

# Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122







Secretary

Principal Dr. S.V. Kshirsagar

NAAC reaccredited - A Grade ISO- 21001:2018

Green audit Dr. B. S. Kshirsagar

[ 3.15 CGPA as per New RAF]

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**Criterion II: Teaching Learning Evaluation** 

# 2.3: Teaching-Learning Process

2.3.1: Student centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences and teachers use ICT- enabled tools including online resources for effective teaching and learning process

1.	<b>Practical Time Table</b>
2.	<b>Syllabus of Laboratory Courses</b>
3.	Learning through Project Work
4.	Learning through Laboratory Practical's

# NSSR'S Mrs. K.S.K. Alias Kaku College, Beed Academic Year-2023-24 B. Sc. I Year

# Batches and subject combination

Batch No.	Subject combination	No. of students
F-1	Physics, Chemistry, Math	01-20
F-2	Physics, Chemistry, Math	21-39
F-3	Physics, Chemistry, Computer Sci.	01-16
F-4	Physics, Chemistry, Computer Sci.	17-31
F-5	Chemistry, Botany, Zoology	01-20
F-6	Chemistry, Botany, Zoology	21-40
F-7	Chemistry, Botany, Zoology	41-57
F-8	Chemistry, Botany, Microbiology	01-16
F-9	Chemistry, Botany, Microbiology	17-32
F-10	Chemistry, Zoology, Microbiology	01-25
F-11	Chemistry, Zoology, Microbiology	26-516
F-12	Math, Physics, Computer science	01-17
F-13	Math, Physics, Computer science	18-34

# NSSR'S Mrs. K.S.K. Alias Kaku College, Beed Academic Year-2023-24 B.Sc. II Year

# Batches and subject combination

Batch No.	Subject combination	No. of students
S-1	Physics, Chemistry, Math	01-15
S-2	Physics, Chemistry, Math	16-30
S-3	Physics, Chemistry, Computer Sci.	All (01-17)
S-4	Chemistry, Botany, Zoology	01-18
S-5	Chemistry, Botany, Zoology	19-36
S-6	Chemistry, Botany, Microbiology	All (01-10)
S-7	Chemistry, Zoology, Microbiology	01-19
S-8	Chemistry, Zoology, Microbiology	20-38
S-9	Math, Physics, Computer science	All (01-20)

Note: Number of students in batches is tentative, final students strength will be given you after completion of admission process.

# NSSR'S Mrs. K.S.K. Alias Kaku College, Beed Academic Year-2023-24 B.Sc. III Year Batches and subject combination

Batch No.	Subject combination	No. of students
T-1	Physics, Chemistry, Math	01-20
T-2	Physics, Chemistry, Computer Sci.	All-(01-17)
T-3	Chemistry, Botany, Zoology	01-20
T-4	Chemistry, Botany, Zoology	21-40
T-5	Chemistry, Botany, Microbiology	All (01-07)
T-6	Chemistry, Zoology, Microbiology	01-16
T-7	Chemistry, Zoology, Microbiology	17-33
T-8	Math, Physics, Computer science	All –(01-18)

# NSSR'S Mrs. K.S.K. Alias Kaku College, Beed Practical Time Table Academic Year-2023-24 B. Sc. I Year

Time/Day	01.20 To 03.50	03.50 To 06.20
Monday	Chemistry-F7	Chemistry –F4
	Physics-F3	Physics-F12
	Microbiology-F8	Microbiology-F9
Tuesday	Chemistry- F5	Chemistry- F6
	Physics-F4	Physics-F2
	Microbiology-F10	Microbiology-F11
Wednesday	Chemistry F2	- Chemistry-F9
	Botany-F8	Botany-F5
	Physics-F1	Physics-F13
Thursday	Chemistry- F3	Chemistry- F8
	Botany-F6	Botany-F7+F9
Friday	Zoology-F5	Zoology-F6+F7
	Chemistry- F1	Chemistry-F10+F11
	Computer Sci-F3	Computer Sci-F4
Saturday	Zoology-F10	Zoology-F11
	Computer Sci-F12	Computer Sci-F13

# NSSR'S Mrs. K.S.K. Alias Kaku College, Beed Practical Time Table Academic Year-2023-24 B.Sc. II Year

Time/Day	01.20 To 03.50	03.50 To 06.20
Monday	Chemistry-S1+S2	Chemistry - S7+S8
	Botany-S4+S5	Botany-S6
	Computer sci S3+S9	
Tuesday	Chemistry-S1+S2	Chemistry – S7+S8
	Botany-S4+S5	Botany-S6
	Computer sci S3+S9	
Wednesday	Zoology-S5+S7	Zoology-S4+S8
	Physics-S1+S9	Physics-S2+S3
	Chemistry-S6	
Thursday	Zoology-S5+S7	Zoology-S4+S8
	Physics-S1+S9	Physics-S2+S3
	Chemistry-S6	
Friday	Chemistry- S4+S5	Chemistry- S3
	Microbiology - S7+S8	Microbiology - S6
Saturday	Chemistry- S4+S5	Chemistry- S3
	Microbiology - S7+S8	Microbiology - S6

Note: This is tentative schedule of practical classes the final schedule will provide you after admission process of B. Sc. II Year.

# NSSR'S Mrs. K.S.K. Alias Kaku College, Beed Practical Time Table Academic Year-2023-24 B.Sc. III Year

Time/Day	01.20 To 03.50	03.50 To 06.20
Monday	Chemistry-T1+T5	Chemistry –T2+ T8
	Zoology-T3+T4	Zoology-T6+T7
Tuesday	Chemistry-T1+T5	Chemistry –T2+ T8
	Zoology-T3+T4	Zoology-T6+T7
Wednesday	Chemistry-T4	Chemistry- T3
	Microbiology-T6+T5	Microbiology-T7
	Computer SciT2+T8	
Thursday	Chemistry-T4	Chemistry- T3
	Microbiology-T6+T5	Microbiology-T7
	Computer Sci. –T2+T8	
Friday	Physics-T1+T2	Physics-T8
	Botany -T3+T5	Botany-T4
	Chemistry-T7	Chemistry-T6
Saturday	Physics-T1+T2	Physics-T8
	Botany –T3+T5	Botany-T4
	Chemistry-T7	Chemistry-T6

#### B. Sc. First Semester Credit: 02

#### **Zoo-103**

#### Paper-III PRACTICAL

#### PROTOZOA TO ECHINODERMATA & Cell Biology

- 1.**Study of animals belonging to** Protozoa, Porifera, Cnidaria, Ctenophora, Platyhelminthes, Aschelminthes and Annelida with special reference to systematic position up to class level, habit, habitat, characteristic features and economic importance (one example of each class and Local examples are to be given more emphasis) with the help of Museum specimens, models, charts, Microslides, Photographs and Digital sources.
- 2. **Study of animals belonging to** Onychophora, Arthropoda, Mollusca, Echinodermata with special reference to systematic position up to class level, habit, habitat, characteristic features and economic importance. (one example of each class and Local examples are to be given more emphasis) with the help of Museum specimens, Models, Charts, Microslides, Photographs and Digital sources.
- 3. Method of protozoan culture (Any one)
- 4. Identification of Protozoan's and Coelenterates in pond water sample
- 5. Temporary mounting of:-
  - Gemules and Spicules of sycon
  - Obelia colony
  - Parapodium of Neries
- 6. Study of diversity of mouth parts in insect:- Mosquito, Housefly, Honey bee, Cockroach, Butterfly
- 7. Digestive and Nervous system of Earthworm (Museum specimen/Charts/digital sources)
- 8. Digestive system of Cockroach (Museum specimen/digital sources)
- 9. Study of Prokaryotic cells Grams staining technique
- 10. Study of Eukaryotic cells using suitable staining technique (Buccal epithelial cells)
- 11. Study of cytoplasmic movements in paramecium
- 12. Localization of Mitochondria by Janus Green stain
- 13. Study of cancer cells through permanent slides
- 14. Study of cell organelles through electron micrographs/charts
- 15. Study of Mitosis using suitable material /Meiosis using permanent slides.

Note: Demonstration of animal dissections through Computer Aided

## B. Sc. Second Semester Course Code - ZOL- 106 Zoology Paper: VI

# DIVERSITY OF CHORDATA-II Based on Protochordata to Mammals&Genetics

# PRACTICALS Credits 02

- 1. **Protochordata:** Study of specimens: *Balanoglossus, Herdmania, Branchiostoma, Salpa, Doliolum, Oikopleura, Botryllus*
- 2. Agnatha: Study of specimens: Petromyzon, Myxine
- 3. **Fishes:**Study of specimens: *Scoliodon, Sphyrna, Pristis, Torpedo, Chimaera, Mystus, Heteropneustes, Labeo, Exocoetus, Echeneis, Anguilla, Hippocampus, Tetrodon/Diodon, Anabas, Cyannoglossus.*
- 4. **Amphibia:**Study of specimens: *Ichthyophis/Ureotyphlus, Necturus, Bufo, Hyla, Alytes, Salamandra*
- Reptilia: Study of specimens: Chelone, Trionyx, Hemidactylus, Varanus, Uromastix, Chamaeleon, Ophiosaurus, Draco, Bungarus, Vipera, Naja, Hydrophis, Zamenis, Crocodylus. Key for Identification of poisonous and non-poisonous snakes
- 6. Aves: Study of six common birds from different orders. Types of beaks and claws
- 7. **Mammalia:** *Sorex*, Bat (Insectivorous and Frugivorous), *Funambulus, Loris, Herpestes, Erinaceus*.
- 8. Visit to Zoological survey of India/ Museum/National Park.
- 9. Observation of common mutants of drosophila
- 10. Determination of human blood groups A, B, AB, and O, Rh factor.
- 11. Major and minor problems in genetics
- 12. Study of preparation of Normal Karyotype of human.

- 13. Karyotypic study of Down's syndrome, Turner's syndrome,
- 14. Klinefelter's syndrome with the help of photograph.
- 14. Detection of Barr body from epithelial cell.
- 15. Problems on sex linked inheritance.

## 16.. Study of gene frequency and mutants of man

- > Attached and free ear lobe.
- Colour of eye.
- > Rolling of tongue.
- ➤ Blood group frequency.
- 17. Human pedigree analysis- various symbols used.
- 18. Study of permanent slide of sickle cell anemia

# B.Sc. III Semester Paper:ZOL- 203 DEVELOPMENTAL BIOLOGY OF VERTEBRATES (PRACTICAL)

- 1. Study of Whole mount of different types of Sperm(Slide)
- 2. Types of Egg and cleavage pattern (Slides/LCD Projector)
- 3. Study of different stages of frogdevelopment.(Models/Specimen)
- 4. Study of types of placenta in Mammals (Slides/LCD Projector)
- 5. Study of Blastula, Gastrula, Morula in Frog ( Slides/LCD)
- 6. Study of whole mount of 24 Hrs, 33 Hrs., 48 Hrs., 72 hrs., 96 Hrs. Chick embryo (Slide)
- 7. Slide preparation and mounting of Chick Embryo from the Incubated Egg

# B.Sc. III Semester Paper: ZOL- 204 BIOCHEMISTRY AND ENDOCRINOLOGY (PRACTICAL)

- 1. Preparation of solutions of given percentage, normality and molarity.
- 2. Study of analytical instrument principle and applications.
  - > pH meter,
  - > Colorimeter,
  - Centrifuge
  - > Electrophoresis
- 3. Factors affecting enzymes activity temperature and pH.
- 4. Detection of amino acid by paper chromatography.
- 5. Qualitative test for organic compound.
  - > Carbohydrate.
  - > Protein.
  - Fats.
- 6. Quantitative estimation of protein from animal tissue using Lawry's method.
- 7. Study of biochemical Qualitative and Quantitative test for Urine
- 8. Determination of Hemoglobin from given blood sample
- 7. Study of permanent histological slides of endocrine glands.
  - T.S. of Pituitary gland,
  - > T.S. of Thyroid gland,
  - T.S. of Adrenal Gland,
  - T.S. of Islets of Langarhans.
  - > T.S. of Testis
  - T.S. of Ovaries

# Skill Enhancement Course Practical Based on ZOL-SEC-205 ZOL-SEC-207 HAEMATOLOGY

- 1. Collection of blood by Venipuncture and arterial blood.
- 2. Determination of haemoglobin from given blood sample, Clotting and bleeding time of blood.
- 3. Determination of Total Count of RBC, WBC.
- 4. Determination of differential WBC Count by blood Smear

# Skill Enhancement Course Practical Based on ZOL-SEC-206 ZOL-SEC-208URINOLOGY

- 1. Study of normal and abnormal constituents of Urine.
- 2. Biochemical Qualitative and Quantitative tests for urine
- 3. Study of Microscopic Examination of urine.
- 4. Qualitative tests for sugar and albumin,

# REFERENCE BOOKS: (HAEMATOLOGY)

- 1. Medical Laboratory Technology RamnikSood
- 2. Medical Lab Technology Vol. I, II & III Kanai Mukherjee
- 3. Hand Book of Medical Technology Mrs. Chitra
- 4. Medical Laboratory Technology A. Ananthanarayan
- 5. Manual for Laboratory Technician of Primary Health by Minister of Health
- 6. Human Physiology Vol. I & II C. C. Chatterji

#### REFERENCE BOOKS ( URINOLOGY)

- 7. Medical Laboratory Technology RamnikSood
- 8. Medical Lab Technology Vol. I, II & III Kanai Mukherjee
- 9. Hand Book of Medical Technology- Mrs. Chitra
- 10. Medical Laboratory Technology A. Ananthanarayan
- 11. Manual for Laboratory Techniian of Primary Health by Minister of Health
- 12. Human Physiology Vol. I & II C. C. Chatterjee

## B.Sc. IV Semester Course Code - ZOL- 211 PAPER: Ecology Practical

- 1. Estimation of Dissolved oxygen from given water sample.
- 2. Estimation of Water Alkalinity from given water sample.
- 3. Estimation of population density byquadrate method.
- 5. Study of microscopic fauna of freshwater ecosystem (from pond).
- 6. Estimation of water holding capacity of given soil sample.
- 7. Estimation of Salinity/Chlorinity from water sample.
- 8. Preparation of permanent slides of the following:
  - a) Spirogyra b) Verticella c) Oedogonium d) Daphnia e) Cyclop f) Mysis
- 10. Visit to Ecosystem: Marine/Fresh water/Desert Ecosystem

### **Recommended Reference Books:**

- 1. Colinvaux, P. A. (1993). Introduction to Ecology. II Edition. Wiley, John and Sons, Inc.
- 2. Krebs, C. J. (2001). Ecology: The Experimental Analysis of Distribution and Abundance, 6th Edition, ©2009, Pearson
- 3. Odum, E.P., (2008). Fundamentals of Ecology. Indian Edition. Brooks/Cole
- 4. Robert Leo Smith Ecology and field biology Harper and Row publisher
- 5. Ricklefs, R.E., (2000). Ecology. V Edition. Chiron Press
- 6. Sharma P.D. (2002) Ecology and Environment, Himalaya Publication
- 7. Verma and Agarwal- Principal of Ecology
- 8. Dutta- Fundamentals of Ecology
- 9. Clarke, G.L. Elements of Ecology

# **B.Sc. IV Semester**

Course Code - ZOL- 212
PAPER: XIV
Evolution
Practical

- 1. Study of evidences by using photograph/charts and models
- a) Analogous and Homologous organs
- b) Connecting link (*Peripatus and Archaeopteryx*)
- c) Embryological evidences
- 2. Study of adaptations (Museum Specimens).
- 3. Study on patterns of speciation with the help of Charts/Models/Pictures
  - a) Allopatric Speciation
  - b) Sympatric Speciation
- 4. Study of successive stages of evolution with the help of Charts/models
  - a) Horse
  - b) Human

#### **Recommended Reference Books:**

- 1. Evolution Moody
- 2. Evolution Gopalkrishnan
- 3. Organic Evolution M.P. Arora (Himalaya Pub. House)
- 4. Evolution M.W. Strickberger (CB Publishers)
- 5. Organic Evolution N. Armugam (Saras Pub.)
- 6. Evolution- Surject Publication, Delhi
- 7. Jha, A.P. Genes & Evolution, John Publication, New Delhi
- 8. P.K. Gupta-Ecology, Genetics and Evolution
- 9. Tomer and Singh-Organic evolution, Rastogi Publication, Meerut

# Skill Enhancement Course Practical Based on ZOL-SEC- 213: Microtechnique

# Credit: 01 ZOL-SEC-214 Microtechnique

- 1. Isolation and collection of tissue, fixing and block preparation.
- 2. Tissue processing of prepared blocks.
- **3.** Technique of Section Cutting, fixing, alcohol grading, staining and preparation of permanent slide.
- **4.** Methods of preparation and examination of tissues (fresh and fixed tissue)

#### **REFERENCE BOOKS:**

- 1. Histochemical Techniques J. D. Bancrot.
- 2. Handbook of Histopathological and Histochemical Techniques C.F.A. Culling.
- 3. Histological and Histochemical Methods 4th Edition John Kiernan

# Skill Enhancement Course Practical Based on ZOL- SEC-214: APICULTURE Credit: 01 ZOL-SEC-215: APICULTURE

- Visit to the Apiculture centers, Collect practical information of artificial Bee Hives and its mechanism.
- 2. Collection of natural bee hives, wax, honey etc.
- 3. Methods of extraction of honey (Indigenous and Modern).

#### **REFERENCE BOOKS:**

- 1. Apiculture Prost, P. J. (1962), Oxford and IBH, New Delhi.
- 2. Apiculture Bisht D. S., ICAR Publications.
- 3. Bee Keeping in India Indian Council of Agricultural Research, New Delhi.

# B. Sc. First Semester

# Course Code - ZOL- 103 Zoology Paper - III

# PROTOZOA TO ANNELIDA (PRACTICAL)

3.	(One point) habitat (one or two point) structure & (one point from)  Biological importance.]  Dissection:  ➤ Dissection of Leech for Digestive, Excretory & Reproductive systems.	09
4.	<ul> <li>Dissection of Earthworm for Nervous System &amp; Reproductive system</li> <li>Mounting of any five of the following.</li> <li>Sponge spicules, Gemmule, Obelia colony, Jaws of Leech.</li> <li>Spermatica, testes nerve ring of Earthworm, Parapodia of Nereis.</li> </ul>	03
	Total Practical Periods	15



# B. Sc. First Semester

# Course Code - ZOL- 104 Zoology Paper – IV

# CELL BIOLOGY (PRACTICAL)

1.	Study of cell organelles by using Models, Charts, Slides & Electron micrographs.	02
2.	Squash preparation of Onion root tip to study Mitosis.	02
3.	Preparation of polytene chromosome in chironomous larva/fruit flies.	02
4.	Microtechnique: - Fixation, dehydration, Block preparation, Microtomy and Staining of Rat tissue.	06
5.	Study of Microscopy: - Simple, Compound, & Phase Contrast Microscope	e <b>03</b>
	Total Practical Periods	15



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# **B. Sc. Second Semester**

# Course Code – ZOL- 203 Zoology Paper – VII

# ARTHROPODA TO ECHINODERMATA AND PROTOCHORDATA (PRACTICAL)

Study of museum specimen & slides of relevant Invertebrates & Protochordata. (At least 3 form each phylum).
 Dissections:

 Dissection of Prawn for Nervous system
 Dissection of Cockroach for Digestive and Nervous Systems.
 Dissection of Pila for Nervous system.
 Dissection of Sea Star for Water Vascular System.

 Mounting of any five of the following.
 Mouthparts of Cockroach, Mosquito, House fly, Bed bug and Honeybee.
 Salivary glands of cockroach.
 Redula of Pila, Pedicillaria of Star fish.

Total Practical Periods ₌15

# B. Sc. Second Semester

# Course Code – ZOL-204 Zoology Paper –VIII

# GENETICS - I (PRACTICAL)

1.	Culture of Drosophila- experimental organism in genetics	02
2.	Observation of common mutant of drosophila.	02
2.	Determination of human blood groups A, B, AB, and O, Rh factor.	01
3.	Minor problems based on monohybrid ratio & human blood	
	group and its interpretation.	04
4.	Major problems based on dihybrid ratio & interaction of genes.	04
5.	Study of chromosomal aberration	02
	Practical Periods	15



# **B.Sc. III Semester**

# Course Code - ZOL- 303 PAPER XI



# VERTEBRATE ZOOLOGY (Practical)

Museum study of vertebrates. (At least 20).     (Identification, classification, sketches, General characters and biological important.)	<b>05</b> ance
2. Dissection of Scoliodon / Labeo  > Afferent and efferent,  > Cranial Nerves.  > Brain	03
3. Dissection of Rat/ Frog;  ➤ Urinogenital system,  ➤ Arterial system,  ➤ Venous System,  ➤ Brain of Rat.	05
<ul><li>4. Mounting of Placoid, Cycloid and Ctenoid scales of fish</li></ul>	01
<ul> <li>5. Study of Embryological development of chick according to hours of incubation.</li> <li>6. Visit to Zoological museum/Zoo Park is compulsory and Submission of report</li> </ul>	01
7. Write a report on common birds/mammals in your locality, scientific names and economic importance.	
Total Practical periods: -	15



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### **B.Sc. III Semester**

# Course Code - ZOL- 304 PAPER(XII)

# GENETICS-II (Practical)

1.	Preparation of paper model of DNA and study of DNA structure	01
2.	Study of protein synthesis with the help of charts/models.	02
3.	Estimation of DNA from animal tissue with the help of Diphenyl amine method.	02
4.	Study of preparation of Normal Karyotype of human.	01
5.	Karyotypic study of Down's syndrome, Turner's syndrome, Klinefelter's syndrome the help of photograph.	e wit <b>02</b>
6.	Detection of Barr body from epithelial cell.	01
7.	Problems on sex linked inheritance	02
8.	Problems based on Hardy – Weinberg's law	02
9.	Study of gene frequency and mutants of man;  > Attached and free ear lobe.  > Colour of eye.  > Rolling of tongue.  > Blood group frequency.	02
	Total Practical periods: -	15

# B.Sc. IV Semester

# PAPER.XV



# ANIMAL PHYSIOLOGY (PRACTICAL)

To study the digestive enzymes from cockroach/Human Saliva.	02
2 Total count of RBC/WBC from given blood sample.	0.1
	01
3. Preparation of Heamatin crystals from blood sample.	
4. Hb% from given blood sample.	01
5. Effect of isotonic, hypotonic, and hypertonic solutions on blood cell (RBCs)	01
6. Detection of nitrogenous west product from the extract of different animals	01
7. Detection of nitrogenous west product in fish/frog water tank.	01
8. Estimation of O <sub>2</sub> consumed by fish in relation to temperature by	02
Winnes memou.	
<ol> <li>Typographic reading of skeletal muscle properties , heart beating in Toad / Rat. (Demo only) 01</li> </ol>	
10. Histological study of following.  ➤ T.S. of Kidney  ➤ T.S. of Testis	01
➤ T.S. of Intestine	
Total practical periods	15

B.Sc. IV Semester

Course Code - ZOL- 404



# BIOCHEMISTRY AND ENDOCRINOLOGY (PRACTICAL)

preparation of soll of giver percentage; Hermality 2M 02 2. Study of analytical instrument principle and applications. pH meter, Colorimeter. Electrophoresis 02 Factors affecting enzymes activity temperature and pH. 4. Detection of aminor of the plant objects that the 01 03 5. Qualitative test for organic compound. Carbohydrate. > Protain 6. Quantitative estimation of protein from animal tissue using Lawry's method. 02 7. Study of permanent histological slides of endocrine glands. 02 - T.S. of Thyroid gland, T.S. of Adrenal Gland, > T.S. of Islets of langarhance. TS of Tomin

Total practical periods: - 15



## **B.Sc. V Semester**

Course Code - ZOL- 503
PAPER - XIX

# **ECOLOGY (PRACTICAL)**

1.	Estimation of productivity of pond ecosystem using white and dark bottle method.	02
2.	Determine the following parameters of soil.  > pH  > Alkalinity > Chlorinity > Salinity >	04
3.	Analysis of DO, CO <sub>2</sub> , Salinity, Chlorinity of water sample.	04
4.	Study of animal association ship with example (Charts/photo) -Competition, mutualic parasitism, predation and commensalisms.	sm, <b>0</b> 1
5.	Estimation of population density by Quadrate method on field and by Simulation method.	04
6.	Preparation of permanent slides of following Spirogyra, Verticella, Odogonium, Daphnia, Cyclops, Mysis, Cypris, keretella	
7.	Project report: - Forest or fresh water ecosystem.	

Total practical periods: - 15

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#### **B.Sc. V Semester**

# Course Code - ZOL- 504 PAPER XX - A

## FISHERY SCIENCE – I (PRACTICAL) (Elective Paper)

03 1. Study of freshwater fishes. Major carps ---Other carps. -Cat fishes -Clupoides -02 2. Study of brackish water fishes, Hilsa hilsa, Chanos chanos (milkfish), Latis calcarifer, Tilapia 3. 03 Study of marine ware fishes. Oil sardine-Mackerel Ribbon -fish -Bombay-duck Pomfret\_ Sole Polynemus 4. Water analysis 05 5. Visit to local or any reservoir and marine fish landing centre and student should be submit a project report at the time of practical examination Total practical periods: -

# **B.Sc. VI Semester**

# Course Code - ZOL - 603 PAPER XXIII

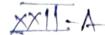
# **EVOLUTION (PRACTICAL)**

1	. Embryological evidences of evolution with the help of slide/chart/pictures.	02
2	. Adaptive modification in feets of birds and mouth parts of insects	02
3	<ul> <li>Study of successive stages of evolution with the help of models/charts</li> <li>➤ Horse</li> <li>➤ Human</li> </ul>	02
4	<ul> <li>Discussion on patterns of speciation with the help of charts /pictures.</li> <li>Allopatric speciation</li> <li>Sympatric speciation.</li> </ul>	02
5	. Study the homologous and analogous organs.	04
6	. Study of natural selection using <i>E.coli</i> bacteria against antibiotics (Tetramycin/ Penicillin)	01
7	. Study of geographical era.	02
	Total Practical periods	15



# **B.Sc. VI Semester Course**

Code - ZOL- 604 PAPER XXIV - A



# FISHARY SCIENCE - II (PRACTICAL) (Elective Paper)

1.	Primary productivity of ponds (plankton studies).	02
2	identification, classification and culturaable significance of following.	03
	Catla, rohu, mrigal, catfishes, exotic canoj	
3	Collection and identification of fish parasites and worms.	04
4	Removal of fish pituitary gland and preparation of pituitary extract	02
5	Identification of crafts and gears. <u>Gill net</u> , Rampanni, Satpalti, Machwa, Catamaran.	02
6.	A visit to fish farm and fish processing centre is compulsory.	02
	Total Practical Periods	15



#### NSSR(N)

#### Mrs. K.S.K. Arts, Science, Commerce College Beed Department Of Computer Science Practical Syllabus B.Sc. I, II, & III Year Effective from 2018-2023

SUBJECT: Comp. Sci. (opt.) Semester: I Hours/week: 3

Code : CSO3

#### Office Lab

**Objective:** To impart the student hands on practice so that students should be able to: Create, Save, Copy, Delete, Organize various types of files and manage the desk top in general, use a standard word and spread-sheet processing package exploiting popular features.

- <u>GUI Operating System:</u> Mouse Practice, Starting, Login, Shutdown, Exploring
  Directories, Resizing, Moving, Minimizing, closing of software windows,
  familiarization with file icons, Launching Applications, Deleting, Renaming
  files, Managing Directories, Searching for files, Using Accessories.
- Web Browser: Basic Browsing, Buttons: forward, backward, home, adding to favorites, stop, save, save as, Saving an Image from the Web, printing, Specifying a Home Page, Browsing: Using Web URLs, Anatomy of a URL, Membership Websites: Signing up for email service, Searching: Academic

Search on the web.

Word Processing Tool: Menus, Shortcut menus, Toolbars, Customizing toolbars, Creating and opening documents, Saving documents, Renaming documents, Working on multiple documents, Close a document; Working With Text: Typing and inserting text, Selecting text, Deleting text, Undo, Formatting toolbar, Format Painter, Formatting Paragraphs: Paragraph attributes, Moving, copying, and pasting text, The clipboard, Columns,

Drop caps; **Styles**: Apply a style, Apply a style from the style dialog box, Create a new styles from a model, Create a simple style from the style dialog box, Modify or rename a style, Delete a style; **Lists**: Bulleted and numbered lists, Nested lists, Formatting lists **Tables**: Insert Table button, Draw a table, Inserting rows and columns, Moving and resizing a table, Tables and Borders toolbar, Table properties **Graphics**: Adding clip art, Add an image from a file, Editing a graphic, AutoShapes; **Spelling and Grammar**: AutoCorrect, Spelling and grammar check, Synonyms, Thesaurus; **Page** 

**Formatting**: Page margins, Page size and orientation, Headers and footers, Page numbers, Print preview and printing.

- Spreadsheet Basics: Screen elements, Adding and renaming worksheets, The standard toolbar opening, closing, saving, and more; Modifying A Worksheet, Moving through cells, Adding worksheets, rows, and columns, Resizing rows and columns, Selecting cells, Moving and copying cells, Freeze panes; Formatting Cells: Formatting toolbar, Format Cells dialog box, Dates and times; Formulas and Functions: Formulas, Linking worksheets, Relative, absolute, and mixed referencing, Basic functions, Function Wizard, Autosum, Sorting and Filling: Basic ascending and descending sorts, Complex sorts, Autofill; Alternating text and numbers with Autofill, Autofilling functions; Graphics; Adding clip art; Add an image from a file; Editing a graphics; AutoShapes; Charts: Chart Wizard; Resizing a chart; Moving a chart, Chart formatting toolbar; Page Properties and Printing: Page breaks, Page orientation, Margins, Headers, footers, and page numbers, Print Preview, Print; Keyboard Shortcuts.
- Presentation Tool: AutoContent Wizard, Create a presentation from a template, Create a blank presentation, Open an existing presentation, AutoLayout, Presentation Screen: Screen layout, Views, Working with Slides: Insert a new slide, Applying a design template, Changing slide layouts, Reordering slides, Hide slides, Create a custom slide show, Edit a custom slide show Adding Content: Resizing a text box, Text box properties, Delete a text box, Bulleted lists, Numbered lists, Adding notes, Video and Audio Working with Text: Adding text, Editing options, Formatting text, Replace fonts, Line spacing, Change case Spelling check Color & Background: Color schemes, Backgrounds, Graphics, Adding clip art, Adding an image from a file, Editing a graphic, AutoShapes, WordArt Slide Effects: Action buttons, Slide animation, Animation preview, Slide transitions, Slide show options, Master Slides, Slide master, Header and footer, Slide numbers, Date and time Saving and Printing, Save as a web page, Page setup, Print
- Integrating Programs Word, spreadsheet and Presentation.

#### Note:

The above practical is to be conducted using the either Microsoft-Office or OpenOffice.

# **Digital Electronics Lab**

Objective: To provide hands-on practice of the basic knowledge in digital logic and circuits and to provide hands-on practice in some commonly used combinational and sequential circuits

Instruction: The Laboratory work will have to be performed during the semester consisting of any of the 8 experiments from the given list below:

## List of Experiments:

- Study and Testing of measuring instruments: Digital and Analog multimeters, CROs and Signal Generators – measurement of AC & DC voltages, measurement of frequency.
- 2. Study of Components: Identification and testing of resistors, capacitors, inductors, diodes, LEDs & transistors
- 3. Study of Logic Gates: Study of truth table of basic gates, realization of Boolean functions
- 4. Study of Half adder and Full Adder
- 5. Study of Half Subtractor and Full Subtractor
- 6. Study of Implementation of a 3:8 decoder,
- 7. Study of 4-line to 16 bit decoder
- 8. Study of BCD to 7-segment decoder
- 9. Study of Generating a Boolean expression with a multiplexer
- 10. Study of Clocked JK Flip Flop
- 11. Study of 4-bit ripple counter
- 12. Study of Parallel-in, serial-out, 4-bit shift register

SUBJECT: Comp. Sci.(opt.) Semester: II Hours/week: 3

Code : CSO6

## Operating System

Assignments: Write the Program using C (if applicable):

## Operating System:

- 1. Study of DOS Commands.
- 2. Study of Unix/Linux Commands.
- 3. Write a program to implement the FCFS Scheduling Algorithm.
- 4. Write a program to implement the SJF Scheduling Algorithm.
- 5. Write a program to implement the Priority Scheduling Algorithm.
- Write a program to implement the Round Robin Scheduling Algorithm.

#### Lab for Programming in 'C'

#### List of Experiments:

- 1. Find Area, Perimeter of Triangle & Rectangle.
- 2. Find maximum amongst 3 numbers.
- Program for nested loops.
- 4. Program to Calculate x y
- 5. Program to check Prime Number.
- 6. Program to find Armstrong Number.
- 7. Program to print the Fibonacci Series
- 8. Searching and element from array.
- 9. Transpose of matrices
- 10. Multiplication of matrices
- 11. Sorting array using bubble sort technique
- 12. Program for recursion e.g. factorial, reverse of digit
- 13. Program for structure initialization
- 14. Array of Structure e.g. student result, Employee pay slip, Phone bill
- 15. Function with parameter & return values

Course: B.Sc.(C.S.) Paper title: Practical Based on Adv. C Programming Semester: III Paper No.: CSO9

- 1. Swapping of numbers by using call by reference.
- 2. Program to pass array to function.
- 3. Program for passing structure pointer to function.
- 4. String manipulation function e.g. string copy, concatenation, compare, string length, reverse.
- 5. Program for reading/writing text file.
- 6. Program for reading/writing binary file.7. File copy program.
- 8. Program to modify a record from binary file.
- 9. Program to delete a record from binary file.
- 10. Program on conditional compiling.
- 11. Program on macro substitution.
- 12. Program for data conversion.
- 13. Program to draw simple pictures (human face, clock, hut, etc.) using graphics functions.
- 14. Program using command line arguments.
- 15. Program to demonstrate the storage class.
- 16. Program to sort names.

Course: B.Sc.(C.S.)
Paper title: Practical Based on Data Structure

Semester : III Paper No.: CSO10

Assignments: Write the Program using C (if applicable):

- Write a program using DIV(J,K) which reads a positive integer N>10 and determines whether or not N is a prime number.
- 2. Write a program which counts the number of particular character/word in the String.
- Write a program which reads words WORD1 and WORD2 and then replaces each occurrence of word1 in text by word2.
- 4. Write the programs for traversing of n item using the array.
- 5. Write the programs for insertion and deletion of n item using the array.
- 6. Implement Linear and binary search algorithm using C.
- 7. Implement Bubble sort using C.
- 8. Write the programs for traversing of n item from the linked list.
- 9. Write the programs for push and pop operation using the stacks.
- 10. Write the programs for insertion and deletion of n item from the queues.

6. B.Sc. Comp. Sci. [Opt.] IIrd Yr. Sem.III & IV - 12 -

Course: B.Sc.(C.S.)

Paper title: Practical Based on Programming in C++

Semester : IV

Paper No.: CSO13

Minimum 12 Practicals to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

Course: B.Sc.(C.S.) (Opt.)

Semester : IV

Paper title: Practical Based on Database Management System

Paper No.: CS O14

- Design five schemas for any organization like: College, school, hospital, travel agency, company, bank etc.
- 2) Normalize the above five selected schemas as per 1NF,2NF and 3NF
- 3) Draw E-R Diagram for the same.
- 4) Solve at least ten Relational Algebraic Queries

Paper No.: CSO17

Comp. Sci. (Gen.) Semester : V

Paper title: Software Engineering Case Study

Using any Software engineering model case study on development of a software.

Paper No.: CSO18

Comp. Sci. (Gen.) Semester: V

Syllabus of Computer Science (General), w.e.f.: 2014-15

### Paper title: Web Designing if Selected

- 1. Create a simple website by using Visual Studio Express
- 2. Create additional pages
- 3. Embedding Content
- 4. Create a webpage using and <div> elements
- 5. Create a webpages using conditional and looping statements.
- 6. Create a calculator webpage
- 7. Create a Webpage to introduce National Bird/Animal/Emblem/Flower
- Learn more about positioning by adding more <div> elements to the webpage
  to define a header and footer for the page. Use CSS style rules to set the
  position.
- Learn more about CSS selectors by adding more elements to the page and try setting the format by selecting the elements without using an id.
- 10. Learn more about colors by changing the color scheme, using RGB values.

Paper No.: CSO18 Comp. Sci. (Gen.) Semester : V

Paper title: VB.NET if Selected

Minimum 12 Practical to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

Paper No.: CSO21 Comp. Sci. (Gen.) Semester : VI Paper title: Seminar

Syllabus of Computer Science (General), w.e.f.: 2014-15

14

5. SU-02 June-2016 All Syllabus Science Facutly B.Sc. Computer Science [Optional] Sem. V & VI

- 15 -

Student should prepare and present a seminar on any latest topic should be related to Computer Science.

Paper No.: CSO22 Comp. Sci. (Gen.) Semester : VI

Paper title: Major Project

Students group (maximum 3 students) should design and develop a project.

Course Code: CMP-121

Course Title: Lab course 1 (Based on CMP-111 and CMP-112 )

Total Credits: 1.5

Contact Hours: 03 Hours (Week)

Marks: 50

### Practical based on CMP-111

- Student should prepare a report based on computer component such as monitor, printer, CPU, Pen drive, CD –ROM, Hard Disk
- Create a partition of computer drive creation, formatting the drive and deleting the partition.
- Create a user and password of computer user and Reset a computer password using CMOS battery.
- Practical on office word tool as a creation, edit, insertion of table in the new word file.
- Practical based on MS-Excel for creation of student data with name, marks, roll no for sorting and mark sheet creation.
- Perform practical of DOS internal commands. DIR,TYPE,DEL, MD,CD,COPY,RMDIR,VER,DATE,TIME, CLS EXIT.
- Write a comparative report of different web browser such as opera, Microsoft edge, chrome and mozila Firefox.
- 8. Create an IP setting and home network setting for the computer.
- 9. Connect internet using wifi for a computer.
- 10. Practical based on online meeting using zoom, Google meet and skype
- 11. Practical based on remote desktop using any desk software.
- 12. Solve one example of binary to decimal, octal and hexadecimal number.
- 13. Solve one example of decimal to binary, octal and hexadecimal
- 14. Solve one example of octal to hexadecimal, decimal and binary.

Minimum three practical on each unit

#### Practical based on CMP-112

- 1. Execution of DOS internal and External commands
- 2. Study and explain the types of operating systems (their types with structure, functionality, dependencies, application software with their differences).
- 3. Installation of any one of the operating system.
- 4. Present the output of different file operation.
- Implement any file allocation technique (Linked, Indexed or Contiguous) .(any one)
- 6. Present the output of following CPU Scheduling algorithm.(any one)
  - a. FCFS
  - b. SIF
  - c. Priority
  - d. Round Robin
- 7. Present the output of following Page Replacement Algorithm.(any one)
  - a. FIFO
  - b. LRU

#### Minimum three practical on each unit

Course Code: CMP-221

Course Title: Lab course 1 (based on CMP-211 and CMP-212)

Total Credits: 1.5

Contact Hours: 03 Hours (Week)

Marks: 50

**Objective**: student understands the practical and logical application of programming language. The use of C logical statement in real time example solving. The student should understand the working of logic gate with its application in real time era.

#### Practical based on Digital Electronic

- The practical should be done on kit for AND, OR, NOT, NAND, NOR, X-OR and X-Nor gate (If kit not available use the software simulation for practical)
- 2. Study of Components: Identification and testing of resistors, capacitors, inductors, diodes, LEDs & transistors
- 3. Study of Logic Gates: Study of truth table of basic gates, realization of Boolean functions
- 4. Study of Half adder and Full Adder
- 5. Study of Half Subtractor and Full Subtractor
- 6. Study of Implementation of a 3:8 decoder,
- 7. Study of 4-line to 16 bit decoder
- 8. Study of BCD to 7-segment decoder
- 9. Study of Generating a Boolean expression with a multiplexer
- 10. Study of Clocked JK Flip Flop 11. Study of 4-bit ripple counter 12. Study of Parallel-in, serial-out, 4-bit shift register

#### **Practical based Basic C Programing**

#### 1.Installation of C Program:

Download and installation of C programming software. Discussion on available c software and use of each individually.

#### 2. Input Output statement program

Minimum 10 program on input and output statement, data type and constant.

3.List of Program for student to understand the concept of programing

- · Find Area, Perimeter of Triangle & Rectangle.
- Find maximum amongst 3 numbers.
- · Program for nested loops.
- · Program to Calculate x y
- · Program to check Prime Number, Program reverse of digit.
- · Program to find Armstrong Number.
- · Program to print the Fibonacci Series
- · Searching and element from array.
- · Transpose of matrices
- · Multiplication of matrices
- · Sorting array using the bubble sort technique
- · Program for factorial of number

Course Code: CMP-321

Course Title: Lab course 3 (based on CMP-311)

Total Credits: 1.5

Contact Hours: 03 Hours (Week)

Marks: 50

- 1. Write a program to store the elements in 1-D array and perform the operations like searching, sorting and reversing the elements.
- Read the two arrays from the user and merge them and display the elements in sorted order
- 3. Write a program to perform the Matrix addition, Multiplication and Transpose Operation.
- 4. Write a program to implement the concept of Stack with Push, Pop, Display and Exit operations
- 5. Write a program to convert an infix expression to postfix and prefix conversion
- 6. Write a program to implement Tower of Hanoi problem.
- Write a program to implement the concept of Queue with Insert, Delete, Display and Exit operations.
- 8. Write a program to implement the concept of Circular Queue
- 9. Write a program to implement the concept of Deque.
- 10. Write a program to create the tree and display the elements.
- 11. Write a program to construct the binary tree
- 12. Write a program for inorder, postorder and preorder traversal of tree
- 13. Write a program to create a single linked list and display the node elements in reverse order
- 14. Write a program to search the elements in the linked list and display the same

Minimum three practical on each unit

Course Code: CMP-322

Course Title: Lab course 4 (based on CMP-312)

Total Credits: 1.5

Contact Hours: 03 Hours (Week)

Marks: 50

- Write a program to calculate average temperature of five days. Create temp() function.
- Write a program that uses recursive function fibo() that generates a Fibonacci series containing N elements.
- Write a program that uses a recursive function fact() that finds the factorial of a given number N.
- 4. Program to find if the given no. is prime or not. The function should accept the number as argument and return if the no. is prime or not.
- 5. Write a function which accepts a character array as argument from the user. The function should print the ASCII equivalent of all the characters in the string.
- 6. Write a program to define structure with tag state with fields state name, number of districts and total population. Read and display the data.
- 7. Write a program to create a list of books details. The details of a book include title, author, publisher, publishing year, number of pages, and price.
- 8. Define a structure called Item with members: Item\_code, Item\_name, Price. Create an array of five Items. Create a function which accepts the Item array and modifies each element with an increase of 10% in the price.
- Define a structure to represent a date. Use your structures that accept two different dates in the format mm dd of the same year. Write a C program to display the month names of both dates.
- 10. Define a structure that can describe a Hotel. It should have members that include name, address, grade, room charges, grade and no of rooms. Write a function to print out all hotel details with room charges less than a given value
- 11.1 Write a program to display contents of file on the screen. The program should ask for file name. Display the contents in capital case.
- 12. Write a program to find size of the file.
- 13. Write a program to combine contents of two files in a third file. Add line number at the beginning of each line.
- 14. Write a program to display number 1 to 100. Redirect the output of the program to text file.
- 15. Write a program to write contents of one file in reverse into another file

Minimum three practical on each unit

Course Code: CMP-421

Course Title: Lab course 5 (based on CMP-411)

Total Credits: 1.5

Contact Hours: 03 Hours (Week)

Marks: 50

- 1. Creating a single table without constraints and firing queries.
- 2. Queries containing aggregate, string and date functions fired on a single table.
- 3. Creating single table with constraints and executing queries.
- 4. Updating tables, altering table structure and deleting table Creating and altering a single table and executing queries.
- 5. Joining tables and processing queries.
- 6. For given scenario draw E-R diagram and convert entities and relationships to table. Write relational algebra queries and convert to SQL queries on these tables.
- 7. Creating, dropping and maintaining indexes.
- 8. Create and manage views and process queries on views.
- 9. Creating stored procedures, executing procedures, deleting procedures.
- 10. Creating with or without enforcing data integrity through triggers, nested triggers, viewing, modifying and deleting triggers

Minimum three practical on each unit

Course Code: CMP-422

Course Title: Lab course 6 (based on CMP-412)

Total Credits: 1.5

Contact Hours: 03 Hours (Week)

Marks: 50

- 1. Write programs that illustrates the simple C++ concepts without classes.
- 2. Write C++ programs to illustrate the concepts pointers, functions and function overloading.
- 3. Write C++ programs to illustrate the concepts: classes, friend functions.
- 4. Write C++ programs to illustrate the concepts:constructors, constructor overloading and destructors.
- 5. Write C++ programs to illustrate the concepts: operator overloading (both Unary and Binary).
- 6. Write C++ programs to illustrate the concepts: Simple, Multiple, Multilevel inheritance.
- 7. Write C++ programs to illustrate the concepts: Polymorphism (Virtual functions, Pure Virtual functions).
- 8. Write programs to illustrate the file handling in C++.
- 9. Write programs to illustrate the templates in C++.
- 10. Write programs to illustrate the exceptions in C++.



#### B. Sc. 1 Semester Physics paper III (Phy113) List of experiment

- 1. Study and use of various measuring Instruments
  - 1. Vernier caliper 2. Micrometer Screw Gauge 3. Travelling Microscope
  - 4. Spherometer 5. Spectrometer information about source and their wavelengths.
- 2. Determination of acceleration due to gravity by Kater's pendulam
- 3. Y by bending of a beam loaded at center.
  - 4. Determination of Y by Cantilever (Oscillation method)
  - 5. η by Maxwell's needle.
    - 6. Determination of "Y" and " $\eta$ " by flat spiral spring.
    - 7. Viscosity measurement by Poiseuille's method.
    - 8. S.I. by Jaeger's method.
    - 9. Study of Solar constant.
    - 40. Study of thermal conductivity by Lee's method

Note: - At least six experiments should be performed.



## B. Sc. II Semester Physics paper VI (PHY-221) List of experiment

- 1. Use of multimeter for measuring voltage, current and resistance.
- 2. Determination of dielectric constant of liquid / solid.
  - 3. I-H curve.
- 4. Field along the axis of circular coil.
  - 5 Determination of wavelength of light by Newton's rings.
  - 6. Resolving power of telescope.
- 7 Specific rotation by Laurent's half shade polarimeter.
- 8. λ by grating (normal incidence)
  - 9. Determination of frequency of AC mains by sonometer
  - 10. Comparison of capacitor using De'Sauty's method
  - 11 Measurement of constants of B. G.

Note: - At least six experiments should be performed.

# B. Sc. Second Year Physics (Semester-III)

Physics Practical: Lab Course-3

Course Code: PHY-321



#### Credit 1.5

Marks-50 (CIA-10 and UA-40)

# List of Experiments:

- 1. Study of temperature dependence of total radiation
  - 2. To draw the histogram of theoretical Gaussian curve
- 3. Velocity of sound using Helmholtz resonator
- 4. Surface tension by Fergusons method -
- 5. e/m by Thomson's tube experiment
- 1-V characteristics of solar cell
- Viscosity of liquid using Searle's viscometer
- 38. M. I. by Bifilar suspension
  - 9. Viscosity of liquid by using oscillating disc method. -

Note: Students should perform at least six experiments

#### Books:

- 1. B. Sc. Practical Physics C. L. Arora (S. Chand Publications)
- 2. College Practical Physics Khanna and Gulati (S. Chand Publication)
- 3. Practical Physics Gupta and Kumar (Pragati Prakashan, Meerut)
- 4. A text book of Practical physics Shrinivasan and Balsubramanyam.

# B. Sc. Second Year Physics (Semester-III)

Physics Practical: Lab Course-4

Course Code: PHY-322

#### Credit 1.5

Marks-50 (CIA-10 and UA-40)

#### List of Experiments:

- 1. To verify the inverse square law using photocell
- 2. 'h' by photocell
  - 3. To compare the luminous intensities of two lights sources using photocell
- 4. Measurement of the focal length of a given convex lens using laser
- 5. Diffraction of grating using laser beam
- 6. Beam divergence of a diode laser
- Determination of the diameter of a thin wire using laser
  - 8. Determination of wavelength of He-Ne laser by transmission grating and reflection grating.
  - 9. To draw the plateau curve for GM counter
  - 10. To find the dead time of GM counter

Note: Students should perform at least six experiments

#### Books:

- 1. B. Sc. Practical Physics C. L. Arora (S. Chand Publications)
- 2. College Practical Physics Khanna and Gulati (S. Chand Publication)
- 3. Practical Physics Gupta and Kumar (Pragati Prakashan, Meerut)-
- 4. A text book of Practical physics Shrinivasan and Balsubramanyam.



# B. Sc. Second Year Physics (Semester-IV)

Physics Practical: Lab Course-5

Course Code: PHY-421



#### Credit 1.5

Marks-50 (CIA-10 and UA-40)

#### List of Experiments:

1. I-V Characteristics of transistor in CB configuration

1-V Characteristics of transistor in CE configuration

3. I-V Characteristics of Zener diode

4. I-V Characteristics of FET

5. Study of OR, NOT, AND gates

6. Study of Op-amp as adder

Study of Op-amp as subtractor

8. Study of RC Oscillator (Phase shift Oscillator)

9. Study of LC Oscillator (Hartley Oscillator)

Note: Students should perform at least six experiments

# B. Sc. Second Year Physics (Semester-IV)

Physics Practical: Lab Course-6

Course Code: PHY-422



#### Credit 1.5

Marks-50 (CIA-10 and UA-40)

# List of Experiments:

- 1. Energy band gap of semiconductor using thermistor
- 2. Thermal conductivity by Forb's method
- 3. Rydberg constant using Excel
- 4. I-H curve using Excel
- 5 Calibration of bridge wire using Carry-Foster's bridge.
  - 6. Determination of absolute capacity of condenser using B.G.
  - 7. To determine the Hall coefficient of a semiconductor sample.
- 8. Study V-I characteristics of a solar cell.
  - 9. To analyze the XRD data of the two given sample and find out the lattice constant

Note: Students should perform at least six experiments

# Practical Course code PHY-308 Paper-XVIII



Marks-50

# List of experiments

- 1. Temperature coefficient of resistance of semiconductor
- 2. Measurement of thickness of thin film by gravimeter/optical/electrical method
- Temperature of sodium flame
- 4. Hartmann's dispersion formula
- 5. Maxwell's bridge (measurement of inductance using impedance at different frequency)
  - 6. λ by grating (normal incidence) .
  - 7. Transistorized Regulated power supply using Zener diode.
- 8. Bridge Rectifier

Note:- At least Six experiments should be performed.

# B.Sc. IIIrd year Physics (Semester-V)

## **Practical**

Course code PHY-303

Paper-XXI



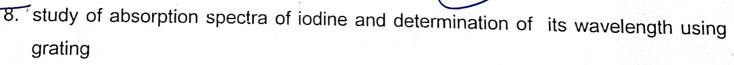
Period-45

50

Marks-

## List of experiments

- 1. Measurement of the focal length of a given convex lens using laser
  - 2. Spectral response of photoconductor (LDR)
  - 3. Diffraction of grating using laser beam
  - 4. e by Millikan's oil drop method
  - 5. Study of thermocouple (Fe-Cu) and to find inversion temperature
  - 6. Refractive Index R.I. of Optical fiber
- 7. constant of B.G. by standard condenser method



Note: - At least Six experiments should be performed.

B.Sc. III<sup>rd</sup> year Physics (Semester-V)

Practical

Course code PHY-304

Paper-XXII



Marks-50

List of experiments

1. Beam divergence of a diode laser

- 2. Determination of the diameter of a thin wire using laser
- 3. To study the interference of light using optical fibers
- 4. Determination of wavelength of He-Ne laser by transmission grating and reflection grating
- 5. Y by Koenig's method
  - 6. Edser's A pattern
- 7. e/m by Thomson methods by Excel
  - 8. Surface tension by Ripple's method

Note: - At least Six experiments should be performed.



# B.Sc. Illrd year Physics (Semester-VI)

### **Practical**

Course code PHY-307

Paper-XVII



# List of experiments

- 1. Thermal conductivity by Forb's method
- Rydberg constant
- 3. B-H curve using magnetometer
- 4. Determination of Debye's temperature (e.g. Tin)
- 5. Determination of dielectric constant of liquid/solid
- (M)
- 6. Resistance measurement of semiconductor by Vaders Pau's method
- 7. I-H Curve by Excel
- 8. Rydberg constant Excel

Course Name: Practical Based on PHYT/MJ/500 (Linear and digital Electronics)

Course Code: PHYP/MJ/526, Course Type: MJ, Contact Hours: 60,

Credits: 02, Hours/Week: 02, Max. Marks: 50

Course objective: The themes dealt with in this paper:

This course deals with the basic foundation to specialization in Electronics and Industrial applications.

This course is an advanced which requires the special efforts and training.

This course will help the student to elaborate designing the electrical circuits, input and output characteristics and their uses in various electrical devices for various applications.

Course Outcomes: The present unit attempts to achieve the following learning outcomes:

- After completing this course the student will be prepare to explain the scope and possibilities of electrical circuits designed using OP-AMP, Multivibrators and counters for various applications for research career as well as in industries.
- The students will be able to design electrical circuits for various industrial applications.

#### Course Contents:

- 1. Determination of characteristics of OP-AMP 741: CMRR and Slew rate
- 2. Determination of characteristics of OP-AMP 741: input offset voltage and input bias current
- 3. Inverting and non-inverting amplifier using OP-AMP 741
- 4. Astable multivibrator using OP-AMP 741
- 5. Schmidt trigger using OP-AMP 741
- 6. Wien bridge Oscillator using IC 741
- 7. Monostable multivibrator using IC555
- 8. Decimal to BCD converter
- 9. Mod 16 counter
- 10. Diode Matrix ROM



## Course Name: Practical Based on PHYT/MJ/501 (General Condensed Matter Physics)

Course Code: PHYP/MJ/527, Course Type: MJ,

Contact Hours: 60, Credits: 02, Hours/Week: 04, Max. Marks: 50

# Course objective: The themes dealt with in this paper:

This course deals with the basic foundation to specialization in Condensed Matter Physics and applications.

This course is an advanced which requires the special efforts and training.

This course will help the student to elaborate characterization techniques of as prepared materials using XRD and UV-VIS spectra.

# Course Outcomes: The present unit attempts to achieve the following learning outcomes:

- After completing this course the student will be prepare to explain the scope and possibilities of studies in structural properties of synthesized materials for various applications for research career as well as in industry.
- The students will be able to identify the structure, cell parameters, energy band gaps and optical properties of any given materials.

#### Course Contents:

- 1. Study the cubic structure of given XRD data and determine lattice parameters.
- 2. Study the hexagonal structure of given XRD data determine the lattice parameters.
- 3. Study the diamond structure using XRD data and determine of lattice parameters.
- 4. Study the Hall Effect and determine type and number of charge carriers.
- 5. Study the Hall Effect and determine type and Hall coefficient.
- 6. Study the Hall Effect and determine type and drift mobility.
- 7. Study the UV Vis Spectra of ZnO lattice.



# Course Name: Practical Based on PHYT/MJ/502 (General Nuclear Physics)

Course Code: PHYP/MJ/528, Course Type: MJ,

Contact Hours: 60, Credits: 02, Hours/Week: 04, Max. Marks: 50

Course objective: The themes dealt with in this paper:

This course gives basic foundation to specialization in nuclear physics and Spectroscopy and applications.

The course is an advanced course and requires special efforts.

The course will help the student to explain characteristics of Geiger Muller counter/tube: Operating voltage, Dead time and counting statistics.

Course Outcomes: The present unit attempts to achieve the following learning outcomes:

- After completing this course the student will be prepare to explain the scope and possibilities of studies in nuclear physics for research career as well as in industry.
- The students able to explain the characteristics of Geiger Muller counter/tube: Operating voltage, Dead time and counting statistics.

#### Course Contents:

- Determination of characteristics of Geiger Muller counter/tube:
   Operating voltage
- 2. Determination of dead time of a G. M. counter by double source method.
- 3. Determination of dead time of a G. M. counter by variable area method.
- 4. Statistical aspects of radioactivity measurements.
- 5. Beta backscattering as function atomic number.
- 6. Beta energy determination by feather's analysis.
- 7. To study the secular equilibrium.
- 8. To study the transient equilibrium.



# Course Name: Practical based on PHYT/DSE/504

Course Code: PHYP/DSE/529, Course Type: DSE,

Contact Hours: 60, Credits: 02, Hours/Week: 04, Max. Marks: 50

# Learning Objectives:

1. To facilitate the students to understand

a) The concepts of microprocessor and assembly language programming.

b) The concept of interfacing devices at laboratory as well industrial level

2. To provide an opportunity to the students to enter into entrepreneurship.

#### Learning Outcome: Students will be able to learn

1. Microprocessor architecture, physical configuration of memory, logical configuration of memory, microprocessor programming and interfacing.

2. Students will be capable to perform following job

a) Industrial automation using 8086 interfacing and programming.

b) Start his / her own small scale industry for manufacturing microprocessor based automated devices.

3. Students will have option to start his / her teaching career either in science or engineering colleges / institutes as this course is included in science as well engineering discipline.

#### Experiments using 8086 Kit

- 1. Data transfer, addition, subtraction, multiplication, division and sum of series
- 2. Factorial and square of the number
- 3. Sorting of data (ascending / descending), square root of a number
- 4. Arithmetic mean of N- numbers and sum of square of Numbers
- 5. Interfacing of SPDT switches and 7 segment display as a position encoder / decoder
- 6. Interfacing of stepper motor
- 7. Interfacing of DC motor
- 8. Interfacing of DAC to generate ramp wave, triangular wave and square wave.
- 9. Interfacing of 8-bit ADC
- 10. Interfacing of LCD display

# Experiments Using 8086 Assembler

11. Data transfer, addition, subtraction, multiplication, division and sum of series

- Company).
- 2. Electronic Communications Dennis Roddy and John Coolen (Pearson).
- 3. Communication Systems (Analog and Digital) R P Singh and S D Sapre. (TMH).
- 4. Electronic Communication Systems Kennedy and Davis (TMH)

# PHYL-321: Lab course 5 (Based on Electives A1/ B1/ C1/ D1)

# PHYL-321 - Lab course 5 (A1): 8086 Microprocessor and interfacing: Credits 3

#### Learning Objectives:

- 1. To facilitate the students to understand
  - a) The concepts of microprocessor and assembly language programming.
  - b) The concept of interfacing devices at laboratory as well industrial level
- 2. To provide an opportunity to the students to enter into entrepreneurship.

# Learning Outcome: Students will be able to learn

- a) Microprocessor architecture, physical configuration of memory, logical configuration of memory, microprocessor programming and interfacing.
- 1. Students will be capable to perform following job
  - a) Industrial automation using 8086 interfacing and programming.
  - b) Start his / her own small scale industry for manufacturing microprocessor based automated devices.



2. Students will have option to start his / her teaching career either in science or engineering colleges / institutes as this course is included in science as well engineering discipline.

#### Experiments using 8086 Kit

- 1. Data transfer, addition, subtraction, multiplication, division and sum of series
- 2. Factorial and square of the number
- 3. Sorting of data (ascending / descending), square root of a number
- 4. Arithmetic mean of N- numbers and sum of square of Numbers
- 5. Interfacing of SPDT switches and 7 segment display as a position encoder / decoder
- 6. Interfacing of stepper motor
- 7. Interfacing of DC motor
- 8. Interfacing of DAC to generate ramp wave, triangular wave and square wave.
- 9. Interfacing of 8-bit ADC
- 10. Interfacing of LCD display

#### **Experiments Using 8086 Assembler**

- 11. Data transfer, addition, subtraction, multiplication, division and sum of series
- 12. Factorial and square of the number
- 13. Sorting of data (ascending / descending), square root of a Number
- 14. Arithmetic mean of N- numbers and sum of square of Numbers

Note: Students should perform any eight experiments.

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## PHYL-322: Lab course 6 (Based on Electives A2/ B2/ C2/ D2)

PHYL-322 - Lab course 6 (A2): Microwave and communication Electronics: Credits 3

Learning Objectives: The themes dealt with in this paper:

- 1 6. Gain knowledge of microwaves, microwave components and verify the relationship between frequency and wavelength experimentally.
- 2 7. Experimental verification of the characteristics of Gunn and Klystron oscillators as microwave generators.





- 3 8. Determine the plane pattern and beam width of microwave horn antenna and study the inverse square law with the same.
- 4 9. Measure voltage standing wave ratio, S-parameters, Detector law, dielectric constant of solid and liquid with microwave bench setup.
- 10. Gain knowledge of communication and verify how the signal is transmitted and detected with different electronic circuits like PAM, PWM, PPM, FSK, and PL

# Learning Outcomes (COs): At the end of the course the student should be able to;

- CO-1 Understand the working use of all microwave components that may be used in a microwave X-band setup.
- CO-2 Assemble the bench as per the experimental requirement.
- CO-3 Obtain output power and perform experiment satisfactorily.
- CO-4 Conduct experiments smoothly, safely and interpret the data accordingly.
- CO-5 Apply practical knowledge of microwaves for other applications and research for finding basic properties of materials at microwave frequency.

#### Course contents:

- 1. Demonstrate the relationship between frequency (f), wavelength (1 o) in free space and Wavelength in waveguide (1 g)
- 2. Reflex Klystron Characteristics Mode diagrams, ETR and ETS
- 3. Gunn Diode Characteristics; I-V Characteristics, Power versus bias characteristics and Power-frequency characteristics
- 4. Microwave Horn Antenna E-H Plane pattern and Beam width
- 5. Study of square law behavior of microwave crystal detector and hence to determine Operating range and detection frequency
- 6. Study of high and low VSWR and impedance measurements using Smith chart.
- 7. Measurement of S- parameters of a) E-Tee b) Magic Tee c) Directional coupler.
- 8. Determination of dielectric constant of solids Two point method
- 9. Determination of dielectric constant of liquids Robert-Von Hipple method
- 10. Study of Faraday's rotational principle 10. Study of PAM and its detection
- 11. Study of Balance modulator using IC 1596
- 12. Study of FSK modulation and detection 13. Study of PPM and detection
- 14. Study of PLL
- 15. Study of PWM and detection
- 16. Reflection and refraction in microwaves.
- 17. Interference and diffraction in microwaves.

# Practical Paper No. ZOO-109 Practical's based on ZOO-101

#### (Biosystematics and Animal Diversity)

1. Museum specimen study of different groups of Invertebrates and Vertebrates.

2. Terrestrial ecosystem (Vegetation studies)- Abundance, Frequency, Density, Relative Diversity, Dominance, Raunkars biological spectrum, Index of Dominance etc.

3. Method of plankton collection, plankton identification and quantification from river or stream or lake water.

4. Methods of collection, preservation and identification of zooplankton.

- 5. Composition assessment of taxonomical diversity or biodiversity in habitat from local Grassland, Terrestrial and Wetland.
- 6. Composition assessment of taxonomic diversity/Biodiversity from different ecosystems.

a. Species diversity indices.

b. Relative density, Relative frequency and relative abundance of species.

7. Methods of collection, preservation and identification with keys from different groups of organisms like, Parasites, hosts, insects, birds and fishes etc.

8. Construction of taxonomic Key from the character in an animal group.

9. Visit to any biodiversity center /spots and submission of report

#### Practical Paper No. ZOO-110 Practical's based on ZOO-102 (Biochemistry)

1. Preparation of Acid and Alkali solutions and acid base titration

2. Preparation of Buffers of known pH, buffering capacity.

3. Identification of Carbohydrates by Chemical tests.

4. Estimation of Amino acid (Tyrosine)

5. Estimation of Protein by Lowry's method.

6. Estimation of Carbohydrates by Anthrone reagent method. (Glycogen)

7. Separation of amino acids by paper chromatography.

8. Study of factors affecting enzyme activity (Substrate concentration, pH, Temperature and Inhibitors)

9. Isolation of Casein protein from the milk.

10. Determination of isoelectric pH of Caesin.

# Practical Paper No. ZOO-111 Practical's based on ZOO-103

(Ecology: Principles and Practices)

1. Study of ecosystem biodiversity of local area.

2. Estimation of DO/BOD

3. Estimation of hardness of water sample. (Total, Sodium and Potassium hardness.) 4. Estimation of Salinity /Nitrates and phosphates from a given water sample.

5. Biomass analysis in a given ecosystem.

6. Species diversity in community and its measurement- Alpha diversity- Simpsons diversity index, Shannon index, Fisher alpha. Beta diversity- Sorensen's similarity index, Whittaker's index, Evenness, Gamma diversity, Guild and its functioning in the community.

7. Productivity estimation in given ecosystem (Primary and Secondary)

8. Study of efficiency of sampling method.

9. Study of air quality and aerobiology in given area.

10. Toxicology- Principles, toxicants- types, dose and effects, toxicity of heavy metals

11. Measuring ecotoxicity using a lettuce seed assay.

12. Estimation of various physical parameters of water (SSP, Turbidity, TDS etc).

13. Visit to any biodiversity centre /National park/Sanctuary and submission of report.

# Practical Paper No. ZOO-112 Practicals based on ZOO-105 (Helminthology I)

1) Collection of trematodes and cestodes from various hosts

2) Preservation, staining and identification of collected trematode & cestodes, and preparation of their permanent slides (At least, 10 from cestodes & 10 from trematodes).

3) Study of different trematodes and cestodes from permanent slides (At least, 10 from cestodes & 10 from trematodes).

4) Examination of fecal samples for ova.

5) Collection and examination of molluscan hosts for larvae of trematodes.

6) Study the effect of helminth parasites (histopathology) on their host's tissue by microtechnique. **Submission:** At least five permanent slides to be submitted at the time of practical examination

# Practical Paper No. ZOO-113 Practical based on ZOO-106 (Protozoology-I)

- 1. Collection, observation in living condition-fixation, staining and identification of protozoa from different habitats.
- a. Marine Protozoa
- b. Planktonic protozoa
- c. Soil protozoa
- 2. Study of population density of ciliates in fresh water.
- 3. Study of ecological factors in relation to freshwater ciliates.
- a. Oxygen
- b. Carbon dioxide
- c. pH
- d. Oxidized organic matter
- 4. Study of cyclosis in Paramecium.
- 5. Study of contractile vacuole to observe excretion and osmoregulation.

# Practical Paper No. ZOO-114 Practical based on ZOO-107 (Entomology I)

- 1. Study, mounting and sketching of types of mouth parts, antennae, wings, legs and genitalia of various insects. (2 in two insects)
- 2. Dissections of Digestive system / Reproduction system / Nervous system of five available at least 3 insects.
- 3. The study and preparation of permanent slides of any five organs of at least 2 insects
- 4. Estimation of enzyme activities of Amylase, Invertase, Lipase & Protease in the alimentary canal/midgut of cockroach.
- 5. Detection of uric acid as an end product of excretion in any terrestrial insect.
- 6. Study of types and Total count of haemocytes in haemolymph of any one insect.
- 7. Determination of role of insect hormones in the pupation of insect larvae by ligature technique.
- 8. Study of eggs, larvae and pupae/ nymph of any one insect.

# Practical Paper No. ZOO-115 Practical based on ZOO-108

#### (Endocrinology-I)

- 1. Histomorphological study of neuroendocrine system in various invertebrates (Annelida, Mollusca Arthropoda etc.) (at least 10 Slides)
- 2. Dissection of nervous systems in different invertebrates (Leech, crab, cockroach, slug, snail).
- 3. Histological preparation of slides of neuroendocrine centers (at least 5)
- 4. Effect of brain removal on oxygen consumption in leech.
- 5. Effect of background on integument chromatophores of the freshwater prawn, *Caridina / Macrobrachium*.
- 6. Effect of eyestalk removal on oxygen consumption of freshwater crab / prawn.
- 7. Effect of eyestalk removal on blood glucose level in crab / prawn.
- **8.** Effect of eyestalk removal on chromatophores in relation to background adaptation in *Caridina/Macrobrachium*

#### Laboratory Courses (LCs)

#### Developmental Biology (ZOO- 314): LC Based on ZOO-301

- 1. Whole Mount of different types of sperms.
- 2. Study of sperm count by Neubar's chamber.
- 3. Types of eggs and cleavage patterns.
- 4. Study of morphogenetic movements during development.
- 5. Stages of development in frog.
- 6. Studies of whole Mount of chick development; 16,18,24,33,36,48,72,98 hours.
- 7. Developmental stages of pond snail, Lymnaea.
- 8. Chick embryo and determination of its age.
- 9. Studies of cell death in chick embryo.
- 10. Regeneration in Planaria/Hydra.

#### Immunobiology (ZOO - 315): LC Based on ZOO-302

- 1. To determine the blood groups of given blood samples by slide agglutination techniques.
- 2. To perform double immunodiffusion (DID) by using Outhterlony's methods.
- 3. To carryout Immunoelectrophoresis.
- 4. To determine hemocytes from cockroach hemolymh.
- 5. To determine the activity of Phenoloxidase in hemolymph of cockroaches.

# Biostatistics & Microbiology and Human Welfare (ZOO- 316): LC Based on ZOO-304(a&b) and Animal Biotechnology ZOO-303

- i) Process the data using suitable computer software for calculating mean, median, and mode.
- 2. Calculation of average, variance, frequency distribution, standard deviation.
- 3 Making of graphs using Computer
- 4. Calculation of 't" test,( Unpaired and Paired)
- 5. Calculation of ANOVA
- 6. Calculation of Chi square test.
- 7. Techniques for isolation of pure cultures.
- 8. Gram stain for differentiation of bacteria.
- 9. Nutritional requirements: Media for the routine cultivation of Bactria.
- 10. Determination of growth curve of bacteria.
- 11. Methylene blue reductase test.
- 12. Standard qualitative analysis of water: Confirmed test of bacteria.
- Isolation colony characterization and Gram characteristics of bacteria from fermented food.(curd/idlibatter/ dhokla batter)
- 14. Testing of food adulteration (milk/ milk products/haldi or any food sample)
- 15. Determination of moisture in food sample. /Determination of ash in food sample
- 16. Antibiotic Potency test- Plate diffusion method (Minimum Inhibitory Concentration)
- 17. Visit to Food/ Pharmaceutical industry

#### Applied Parasitology - I (ZOO - 317):LC Based on ZOO-310

- 1. Study of different types of animal associations with suitable examples.
- 2. Study of different types of parasites, vectors etc.
- 3. Study of different/important ecto/endoparasites of poultry, fish, animal and human.
- 4. Study of hemoflagellates from vertebrate blood.
- 5. Preparation of blood smear, staining and identification of Haemosporina.
- 6. Study of different mosquito vectors of protozoan parasites.
- 7. Submission of permanent slides at the time of examination.

#### Animal physiology-I (ZOO-318):LC Based on ZOO-311

- 1. Effect of salinity on blood chloride content of crab.
- Effect of temperature on Heartbeat. Q<sub>10</sub> measurements in bivalve/crabs.
- 3. Estimation of glycogen from hepatopancreas and gonads of bivalve/crabs.
- Estimation of protein from hepatopancreas and gonads of bivalve/crabs.
- 5. Estimation of lipid from hepatopancreas and gonads of bivalve/crabs.
- 6. Estimation of cholesterol from hepatopancreas and gonads of bivalve/crabs.
- 7. Oxygen consumption in relation to sex and size/temperature of bivalve/leech/crabs.
- 8. Acid phosphatase activity in hepatopancreas of crab/bivalve.
- 9. Alkaline phosphatase activity in hepatopancreas of crab/bivalve.
- 10. Estimation of ascorbic acid from hepatopancreas and gonad of crab/bivalve.
- 11. Chromatophores in crustaceans and effect of background on color change.

#### Molecular Biology-I (ZOO- 319):LC Based on -ZOO-312

- 1. Extraction of genomic DNA from plant/bacterial/yeast/tissue/whole blood.
- 2. Determination of Molecular size of DNA.
- 3. Restriction digestion of DNA.
- Determination of molecular weight of different DNA fragments by running a standard marker on agarose gel electrophoresis.
- 5. Demonstration of plastids in the gel by gel electrophoresis.
- 6. To isolate and clearing of the DNA fragment of interest from the agarose gel.
- 7. To perform transformation of DNA into bacterial cells.
- To separate immunological proteins (alpha, beta and gamma) from serum by Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE).

#### Fishery Science-I (ZOO- 320):LC Based on ZOO-313

- 1. Identification of fish up to species level with suitable examples from each class.
- 2. Analysis of water: Turbidity, pH, dissolved oxygen, carbon dioxide, alkalinity, chlorinity.
- 3. Identification of plankton, nekton and benthos.
- 4. Fishing crafts and gears, hatching happa.
- 5. Identification fish parasites.
- 6. Identification of fish food ( at least twenty)
- 7. Visit to fish breeding centre.

- 15. Shang, Y.C. -Aquaculture Economic Analysis An Introduction. 1990.
- 16. Nikolsky, G.V. Ecology of Fishes. Academic Press, NY, 1963.
- 17. Hoar, W.S. & D.J. Randal- Fish Physiology, Vols. 1-4, Academic Press, NY,1970.
- 18. Carl, B.E. Biology of Fishes- Saunders, 1979.
- 19. Turnor- Textbook of endocrinology
- 20. Day, F.-The fishes of India.

#### Laboratory Courses(LCs):

#### Evolution and Behavior (ZOO- 409): LC Based on ZOO-401

- 1. Practical based on Hardy-Weinberg law.
- 2. Lederberg experiment.
- 3. Courtship behavior in Drosophila.
- 4. Wing beat and song produced.
- 5. Duration intervals of courtship songs (wing buzzing).
- 6. Reading behavior of praying Mantis.
- 7. Schooling behavior of fish.
- 8. Field visit to an animal husbandry centre.
- 9. Visit to NCCS, NCL, NIV, NARI Pune.

#### General Animal Physiology (ZOO-410): LC Based on ZOO-402

- 1. Qualitative survey of digestive enzymes in any vertebrate.
- 2. Estimation of salivary amylase activity.
- 3. Determination of abnormal and normal constituents of urine.
- 4. Estimation of chloride from haemolymph/ urine of cow.
- 5. Estimation of uric acid from serum.
- 6. Total count of R.B.C from human blood.
- 7. Differential count of W.B.C from human blood.
- 8. Estimation of Haemoglobin and carrying capacity of blood.
- 9. Measurement of blood pressure.
- 10. Hematin crystal formation.
- 11. Effect of temperature on the heart beat and Q10 measurement.
- 12. Effect of temperature on the rate of oxygen consumption
- 13. Measurement of respiratory quotients.

# Animal tissue culture, Virology and Epidemiology and applied Biotechnology ZOO-(411): LC based on ZOO-404 (a and B) and Applied Biotechnology II ZOO403

- 1. Study of cell viability determination by fluorescence staining method.
- 2. Study of cell viability determination by Trypan blue exclusion.
- 3. Characterization of cells by indirect immunofluorescences staining.
- 4. Isolation of hepatocytes by differential pelleting.
- 5. Standard procedure for cell separation by centrifugal elutriation (free electrophoresis).
- 6. Purification and preparation of neutrophils for FFE (Eggleton, 1989).
- 7. Isolation of erythrocytes.

- 8. Precipitin reaction: The ring test
- 9. Agglutination reaction: The febrile antibody test.
- 10. Cultivation of E.coli and isolation of its plasmid DNA by Mini prep Methods.
- 11.To cultivate lambda phage (λ) using appropriate E.coli culture.
- 12. To isolate DNA of bacteriophage lamda.
- 13. To culture animal viruses on various membrane of a developing chick embryo.
- 14. Drug Toxicity-LC50 and ED 50
- 15. Visit to Marine Research Laboratory or National Laboratory.
- 16. Antibiotic Potency test- Plate diffusion method (Minimum Inhibitory Concentration)
- 17. Visit to Food/ Pharmaceutical industry

#### Applied Parasitology-II (ZOO- 412):LC Based on ZOO-405

- 1. Study of prevalence and intensity of parasites from locally available hosts.
- 2. Demonstrate/study the effect of season/phonological factors as the prevalence and intensity of parasites.
- 3. Separation of immunological protein (alpha, beta, gamma) by paper or gel electrophoresis.
- 4. Estimation of antigen and antibodies in samples by quantitative precipitation essay.
- 5. Examination of fecal sample of sheep, goat and chicken.
- 6. Histopathology of Caeca of chicken to study different stages of schizonts.
- 7. Techniques for collection, fixation, preservation, staining and identification of different nematodes from different / various hosts.
- 8. Collection, preservation and identification of veterinary and medically important Annelids. Acanthocephalans and Arthropods.
- 11. Study of different types of mouthparts of vectors.
- 12. Visit to veterinary and medical parasitology/ pathology laboratory and study of food and water borne parasites.
- 13. Submission of permanent slides at the time of examination

#### Animal physiology-II (ZOO- 413):LC Based on ZOO-406

- 1. Denaturation and Coagulation of egg albumen.
- 2.Isoelectric point of Casein.
- 3. Effect of temperature on Heartbeat of fish, Q 10 measurement.
- 4.Effect of drugs on respiration of fish.
- 5. Estimation of Chloride from urine .
- 6. Estimation of Uric acid from rectum/blood of lizard/birds.
- 7. Determination of clotting time of blood.
- 8.Differential count of WBC form blood of human.
- 9. Effect of drugs on rate of heart beat.
- 10.Demonstration of Adrenalectomy and ovariectomy in rat.

#### Molecular Biology-II (ZOO- 414):LC Based on ZOO-407

- 1. Transformation of DNA in Bacteria.
- 2. Gene expression by Gal-x.

- 3. Detection/ determination of Auxotroph mutant.
- 4. Chromatin digestion with micrococcal nuclease.
- Isolation of DNA from animal / plant / bacterial cells by using kits.
- 6. Restriction digestion of DNA using nucleases.
- 7. DNA amplification using PCR.
- 8. Molecular weight determination using column chromatography and PAGE.
- 9. Isolation of plasmids from bacteria.

#### Fishery Science - II (ZOO - 415):LC Based on ZOO-408

- 1. Quantitative determination of glycogen, proteins and fats.
- 2. Dissections (any Bony fish)- digestive, reproductive, brain, pituitary gland and cranial Nerves.
- 3. Methods of food analysis with different feeding habits.
- 4. Study of different maturity stages and fecundity in fish.
- 5. Determination of growth in fish by scale or otolith method.
- 6. Determination of GSI and PI.
- 7. Histological preparation: Different glands and tissues.
- 8. Visiting CIFE, CIFA, FSI and CIFT etc.
- 9. Field work: Visit to fish production unit.

Research Project ZOO-416: The research project will commence from Semester III and the Final Dissertation should be submitted in the Semester IV Examination. The students have to defend their dissertation by means of open defense and viva -voce. The presentation should be with minimum 6-8slides

Dean & Technology
Faculty of Science & Technology
Or. Babasaheb Ambedkar Marathwada
Dr. Babasaheb Ambedkar Marathwada

#### ZOO/MJ/503

#### Practical based on ZOO/MJ/500

#### (Biosystematics and Animal Diversity)

- 1. Museum specimen study of different groups of Invertebrates.
- 2. Museum specimen study of different groups of Vertebrates
- 3. Terrestrial ecosystem (Vegetation studies)- Abundance, Frequency, Density, Relative Diversity, Dominance, Rounkers Biological Spectrum, Index of dominance etc.
- 4. Method of plankton collection, plankton identification and quantification from river or stream or lake water.
- 5. Method of collection, preservation and identification of zooplankton.
- 6. Composition assessment of taxonomical diversity or biodiversity in habitat from local Grassland, Terrestrial and wetland.
- 7. Composition assessment of taxonomic diversity/biodiversity from different ecosystems.
  a. a. Species diversity indices.
- 8. Relative density, relative frequency and relative abundance of species.
- 9.Method of collection, preservation and identification with keys from different group of organism like parasite, etc.
- Method of collection, preservation and identification with keys from different group of organism like insects, birds and fishes etc.
- 11. Construction of taxonomic Key from the character in an animal group.
- 12 .Construction of Phylogenetic tree from the characters of an animal group.
- 13 Study of larval forms in crusteceans /coelenterates/helminths(from permenant slides)
- 14. Visit to any biodiversity center / spots and submission of report.

#### ZOO/MJ/-504

#### Practical based ZOO/MJ/-501 (BIOCHEMISTRY)

- 1. Preparation of Acid and Alkali solutions
- 2. Preparation of acid base titration.
- 3. Preparation of Buffers of known pH, buffering capacity.
- Qualitative test for Carbohydrates.
- 5. Qualitative test for lipids.
- 6. Preparation paper model of DNA.
- 7. Estimation of Amino acid (Tyrosine)
- 8. Estimation of Protein by Lowry's method.
- 9. Estimation of Carbohydrates by Anthrone reagent method. (Glycogen)

- 10. Separation of amino acids by paper chromatography.
- 11. Separation of Proteins by Gel electrophoresis.
- 12. Study of factors affecting enzyme activity (Substrate concentration, pH, Temperature and Inhibitors)
- 13. Isolation of Casein protein from the milk.
- 14. Determination of isoelectric pH of Caesin.

#### ZOO/MJ/-505

#### Practical based on ZOO/MJ/-502

#### (ECOLOGY: PRINCIPLES AND PRACTICES)

- 1. Study of ecosystem biodiversity of local area.
- 2. Estimation of DO/BOD
- 3. Estimation of hardness of water sample. (Total. Sodium and Potassium hardness.)
- 4. Estimation of Salinity /Nitrates and phosphates from a given water sample.
- 5. Biomass analysis in a given ecosystem.
- 6. Species diversity in community and its measurement- Alpha diversity- Simpsons diversity index. Shannon index, Fisher alpha. Beta diversity- Sorensen's similarity index, Whittaker's index, Evenness, Gamma diversity, Guild and its functioning in the community.
- 7. Productivity estimation in given ecosystem (Primary and Secondary) 8. Study of efficiency of sampling method.
- 9. Study of air quality and aerobiology in given area. 10. Toxicology- Principles, toxicants- types, dose and effects, toxicity of heavy metals
- 11. Measuring ecotoxicity using a lettuce seed assay.
- 12. Estimation of various physical parameters of water (SSP, Turbidity, TDS etc).
- 13. Visit to any biodiversity centre /National park/Sanctuary and submission of report.

#### Practical

#### ZOO/MJ/-506-Skill/ Advanced technique

#### Unit-V Neuroendocrine mechanisms in Echinodermata.

- 1. Histomorphology of radial nerve neurosecretory system in starfish.
- 2. Neurosecretory hormones and control of reproduction in Echinodermata.
- 3. Hormone types and their chemical nature in echinoderms.

#### References

- 1. Highnam K.C. and Hill L: The comparative Endocrinology of Invertebrates.
- 2. Adiyodi and Adiyodi: Reproductive Biology of invertebrates Vol. I & II.
- 3. Laufer H. and Downer R.C.H. Endocrinology of selected invertebrates Types.
- 4. Journals and Internet resources.
- 5. Boolootian R.: Physiology of Echinodermata.

#### Reference Book

- 1. Patil Meena: Neurobiology and Electrophysiology of Decapod.
- 2. Crustacean Lockwood , A.P.M.: Aspects of Physiology of Crustacea.
- 3. Novak, U.J.A.: Insect hormones.
- 4. Rock stein M.: The physiology insect Vol.I.
- 5. Wilbur K.M. and Young ,C.M. Physiology of Mollusca Vol.I and II Mill P.J. Physiology of Annelida.

#### ZOO/DSE/-508

#### Praciticals based on ZOO/DSE/507 (Helminthology I)

- 1. Examination and survey of host(vertebrates) for parasitic col lection
- 2. .Collection of trematodes and cestodes from various host.
- 3. Preservation, staining and mounting of collected trematodes & cestodes and preparation of their permanent slides (At least 10 from cestodes and 10 from trematode).
- 4. Identification of parasites from the prepared slides.
- 5. Study of different trematode and cestodes from permanent slide (At least 10 from cestodes and 10 from trematode).
- 6. .Study of hold fast organs in helminths.
- 7. Examination of fecal samples for ova.
- 8. Study of different larvae of helminth parasites (from permanent slides)
- 9. .Collection and examination of molluscan hosts for larvae of trematode.
- 10. .Study of effect of helminth parasites(histopathology) on the host tissue
  - a. micro technique.
- 11. Submission: At least five permanent slides to be submitted at the time of practical examination.

#### ZOO/DSE/-510

#### Practical based on ZOO/ DSE /-509 Protozoology-I

- 1. Collection, observation in living condition-fixation, staining and identification of protozoa from different habitats.
  - a. Marine Protozoa
- 2 Collection, observation in living condition-fixation, staining and identification of Planktonic protozoa.
- 3. Collection, observation in living condition-fixation, staining and identification of Soil protozoa.
- 4. Study of population density of ciliates in fresh water.
- 5. Study of ecological factors in relation to freshwater ciliates.
  - a. Oxygen b. Carbon dioxide
  - c. pH .d. Oxidized organic matter
- 6. Study of different protozoans
- 7. Study of cyclosis in Paramecium.
- 8. Study of contractile vacuole to observe excretion and osmoregulation.
- 9. Submission of slides.

#### ZOO/DSE/-512

#### Practical based on ZOO/ DSE /-511 Entomology-I

- 1. Study, mounting and sketching of types of mouth parts, antennae
- 2. Study, mounting and sketching of wings, legs.
- 3. Study, mounting and sketching of genitalia of various insects.
- 4. Dissections of Digestive system of five available/ at least 3 insects.
- 5. Dissections of Reproductive system of five available/ at least 3 insects.
- 6. Dissections of Nervous system of five available/ at least 3 insects.
- 7. The Study and preparation of permanent slides of any five organs of at least 2 insects.
- 8. Estimation of enzyme activities of Amylase, Invertase, Lipase & Protease in the alimentary canal / midgut of cockroach.
- 9. Detection of uric acid as an end product of excretion in any terrestrial insect.
- 10. Study of types and Total count of haemocytes in haemolymph of any one insect.
- 11. Determination of role of insect hormones in the pupation of insect larvae by ligature technique.
- 12. Study of eggs, larvae and pupae / nymph of any one insect.

#### ZOO/DSE/514

## Practical based on ZOO/DSE/513 (Endocrinology-I)

- 1. Histomorphological study of neuroendocrine system in various invertebrates (Annelids, Mollusca Arthropoda etc) (At least 10 Slides)
- 2. Dissection of nervous systems in different invertebrates (Leech, Crab, Cockroch. etc)
- 3. Histological preparation of slides of neuroendocrine centers (at least 5)
- 4. Effect on brain removal on oxygen consumption in leech.
- 5. Effect of background on integument chromatophores of the freshwater prawn, *Caridina/Macrobachium*.
- 6. Effect of eyestalk removal on oxygen consumption of freshwater crab/prawn.
- 7. Effect of eyestalk removal on blood glucose level in crab/prawn.
- 8. Effect of eyestalk removal on chromatophores in relation to background adaptation in *Cariadina/Macrobacrium*

## PRACTICALS

#### ZOO/MJ/-553

#### Practical based on ZOO/MJ/-550 Genetics and Bioinformatics

#### Genetics and Bioinformatics (Any 8)

- 1. Determination of blood groups and suggestions on Medico legal problems regarding the parentage disputes using blood groups.
- 2. Problems based on interaction of genes
- 3. Culture of Drosophila melanogaster and study of its life cycle stages
- 4. Mutant studies in Drosophila.
- 5. Identification of blood group, a case study of multiple alleles.
- 6. Chironomous larva Giant Chromosomes
- 7. Study of gene frequency using PTC tests (taster and non tasters)
- 8. database search and data retrieval-using NCBI, SWISS-PROT, PDB, Expasy.
- 9. Methods of sequence alignment-BLAST and Clustal W.
- 10. Phylogenetic tree using PHYLIP.
- 11. Gene Prediction using GENSCAN/GRAI.
- 12. Protein structure visualization using RASMOL.

#### ZOO/MJ/-554

## Practical based on ZOO/MJ/-551 Cell and Molecular Biology

- 1. Preparation of different cell types as hepatocytes/ parenchymal cells
- 2. Study of tumor and cancerous cell (Use permanent slides)
- 3. Study of Stages of Mitosis (permanent slides)
- 4. Study of Stages of Meiosis (permanent slides)
- 5. Squash preparation of grasshopper testis to study meiotic stages.
- 6. Determination of mitotic index in the squash preparation of onion root tip. Effect of drugs on cell division (Colchicine or any other inhibitor)
- 7. Study of mitochondria by vital staining technique.
- 8. Fulgen reaction- Staining of DNA.
- 9. Micronuclei test.
- 10. Induction of puff and study of puffing pattern.
- 11. Study of polytene chromosomes.
- 12. Preparation of Microtome section, spreading.
- 13. Histochemical staining of carbohydrates (PAS), Protein (Bromophenol blue), lipids (Sudan Black), DNA (Fuelgen stain).

#### ZOO/MJ/-555

## Practical based on ZOO/MJ/-552 Immunobiology

- 1. To study the immunological techniques. (Cell culture, ELISA, Flow cytometry)
- 2. To study the different cells of immune system (by permanent slide/charts)
- 3. To determine the blood groups of given blood samples by slide agglutination, technique.
- 4. Blood group antigen and research system
- 5. Blood cell count
- 6.To perform double immunodiffusion (DID) by using Outherlony's method.
- 7. To carry out Immunoelectrophoresis..
- 8.To determine haemocytes from cockroach hemolymph.
- 9. To determine the activity of Phenol oxidase in haemolymph of cockroaches

10. To study the immunodeficiency diseases.

Praicitical.

ZOO/MJ/-556- Skill/ Advance technique

#### ZOO/DSE/558

#### Practical based on ZOO/DSE/-557 Helminthology-II

- 1. Collections of Nematodes from locally available animals
- 2. Basic techniques of preservation and mounting of Nematodes
- 3. Identification of collected Nematodes
- 4. Fecal sample analysis for collection and identification of ova.
- 5. Study of permanent slides of animal nematodes (At least 8).
- 6. Study of larva.
- 7. Collection and identification of Phyto nematode.
- 8. Techniques of collection, fixation, mounting and preparation of permanent slides of phytonemes.
- 9. Study of permanent slides of plant nematodes.
- 10. Submission of permanent slides at the time of examinations.

#### ZOO/DSE/560

## Practical based ZOO/DSE/558(Protozoology II)

- 1. Classification of parasitic protozoa.
- 2. Study of ciliates in alimentary canal of vertebrates and invertebrates.
- 3. Impregnation of ciliates with dry silver nitrate for study of kinetic structure.
- 4. Study of haemoflagellates from vertebrate blood.
- 5. Preparation of blood smear, staining and identification of staining of haemosporina.
- 6. Histopathology of host tissue caused by Apicomplexan parasites.
- 7. Examination of fecal sample of vertebrate host for oocyst of coccidia.
- 8. Collection of coccidian oocysts by centrifugation method.
- 9. Observation of oocysts for sporulation.
- 10. Study of different mosquito vectors of protozoan parasites.
- 11. Collection of Myxozoa from fishes.
- 12. Study of binary fission and conjugation in ciliates

#### **ZOO/DSE/-562**

## Practical Based on ZOO/DSE/-559 Entomology II

- 1. Collection, preservation, sketching, identification and classification of insects from Marathwada belonging to orders- Thysanura, Collembola, Odonata, Orthoptera, Mallophaga, Anopleura, Isoptera.
- 2. Collection, preservation, sketching, identification and classification of insects from Marathwada belonging to orders Hemiptera, Coleoptera, Neuroptera, Hymenoptera. Lepidoptera. and Diptera and insects from Marathwada.
- 3. Identification damage symptoms, and management practices of pests of Jowar. Cotton, Sugarcane, Soyabean,
- 4. Identification damage symptoms, and management practices of pests of Vegetables, Fruit Crops. Stored grains.
- 5. Collection and study of parasitic, predatory and biological control agents.
- 6. Collection and study of pollinator insects,
- 7. Collection and study of forensic insects.
- 8. Study of insect vectors like mosquito, bed bug, flea, body louse, rat flea.
- 9. Study of silk worm adult, caterpillar, cocoon and types of silk worms.
- 10. Study of Indian species of honeybee and Study of life cycle of honeybee.

- 11. Study of Indian species of Lacifer lacca and its life cycle stages.
- 12. Field visit for demonstration of pest damage/Sericulture farm/Apiculture farm.

#### ZOO/DSE/-564

## Practical based on ZOO/DSE/-560 Endocrinology- II

- 1. In situ demonstration of endocrine glands in rat or by demonstration using visual aids.
- 2. Histological study of endocrine glands in different vertebrate representatives
- 3. Anatomical studies of reproductive system in and rat
- 4. Study of estrous cycle in rat
- 5. Endocrine gland removal in rat- a) Orchidectomy b) Ovaryectomy
- c) Adrenalectomy d) Thyroidectomy
- 6. Effect of thyroxin on oxygen consumption in fish
- 7. Chromatophores and colour changes in fish (a) Effect of back ground and (b) Effect of MSH injection.
- 8. Determination of cholesterol in the adrenal gland of rat.
- 9. Effect of insulin on blood glucose levels in fish / rat
- 10. Histological techniques: preparation of permanent slides for histological structure of endocrine glands of rat (at least 5 be submitted)

# ZOO/OJT/FP/565 -On job training/Field project







# NEP-2020 BASED CURRICULAM, FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

		Semester: 1		
Course	Name: Inorganic Chemist	ry Laboratory Course-1	Course Code: CHEL/MJ/ 504	-
Course type : DSC-5			4 Hrs/ Week	
	Total contact hours :60 Hrs Lab. Work Credit: 2 Marks : 50			
Course	outcomes:			
On cor	npletion of this course, th	ne students will be able:		
1.	To understand the differ	ence between qualitative and	quantitative analysis.	
2.	To understand the conce chemical reactions and	ept of qualitative and quantita	itive chemical analysis and their	
3.	To understand the design volumetric and gravimo	an and development of exper etric analysis of chemical con	imental setup and procedure, for apound.	
4.	To identify constituents	s of chemicals qualitatively a	nd quantitively	
5. To understand importance of accuracy and precision in measurement of chemical analysis				
6. To apply grasped knowledge to solve chemical analysis related issues of stakehole		r.		
7.	7. To understand importance of laboratory skills, precaution, accuracy and precisio			
8.	To separate and identi	fy acidic & basic radicals from	n chemical sample.	
9.	To apply the grasped	knowledge in chemical analy	rsis of unknown sample.	
List	of experiments			
Sr	Group-1 (Any 3)			
No L	Separation and Ident	ification of three basic rad qualitative analysis method	icals from II group sample and their chemical reactions.	
2.	Separation and Ident	ification of three basic radic	als from III-A group sample and their chemical reactions.	
3.	Separation and Ident	ification of three basic radio	cals from III-B group sample and their chemical reactions.	
4	Separation and Iden mixture by semimicro	tification of three basic rac o qualitative analysis method	licals from IV group sample and their chemical reactions	
5.	. Separation and Ident	fication of three basic radication	als from special group sample and their chemical reactions.	
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Pathan Mohd Arif All Khan

M.Sc. Chemistry I & II Semester effective from 2023-24 & onwards

Dr. Babasaheb Ambedkar Marathwada

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00//	Gr	oup- II (Auy 3)	-
		topic madicals (10) II, III/I and IIID	
	6.	Separation and Identification of three basic radicals from groups sample mixture by semimicro qualitative analysis method and their	
	0.	by semimicro quantative analysis means	
		groups sample many	
		chemical reactions.  Separation and Identification of three basic radicals from IIIA, IIIB & IV	
		three basic faultus from the	
- 1	7.	Separation and Identification of three obsideration and Identification of three obsiderations and Identification of the Identification of the Identification of the Identification of Identification	
-		groups sample mixture by semimere quantity	
1		chemical reactions.	
-		Separation and Identification of three basic radicals from IIIA, IIIB & V groups	
	8.	Separation and their relations of the separation and their chemical	
		sample mixture by semimicro qualitative analysis method and their chemical	
		reactions.	
-	0	Separation and Identification of three basic radicals from IIIA, IV & special	
	9.	Separation and Identification of three basic faulters from first, it is special	
- 1		groups sample mixture by semimicro qualitative analysis method and their	
		chemical reactions.	
		Group- III (Any 3)	
-	10.	Identification of Carbonate, Chloride Iodide and Acetate, ions from given	
- 1		mixture by semimicro qualitative analysis method along with chemical reaction	
		of each radicals.	
	11.	Identification of Nitrata Phoceshots Overland and C. L. L.	
		Identification of Nitrate, Phosphate, Oxalate and Sulphate ions from given	l
		mixture by semimicro qualitative analysis method along with chemical reaction	- 1
1		of each radicals.	- 1
	12.	Identification of the Marita David	- 1
		identification of the Chloride, Bromide, Iodide and Acetate ions from given	
		with Chemical reaction of each region to	- 1
	13	Identification of Phosphate , Oxalate , thiosulphate and Acetate ions from given	- 1
		mixture by coming to Addate, thiostiphate and Acetate ions from given	
		of each radicals.	- 1
		of each radicals.	- 1
	14	Identification of Carbonate, Nitrate, Oxalate and thiosulphate ions from given	
		miyura bu care i	
		statute by semimicro qualitative analysis method along the	- 1
-		mixture by semimicro qualitative analysis method along with chemical reaction	
		Group- IV (Any 3)	1
			- 1
1	15.	Qualitative and	
	-	Qualitative analysis of metal ions present in soil sample.	- 1
	6.	Determine the temporary and permanent hardness of given sample of water  To determine the percentage of place.	
		recentime the temporary and permonent	1
	7.	The permanent hardness of given sample of	
1		o determine the percentage and sample of water	
_	1	Ammonium at prosphate as DL	- 1
1	8.	To determine the phosphomolybdate method	
		the percentage of	- 1
-		miculon Dyalata	- 1
1	9.	To determine the	-
The same of the sa		by Volleger	- 1
	-	Party of Sodium chloride in a	- 1
		To determine the percentage purity of Sodium chloride in commercial salt sample  References Books	-
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# NEP-2020 BASED CURRICULAM FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

and courts & course a	A Text book of Quantitative Inorganic Analysis- A. I. Vogel	
1	1 Text book of Quantitative morgani	
1	1. Observatory Pass Geoffrey and Haydn Sutcliffe	
	Practical Inorganic Chemistry- Pass Geoffrey and Haydn Sutcliffe	-
1	Advanced Practical Inorganic Chemistry- Gurudeep Raj	
The same of the sa	Advanced Practical Inorganic Chemistry Carry	<del>                                     </del>
	Analysis, VII Edn. Orient Longman Ltd. D.	1
5.	Vogel's Qualitative Inorganic Analysis- VII Edn. Orient Longman Ltd. D.	
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6.	A Text book of Micro and Semi micro Qualitative Inorganic Analysis- IVedn,	
***	A. I. Vogel	
	L A plusis A I Voge	
7.	A Text book of Quantitative Inorganic Analysis- A. I. Vogel	-
\ '.	Practical Inorganic Chemistry- Pass Geoffrey and Haydn Sutcliffe	
8.	Progress Inorganic Chemistry- Pass Geometry and Trage	

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The suppression of the state of	Semester : I	
Course Name: Organic Chemis	Course Code:CHEL/MJ/- 505	
Course type : DSC-6		4 Hrs/ Week
Total contact hours :60 Hrs	Lab. Work Credit: 2	Marks: 50

#### Learning Outcome:

On completion of this course, the students will be able

- 1. Understand the separation and purification techniques
- 2. Understand various step involved in identification of organic compounds
- 3. Understand the handling of equipment required for the analysis of organic compounds.
- 4. Understand the stichometry of the reaction
- 5. To check the purity of compound using TLC
- In check the Melting point

# List of experiments

# Qualitative Organic Analysis

Separation, purification and identification of binary (Solid-Solid) mixtures with one water soluble compound.

The separation should be carried out using Chemical method/ physical method The two components are solid-solid mixtures.

Student should submit the purified samples of the separated compounds and prepare a suitable derivative of the two compounds separated out.

Note: Analysis of at least five mixtures should be carried out.

#### 2 Single Stage Preparations

- i) p-naro acetanilide from acetanilide.
- in Dibenzylidene acetone from Benzaldehyde
- iii) p-r itrobromobenzene from bromobenzene
- iv) salicyladehyde from phenol ( Reimer Tiemann reaction)
- v) b benzol propionie acid from succinic anhydride
- Note: i) The preparations should be carried out using (0.02 to 0.05 mole) of the
- ii) The yield, melting point and TLC of the recrystalised product should be recorded. Note Student will not be allowed for practical examination if his/her record book is

mester effective from 2023-24 & onwards

Dr. Babasaneb Ambedkar Marathwada University Aurangebad (M.S)







# NEP-2020 BASED CURRICULAMI FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

		Semester: 1		
nurse N	ame: Physical Chemistry	/ Laboratory Course-1	Course Code:CHEL/MJ/-506	
THE STREET, ST	DSC 7	and the latest section of the latest section	4 Hrs/ Week	
Appropriate to the state of the	urse Type: DSC-7	Lab. Work Credit: 2	Marks: 50	
Total co	outact hours :60 Hrs	Lab. Work Cream. 2		
	Course Outcomes:	a. A. C. A.		
	On completion of this cou	rse, the students will be able:		
1.	To analyse sample by var	ious instrumental techniques		
2.	To handling of electronic	equipment		
3.	To understand laboratory	skills, precaution, accuracy an	d precision.	
4,	To design experimental	procedure for analysis importan	t chemicals &samples	
5.	To understand the physi	nysical properties of chemicals		
6.	To distinguish accuracy of results in instrumental and non instrumental methods			
Unit	I-I: Instrumental			
1.	Determination of strengths of halides in a mixture potentiometrically.			
2.	1	rength of strong and weak acid	in a given mixture	
3.	Determination of solution	pility and solubility product of s	paringly soluble salt BaSO4.	
4	. Determine the pK <sub>1</sub> and	d pK2 value of phosphoric acid l	by pH me try.	
5	Determine the indicat	Determine the indicator constant of given indicator by colorimetric measurements.		
6	Study of kinetics of inversion of cane sugar,			
	7. of lattice parameters	& particle sizes.	ce &fee metal oxides &calculati	
	water, evolution of la	ittice oxygen and phase transition	•	
1	Thermal analysis o transition temperature	f any 5 well known polymer res.	s and interpretation of their gl	
U	Init-II: Non-Instrumenta			

Prof. Pathan Mohd Arif All Kha...

M.Sc. Charaistry I & II Semester effective from 2023-24 & onwards

Dr. Babasaheb Ambedkar Dr. Babasaheb Ambedkar Aurangabad (M.S)



and the second of	Determine the molecular refraction of methyl acetate, ethyl acetate, n-hexane and carbon
1.	tetrachloride and calculate the refraction of CH <sub>2</sub> , C, H and O atoms.
7	To study the effect of surfactants (sodium chloride) on surface tension of given liquid.
3.	To determine the radius of molecule by viscosity measurements.
4.	Determine the solubility of benzoic acid in water at different temperature and hence its
٠٠.	heat of solution.
5.	Determine the formula of the complex formed between Cu(II) and ammonia by
	distribution method.
6.	Determine the velocity constant of hydrolysis of ester.
Refe	rence Books:
1.	Systematic experimental physical chemistry – T. K. Chondhekar & S.W. Rajbhoj
2	Experiments in chemistry D.V. Jahagirdar

crof, Pathan Mohd Arif All Khan

# NEP-2020 BASED CURRICULAM FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD



	Semester : 11	
Course Name: Inorganic Chemist	ry Laboratory Course -II	Course Code: CHEL/MJ/- 554
Course type : DSC-12		d Hrs/ Wook

Total contact hours :60 Hrs Lab. Work Credit: 2 Marks: 50

## Learning outcomes:

On completion of this course, the students will be able:

- To design experimental procedure for synthesis of metal complexes, calculation of conversion factors and characterization of synthesized coordination complexes compounds.
- To understand, which skills are required in chemical laboratory.
- To understand importance of accuracy and precision in chemical analysis
- To design the experimental procedure for separation and estimation of metals from mixture solution
- To estimate the amount of constituents of chemicals by volumetric and gravimetric methods.
- To apply grasped knowledge for finding purity of chemicals.

# List of experiments

And the second	Group-1 (Any 3)	
1.	Preparation of [Mn(acac)3] complex and its spectral analysis.	
2.	Preparation of Hg[(Co(SCN)4] complex and its spectral analysis.	
3.	Preparation of [Co(III)(NH <sub>3</sub> )6]Cl <sub>3</sub> complexes and its spectral analysis.	
4.	Preparation of [Ni (NH <sub>3</sub> ) <sub>6</sub> ]Cl <sub>2</sub> complex and its spectral analysis.	
	Group- II (Any 2)	
5.	Preparation of Cis-K[Cr(C <sub>2</sub> O <sub>4</sub> ) <sub>2</sub> (H <sub>2</sub> O) <sub>2</sub> ] complex and its thermogravimetric analysis.	
6.	Preparation of VO(acac)2 complex and its thermogravimetric analysis.	

Prof. Pathan Mohd Arif Ali Khan

Chairman

Board of Studies in Chemistry,

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# NEP-2020 BASED CURRICULAM FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGAS

	Description of Control	089
	Preparation of [Cu(NH <sub>2</sub> ) <sub>4</sub> ]SO <sub>4</sub> .H <sub>2</sub> O complex and its thermogravimetric analysis.	
	Group- III (Auy 3)	
	Preparation of K <sub>3</sub> [Fe(C <sub>2</sub> O <sub>4</sub> ) <sub>3</sub> ] complex and estimate the amount Iron present in it.	
9.	Preparation of [Co(III)(NO <sub>2</sub> )(NII <sub>3</sub> ) <sub>3</sub> ]Cl <sub>2</sub> complex and estimate the amount cobalt present in it.	
10	Preparation and estimation of percentage of copper from the [Cu (NH <sub>2</sub> CSNH <sub>2</sub> ) <sub>3</sub> ] (NO <sub>3</sub> ) <sub>2</sub> complexes	
	Group- IV (Any 3)	
	<ol> <li>Separation of Copper and Nickel from the given binary mixture sample and estimate the amount of Copper by volumetric and Nickel by gravimetric method.</li> <li>Separation of Nickel &amp; Zinc from given binary mixture sample and estimate the amount of Zinc by volumetric method and Nickel by gravimetric method.</li> <li>Separation of Copper &amp; Barium from given binary mixture sample and estimate the amount of Copper by volumetric method and Barium by abod</li> </ol>	
	gravimetric method.  14. Separation of Iron & Aluminium from given binary mixture sample and estimate the amount of Aluminium by volumetric method and Iron by	
	15. Separation of Copper & Iron from given blindy limited and Iron by estimation of amount of Copper by volumetric method and Iron by	
	16. Separation of Iron & Magnesium volumetric method.	
	Group- V (Any 3)  17. Determination of percentage purity of concentrated hydrochloric acid by volumetric method.	
	18. Determination of chemical oxygen demand from given sample of water by	
•	Determination of dissolved oxygen from given sample of water by yolumetric method.	



# 2-2020 BASED CURRICULAM FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

20.	Determination of the percentage purity of copper sulphate from given commercial sample.	
21.	Determination of the amount of water content in commercial sample of copper sulphate.	
	References Books	
l.	Advanced Practical Inorganic Chemistry- GurudeepRaj;.	
2.	Practical Inorganic Chemistry- Pass Geoffrey and Haydn Sutcliffe.	
3.	A Text book of Micro and Semi micro Qualitative Inorganic Analysis, IVedn. A. I. Vogel	
4.	A Text book of Quantitative Inorganic Analysis; A. I. Vogel	
5.	Vogel's Qualitative Inorganic Analysis, VII Edn. Orient Longman Ltd. D. Svehla	

Prof. Pathan Mohd Arif All Khan
Chairman
Board of Studies in Chemistry,
Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad (M.S)

# NEP-2020 BASED CURRICULAM FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

		Semester : II	
	Name: Organic Chemistry		
		Canoratory Course-II	Course Code:CHEL/MJ/- 555
Course	type : DSC-13		4 Hrs/ Week
Fotal c	ontact hours :60 Hrs	Lab. Work Credit: 2	Marks: 50
	Course Outcomes  1. To Perform/demonst	rate the techniques involve	d in organic binary mixture
separation specially so  2. To perform distillati  3. To use/ apply the tection Group detection		on techniques for purificati chnique of separation, cryst on	on of organic compounds. allization derivatization and al compounds using named
1	The separation should be The two components are Student should submit to	and identification of binary e carried out using Chemic	eparated compounds and prepare
2	i) p-Bromo acetanilde ii) 1.4-dichlorobenzene iii) Benzophenone from iv) Cinnamic acid from v) o-iodo benzoie acid	ingle Stage Preparations:  p-Bromo acetanilide from acetanilide.  1.4-dichlorobenzene from p-chloroaniline  Benzophenone from benzene (Friedel Craft)  Cinnamic acid from Benzaldehyde (Perkins reaction)  o-iodo benzoic acid from anthranilic acid	
	Note: i) The preparati starting material. ii) The yield, melting	ons should be carried out	using (0.02 to 0.05 mole) of the recrystallized product should be camination if his/her record both

Prof. Pathan Mohd Arif All Khan Studies in Chemistry.

M.Sc. Charaistry ( & II Semester effective from 2023-24 & onwards

is not completed and certified.



# NER 2020 BASED CURRICULAMI FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

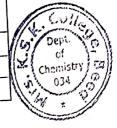
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) ea		Semester: II				
	Course Name: Physical Chemistry Labo		oratory Course -II	Course Code: CHEL/MJ/556		
	Co	ourse Type: DSC-14		4 Hrs/ Week		
	То	tal contact Hours :60 Hrs	Lab. Work Credit: 2	Marks: 50		
Course Outcome:						
		On completion of this course, the				
	2.	To analyse sample by various in	strumental techniques			
	3,	To handling of electronic equipn	ient			
	4.	To understand laboratory skills,	precaution, accuracy and p	precision.		
	5.	To design experimental procedur	e for analysis important ch	emicals &samples		
	6.	To understand the physical prope				
	7.	To distinguish accuracy of result		nstrumental methods		
	1.	Unit-I: Instrumental				
	2.	Determination of dissociation constants of phosphoric acid potentiometrically.				
	3.	Determination of dissociation con	nstants of phosphoric acid (	potentiometrically.		
	3.	Determination of dissociation cor	ustants of weak acid potent	iometrically.		
	4.	Determination of acidic and basic dissociation constants of an amino acid and its				
	5.	Determination of equilibrium que	otient for the formation of n	Jonothinevnato !		
	6.	Determination of equilibrium quotient for the formation of monothiocynato iron (III)  To study the kineties of mutarotation of glucose/fructose polarographically.				
	7.	Study of thermal analysis (TG/D)	CA/DSC) in atmost 1	arographically.		
	1	Study of thermal analysis (TG/DTA/DSC) in atmosphere of evolved gases e.g decomposition of CaCO <sub>3</sub> , KClO <sub>3</sub> etc in environment of gases such as N <sub>2</sub> , O <sub>2</sub> , CO <sub>2</sub> ) their characterization by infra – red spectroscopy.				
	8.	i was contracted to the face of		THE HIM AND ADDRESS OF THE PARTY OF THE PART		
	1 9 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					
	reaction kinetics by IR spectroscopy.  Study of kinetics of really.					
	11.	Study of kinetics of zeolite synthesis by infrared spectroscopy.  Identification of acidic and the infrared spectroscopy.				
		Unit-II: Non-to-				
	سبلا					
		To study the adsorption of acetic acid from aqueous solution by activated charcoal and examine the validity of Freundlich and Langmuir's isotherm.  To construct the phase diagram for three component system (chloroform-acetic acid to study auto catalysis reaction between				
	2.	water).	unce component			
	3.	To study auto catalysis reaction between	year	(enforoform-acetic acid		
31	3. To study auto catalysis reaction between potassium permanganate and oxalic acid.					
a Condi	Chairma: dl Khari					

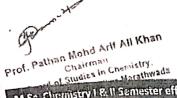
# 2020 BASED CURRICULAM FOR PG COURSE IN AFFILIATED COLLEGES OF DR.BAMU, AURANGABAD

- Determine the rate constant of the reaction between potassium persulphate and potassium iodide having equal/unequal concentration of the reacting species.
- To study the variation of viscosity with the composition of mixtures (ethanol-water-11NO3 -chloroform) and to determine the formation of complex between two liquids.

# Reference Books:

- 1. Systematic experimental physical chemistry T. K. Chondhekar& S.W. Rajbhoj
- 2. Experiments in chemistry D.V. Jahagirdar





M.Ss. Chemistry I R. II Semester effective from 2023-24 & onwards





# Course Structure of B.Sc. program (Faculty of Science) under CBCS pattern:

# Dr. Babasaheb Ambedkar Marathwada University, Aurangabad Choice Based Credit System (CBCS) Structure & Curriculum B.Sc. Botany Three Year Undergraduate Degree Program

Semester I			Periods	Credits	Scheme of Examination				
Course	Code	Course Title	(Periods /week)		Max Marks	CIA	UA	Min Marks	
	BOT-111	Diversity of Cryptogams - I	45(3/week)	02	50	10	40	20	
Optional I (DSC-1A) Core Courses	BOT-112	(Theory Paper-I)  Morphology of Angiosperms (Theory Paper-II)	45(3/week)	02	50	10	40	20	
	BOT-121	Lab Course I (Based on BOT-111 and BOT-112)	45(3/week)	1.5	50	10	40	20	
Ability Enhancement	ENG-131	Communication skills in English-I	45(5/week)	03	50	10	40	20	
Enhancement compulsory courses (AECC-1)	SL-132	Marathi/Hindi/Additional English/Urdu/Sanskrit A student can opt for any one of these languages ( SL-I)	45(4/week)	03	50	10	40	20	
Non-Credit Course							200	100	
N. S. C.	ACCOUNT OF THE PARTY OF		225	11.5	250	50	200	100	

Total Credits for Semester I: 11.5 (Theory: 10; Laboratory: 1.5)

Semester II Course	Course	Course Title	Periods	Credits	Scheme	of Exam	ination	Maria
Course	Code	Course Title	(Periods /week)		Max Marks	CIA	UA	Min Marks
	BOT-211	Diversity of Cryptogams -II (Theory Paper-III)	45(3/week)	02	50	10	40	20
Optional I (DSC-1B) Core Courses	ВОТ-212	Histology, Anatomy & Embryology (Theory Paper-IV)	45(3/week)	02	50	10	40	20
	BOT-221	Lab course 2 (Based on BOT-211 & BOT-212)	45(3/week)	1.5	50	10	40	20
Ability Enhancemen	ENG-231	Communication skills in English-II	45(5/week)	03	50	10	40	20
t compulsory courses (AECC-2)	OT 222	Marathi/Hindi/Additional English /Urdu/Sanskrit,A student can opt for any one of these languages (SL-II)	45(4/week)	03	50	10	40	20
Non-Credit Course	CO1-213	Constitution of India	45(3/week)	02	50	10	40	20
Non-Credit	CCC-214	Compulsory Computer Course	45(3/week)	02	50	10	40	20
Course			315	15.5	250	50	200	100

Total Credits for Semester II: 15.5 (Theory: 14; Laboratory: 1.5)

# Dr. Babasaheb Ambedkar Marathwada University, Aurangabad Choice Based Credit System (CBCS) Structure & Curriculum B.Sc. Botany Three Year Undergraduate Degree Program

Course	Course	Semester	III		9			
	Code	Course Title	Periods	Credits	Scheme of Examination			
The second	BOT-311	Core Course (The P	(Periods /week)		Max Marks	CIA	UA	Min Mark
Optional I (DSC-1C) Core Courses		Core Course (Theory Paper-V) Taxonomy of Angiosperms	45(3/week)	2	50	10	40	20
	BOT-312	Core Course (Theory Paper-VI) Plant Physiology	45(3/week)	2	50	10	40	20
	BOT-321	Lab course 3 (Based on BOT -311)	45(3/week)	1.5	50	10	40	20
	BOT-322	Lab course 4 (Based on BOT -312)	45(3/week)	1.5	50	10	40	20
Skill Enhancement course (SEC-1)	SEC-313	SEC-1 Any one skill to be chosen out of two SEC-1(A), SEC-1 (B)	45(3/week)	2	50	10	40	20
Ability Enhancemen	ENG-331	Communication skills in English-III	45(5/week)	3	50	10	40	20
t compulsory courses (AECC-3)	SL-332	Marathi/Hindi/ Additional English/Urdu/Sanskrit A student can opt for any one of these languages ( SL-III)	45(4/week)	3	50	10	40	20
			315	15	350	70	280	140

Total Credits for Semester III: 15 (Theory: 12; Laboratory: 3)

		Semester	Periods					
Course	Course			Credits	Scheme of Examination			
	Code		(Periods /week)		Max Marks	CIA	UA	Min Marks
Optional I	ВОТ-411	Core Course (Theory Paper-VII ) Gymnosperms & Utilization of Plants	45(3/week)	2	50	10	40	20
(DSC-1D) Core	BOT-412	Core Course (Theory Paper-VIII ) Plant Ecology	45(3/week)	2	50	10	40	20
Courses	BOT-421	Lab Course 5 (Based on BOT-411)	45(3/week)	1.5	50	10	40	20
	BOT -422	Lab Course 6 (Based on BOT -412)	45(3/week)	1.5	50	10	40	20
Skill Enhancemen t course	SEC-413	SEC-2 Any one skill to be chosen out of two SEC-2(C), SEC-2 (D)	45(3/week)	2	50	10	40	20
(SEC-2) AbilityEnha-	ENG-431	Communication skills in English-IV	45(5/week)	3	50	10	40	20
ncement compulsory courses	SL-432	Marathi/Hindi/ Additional English/ Urdu Sanskrit A student can opt for any one of these languages (SL-IV)	45(4/week)	3	50	10	40	20
(AECC-4)		Environmental Studies	45(3/week)	02	50	10	40	20
Additional Credits		EVS-413 Environmental Studies		17	350	70	280	140

# Dr. Babasaheb Ambedkar Marathwada University, Aurangabad Choice Based Credit System (CBCS) Structure & Curriculum B.Sc. Botany Three Year Undergraduate Degree Program

RECEIVE LIFE A /		Sc. Botany Three Year Onder	rV		6.1	of F.	en mina	41
Course	Course Code	Course Title	Periods (Periods /week)	Credits	Max Marks	CIA	UA	Min Marks
	BOT-511	DSE-1A(1) (Theory Paper-IX)	45(3/week)	2	50	10	40	20
Optional I (DSE-1 A)	BOT-512	Cell Biology & Molecular Biology  DSE-1A(2) (Theory Paper-X) (Select any one paper from	45(3/week)	2	50	10	40	20
Discipline Specific	DOT 531	A1/B1/C1/D1) Lab course 7(Based on BOT-511)	45(3/week)	1.5	50	10	40	20
Elective	BOT-521 BOT-522	Lab course 8 (Based on BOT-512 A1/B1/C1/D1)	45(3/week)	1.5	50	10	40	20
Skill Enhanceme nt course ( SEC-3)	SEC-513	SEC-3 Any one skill to be chosen out of two SEC-3(E), SEC-3 (F)	45(3/week)	2	50	10	40	20
Non-Credit Course	PEV-514	Professional Ethics and Moral Values	45(3/week)	2				
No. of Contract of		Design of the second se	270	11	250	50	200	100

Total Credits for Semester V: 11 (Theory: 08; Laboratory: 03)

# Semester VI

	Course	Course Title	Periods	Credits	Scheme of Examination			
	Code	Course True	(Periods /week)		Max Marks	CIA	UA	Min Marks
	BOT-611	DSE-1B(1) (Theory Paper-XI) Genetics and Evolution	45(3/week)	2	50	10	40	20
Optional I ( DSE-1 B) Discipline	BOT-612	BOT-612 DSE-1B(2) (Theory Paper-XII ) 4 (Select any one paper from A2/B2/C2/D2)		2	50	10	40	20
Specific	BOT-621	Lab course 9(Based on BOT-611)	45(3/week)	1.5	50	10	40	20
Elective	BOT-622	Lab course 10 (Based on BOT- 612- A2/B2/C2/D2)	45(3/week)	1.5	50	10	40	20
Skill Enhancemen t course	SEC-613	SEC-4 Any one skill to be chosen out of two SEC-4(G), SEC-4 (H)	45(3/week)	2	50	10	40	20
(SEC4)			225	9	250	50	200	100

Total Credits for Semester V:09 (Theory:06; Laboratory:03)

Total Credits for three years : Sem I (11.5 ) + Sem II (11.5 ) + Sem III (15) + Sem IV (15 ) + Sem V (09 ) + Sem VI (09) = 71 Credits

# BSc IV Semesters Core course (Practical Paper VI) CHE-322 Organic Chemistry



Credits 1.5

4 Lectures per week

# Organic Qualitative Analysis (Five mixtures: water insoluble solid-solid type)

Separation of Two Components from given binary mixture of organic compounds containing mono and di-functional group (carboxylic acid, phenols, amines, nitro, anilide etc.) and systematic identification of one component qualitatively.

# **Organic Preparations**

(Confirmatory Test of functional group: M.P and purity by TLC) (Preference should be given to green approach for following synthesis)

- 1. Preparation of benzoic acid from ethyl benzoate
- 2. Acctylation of primary amine
- 3. Base catalysed Aldol condensation =
- 4. Preparation of Quinone from hydroquinone
- 5. Preparation of phthalimide from phthalic acid.

# Organic estimations

- 6. Determine alcoholic OH groups by pthalation with pthalic anhydride in pyridine.
- 7. Determination of equivalent weight of a carboxylic acid by titration with standard aqueous alkali solution.
- 8. Estimation of amino acids by formol titration
- 9. Estimation of carbonyl compound with 2,4 dinitrophenyl hydrazine
- 10. Estimation of aldehyde/ketone by hydroxylamine -pyridine procedure

- C1. Comprehensive Practical Organic Chemistry by V. K. Ahluwalia and Renu Aggarwal Reference books
  - 2. A hand Book of Practical Chemistry, Dr. S. J. Naik, Phadake Prakashan. 3. Practical Organic Chemistry by Mann, F.G. & Saunders, B.C. Orient-Longman, 1960.
  - 4. Vogel's Textbook of Practical Organic Chemistry, Tatchell, A.R., Furnis, B.S.,
  - Hannaford, A.J. & Smith, P.W.G., -5. Elementary practical organic chemistry Part III quantitative analysis by A I Vogel
    - 6. Elementary practical organic chemistry Part I qualitative analysis by A I Vogel
  - 7. Elementary practical organic chemistry Part II preparations by A I Vogel

Prof. Pathan Mohd Ant All Board of Studies in Chemistry Joard of Studies in Chemistry, ada to Chemistry, ada to Chemistry, and Chemistry,





# NSSR's

Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of English Academic year 2023-24

# Project report

Sr no	Name of student	Seat number	Title of project
1	Ankita Ahire		Life of maha Shweta devi
		NBF605500	
2	Manmode Pranita sanjay	NBF605577	Indian writers and their literary works

H.O.D HEAD

Dept of English

Mrs. K.S.K



NSSR's





# Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of English

Name of student: Ankita Ahire

PRN Number:

Class: B.A third Year (Six semester)

Subject: English

Year: 2023-2024

Name of Project: Life of maha Shweta devi

Seat Number: NBF605500

It is certified mentioned the above mentioned Student submitted the project is approved and the said project that was evaluated is certified by

Guide

Dr Khan A.S
Department of English
Mrs K.S.K college Beed



External examiner

To Aldur A wing

Department of English



NSSR's

# Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of English

Name of student: Manmode Pranita sanjay

PRN Number:

Class: B.A third Year (Six semester)

Subject: English

Year: 2023-2024

Name of Project: Indian writers and their literary works

Seat Number: NBF605577

It is certified mentioned the above mentioned Student submitted the project is approved and the said project that was evaluated is certified by

Guide

Dr Khan A.S

Department of English

Mrs K S K college Reed

Myms

External examiner

Department of English

NavganShikshanSansthallajuri (N)

# MRS. KESHARBAI SONAJIRAO KSHIRSAGAR ALIASKAI ARTS, SCIENCE & COMMERCE COLLEGE, BEED [MIII] DEPARTMENT OF PUBLIC ADMINISTRATION

ACADEMIC YEAR 2023-24

# PROJECT STUDENT LIST

SR.NO	STUDENT NAME	STUDENT ID	STUDENT SUBJECT
1.	MOTE SHANKAR SADASHIV	2668536	Jal Pradushan
2.	MUNDE SACHIN PANDURANG	1610240	Jal Pradushan

Dr. Irlapalle P.B.

नवगण शिक्षण संस्था राज्री नवगण संचलित सौ.केशरबाई सोनाजीराव क्षीरसागर उर्फ 👸 कू कला,विज्ञान व वाणिज्य महाविद्यालय,



# प्रकल्प मूल्यांकन प्रमाणपत्र

शैक्षणिक वर्ष - २०२३-२४

विद्यार्थी / विद्यार्थिनी - Mote Shankar Sudget वर्ग बी.ए.तृतीय वर्ष लोकप्रशासन याने / हिने ----- <u>Tal</u> fraduskar ----- विषयाचे प्रस्तुत प्रकल्प कार्य स्वतः केलेले असून ते त्याने / तिने समाधानकारक लिहिलेले आहे.

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नवगण शिक्षण संस्था राजुरी नवगण संचलित सौ.केशरबाई सोनाजीराव क्षीरसागर उर्फ क्रांक 431122 कला, विज्ञान व वाणिज्य महाविद्यालय, बीडँ

# प्रकल्प मूल्यांकन प्रमाणपत्र

शैक्षणिक वर्ष - २०२३-२४

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बाह्य परीक्षक or Bhalerao Jk. 26/03/20 My

मंतर्गत परीक्षक विभाग प्रमुख Do Tolafalle P'B. Do Folafalle P'B.

# MRS.KSK.COLLEGE, BEED DEPARTMENT OF GEOGRAPHY, 2023-2024

# PROJECT TITAL AND NAME LIST OF UG &PG STUDENTS:



- UNDER GRADUATE STUDENT:2023-24
- STUDY OF FARMER PONDS TURIST DESTINATION IN BEED DISTRICT
  - 1. SURYAWANSHI SUMIT GURUNATH
  - 2. BHOSLE NIKITA KUNDLIK
  - 3. JAGTAP ABHIMAN BABAN
  - ❖ A GEORAPHICAL STUDY OF POLUTION IN BEED TALUKA
    - 1. CHAVAN AKANKSHA ANKUSH
    - 2. CHAURE MOHINI HARINAND
  - STUDY OF INTEGRATED MAHARASHTRA GEOGRAPHY AND CHALLENGES
    - 1. KUTE NITIN KANIK

# ❖ POST GRADUATE STUDENT:2023-24

- ❖ WATER POLLUTION AND MANAGAMENT 1.KHANDE DAMINI MACCHINDRA
- ❖ NATURAL HAZARDS ANE RMIDIEK
  - 1.KHEMADE JAYA MOHAN
- DISASTAR MANAGEMENT
  - 1.LANDGE RUSHIKESH BALASAHEB
- ❖ WHAT IS URBANIZATION AND THE PROBLEMS IT CREATES
  - 1.NIRMAL GAYATRI DIPAK
- MAHARASHTRA SCENERY
  - 1.RATHOD JYOTIRAM BHAGAWAN
- ❖ MANAGEMENT OF SOLID WASTE IN BEED CITY
  - 1.WAGHAMARE SHABDALI BABASAHEB

Head Department of Geography

Mrs.Kistkicollegeliseed. Mrs. K.S.K College Beed 2013 (main) project

डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठळळ 🗗 🐧

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एकृण उपस्थित परीक्षार्थी -

एकूण अनुपरिधत परीकाथी -

केंद्र प्रमुखाबी राही

सह केंद्र प्रमुखावी सही

पर्यवैक्षकाची राष्ट्री

(Dr. Awadhal CK)

प्रत्येक वर्ग आणि विद्याशाखेकरिता स्वतंत्र फॉर्म भराव।

मुळप्रत परीक्षा प्रारमानंतर अध्यक्तिसाने केंद्र प्रमुखास सावी.

परीक्षाशीच्या उत्तरपत्रिका गूळप्रतीतील कमाने लावून गुळप्रतीसह उत्तरपत्रिकाचे वडल कराव

Head Dept of Geograps Mrs KSK College Beed

# नवगण शिक्षण संस्था राजुरी (न) सौ. के.एस.के. महाविद्यालय बीड.



# भूगोल विभाग

# :: प्रमाणपत्र ::

प्रमाणित करण्यात येते की, श्रीमती निर्मळ गायत्री दिपक एम.ए. हितोच वर्ष याने / हिर्ने विद्यापीठाने अभ्यासक्रमात ठेवलेला संशोधन प्रकल्प अहवाल सन 2023-24 या शैक्षणिक वर्षांमध्ये समाधानकारकरित्या पुर्ण केला आहे.

दिनांक :- 27/ 4/2024

परिक्षा क्रमांक : जि. प्रि. प्

कॉ. डॉ. प्रा. बी.टी. पोटे

भूगोल विभाग प्रमुख पदवी व पदव्युत्तर भूगोल विभाग सौ. के.एस.के. महाविद्यालय, बीड.



डॉ. बाबासाहेब आंबेडकर सराठवाडा विद्यापीठ छत्रपती संभाजीन क्रिका भार

नवगण शिक्षण संस्था राज्री ( न )

सीं. के. एस, के, महाविदयालय बीड

भूगोल विभाग

२०२३ - २०२४

प्रमाणपत्र

宿. 27/04/2024

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प्रमाणित करण्यात येते की, श्री. लांडगे ऋषिकेश बाळासाहेब परीक्षा क्र. GGD401076 एम.ए. द्वितीय वर्ष हजेरी क्र. (सत्र चौथे) भूगोल , यांनी शैक्षणिक वर्ष २०२३- २०२४ मध्ये "आपत्ती व्यवस्थापन" केले व उत्कृष्ट पद्धतीने अहवाल तयार केले आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

मार्गदर्शक

भूगोल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोटे बी.

पदव्युत्तर भूगोल विभाग प्रमुख सौ. के. एस. के. महाविदयालय, बीड.



हो.बाबासाहेब आंबेडफर पराठवाडा विद्यापीट 🛭 वाली संभाजीनगर

# नवगण शिक्षण संस्था राज्यी (न)

सौ.के.एस.के.महाविद्यालय,बीड



भूगोल विभाग

2023-2024

# प्रमाणपत्र

दिनांक : 24 042024

प्रमाणित करण्यात येते की, श्री./श्रीमती खांडे दामिनी मच्छिद्र हजेरी क्र.
परिक्षा क्रमांक GGD401074 एम.ए.द्वितीय वर्षे (सत्र चौथे) भूगोल, यांनी शैक्षणिक वर्षे 20232024 मध्ये '' जलप्रदुषण व व्यवस्थापन '' केले व उत्कृष्ट पध्दतीने अहवाल तयार केले आहे.
करिता प्रमाणपत्र देण्यात येत आहे.

मार्गदर्शक

भृगोल विभाग

सां.कं.एस.कं.महाविद्यालय,बीड

कॅप्टन,डॉ.पोर्ट बी.टी.

पदव्युत्तर भूगोल विभाग प्रमुख सौ.के.एस.के.महाविद्यालय,बीड

# सो के एस के महाविद्यालय बीड भूगोल विभाग



# :: प्रमाणपत्र ::

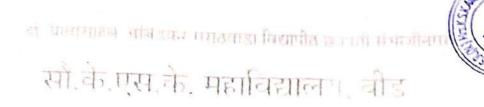
प्रमाणित करण्यात येते की, श्री /श्रीमती/कु कोराल किकिता कुंडिल वो ए तृतीय वर्ष याने / हिने विद्यापीठाने अभ्यासकमात ठेवलेला संशोधन प्रकल्प अहवाल सन 2023-24 या शैक्षणिक वर्षामध्ये समाधानकारक रित्या पुर्ण केला आहे.

दिनांक : 28 / ¢3/2024

परिक्षा क्रमांक :-- १८६६०५ इथ

श्री.प्रा.पोट बी.टी.

भुगोल विभाग प्रमुख पदवी व पदव्युत्तर भूगोल विभाग सो.के.एस.के. महाविद्यालय,बीड



गुगान विभाग

प्रकल्प अहवाल

2023-2024

बी.ए. तृतीय वर्ष सन सहावे

बीड तालुक्यातील प्रदूषणाचा अभ्यास

संशोधक विद्यार्थो

आकांक्षा चव्हाण

मोहिनी चौरे - किन्य

संशोधक मागंदशंक

कंप्टन. डॉ. पोटे बी.टी.

विभाग प्रमुख

पदवो व पदब्युत्तर भूगोल विभाग

सौ.के,एस.के महाविद्यालय बोड

नवगण शिक्षण संस्था सन्ती (न)

# सौ. के. एस. के. महाविद्यालय,



# भूगोल विभाग

# प्रमाणपत्र

दिनांक: 24/4/2024

प्याणित करण्यात थेते की, श्री/कु.. वाह्यार शहराती बाखार्गहिन हजेरी क... कि एक एक एक एक एक एक एक प्रति वर्ष (सत्र चाँथे) भूगील, याती रीक्षणिक वर्ष २०२३-२०२४ मध्ये "बीड शहरातील घनकचन्याचे व्यवस्थापन" केले व उत्कृष्ट एएटतीने सहवाल तथार केला आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

हार्गटर्श व

पा. एतः एस आगाम सर,

असीत विशास

मां के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोर्ट बी. टी.

पदव्यूतर भूगोत विभाग प्रमुख, सो. के. एस. के. महाविद्यालय, बीड.



हो आवासातन मायहक्त पराठवाहा विद्यापीः व्यपनी म

नवगण शिक्षण संस्था राजुरी (न)

सों के एस के महाविद्यालय वी व

भूगोल विभाग

2023-2024

प्रभाणापत्र

G. 24/04/2021

प्रमाणित करण्यात येते की, श्री. राठोड ज्योतीराम भगवान हजेरी क्र. परीक्षा व्र GGD401078 एम.ए.द्वितीय वर्ष (सत्र चौथे) भूगोल, यांनी शैक्षणिक वर्ष 2023-2024 मध्ये भहाराष्ट्र दृष्काळ ` केले व उत्कृष्ट पध्दतीने अहवाल तयार केले आहे.

करिता प्रमाणपत्र देण्यात येत आहे

मार्गदर्शक

Juna Samuel

भगोन विभाग

सा के एस के महाविद्यालय बीह

केंद्रन या पोर्ट वी दी

पदव्युत्तर भगोल विभाग प्रमुख मो के एस के प्रस्तिकालय वीड

# नवगण शिक्षण संस्था राजुरी (न) सौ के एस. के महाविद्यालय, वीड

# भूगोल विभाग



:: प्रामणपत्र ::

प्रभाणित करण्यात येते की, श्रो । श्रीमतीः जिशाताप् अधिमान बढ़ने वो ए तृतोय वर्ष याने हिने विद्यापीठाने अध्यासक्रमात ठवलला संशोधन प्रकल्प अहवाल सन 2023-24 या शैक्षणिक वर्षामध्ये समाधानकारक रित्या पूर्ण केला आहे.

হিনাক :- / / 2024

परिक्षा क्रमांक :-----

कॉ. डॉ. प्रा.वी.टी. पोटे

भूगोल विभाग प्रमुख पदवी व पदव्युत्तर भूगोल विभाग सो.के.एस.के.महाविद्यालय,बीड

### M.Com.ll Year 2023-24

Project given to the students

		mooning rettr 2020-24	1 Tojout given to the students
S	šr. No.	Student Name	Title of Project
	1	BHATI HRUTIK SHIVLAL	Impact of Digital Accounting Practices on Small Businesses
	3	CHEDE RUSHIKESH NANASAHEB	A Comparative Study of Tax Planning Strategies in Indian Corporates
	3	DESHMUKH PRAGATI SUBHASH	Financial Statement Analysis of Selected Banks in India
	4	DHONE ASHOK DATTA	The Role of Blockchain in Financial Reporting and Auditing
	5	DONGRE ANIRUDHA ASARAM	Evaluation of Non-Performing Assets in Public vs Private Sector Banks
	6	DORALE MAYUR LAXMAN	Cost-Benefit Analysis of Green Accounting Practices
	7	FATALE MANISHA DEVIDAS	A Study on the Impact of GST on Small and Medium Enterprises
	8 0	SADE KALYAN NAVANATH	Forensic Accounting: A Tool to Detect Financial
5	9 G	SAVARE KISHOR MAHADEV	Frauds Effectiveness of Working Capital Management in
10	0 G	ONDE RENUKA PRASHANTRAO	Manufacturing Firms Comparative Analysis of Mutual Fund Performance
11	ı JA	YALIV INIWHEA VAHDA	in India Consumer Perception Towards Online Shopping
12	) JA	DHAV BHAGWAN SHANKARRAO	During COVID-19 Impact of Digital Marketing on Consumer Behavior
13	JA	DHAV SHITAL NARAYAN	in Urban Areas Brand Loyalty and Customer Satisfaction in the
14	JAC	GJEEVAN SACHIN SANJAY	Indian Automobile Sector The Effectiveness of Social Media Influencer
15	300	GDAND DHANSHREE ASHRUBA	Marketing in India  Green Marketing Practices in FMCG: A Case Stud
16	305	SHI PRANOTI SHRINIWAS	Role of Packaging in Consumer Purchase
17	JOS	HI VINAY SHRIKANTRAO	Decisions Customer Retention Strategies in E-Commerce
18	KAD	DAM AMOL RAJABHAU	Platforms
10	1	AND ROADIAG	A Study on Rural Marketing Strategies Adopted by FMCG Companies
19	KALI	E VAIBHAV RADHAKISAN	Digital Payment Systems and Consumer Preferences Post-Demonetization
20	КАМ	BLE ANJALI RAMDAS	The Role of Neuromarketing in Consumer Decision Making
21	KAM	THANKAR ISHWARI PRASHANT	Employee Retention Strategies in IT Companies
22	KAPL	E KOMAL SRIRAM	Impact of Remote Work on Employee Productivity
23	KAPLE	SHITAL SHRIRAM	and Job Satisfaction  Role of Emotional Intelligence in Leadership
24	KAWA	DE PRAMOD BAJIRAO	Effectiveness A Study on Work-Life Balance Practices in Banking
	Se		Sector Employees
25		E ANIKET VIJAY	Impact of Training and Development on Employee Performance
:6	KORDE	E HARSHALA ABHIMANYU	Employee Motivation and its Role in Organizational Success
7	KULKA	RNI ABHAY SUNDARRAO	Comparative Study of Recruitment Practices in Startups vs Established Corporates
8	МОНЕК	AR VANITA MUKUNDRAO	The Role of Diversity and Inclusion in Workplace
			Culture

29	MUNDADA PRIYANKA KACHARULAL	Effectiveness of Performance Appraisal Systems in Small Firms		
30	MUNDE MANDAKINI MADHUKAR	Job Satisfaction and Career Growth Opportunities in the Retail Sector		
31	NITURKAR RAJSHRI MAHESH	Customer Perception of Digital Banuary Services		
32	PAWAR SIDHANT SHRIRANG	A Study on Awareness of Microfinance Ampph22		
33	RANDIVE PRATIKSHA SURESH	Impact of Artificial Intelligence on Banking		
34	RANDIVE PRITI SURESH	Analysis of Insurance Penetration in the Rural Sector		
35	RAUT AMRUTA TULSHIRAM	Role of Credit Rating Agencies in Financial Market Stability		
36	SATPUTE ASHOK PRABHU	Adoption of Mobile Banking Among Senior Citizens		
37	SHAIKH HEENA NASEER	A Comparative Study of Public vs Private Life Insurance Providers		
38	SHAIKH NASER BABU	Impact of Cybersecurity Threats on Online Banking		
39	SHINDE PRATIK BALASAHEB	Role of Banking in the Financial Inclusion of Women Entrepreneurs		
40	SHINDE VAIBHAV ASHOK	Analyzing the Growth of Health Insurance Post- COVID-19		
41	SHRIVASTAV AVANTIKA RAJENDRA	The Role of E-Commerce in Promoting Local Handicrafts		
42	SURYAWANSHI RUTUJA ARUN	Economic Impact of Tourism Development in India		
43	TEKALE BHAGWATI VILASRAO	A Study on the Effectiveness of Financial Literacy Programs in Rural India		
44	VEER SHWETA PRAKASH	Impact of Urbanization on Small-Scale Industries		
45	WAKHARE VISHAKHA VITTHAL	The Role of Government Subsidies in Agricultural Growth		

Head

Department of Commerce

HE.S.K.College Beed-431122

# MRS.K.S.K ART'S SCIECNE AND COMMERCE COLLEGE,BEED.

### DEPARTMENT OF COMMERCE

Academic Year -2023-24

## **CERTIFICATE**

This is to certify that the dissertation titled Role of Packaging in Consumer Purchase Decisions Submitted by JOSHI PRANOTI SHRINIWAS Under the supervision of Dr.Sandeep Govardhan Vale has been completed dissertation of the requirements for the degree of Master of Commerce (M.Com) at Dr.Babasaheb Ambedkar Marathwada University, Chh.SambhajiNagar

Dr.Sidharth Jadhav

HOD & Research Guide

Dr.Sandip Vale

# MRS.K.S.K ART'S SCIECNE AND COMMERCE COLLEGE, BEED.

### DEPARTMENT OF COMMERCE

Academic Year -2023-24

### **CERTIFICATE**

This is to certify that the dissertation titled Impact of Digital Accounting Practices on Small Businesses Submitted by BHATI HRUTIK SHIVLAL

Under the supervision of **Dr.Sandip Govardhan Vale** has been completed dissertation of the requirements for the degree of Master of Commerce (M.Com) at Dr.Babasaheb Ambedkar Marathwada University, Chh.Sambhaji Nagar

Dr.Sidharth Jadhav

HOD-& Research Guide

Dr.Sandip Vale





# MRS.K.S.K ART'S SCIECNE AND COMMERCE COLLEGE, BEED.

### DEPARTMENT OF COMMERCE

Academic Year -2023-24

## **CERTIFICATE**

This is to certify that the dissertation titled Impact of Digital Accounting Practices on Small Businesses Submitted by CHEDE RUSHIKESH NANASAHEB Under the supervision of Dr.Sandip Govardhan Vale has been completed dissertation of the requirements for the degree of Master of Commerce (M.Com) at Dr.Babasaheb Ambedkar Marathwada University, Chh.SambhajiNagar

Dr.Sidharth Jadhav

Head

HOD & Research Guide

Dr.Sandip Vale



# MRS.K.S.K ART'S SCIECNE AND COMMERCE COLLEGE, BEED.

### DEPARTMENT OF COMMERCE

Academic Year -2023-24

### **CERTIFICATE**

This is to certify that the dissertation titled A Study on the Impact of GST on Small and Medium Enterprises Submitted by FATALE MANISHA DEVIDAS

Under the supervision of **Dr.Sandeep Govardhan Vale** has been completed dissertation of the requirements for the degree of Master of Commerce (M.Com) at Dr.Babasaheb Ambedkar Marathwada University, Chh.Sambhaji Nagar

Dr.Sidkarth Jadhav

HOD & Research Quide

Dr.Sandip Vale



# MRS.K.S.K ART'S SCIECNE AND COMMERCE COLLEGE, BEED.

### DEPARTMENT OF COMMERCE

Academic Year -2023-24

### **CERTIFICATE**

This is to certify that the dissertation titled Effectiveness of Working Capital Management in Manufacturing Firms Submitted by GAVARE KISHOR MAHADEV Under the supervision of Dr.Sandeep Govardhan Vale has been completed dissertation of the requirements for the degree of Master of Commerce (M.Com) at Dr.Babasaheb Ambedkar Marathwada University, Chh.SambhajiNagar

Dr.Sidharth Jadhav

HOD & Research Guide

Dr.Sandip Vale



# MRS.K.S.K ART'S SCIECNE AND COMMERCE COLLEGE,BEED.

### DEPARTMENT OF COMMERCE

Academic Year -2023-24

### **CERTIFICATE**

This is to certify that the dissertation titled Impact of Digital Marketing on Consumer Behavior in Urban Areas Submitted by JADHAV BHAGWAN SHANKARRAO Under the supervision of Dr.Sandeep Govardhan Vale has been completed dissertation of the requirements for the degree of Master of Commerce (M.Com) at Dr.Babasaheb Ambedkar Marathwada University, Chh.Sambhaji Nagar

Dr.Sidharth Jadhav

Head HOD & Research Guide K.S.K.College Beed-431122 Dr.Sandip Vale

# Sau. K.S.K Arts , Science and Commerce College , Beed Beed A31122 Year 2023 – 24

B.A III year Project

sr.no	Name	Topic	Mark 60
1	Meena Bhima Dongar	देशातील सार्वजनिक आरोग्य	56

Klymdat Head of Dept.

- MAD OJ-

2023 - 2024 Division Division Roll No.

Exam. No — NBF— GOSS

That is certify that experiment written in the index has beed performed by the student satisfactorily

Principal Sign

Nyhandat 21

Dr.Maya Khandat Research Guide

Head of Dept. Sign.

College Stamp

28-3-24

Teacher's Signature

#### NSSR(N)

# Mrs. K. S. K. Alias Kaku, Art's, Science and Commerce College, Beed. <u>Department of Physics</u>

### Academic Year (2023-2024) M.Sc. II (IV Semester)

### Research Project Part III(Dissertation and Presentation) PHYR 431

Project Work Allotment for Dissertation and Presentation

### List of Students

Sr. No.	Seat No.	Name of Student	Project Title
l	GFD401053	Chavan Sachin Dnyanoba	LCR Series and parallel Resonance Circuit
2	GFD401054	Dhaygude Sonam Prakash	LCR Series and parallel Resonance Circuit
3	GFD401055	Kale Abhishek Udhav	LCR Series and parallel Resonance Circuit
4	GFD401056	Kamble Shankar Lalasaheb	LCR Series and parallel Resonance Circuit
5	GFD401057	Khude Pappu Murlidhar	LCR Series and parallel Resonance Circuit
6	GFD401058	Pangudawale Shashank Sanjay	LCR Series and parallel Resonance Circuit
7	GFD401059	Pawar Amol Ramrao	LCR Series and parallel Resonance Circuit
8	GFD401060	Sanap Rushikesh Bhaskar	LCR Series and parallel Resonance Circuit
9	GFD401061	Shinde Sunil Bibhishan	LCR Series and parallel Resonance Circuit
10	GFD401062	Shinde Sushil Suresh	LCR Series and parallel Resonance Circuit

**Project work Supervisor** 

HCB Head Dept. of Physics Mrs. K.S.K. College, Beed.





# Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed <u>CERTIFICATE</u> (2023-2024)

This is to notify that, Mr/Miss Shinde Sushil Suresh M.Sc. II Year (Sem IV), Department of Physics, Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed affiliated by Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar has successfully completed the project work, entitled "LCR Series and parallel Resonance Circuit", under my guidance and supervision, for the partial fulfilment of the requirement for the award of degree of Master of Science in Physics.

Hence certified.

Project work Supervisor

Hop Head Dept. of Physics Mrs. K.S.K. College, Beed.





## Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed <u>CERTIFICATE</u>

(2023-2024)

This is to notify that, Mr/Miss Shinde Sushil Suresh M.Sc. II Year (Sem IV), Department of Physics, Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed affiliated by Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar has successfully completed the project work, entitled "LCR Series and parallel Resonance Circuit", under my guidance and supervision, for the partial fulfilment of the requirement for the award of degree of Master of Science in Physics.

Hence certified.

**Project work Supervisor** 

Hoph Head Dept. of Physics Mrs. K.S.K. College, Beed.



# Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed <u>CERTIFICATE</u>

(2023-2024)

This is to notify that, Mr/Miss Dhaygude Sonam Prakash M.Sc. II Year (Sem IV), Department of Physics, Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed affiliated by Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar has successfully completed the project work, entitled "LCR Series and parallel Resonance Circuit", under my guidance and supervision, for the partial fulfilment of the requirement for the award of degree of Master of Science in Physics.

Hence certified.

Project work Supervisor

Dept. of Physics Mrs. K.S.K. College, Beed.

Beed





# Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed <u>CERTIFICATE</u>

(2023-2024)

This is to notify that, Mr/Miss Chavan Sachin Dnyanoba, M.Sc. II Year (Sem IV), Department of Physics, Mrs. K.S.K. Alias Kaku Arts, Science & Commerce College, Beed affiliated by Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar has successfully completed the project work, entitled "LCR Series and parallel Resonance Circuit", under my guidance and supervision, for the partial fulfilment of the requirement for the award of degree of Master of Science in Physics.

Hence certified.

Project work Supervisor

Head Head Head Boad.

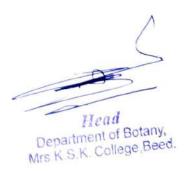
COLLEGE NAME: MRS. KESHARBAI SONAJIRAO KSHIRSAGAR ALIAS KAKU ARTS, SCIENCE &

COMMERCE COLLEGE BEED

CASHBOOK NAME : POST GRADUATE FEES

COURSE NAME : M.SC. (BOT.) - II SESSION NAME : 2023-2024

Studentid	NAME	Project Tital
	CALLIANZE CHIVA II VIEUNII	Studied on Crop Production
4079961	SALUNKE SHIVAJI VISHNU	Technology – Cotton Crop
	WARIN CHAREETA VACAMEEN ALVI	Technology – Studies
4095831	HABIB SHAREEFA YASMEEN ALVI	on Watermelon Diseases
*****	CITTE VAISUNIAVI BALASAHER	Maize Production Technologies
4108942	GITTE VAISHNAVI BALASAHEB	in India
4123384	PAWAR MADHURI SONAJI	Medicinal Plant of Tulsi
4126239	SHAIKH AFTAB ANIS	Soil Sampling & Testing
		Technology – Studies
4133645	WAGHMARE MAYA CHOKHOBA	on Watermelon Diseases
4134745	GHANGHAV RAMA DATTATRAYA	Medicinal Plant of Tulsi
	THORAT ROOMAN SHAM	Studied on Mango Frozen Pulp
4149987	THORAT POONAM SUNIL	Processing Unit
4153964	DUBALE SATYAJEET BANDU	and Their
4153904	DOBALE SATTAJELT BANDO	Management
4180383	SONAWANE KRUSHNA SOMINATH	The Importance of Fruit and
4180383	SOVAVVANE KROSTIVA SOVIINATTI	Vegetable Preservation in India
4186927	SONAWANE MAYUR VISHNU	Studied on Medicinal Plant of
4100327	SONAVAILE MATOR VISING	Turmeric
4215566	ANSARI ARSHIYA SAYYED AHEMED	Bitter Gourd Farming in India
Translation and	THE STATE OF STREET AND ANOTA	Maize Production Technologies
4226392	NAIKWADE SHITAL DNYANOBA	in India
	KALE ANULI CANIAV	Studied on Medicinal Plant of
4229597	KALE ANUJ SANJAY	Turmeric
4000470	KSHIRSAGAR PRATIKSHA SUNIL	The Importance of Fruit and
4238472	KONIKOAGAK PRATIKONA SUNIL	Vegetable Preservation in India
4244678	GITE VAISHNAVI KHANDERAO	Medicinal Plant of Tulsi
	SUSTANTE COMMUNICALIER	Maize Production Technologies
4257316	CHEMTE GOKUL BHAUSAHEB	in India



valus Arts, Soign

### DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, CHHATRAPATI SAMBHAJINAGAR



### CERTIFICATE

This is certified that work embodies in the project entitled. "STUDIES ON WATERMELON DISEASES" being submitted by Mrs. Shareefa Yasmeen Habib Alivi Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar award of Master Degree in botany project work carried out by him under my guidance and supervision, and has fulfilled the requirement fo the submission of this project to my knowledge, has reached requisite standard.

The result contained in the project have not been submitted in part of in full to and other university or institute for the award of any degree or diploma.

Place: Beed

Date: 13/07/201 26/04/2024

(Dr. Santosh M. Talekar) **Project Guide** 

Beed

External Examiner



This is to certify that the project entitled "Mango Frozen Pulp Unit" submitted by Miss. Thorat Poonam Sunil"

In partial fulfillment of the requirements for the degree of Master of science in Botany submitted to the DR. BABASAHEB

AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD. is a record of bonafide research work carried out by him under my guidance and supervision. The thesis or it's any part has not previousely formed the basis for the award or any degree, diploma, or other similar title.

Place: KSK college Beed

Date: 26/04/2024

( Dr. Santosh M. Talekar )

**Project Guide** 

This is to certify that the project entitled "IMPORTANCE AND SCOPE OF FRUIT AND VEGETABLES PRESERVATION IN INDIA" submitted by Mr. KRUSHNA SOMINATH SONAWANE. In partial fulfillment of the requirements for the degree of Master of science in Botany submitted to the DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD. is a record of bonafide research work carried out by him under my guidance and supervision. The thesis or it's any part has not previousely formed the basis for the award or any degree, diploma, or other similar title.

Place: KSK college Beed

Date: 26/04/2024

( Dr. Santosh M. Talekar )

**Project Guide** 



This is to certify that the project entitled "CROP PRODUCTION TECHNONOLOGY – CO'l'TON CROP" submitted by Mrs. SALUNKE SHIVAJI VISHNU. In partial fulfillment of the requirements for the degree of Master of science in Botany submitted to the DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.is a record of bonafide research work carried out by him under my guidance and supervision. The thesis or it's any part has not previousely formed the basis for the award or any degree, diploma, or other similar title.

Place: KSK college Beed

Date: 26/04/2024

( Dr. Santosh M. Talekar )

**Project Guide** 

### Certificate



This is to Certify that work in corporate in the Research Project "MEDICINAL PLANT OF TULSI" submitted for the degree of Master of Botany in department of Botany by Ghanghav Rama Dattatraya carried out by the candidate under my supervision and guidance. Such material obtained from other sources has been duly acknowledged in the Research Project.

I further declared that to the best of my Knowledge and belief this work has not been submitted to this of any other college for the award of degree.

Date: 26-04-24

Place : Beed.

Gulde

Dr. Santosh M. Talekar

HOD

Department of Botany

KSK College, Beed.



This is to certify that the thesis entitled FUNGAL DISEASES OF FIELD CROP AND THEIR MANAGEMENT submitted by DUBALE SATYAJEET BANDU. in partial fulfillment of the requirements for the degree of Master of science in Botany submitted to the Dr. babasahebambedkarmarathwada university Aurangabad .is a record of bonafide research work carried out by him under my guidance and supervision. The thesis or it's any part has not previousely formed the basis for the award or any degree, diploma, or other similar title.

Place: Beed

Date: 36/05/2024

(Dr. Talekar sir)

Research guide

This is certified that the project report entitled "Growth And Production Of Groundhut Is a bonafied work of. Miss Pratiksha Sunil Kshirsagar, who carried out the work at Department of Botany, KSK College, Beed. He has worked under my guidance and the project report partially Fulfills the regirements for M.Sc. Botany, KSK College, Beed.

Date 26/04/2024

Place: Beed

Dr. Santosh M. Talekar

431122

Head of KSK College, Beed

# Navgan Shikshan Sanstha Rajuri (N) Mrs.Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122. Department of Mathematics

\* Field Project Allotment \*(2023-24)

Sr.N	ASS: M.Sc. I (Seme -II)  Name of Student	Name of	CourseCode: MATH/OJT/FP/557  Title of Project		
0.		Supervisor	Mathematical Modeling in Climate Change		
1.	Chavan Prashant Limbraj	Dr.			
2.	Chavan Suraj Uddhav	Raut S.R.	Application of differential equation in Climate Change		
3.	Dhakne RenukaVasanrao		Applications of Group theory in Charactery		
4.	Dhas Shital Dattatrya		Applications of Group Theory in Chemistry		
5.	Dhole Shradda Anil		Application of differential equation in Physics		
6.	Gayva Pooja Rameshwar		Application of differential equation in Physics		
7.	Gharat Rahul Nivrati	-8	Study of two dimensional Wave equation and Heat Equation		
8.	Jagde Somnath Bandu		Study of two dimensional Wave equation and Heat Equation		
9.	Jagtap Balaji Shivajirao		Fourier Series and its Applications		
10	Jogdand Rushikesh Balasaheb		Fourier Series and its Applications		
11,	Kashid ShivamSandipan		Cyclic Groups and Applications		
12	Khod Yogesh Bappasaheb		Cyclic Groups and Applications		
13	Kokane Ganesh Shivaji		Fourier Series and its Applications		
14	Mane VarsharaniPanditrao		Cyclic Groups and Applications		
15	Mane YogeshwariPanditrao	Dr. Shrimangale	Application of differential equation in Medical field		
16	Misal Sheha Shridharrao	G.W.	Application of differential equation in Medical field		
17.	MundeAbhishekDilip		Application of differential equation in Medical field		
18	NaikShivnandaPermeshwar		Applications of Laplace transform in engineering		
19	NarkePooja Satish	9	Applications of Laplace transform in engineering		
20	Pawar Rahul Narayan		Applications of Laplace transform in engineering		
21	SanapKomalBaban		Uniform convergence and continuity		
22	SarodeShraddha Shrikant		Uniform convergence and continuity		
23	SatputeAjit Balasaheb		Application of Homomorphism and Isomorphism		
24	ShelkeAbhayshinghNavnath		Application of Homomorphism and Isomorphism		
25	and and an analysis		Application of differential equation in population growth		
26	, and an		Application of differential equation in population growth		
27	UjgareSurajBramhanand		Application of Beta and Gamma function		
28.	Waghmare Ashish Gautam		Application of Beta and Gamma function		



H.O.D. Dept.of Mathematics Mrs.K.S.K.Alias Kaku College, Beed



### NavganShikshanSansthaRajuri (N)

Mrs.KesharbaiSonajiraoKshirsagar Alias Kaku Arts, Science & Contractor College, Beed-431122

#### CERTIFICATE

This is to certify that, the project titled "Application of differential equation in physics" is bonafide record of the project work carried out by Miss. Dhole Shraddha Anil under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Mathematics of Mrs.KesharbaiSonajiraoKshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr.BabasahebAmbedkarMarathwada University ChhatrapatiSambhaji Nagar. Hence certified.



Dr. Shankar R.Raut

Valou Arts, Solo

Beed

431122

Associate Professor and Head

Department of Mathematics **H.O.D.** 

Dept.of Mathematics Mrs.K.S.K.Alias Kaku College, Beed



NAVGANSHIKSHAN SANSTHA RAJURI (N)

## MRS. KESHARBAI SONAJIRAO KSHIRSAGAR AKEAN KAKU ARTS, SCIENCE & COMMERCE COLLEGE, BEED-431122

### **CERTIFICATE**

THIS IS TO CERTIFY THAT, THE PROJECT TITLED APPLICATION OF DIFFERENTIAL EQUATION IN CLIMATE CHANGE IS BONAFIDE RECORD OF THE PROJECT WORK CARRIED OUT BY KHOD YOGESH BAPPASAHEB UNDER MY SUPERVISION AND GUIDANCE IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN MATHEMATICS OF MRS. KESHARBAI SONAJIRAO KSHIRSAGAR ALIAS KAKU ARTS, SCIENCE AND COMMERCE COLLEGE BEED AFFILIATED TO DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY CHHATRAPATI SAMBHAJI NAGAR. HENCE CERTIFIED.



DR. SHANKAR R.RAUT

ASSOCIATE PROFESSOR AND HEAD

DEPARTMENT OF MATHEMATICS H.O.D.

Dept.of Mathematics Mrs.K.S.K.Allas Kaku College, Bued





# Mrs. KesharbaiSonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

### **CERTIFICATE**

his is to certify that, the project titled Fourier Series and Its Application is bonafide ecord of the project work carried out by JAGTAP BALAJI SHIVAJIRAO under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science Mathematics of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce college Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji



Dr. Shankar R.Raut

Associate Professor and Head

Department of Mathematics

Dept. of Mathematics

Mrs. K. S. K. Allas Kaku College, Beed

मा. ताचार्य, इं. के. ट्रंस. के, महाविधात्रप् कीर.



विध्यं : भूगोल विभागाणा एक दिवशीय खेड सर्वेद्यागायाही

महोदय,
व्यक्ति निष्पी विनेती कि, भूगों निकाशाणी
वी. ए. साणि एम. ए. - क्या विद्याश्मी निकाशाणी
रेपेड सर्वक्षण कि, १४. २ . २०२४ रोजी मीजे लाइवंडी
ता कि में आयोजन उत्पात अगे आहे.
ता कि में आयोजन उत्पात अगे आहे.
तरी मा कोड सर्वक्षणासाही विभागाल पश्वावशी
रेज्यान जावी कि निवाती.

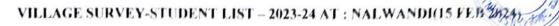
3174(0) 1920172

Permission granted.

अख्न आ, पोरे की ही। भूगोल विकाम सम्म सं. के. प्रश्न के महा.

12/02/2020

#### DEPARTMENT OF GEOGRAPHY



Sr. No.	Title of Linkage	Name of the partnering institution/research lab with contact details	Year of commencement	Duration (From to)	Nature of linkage
1.	Village Survey	Geography Department, Mrs.K.S.K.College, Beed.	2023-2024	15/02/2024	Temporary

Sr.No.	Name of Student	Signature
1	Khande Daminee Machhindra	4 <del>1818</del>
2	Khemade Jaya Mohan	Jaya-
3	Landge Rushikesh Babasaheb	She
4	Nirmala Gayatree Dipak	Allerman .
5	Waghamare Shabdali Babasaheb	Face
6	Rathod Jyotiram Bhagawan	Btothan
7	Abuj VaIshnavi Bhagawat	Varshrowi
8	Sapakal Sonali Bandu	अंग्रे हात्या
9	Pathak Sham Narendra	GRothall .
10	Shinde Anjali Janardan	Anus II
11	Shaikh Sharif Shaikh Rafeek	the state of the s
12	Mommin Mujjamil Rashid	nama
13	Naiknaware Rohan Dattatrey	Naskravae Rohan
14	Tone Rameshwar Chimajee	Runishmis

#### Teachers-

- 1. Capt. Pote B.T. (HOD & PROFESSOR) 3. Mr. Agam.L.S (Assistant Professor)
- 2. Dr. Chavan A.D. (Assistant Professor) 4. Mr Siddhiki.K.P (Assistant Professor)

Head Dept of Geographi Mrs. K.S.K College Beed



नवगण शिक्षण संस्था राज्री (न)

सौ. के. एस. के. महाविद्यालयः बीड

भूगोल विभाग

# प्रमाणपत्र

दिनांक: 24 4 /2024

Beed

प्रमाणित करण्यात येते की, श्री/कु. आहे दामिनी म	
परिक्षा क्रपरिक्षा क्र.	प्रवाद्यां सम्म

प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड जिल्ह्यातील नाळवंडी ता.जि.बीड येथे "खेड्याचे सर्वेक्षण" केले व उत्कृष्ट पध्दतीने अहवाल तयार केला आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल. र्र. आगाम सर,

भूगोल विभाग सौ. के. एस. के. महाविद्यालय, बीड. कॅप्टन, डॉ. पीट बी. टी.

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



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नवगण शिक्षण संस्था राजुरी (न)

सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

## प्रमाणपत्र

दिनांक: -21/04/2024

प्रमाणित करण्यात येते की, श्री/कु. <u>श्री/कु. यो मोट</u> मोटन — **हजेरी क्र. परिक्षा क्र.** <u>ध्राज १५०१ ग्र</u>म.ए.

प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड जिल्ह्यातील नाळवंडी ता.जि.बीड येथे "खेड्याचे सर्वेक्षण" केले व उत्कृष्ट पध्दतीने अहवाल तयार केला आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एलर्ट्स. आगाम सर,

भूगोल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोटे बी. टी.

पदव्यूत्तर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



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नवगण शिक्षण संस्था राज्री (न)

# सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

# प्रमाणपत्र

दिनांक: 27/04/2024

प्रमाणित करण्यात येते की, श्री/कु. ट्राँडिंग ऋषिणिश हिजराहिष्य हिजरी क्र. परिक्षा क्र. जिल्ह्यातील नाळवंडी ता.जि.बीड येथे "खेड्याचे सर्वेक्षण" केले व उत्कृष्ट पध्दतीने अहवाल तयार केला आहे.

प्रा. एल क्या. आगाम सर, भूगोल विभाग सौ. के. एस. के. महाविद्यालय, बीड. कॅप्टन. डॉ. पोट बी. टी. पदव्यूत्तर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



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नवगण शिक्षण संस्था राजुरी (न)

# सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

## प्रमाणपत्र

दिनांक: -ध्न/ 4 /2024

प्रमाणित करण्यात येते की, श्री/कु. 🗔	भिक् गाम्ये	- दिपक	
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जिल्ह्यातील नाळवंडी ता.जि.बीड येथे	"खेड्याचे सर्वेश	ण" केले व	उत्कृष्ट
पध्दतीने अहवाल तयार केला आहे.	is less		100

प्रा. एल स्था. आगाम सर, भूगोल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

करिता प्रमाणपत्र देण्यात येत आहे.

कॅप्टन. डॉ. पोर्ट बी. टी.

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



नवगण शिक्षण संस्था राजुरी (न)

# सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

## प्रमाणपत्र

दिनांक: -29/ ०४ /2024

Beed

प्रमाणित करण्यात येते की, श्री/कु. व	ठोड ज्योतीवाम् मगवान्
हजेरी क्र	<b>परिक्षा क्र.</b> <u>फिल्किप्रवाह नी</u> एम.ए.
प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी	शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड
जिल्ह्यातील नाळवंडी ता.जि.बीड येथे	"खेड्याचे सर्वेक्षण" केले व उत्कृष्ट
पध्दतीने अहवाल तयार केला आहे.	

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल. इस. आगाम सर,

भूगोल विभाग सौ. के. एस. के. महाविद्यालय, बीड. कॅप्टन. डॉ. पोट बी. टी.

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



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नवगण शिक्षण संस्था राजुरी (न)

# सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

## प्रमाणपत्र

दिनांक: -3% ५ /2024

प्रमाणित करण्यात येते	की, श्री/कु. <u>उनाञ</u> ्	ज वेद्यावी	भागव	त
ह	जेरी क्र	परिक्षा क्र	HB-040	।।० <b>_एम</b> .ए.
प्रथम वर्ष (सत्र द्वितीर	य) भूगोल, यांनी शैक्ष	णिक वर्ष २०२	३-२०२४ म	ध्ये बीड
जिल्ह्यातील नाळवंडी	ता.जि.बीड येथे "खेः	ड्याचे सर्वेक्षण	" केले व	उत्कृष्ट
मध्दतीने अहवाल तया	र केला आहे.			

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल एस. आगाम सर,

भूगोल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन, डॉ. पोटे बी. टी

पदव्यूत्तर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग



#### ह्माणाम्बर

दिनांक: -30/ ०4/2024

प्रमाणित करण्यात येते की, श्री/कु. <u>अपकाळ योगाली खुड</u>
हजेरी क्र. <u>परिक्षा क्र. ०५०॥५</u> एम.ए.
प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड
जिल्ह्यातील नाळवंडी ता.जि.बीड येथे "खेड्याचे सर्वेक्षण" केले व उत्कृष्ट
पध्दतीने अहवाल तयार केला आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

पा. एस रस. आगाम सर,

भ्गॉल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोटे बी. टी.

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



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नवगण शिक्षण संस्था राजुरी (न)

सौ. के. एस. के. महाविद्यालय बीड

भूगोल विभाग

#### प्रमाणपत्र

दिनांक: -37 04/2024

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करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल. प्रस. आगाम सर, भूगोल विभाग सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोर्ट बी. टी. पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



# सौ. के. एस. के. महाविद्याल

भूगोल विभाग

#### प्रमाणपत्र

दिनांक: -30/ ०4/2024

प्रमाणित करण्यात येते की, श्री/कु. हों हे भीजाली जान। हेन होरी क्र. परिक्षा क्र. NI48040116 एम.ए. प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड जिल्ह्यातील नाळवंडी ता.जि.बीड येथे "खेड्याचे सर्वेक्षण" केले व उत्कृष्ट पध्दतीने अहवाल तयार केला आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल. एस. आगाम सर,

भूगोल विभाग सौ. के. एस. के. महाविद्यालय, बीड. कॅप्टन. डॉ. पीट बी. टी

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



## सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

#### <u>kPIUIHAR</u>

दिनांक: -30/ ० ५ /2024

प्रमाणित करण्यात येते की, <b>श्री/कु</b> . 💇	क श्रीम श्रेष रफीक
हजेरी क्र	<b>परिक्षा क्र.<u>०१४,०५०११५</u> एम.ए</b> .
प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी	शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड
जिल्ह्यातील नाळवंडी ता.जि.बीड येथे	<b>"खेड्याचे सर्वेक्षण"</b> केले व उत्कृष्ट
पध्दतीने अहवाल तयार केला आहे.	

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल एस. आगाम सर,

भूगोल विभाग सौ. के. एस. के. महाविद्यालय, बीड. कॅप्टन. डॉ. पीट बी. टी.

पदव्यूत्तर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



## सौ. के. एस. के. महाविद्यालय, बीड

भ्गोत विभाग

#### प्रमाणपत्र

दिनांक: -30/04 /2024

प्रमाणित करण्यात येते की, श्री/कु. मामीन मुजामी कि र्वारि
हजेरी क्रपरिक्षा क्र. <u>NHB040111</u> एम.ए.
प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड
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पध्दतीने अहवाल तयार केला आहे.

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एक एस. आगाम सर,

भूगोल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोटे बी. टी.

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



सौ. के. एस. के. महाविद्यालय, बीड

भगोल विभाग

#### प्रमाणपत्र

दिनांक: -30/ 04 /2024

Beed 431122

प्रमाणित करण्यात	येते की, श्री/कु. नाइक	नावरे शहन र	(त) तथ
	हजेरी क्र	परिक्षा क्र.धः	18040112 <b>VA.V</b> .
प्रथम वर्ष (सत्र द्वि	देतीय) भूगोल, यांनी शै	क्षणिक वर्ष २०२३	-२•२४ मध्ये बीड
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पध्दतीने अहवाल	तयार केला आहे.		

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एन रेस. आगाम सर,

भूगोल विभाग

सी. के. एस. के. महाविद्यालय, बीड.

कॅप्टन डॉ. पोट बी. टी.

पदव्यूतर भूगोल विभाग प्रमुख, सौ. के. एस. के. महाविद्यालय, बीड.



#### सौ. के. एस. के. महाविद्यालय, बीड

भूगोल विभाग

#### ह्माणपत्र

दिनांक: -30/04/2024

प्रमाणित करण्यात येते की, <b>श्री/कु</b>	2101 21H202 Fattist
	परिक्षा क. <u>भमत ०५०ग</u> 7 एम.ए.
प्रथम वर्ष (सत्र द्वितीय) भूगोल, यांनी	शैक्षणिक वर्ष २०२३-२०२४ मध्ये बीड
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पध्दतीने अहवाल तयार केला आहे.	

करिता प्रमाणपत्र देण्यात येत आहे.

प्रा. एल. एस. आगाम सर, भूगोल विभाग

सौ. के. एस. के. महाविद्यालय, बीड.

कॅप्टन. डॉ. पोट बी. टी. पदव्यूत्तर भूगोल विभाग प्रमुख,

सौ. के. एस. के. महाविद्यालय, बीड.



#### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122



[ 3.18 CGPA as per New RAF]





Secretary Dr. B. S. Kshirsagar

Principal Dr. S.V. Kshirsagar

NAAC reaccredited - A Grade ISO- 21001:2018

Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph. (02442)222641 Fax-(02442)230197

Ref: kskcb/2023-24/

Date: 17/08/2023.

To, Pedro Fernandes. Fernades Farm, Modekop ( Ottoli), Khanapur, Belgaum - 591302 (Modekop)



Subject: -Admission of students for online On Job Training at your Farm.

R/Sir.

I hope this letter finds you well. We writing to express our keen interest in participating with my students in an online on-the-job training program with your esteemed farm.

As part of our academic curriculum, we required to complete an OJT program to gain practical experience in our field of study. We have been following your organization's work closely and am impressed by your dedication to excellence and innovation. Your commitment to professional growth and development aligns perfectly with our career aspirations.

We are eager to further develop our practical skills and knowledge in poultry.

Thank you for considering our request. I would welcome the chance to discuss this further and provide any additional information you may require. Please feel free to reach out to us at kskzoology@gmail.com.

Students participating in online OJT.

Sr. No.	Student Name	
1	AWAD PRATIKSHA BALAJI	
2	DOLAS RUSHIKESH UDDHAV	
3	GHOLAP MAHESH SHIVAJI	
4	JOGDAND RUTUJA DINKAR	
5	MUNDE PRAMOD VIJAYKUMAR	
6	PARJANE BABU RAJENDRA	
7	PATHAN AYESHA SIRAJKHA	
8	QUAZI SAMREEN FAHEEM QUAZI	
9	RATHOD ANIL PHULCHAND	
10	RAWALE ABHAY SUDHAKAR	
11	SANAP VISHAL VILAS	
12	SAYYED ADEEBA SAYYED AHMAD ALI	
13	SHAH SABA FIRDOS ABDUL RAHIM	

N.S.S.R.(N.) Mrs.Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science and Commerce College, Beed.



Of Completion

This certificate is presented to

Dolas Rushikesh Uddhav

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Gaikwad Vinay Onkar

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Parjane Babu Rajendra

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Sayyed Adeeba Sayyed Ahmad Ali

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Rawale Abhay Sudhakar

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Quazi Samreen Faheem Quazi

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Quazi Samreen Faheem Quazi

to completing DN JOE TRAINING of s-month Poultry aim to the series fulfilment of the Degree W.Sr. Zoonogy First Year

Dr. A.N. Shelks CO-ORDINATOR



Peim Termanie



Of Completion

This certificate is presented to

Pathan Ayesha Sirajkha

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Munde Pramod Vijaykumar

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Jogdand Rutuja Dinkar

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





#### Of Completion

This certificate is presented to

Munde Rutuja Malhari

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Shah Saba Firdos Abdul Rahim

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Awad Pratiksha Balaji

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR





Of Completion

This certificate is presented to

Gholap Mahesh Shivaji

for completing ON JOB TRAINING of 6-month Poultry farm for the partial fulfilment of the Degree M.Sc. Zoology First Year

Dr. A.N. Shelke CO-ORDINATOR



# Navgan Shikshan Sanstha Rajuri (N) Mrs. Kesharbai Sonajirao Kshirsagar Alias kaku Arts, Science & Commerce College Beed (M. Student Project List 2023-2024 Class: B.Sc. Second Year Subject: Environmental Studies



Sr. No.	Name	Project Tital	
t '	WADMARE SEEMA TATYARAM	Urban Ecology	
2	NAGARGOJE MAHAVEER DIGAMBAR	Urban Ecology	
3	DAHE KAILAS CHINTAMAN	Urban Ecology	
4	GHODKE ADITYA RAJENDRA	Urban Ecology	
5	WADMARE DIKSHA CHNDRAKANT	Urban Ecology	
6	PAWAR PALLAVI ARJUN	Urban Ecology	
7	RANDAVE RUDRAKSH BANKAT	Urban Ecology	
8	PAWAR UMESH SHIVAJI	Urban Ecology	
9	KHETRE ARCHANA SHIVDAS	Noise Pollution	
10	KUTE DHIRAJ SHRIMANT	Noise Pollution	
11	GHUGE SACHIN GORAKH	Noise Pollution	
12	KAUSHALYE POOJA LINGOJI	Noise Pollution	
13	JOSHI KANCHAN DILIP	Noise Pollution	
14	UGHADE KALYANI DILIP	Noise Pollution	
15	MANE RUTUJA RAVINDRA	Noise Pollution	
16	CHOLE PRATIKSHA SHRIRAM	Noise Pollution	
17	PAYAL PRATIKSHA KAILAS	Deforestation	
18	WAGH SHANTANU SUNIL	Deforestation	
19	JADHAV NITIN GORAKH	Deforestation	
20	DHAS ANKITA KHANDU	Deforestation	
21	DHAS KIRTI GANESH	Deforestation	
22	SHELKE ASHA SHIVAJI	Deforestation	
23	MATKAR DNYANESHWARI DADASAHEB	Deforestation	
24	NAIKWADE SAKSHI RAMESHWAR	Deforestation	
25	TAWARE SAGAR ABHIMAN	Renewalble Energy	
26	ARSUL VARSHA VISHAMBER	Renewalble Energy	
27	SHINDE RAJNANDINI ATUL	Renewalble Energy	
28	VISHWAD RUTUJA RAVINDRA	Renewalble Energy	
29	SATPUTE SUJATA PRABHAKAR	Renewalble Energy	
30	YEWALE SANIKA ASARAM	Renewalble Energy	
31	PANDHRE VAISHNAVI DATTATRAY	Renewalble Energy	

		A Salan Arts
r. No.	Name	Project Tital 43112
32	THOTE ANUJA MUNJABA	Environmental Pollution
33	MUNDE RUSHIKESH SHRIKISAN	Environmental Pollution
34	SHELKE SHWETA SHAMRAO	Environmental Pollution
35	KANDE SIDDHESHWAR SUKHADEV	Environmental Pollution
36	JOGDAND TEJASHRI TUKARAM	Environmental Pollution
37	KHADE ROHIT LAXMAN	Environmental Pollution
38	SUKHWASE OM LALASAHEB	Environmental Pollution
39	MASKE DHANANJAY BHIMRAV	Environmental Health
40	DONGARE JYOTI SHAMU	Environmental Health
41	THOKAL AJAY BHARAT	Environmental Health
42	SHAIKH IBRAHIM SALIM	Environmental Health
43	DOIPHODE ANIKET BALIRAM	Environmental Health
44	BAHIR SANKET VIKRAM	Environmental Health
45	KAKDE RAJNANDINI RAVINDRA	Environmental Health
46	SHINDE RUSHIKANT RADHAKISAN	Water Pollution
47	MASKAR ASHWINI ANIL	Water Pollution
48	DHAKNE DAIVSHALA MAHADEV	Water Pollution
49	PATIL SHWETA NIVRUTTI	Water Pollution
50	PATHAN UMARKHAN AYYUBKHAN	Water Pollution
51	KHOSE ARTI NARAYAN	Water Pollution
52	. HONDE ASHABAI RAMNATH	Water Pollution
53	WAGHIRE RUPAJI ANANT	Water Pollution
54	NIRDHAR SARITA UDDHAV	· Water Pollution
55	GHOLAP POONAM ASHOK	Water Pollution
56	BAHIR UMAKANT ASHOK	Effect of Greenhouse Gases on atmosfere
57	KANDE RUSHIKESH LAXMAN	Effect of Greenhouse Gases on atmosfere
58	RAUT ASHWINI SHIVAJI	Effect of Greenhouse Gases on atmosfere
59	BONGANE DADARAO DHONDIRAM	Effect of Greenhouse Gases on atmosfere
60	GANESH GORAKH KHARSADE	Effect of Greenhouse Gases on atmosfere
61	JOGDAND ASHOK VASANT	Effect of Greenhouse Gases on atmosfere
62	DONGARE SAKSHI PRAKASH	Effect of Greenhouse Gases on atmosfere
63	BHOLE SIDDHANT MILIND	Effect of Greenhouse Gases on atmosfere
.64	GAIKWAD VAISHNAVI NAVNATH	Effect of Greenhouse Gases on atmosfere
65	DHAYAJE SUKESHANI MANIK	Effect of Greenhouse Gases on atmosfere
66	BARHATE SUDAM NANDU	Effect of Greenhouse Gases on atmosfere
67	GAIKWAD PRATIK DADAJI	Ecosystem

r. No.	Name	Project Tital Beed 43112
68	JOGDAND SNEHAL MARUTI	Ecosystem dis NA
69	JOGDAND ABHISHEK SUNDAR	Ecosystem
70	KOLHE SHARVARI MALHARI	Ecosystem
71	SHAIKH MUSKAN MUNNA	Ecosystem
72	KORDE SHRUTI CHHAGAN	Ecosystem
73	DALVE MAHESH MAHADEV	Ecosystem
74	SULE PRADIP PRABHAKAR	Ecosystem
75	KOKATE NIKITA RAJENDRA	. Ecosystem
76	RATHOD ABHAY SUDHAKAR	Biotic & Abiotic factors
77	GHODKE ABHISHEK SURESH	Biotic & Abiotic factors
78	DALAVE ROHAN SHESHERAO	Biotic & Abiotic factors
79	MOHITE VISHNU ASHOK	Biotic & Abiotic factors
80	ZUNZURKE ADITYA NANDU	Biotic & Abiotic factors
81	YADAV NARAYAN BALIRAM	Biotic & Abiotic factors
82	DONGRE PRUTHVIRAJ MADAN	Biotic & Abiotic factors
83	KULKARNI SHREYAS ANANTRAO	Biotic & Abiotic factors
84	TURUKAMARE ANIKET ATMARAM	Biotic & Abiotic factors
85	SHINDE TANISHQA APPASAHEB	Biotic & Abiotic factors
86	DEVKAR SAKSHI BALKISAN	Effect of climate Change on Environmental
87	BHALERAO VAISHNAVI DHARMRAJ	Effect of climate Change on Environmental
88	RATHOD DNYANESHWAR SHANKAR	Effect of climate Change on Environmental
89	DHUTADMAL SONAM RAJU	Effect of climate Change on Environmental
90	SHAIKH ZAID ZAINUDDIN	Effect of climate Change on Environmental
91	MEHETRE GAURAV ANKUSH	Effect of climate Change on Environmental
92	SHIRALE GANESH BALIRAM	Effect of climate Change on Environmental
93	KALE PURUSHOTTAM GORAKSHANATH	Effect of climate Change on Environmental
94	BANSODE KRISHNA BALBHIM	Effect of climate Change on Environmental
95	NISARGANDH NILESH BABASAHEB	Varine Water Pollution
96	AUSARMAL SAKSHI SHAILENDRA	Varine Water Pollution
97	BONGANE POONAM ARUN	Varine Water Pollution
98	· AMTE ARTI RAMESH	Varine Water Pollution
99	NAIKWADE SAI SHRIMANT	Varine Water Pollution
100	RAKH PRANAVI BABASAHEB	Varine Water Pollution
101	GHODKE SHUBHANGI BABASAHEB	Varine Water Pollution
102	GHODKE ASHWINI PRATAP	Solide wastes Disposal Dractices in wrlonarve
102	RAUT NITIN KISHOR	Solide wastes Disposal Dractices in wrlonaryo

Sr. No.	Name	Project Beed 431122
104	GORE PRIYANKA ADINATH	Solide wastes Disposal Dracth & Sulvellinia
105	HINDOLE NILESH RAJENDRA	Solide wastes Disposal Dractices in wrlonary
106	KADAM POOJA BALU	Solide wastes Disposal Dractices in wrlonary
107	SONTAKKE POOJA ASHRUBA	Solide wastes Disposal Dractices in wrlonary
108	MASKE SAKSHAM RAMPRABHU	Solide wastes Disposal Dractices in wrlonary
109	KHEMADE PAYAL SUNIL	Solide wastes Disposal Dractices in wrlonary
110	THITE ASHWINI BALASAHEB	Solide wastes Disposal Dractices in wrlonary
111	WAGHMARE SNEHA BHAGWAT	Solide wastes Disposal Dractices in wrlonary
112	SONWANE APURVA VINOD	Solide wastes Disposal Dractices in wrlonary
113	PAWAR ROHINI BABASAHEB	Toxic Wastes
114	LANDGE SONALI GANESH	Toxic Wastes
115	GADE PALLAVI BANDU	Toxic Wastes
116	JAGTAP SOMNATH NAVNATH	Toxic Wastes
117	JADHAV SAKSHI NANDKISHOR	Toxic Wastes
118	GHULE SUMIT SUGRIV	Toxic Wastes
119	GAIKWAD KRANTI RAHUL	The impact Climate Change
120	DORLE PIYUSH SURESH	The impact Climate Change
121	ADMANE ABHISHEK ASHOK	The impact Climate Change
122	SANAP VAISHNAV VISHNU	The impact Climate Change
123	KADAM ABHISHEK EKNATH	The impact Climate Change
124	BAHIRWAL ABHISHEK BALU	The impact Climate Change
125	GHUMRE SWAPNIL ASHOK	Air Pollution
126	BHALSHANKAR RAGINI ASHOK	Air Pollution
127	PAWAR AJAY SHIVAJI	Air Pollution
128	KHAN RAFEDULLAH ANSARULLAH	Air Pollution
129	SARWADE YASH RAHUL	Air Pollution
130	GARJE PANKAJ SOMINATH	Air Pollution
131	KAMBLE PRATIKSHA BIBISHAN	Air Pollution
132	SHETE BHAVIKA BHAGWAT	Air Pollution
133	DARADE AJAY KAILAS	Health effects of air Pollutions
134	DARADE ANUJA DNYANESHWAR	Health effects of air Pollutions
135	FAROOQUI RIMSHA FARHEEN SOHAIL AHMEI	Health effects of air Pollutions
136	FAROOQUI AFSHA AFREEN SOHAIL AHMWD	Health effects of air Pollutions

Sr. No.	Name Name	Project tital 431122	
137	SAYYADA NOOR UL AIN MIR AMJAD ALI	Water Pollution SW 12550	
138	THANGE RANI ASHOK	Water Pollution	
139	NANNWARE ROHIT RAJKUMAR	Water Pollution	
140	QUAZI ABU REHAN AHMED RIZWAN AHMED	Water Pollution	
141	KORDE PAYAL RAMHARI	Water Pollution	
142	WAREKAR ASHISH GANPAT	Water Pollution	
143	DOIPHODE MAHESH DEVIDAS	Noise Pollution	
144	PAWAR RUTUJA BABASAHEB	Noise Pollution	
145	SHAIKH ADIBASHIRIN ABDULTALIB	Noise Pollution	
146	SYED MADIHAFATEMA ASEF	Noise Pollution	
147	JADHAV SUSHIL SUBHASH	Noise Pollution	
148	MATRE PRADIP ASHOK	Noise Pollution	
149	DHAKNE ROSHNI RAMESH	Noise Pollution	
150	THOKE SARITA VIJAYKUMAR	Noise Pollution	
151	SANAP SANTOSH BAJIRAO	Ground Water Pollution	
152	KHATIB MISBA ABDULMOIN	Ground Water Pollution	
153	KUTE GOKUL SHAHADEV	Ground Water Pollution	
154	MANE VAISHNAVI SUNIL	Ground Water Pollution	
155	BARDE KSHANPRABHA SHAMSUNDAR	Ground Water Pollution	
156	THORAT SHAILESH KAILAS	Ground Water Pollution	
157	ADANE VAISHNAVI SUDHIR	Ground Water Pollution	
158	KAJALE SANKET BHARAT	Ground Water Pollution	
159	KAMBLE PRIYA RAJENDRA	Ground Water Pollution	
160	MASKE VAISHNAVI SURESH	Light Pollution	
161	RATHOD SACHIN DEVIDAS	Light Pollution	
162	KAMBLE SATYAJEET PRASAD	Light Pollution	
163	KHAKRE ANIKET BALU	Light Pollution	
164	SAPTE ISHWAR BALASAHEB	Light Pollution	
165	BAVANE SANDHYA BALIRAM (NEW)	Light Pollution	
166	GHULE ABHISHEK SANJAY (NEW)	Biotic factor	
167	MOGHE VISHAL ANKUSH (NEW)	Biotic factor	
168	JADHAV POOJA RADHAKRUSHN (NEW)	Biotic factor	

Dr. Jogdand s.k.

chairman

Environmentel studies.

Valu Arts, Soish

Principal
N.S.S.R.(N.) Mrs.Kesharbai
Sonajirao Kshirsagar Alias Kaku Arts, Science and Commerce College, Beed.

## Navgan Shikshan Sanstha Rajuri (N) Mrs. Kesharbai Sonajirao Kshirsagar Alias kaku Arts, Science & Commerce College Beddi 1.53112 Student Project List 2023-2024

Class: B.A. Second Year Subject: Environmental Studies



Sr. No.	Name	Project Tital			
1	WAGHMARI SARIKA SHRIRAM	Ecosystem			
2	DISALE OM VIJAYANAND	Ecosystem			
3	DAHE NIKHIL DNYANDEO	Ecosystem			
4	SHINDE GANESH LAXMAN	Ecosystem			
5	BAWANE SANJAY ANKUSH	Ecosystem			
6	GHOLAP ABHIJEET ASHOK	Ecosystem			
7	KAKADE VAIBHAV SANJAY	Ecology			
8	DHAWLE ROHIT GANESH	Ecology			
9	SABLE NILESH ATMARAM	Ecology			
10	KOTULE UTTAM VACHISHT	Ecology			
11	TIPALE AMRUTA RAJENDRA	Biotic environmental factors			
12	WAGHMARE ABHAY SHRIRAM	Biotic environmental factors			
13	PAWAR SACHIN RAJENDRA	Biotic environmental factors			
14	WAVALKAR PRASHANT SHRIMANT	Biotic environmental factors			
15	JADHAV PRATIKSHA SAINATH	. Biotic environmental factors			
16	RATHOD ATUL RAMBHAU	Biatic Components			
17	PAWAR PRAVIN BABASAHEB	Biatic Components			
18	SHELAR DNYANESHWAR DINKAR	Biatic Components			
19	PAWAR KANHAIYA NILKANTH	Biatic Components			
20	MISAL PRADIP SHAHADEV	Biatic Components			
21	SABLE RUTIK GORAKSHNATH	Types of Ecosystem			
22	DHANDE PRAVIN SUBHASH	Biatic Components  Types of Ecosystem			
23	GANGAWANE PAYAL SHANKAR				
24	LANDGE ABHISHEK SHAHADEV	E ABHISHEK SHAHADEV  E VISHNU BABURAO  Types of Ecosystem  Types of Ecosystem  Ocean Ecosystem			
25 .	DHAWLE VISHNU BABURAO				
26	AMTE ARTI MAHADEV				
27 PAWAR RAHUL ASHOK		27	PAWAR RAHUL ASHOK	Ocean Ecosystem	
28	GADE SACHIN SUBHASH	Ocean Ecosystem			
29	PABLE PAYAL HARIBHAU	Ocean Ecosystem			

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30	DEVARKONDE SACHIN MAHADEV	Ossah Ceosyston
31	IRMALE AMOL RAMHARI	Ocean Ecosystem
32	SHINDE PAWAN PARSHURAM	Natural Ecosystem
33	KOTHULE POOJA NAVNATII	Natural Ecosystem
34	RAUT SANKET SAKHARAM	Natural Ecosystem
35	WAVHAL CHAITNYA KISAN	Natural Ecosystem
36	KALE VAISHNAVI BHIMRAO	Natural Ecosystem
37	GHOLAP AKANKASHA SOMINATH	Natural Ecosystem
38	SHAIKH FARANA FEROZ	Pollution
39	WALE SAPANA ASHOK	Pollution
40	JAWALE SUMEDH ATAMARAM	Pollution
41	GAIKWAD ROHAN GANESH	Desent Ecosystem
42	MISAL ATUL SANJIV	Desent Ecosystem
43	REDDI SHIRISH PRAKASH	Desent Ecosystem
44	KALE ANUJA KAILAS	Desent Ecosystem
45	RATHOD VAISHALI GOKUL	Desent Ecosystem
46	KADAM DATTA MITTU	Noise Pollution
47	KADAM AVINASH ADINATH	Noise Pollution
48	SHINDE CHAITANAY BAPURAO	Noise Pollution
49	MASKAR MAHARUDRA VIKRAM	Noise Pollution
50	AGAM POOJA PANDURANG	Noise Pollution
51	CHAVAN AKSHDA BALU	Noise Pollution
52	RAKHE RENUKA SUNIL	Marine Ecosystem
53	DHANVE SHARAD BAPU	Marine Ecosystem
54	TANDALE AVINASH DEVIDAS	Marine Ecosystem
55	KALE SOMNATH BALU	Marine Ecosystem
56	KHANDE SACHIN RADHAKISAN	Soil Pollution
57	KHANDEKAR KANIFNATH VASANT	Soil Pollution
58	THORAT MAHESHWARI BALAJI	Soil Pollution
59	GHODKE DNYANESHWARI RAMHARI	Soil Pollution
60	GHODKE GITANJALI SHRIRAM	Soil Pollution
61	PARVE MONIKA VASANT	Air Pollution
62	SHINDE SANGRAM RAMESH	Air Pollution
63	JADHAV AMAR SADASHIV	Air Pollution
64	AGAM PALLAVI VACHISHTA	Air Pollution

		Valua Arts, Stan
65	V 1.1 m	Beed S
	KAMBALE SAKSHI SANTOSH	At Pollution &
66	KADAM PRANITA ARUN	Sy & Follyting
67	SHINDE NIKITA VILAS	Water Politation
68	RATHOD SUREKHA BHARAT	Water Pollution
69	GHODKE SWAPNIL SITARAM	Water Pollution
70	SALGUDE KARAN DHARMRAJ	Water Pollution
71	SANAP ARTI VISHNU	Seashove Ecosystem
72	JADHAV KOMAL DHURAJI	Seashove Ecosystem
73	SHAIKH AMAN GAFFAR	Seashove Ecosystem
74	LONKAR RAMESHWAR PRABHAKAR	Seashove Ecosystem
75	HARALE CHANDU SHIVDAS	Seashove Ecosystem
76	GHUNGRAD HARIDAS ASHOK	Seashove Ecosystem
77	POTBHARE TEJASKUMAR CHAKRADHAR	Effect of Climate Change as atmosphere
78	PATOLE AJAY GAVAJI	Effect of Climate Change as atmosphere
79	UBALE NAVNATH DAMODHAR	. Effect of Climate Change as atmosphere
80	SONTAKKE RITESH VITTHAL	Effect of Climate Change as atmosphere
81	RAUT PRATIKSHA RANJIT	Effect of Climate Change as atmosphere
82	KOTULE DNYANESHWAR BABURAO	Fresh Water Ecosystem
83	BEDKE RUSHIKESH ASARAM	Fresh Water Ecosystem
84	DHOLE VISHAL BAPPA	Fresh Water Ecosystem
85	JADHAV SANDHYA KISAN	Fresh Water Ecosystem
86	DHOLE PRIYANKA CHANDRAKANT	Plastic Pollution
87	KUDKE VAISHNAVI SANDEEP	Plastic Pollution
88	KHAKARE MAHADEV HANUMAN	Plastic Pollution
89	NIMBALKAR ANIKET SHIVRAM	Plastic Pollution
90	SAVSAKE SHIVAJI RAMA	Plastic Pollution
91	KHNDAGALE AKSHAY RANJIT	Plastic Pollution
92	JADHAVAR ARUN PRABHU	Thermal Pollution
93	YEDKE POOJA SURESH	Thermal Pollution
94	BHORE DIGVIJAY MAHADEV	Thermal Pollution
95	SHAIKH TAHA YASEEN TAHER	Thermal Pollution
96	SAPKAL AJAY DHARMARAJ	Thermal Pollution
97	NIKAM NAVNATH EKNATH	Thermal Pollution
98	RATNAPARKHE DHANSHREE APPASAHEB	Climate Change
99	MOMIN SHAYESTA MOMIN ILYAS	Climate Change

100	Para	Sales Valus Aro,	
101	SANAP RADHA SOMINATH	image Clanga	
	SHAIKH TABASSUM SK QUADEER	Manage Change	
102	SHAIKH NASREEN TAYYAB	Ecosystem	
103	KOTHULE MONIKA SANJAY		
104	CHANDANE POOJA SHAHURAO	Ecosystem	
105	KANDEKAR DHANANJAY VILAS	Ecosystem	
106	AMTE ARTI ANURATH	Ecosystem	
107	INDURE MEGHARAJ MAHADEV	Ecosystem	
108	OVHAL NIKITA SURESH	Water Pollution	
109	GAIKWAD NIKITA YALAPPA	Water Pollution	
110	THOMBRE ANJALI RAJENDRA	Water Pollution	
111	PATHAN MUDASSIR HASHAM	Water Pollution	
112	VEDPATHAK SONALI DATTATRAYA	Water Pollution	
113	WAGHMARE OMKAR PANDIT	Air Pollution	
114	ROHITE RUSHIKESH BALU	Air Pollution	
115	KHEMADE PAYAL BABASAHEB	Air Pollution	
116	GAIKWAD RUTVIK SUDHAKAR	Pollution	
117	GHUMRE RUPALI SEETARAM	Pollution	
118	SOMVANSHI SHIVAM DILIP	Pollution	
119	SHIAKH NAILA PARVEEN SHAIKH JABBAR	Pollution	
120	PATHAN ZEENAT TAHER	Pollution	
121	BHANDARE SIDDHARTH VINAYAK	Pollution	
122	KALKHAIR SUNNY RAM	Grassland Ecosystem	
123	KARWANDE ABHISHEK SUBHASH Grassland Eco		
124	CHOURE ANANT BAPURAO	Grassland Ecosystem	
		Grassland Ecosystem	
126	JADHAV RAMESHWAR ASARAM (NEW) Grassland Ecos		
127	GOMASE DIPALI MAHADEV (NEW)	Grassland Ecosystem	
128	BAN VAISHNAVI GANESH	Grassland Ecosystem	

Environmental Studies.

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## Navgan Shikshan Sanstha Rajuri (N) Mrs. Kesharbai Sonajirao Kshirsagar Alias kaku Arts, Science & Commerce College Beed (Mars. Student Project List 2023-2024

Class: B.Com. Second Year Subject: Environmental Studies

r.No	Name	Project Tital
1	CHAVAN OMKAR RAM	Pollution
2	KHANDALE DHANANJAY BALASAHEB	Pollution
3	LOLGE ABHAY PRAMOD	Pollution
4	MASKE MAYUR HARIBHAU	Pollution
5	KARGUDE RITESH MAHADEO	Pollution
6	GHUGE AJAY LIMBAJI	Pollution
7	MANJULE DIPAK PIRAJI	Pollution
8	BHAWSAR GAYATRI SHAM	Pollution
9	KAMBLE KSHITIJ VIJAY	Abiotic Components
10	WAGHMARE MAHESH SANTOSH	Abiotic Components
11	KALASE SAURABH CHANDRASHEN	Abiotic Components
12	KAITAKE SANDIPAN VISHNU	Abiotic Components
13	JANVALE AJINKYA SANTOSH	Abiotic Components
14	JANVALE RUSHIKESH KAILAS	Abiotic Components
15	TALEKAR TUSHAR SHRIHARI	Biotic Components
16	DUDHAL VAIBHAV KALYAN	Biotic Components
17	KHOD SWAPNIL CHHAGAN	Biotic Components
18	NEVADE ANIL SANJAY	Biotic Components
19	PURI RUSHIKESH SUBHASH	Biotic Components
20	KUTE DNYANESHWAR HANUMANTRAO	. Biotic Components
21	KUTE RUSHIKESH MAHADEV	Biotic Components
22	BAND RUSHIKESH DEVRAO	Biotic Components
23	GILBILE SURESH SACHIN	Ecology
24	BAHIR MAHESH MITTHU	Ecology
25	CHAVAN SHITAL SADASHIV	Ecology
26	SURYAVANSHI SIDDHESHWAR TULSHIRAM	Ecology
27	KHAWLE VIRENDRA MAHARUDRASWAMI	Ecology
28	BAYAS RAJAT KANHAIYA	Ecology
29	AJABE RAJU SANTOSH	Ecology

Sr.No	Name	Project Tital Be
30	RAKHUNDE AJINKYA HARIBHAU	Health & Pollution 55/11/2
31	LONDHE YUVRAJ MAHADEV	Health & Pollution
32	KAKDE ONKAR SHRIRAM	Health & Pollution
33	SOLUNKE ONKAR MADHUKAR	- Health & Pollution
34	PAWAR KOMAL RAMESH	Health & Pollution
35	DHAVALE GANESH ROHIDAS	Health & Pollution
36	PHATAK SHIVANI SURESH	Health & Pollution
37	TEKALE SHUBHADA PRASHANT	Fresh Water Ecosystem
38	KOTHULE AVISHKAR TUKARAM	Fresh Water Ecosystem
39	KHARAT SHRADDHA GORAKSH	Fresh Water Ecosystem
40	KHARSADE DHANANJAY BAPURAO	Fresh Water Ecosystem
41	KAPLE SUSHANT SHAHADEV	Fresh Water Ecosystem
42	TAGAD YOGITA ANIL	Fresh Water Ecosystem
43	THORAT AKASHKUMAR RANJITKUMAR	Fresh Water Ecosystem
44	KAITAKE AKANKSHA RAJENDRA	Fresh Water Ecosystem
45	DESHMANE SHRUTI DHANRAJ	Noise Pollution
46	GADE VAIBHAV BALBHIM	Noise Pollution
47	DORLE ADITYA SOMANATH	Noise Pollution
48	TIDKE ROHIT RAMRAO	Noise Pollution
49	AMTE PRATIK VILAS	Noise Pollution
50	SHAIKH AYAN SATTAR	Noise Pollution
51	KHEMADE NIKITA NITIN	Vaurini Ecosystem
52	INKAR NILAM BHAGUJI	Vaurini Ecosystem
53	ANERAO VAIBHAV DATTATRAY	Vaurini Ecosystem
54	SHAIKH AFTAB NAVAJ	Vaurini Ecosystem
55	AKĤADE SUDHIR SAMBHAJI	Vaurini Ecosystem
56	GHULE ANIKET VIJAY	Vaurini Ecosystem
57	TALEKAR ANURADHA RAJENDRA	Vaurini Ecosystem
58	THORAT NIKHIL CHAGAN	Biotic & Abrotic Factor
59	SHENDGE ABHISHEK SUBHASH	Biotic & Abrotic Factor
60	THOTE AMOL JALINDAR	Biotic & Abrotic Factor
61	LOKHANDE RUPESH DEVIDAS	Biotic & Abrotic Factor

Sr.No	Name	SS Valcu Arts, Sciente	
	A Marie Manie	Project Tital Beed	
63	SURYAWANSHI PRIYA KISHOR	Biotic & Abrol 2 not 31122	
64	KORDE SHAHADEV BALNATH	Biotic & Abroti	
65	CHADAR BABLU BALU	Impact of our pollution on health	
66	DAMBALE AKANKSHA ASHOK	Impact of our pollution on health	
67	DHONDAKAR DATTA ATMARAM	Impact of our pollution on health	
68	DHENGLE AMAR MADHUKAR	Impact of our pollution on health	

Skogdand

Dr. Jogdand S.K.

Chairman

Environmental Studies.

Principal
N.S.S.R.(N.) Mrs.Kesharbai
Sonajirao Kshirsagar Alias Kaku
Arts, Science and Commerce
College, Beed.

NSSR's

Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, B

Department of Zoology

M.Sc. II Year (IV-Semester), Practical Examination April/May 2024

Date: - 27/ 04/2024 Time: - 10.00 AM - 02.00PM

Paper No. - ZOO-4/6

Paper Name. - Proje

Project Work431122

Sr. No.	Seat No.	Mentee Name	Mentor	Fitte of the Project	Sign Sign
1	GZD401037	Aasma Faheem Pasha	Dr. A.N. Shelke	Distribution of Cyprinus Carpio in Districts of Maharashtra.	Car.
2	GZD401038	Bagwan Reema Bagwan Khaja Miya	Dr. A.N. Shelke	Study of Freshwater fishes in Beed District of Maharashtra.	Reamon
3	GZD401039	Choure Parmeshwar Shriram	Dr. A.N. Shelke	Study of brackish water fishes in marine coastline of Maharashtra.	Paul
4	GZD401040	Dake Rohini Namdeo	Dr. P.B. Sirsat	Study on Intestinal Helminthic Parasite: Ascaris lumbricoides.	Parinita
5	GZD401041	Gange Pratiksha Dattatraya	Dr. P.B. Sirsat	Study of microbial peptides.	Rankha
6	GZD401042	Gavate Mukund Rajebhau	Dr. P.B. Sirsat	Study on Intestinal Helminthic Parasite: Taenia saginata.	Muxemy
7	GZD401043	Humbare Diksha Arun	Dr. P.P. Gaike	Study on Biology and Life cycle of Fasciola Hepatica.	Dibolio
8	GZD401044	Maharudra Uddhav Khule	Dr. P.P. Gaike	Study on need of protein for Human body in daily life.	Bhuk.
9	GZD401045	Morale Pratiksha Sampat	Dr. P.P. Gaike	DNA: structure, function and hereditary characters.	8. misaje
10	GZD401-046	Murkute Manisha Mahadev	Dr. P.P. Gaike	Prevalence of Mosquitos in Beed City.	mmy-
, II	GZD401047	Pathan Madiha Khanam Mushtamir Khan	Mr. A.D. Kaldhon	Golgi Complex: structure & fumction in various animals.	Alha
12	GZD401048	Pawar Sharyu Yogesh	Mr. A.D. Kaldhon	Biology and Distribution of Bombay Duck in India.	Spanning.
13	GZD401049	Phad Akash Sanjay	Mr. A.D. Kaldhon	Biology of Silkworm: Growth & Infections.	Dung.
14	GZD401050	Sayyed Arshiyabegam Mushtakh	Mr. A.D. Kaldhon	Replication of DNA.	وظ
15	GZD401051	Taur Aniket Gangadhar	Mr. A.D. Kaldhon	Fish parasite: Tapeworm.	Agus

Head of the Department
Department of Zoology,
Mrs.K.S.K. College, Beed.

Dr. Babasaheb Ambedkar Marathwada University, Amangabad - 431 004.

#### **CERTIFICATE**

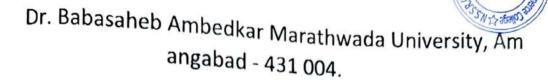
This is to certify that the dissertation entitled "Topic Name": A Project Work, which is being submitted by Miss. <u>Aasma Faheem Pasha</u> Student of Department of Zoology, Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed 431122 Dr. Babasaheb Ambedkar Marathwada University, Aurangabad during the academic year 2023-24 under supervision and the guidance of Dr. A. N. Shelke in partial fulfillment for the award of the degree of master of science in Zoology, is a record of his own work

Dr. A. N. Shelke

(Project Guide & Head of the Department of Zoology)

Place: BEED

Date: 27/04/2024



### <u>CERTIFICATE</u>

This is to certify that the dissertation entitled "Topic Name": A Project Work, which is being submitted by Miss. Bagwan Reema Bagwan Khaja Miya Student of Department of Zoology, Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed 431122 Dr. Babasaheb Ambedkar Marathwada University, Aurangabad during the academic year 2023 -24 under supervision and the guidance of Dr. A. N. Shelke in partial fulfillment for the award of the degree of master of science in Zoology, is a record of his own work

Dr. A. N. Shelke

(Project Guide & Head of the Department of Zoology)

Place: Beed

Date: 27/4/2024

Beed 431122

### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts Science and Commerce College Beed

### **CERTIFICATE**

This is to certify that project report on Study of brackish water fishes in Marine coastaline of Maharashtra a bonafide work carried out by Choure Parmeshwar Shriram under my guidance and supervision. The martial from other source have been duly acknowledged his research.

This work is submitted in partial fulfilment of Dr. Babasaheb Ambedkar University for the degree Master of Science Zoology in the academicyear 2023-24

Dr.P.B.Sirsat

Project Guide

Dr.A.N.8helke

**HOD Department of Zoology** 

Examinier

Dr. Babasaheb Ambedkar Marathwada University
Aurangabad - 431 004.

### <u>CERTIFICATE</u>

This is to certify that the dissertation entitled "Study on intestinal helminthic parasite: Ascaris lumbricoides": A review, which is being submitted by miss. Dake Rohini Namdeo Student of Department of Zoology, Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed 431122. Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. during the academic year 2023-24 under supervision and the guidance of Prof. Dr.P.B. Sirsat n partial fulfillment for the award of the degree of master of science in Zoology, is a record of his own work

Prof. Dr.P.B. Sirsat

Dr. A.N. Shelke h 2021

Prof. & Head of Department of Zoology

(Project Guide)

Place:

Date: 22 /4 /2024.

Dr. Babasaheb Ambedkar Marathwada Universi Aurangabad - 431 004.

### <u>CERTIFICATE</u>

This is to certify that the dissertation entitled "Study of Antimicrobial peptides": A review, which is being submitted by miss. Gange Pratiksha Student of Department of Zoology, Mrs. Kesharbai Sonajirao Kshirsagar, Alias Kaku Arts, Science & Commerce College, Beed 431122. Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. during the academic year 2023-24 under supervision and the guidance of Prof. Dr. Ajay Kaldhon n partial fulfillment for the award of the degree of masterof science in Zoology, is a record of his own work

Prof. Dr. Ajay Kaldhon

Dr. A.N. Sheike

Prof. & Head of Department of Zoology

(Project Guide)

Place: Bes Date: 1 1/2024.

### COLLEGE NAME : MRS. KESHARBAI SONAJIRAO KSHIRSAGAR ALIAS KAKU ARTS, SCIENCE & COMMERCE COLLEGE BEED

#### NAME : POST GRADUATE FEES

#### COURSE NAME: M.SC.(CHEMISTRY) - I

SESSION NAME: 2023-2024

sr.no	Student Name	Title
468383	7 TEKALE PRANJALI VILAS	Water analysis
4684551	GAIKWAD AKANKSHA KASHINATH	Water pollution
4685075	MANTRE BHAGAVAT DHARMARAJ	Soil analysis
4687563	DAWKAR AKSHATA KRISHNAKUMAR	Water pollution
4688965	ATTAR FARUK EKBAL	Water pollution
4690432	PIMPLE AKANKSHA ASHRUBA	Assessment of the groundwater quality of the first industrial residential confluence area of a beed
4693008	KSHIRSAGAR SAKSHI RAJABHAU	Water pollution
4694017	MISAL SAVITRA PANDHARINATH	Water analysis
4697040	SIRSAT RUTUJA SUNIL	Water analysis
4700398	BHALEKAR ABHISHEK MUKUNDRAO	Soil analysis
4702572	SONWANE CHANDANI BABAN	Assessment of the groundwater quality of the first industrial residential confluence area of a beed
4702607	SHINDE PANCHASHIL SANJAY	Assessment of the groundwater quality of the first industrial residential confluence area of a beed
4702807	SHINDE SHITAL RAMDAS	Assessment of the groundwater quality of the first industrial residential confluence area of a beed
4703838	VIBHUTE ANURADHA HARISHCHANDRA	Water analysis
4704185	CHAWAR GAYATRI BALASAHEB	Soil analysis
1704192	KANDHARE RUTUJA SANJAY	Assessment of the groundwater quality of the first industrial residential confluence area of a beed
706544	BHOSKAR VAIBHAV KAKASAHEB	Soil pollution
712430 5	SHAIKH ALFIYA MAHVISH ABDUL SALEEM	Water resources

4718087	VARKALE BALIRAM GANPATI	Soil analysis		
4718126	QURESHI RAHEEM SALEEM	Water resources		
4718205	MASUOD MOHAMMED ABUDANEESH MOHAMMED ZAKIUDDIN	Water resources		
1718367	GORE SWAPNIL KISHOR	Water pollution		
4718687	MORE SAURAV VASUDEO	Soil pollution		
4718703	MORE HARSHAL VASUDEO	Soil pollution		
4719113	QUADRI SYED ABDUL WASE SYED ABDUL BARI	Water resources		
722956	SYED ASJAD SYED ASAD	Water resources		
4723365	SHINDE VIVEK NARAYAN	Soil analysis		
4729631	PAGARE SHUBHAM CHHABURAO	Soil analysis		
4735335	BHAND SHIVANI SHIVAJI	Water pollution		
4760187	KAWADE TUSHAR SUNIL	Soil analysis		
4830615	SANAP DHANANJAY JIVAN	Soil pollution		
4830859	SAYYED A RAUF LIYAQAT	Water resources		
1830999	DHAS KASHINATH ANURATH	Soil pollution		
831054	GHARAT RUPALI TUKARAM	Water pollution		
862251	KHOLE VAISHANVI RAM	Water pollution		
862498	MAHAJAN POONAM BALKRISHNA	Soil analysis		

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### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

Principal-Dr. S.V. Kshirsagar







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150-21001:2018

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### **CERTIFICATE**

This is to certify that, the dissertation titled { Water Resources } is bonafide record of the research work carried out by { Qureshi Raheem Saleem } under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar, Hence certified.



### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122







Principal-Dr. S.V. Kshirsagar

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ISO 21001:2018

Green audit

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### **CERTIFICATE**

This is to certify that, the dissertation titled { Water Resources } is bonafide record of the research work carried out by { Masuod Mohammed Abudancesh Mohammed Zakiuddin } under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar. Hence certified.

(Mr. L.A.Chavan)



### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

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[ 3.18 CGPA as per New RAF]

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#### CERTIFICATE

This is to certify that, the dissertation titled water analysis is bonafide record of the research work carried out by Vibhute Anuradha Harishchandra under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar. Hence certified.

Mr. G.A. Deshmane

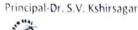


### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122



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Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph.(02442)222641 Fax 02442)230197

### **CERTIFICATE**

This is to certify that, the dissertation titled Water Analysis is bonafide record of the research work carried out by Misal Savitra Pandharinath under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar. Hence certified.

Mrs Dowlynania G A



### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122









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#### **CERTIFICATE**

This is to certify that, the dissertation titled Water Analysis is bonafide record of the research work carried out by Tekale Pranjali Vilas under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar. Hence certified.

Mrs. Deslimane G.A



### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

Principal-Dr. S.V. Kshirsagar







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### CERTIFICATE

This is to certify that, the dissertation titled water analysis is bonafide record of the research work carried out by Sirsat Rutuja Sunil under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar. Hence certified.



### NSSR(N)

### Mrs. K.S.K. Alias Kaku Arts, Science and Commerce College, Beed.

### Department of Computer Science

List of students completing project for Academic Year 2023-24

B.Sc. III<sup>rd</sup> Year

Sr. No	Name Of Student	Project Title	
1.	AJAY GANESH WAKHARE		
2.	YOESH GANESH AVGHAD	ART GALLERY WEBSITE	
3.	POONAM KISHOR DHUTADMAL	MULT:PLEX THEATER ONLINE	
4.	PRITI BHIMRAO NAWALE	BOOKING SYSTEM	
5.	BHOSALE RUTUJA SATISH		
6.	SATHE AKANKSHA KAILAS	HOSPITAL MANAGEMENT SYSTEM	
7.	TANGADE SNEHAL DADARAO	LIBRARY MANAGEMENT SYSTEM	
8.	BHOSALE SHUBHANGI GANESH		
9.	KAKDE MOHINI MAHADEV	SMART DUSTBIN	
10.	YEVALE JAYA BALASAHEB		
11.	NIRMAL AARTI DIPAK	HOSPITAL MANAGEMENT SYSTEM	
12.	TAKIK VAISHNAVI SHAM		
13.	DIPIKA NAVNATH SOUNDALKAR	TIMESHEET MANGEMENT	
14.	SHENDGE MAHESH JALINDAR	BLOOD BANK	
15.	JAGTAP ABHISHEK SAKHARAM		
16.	KALE SANKET KISHOR	ONU INIC EVANA OVOTENA	
17.	GANGAVNE HRUSHIKESH RAVI	ONLINE EXAM SYSTEM	
18.	PATHAK VAISHNAVI PRASHANT	RAILWAY RESERVATION MANAGEMENT SYSTEM	
19.	CHAVAN SHRUTI LAXMAN		
20.	GHODKE YOGITA RAMNARAYAN	ONLINE EXAMINATION SYSTEM	
21.	SOLANKE APARNA VISHNU		
22.	GANESH SHANTIRAM KADAM	HOSPITAL MANAGEMENT SYSTEM	
23.	VISHAL ASHOK KHEDKAR		
24.	TAWARE KRUSHNA ABHIMAN	HOSPITAL MANAGEMENT SYSTEM	

Project Supervisor



H.O.19

Wirs. I. S. M. College, 2. ....

### NSSR(N)

### Mrs. K.S.K. Alias Kaku Arts, Science and Commerce

### College, Beed.

Department of Computer Science
List of Students Completing Project

For M.Sc. II<sup>nd</sup> Year (Sem. IV<sup>th</sup>) Academic Year (2023-2024)

Sr. No	Name Of Student	Project Title	
1	BANGAR RAHUL SUBHASH	BUILD A PROFESSIONAL COOK	
	SHINDE SANKET PANDURANG	RECIEPES LANDING PAGE	
2	PATTEKAR ANĮKET PRADIP	RETRO MUSIC PLAYER	
	KHURESHI SOHEL RASHID		
3	BANGE SONALI CHANDANLAL	ARTIFICIAL INTELLIGENCE CHATBOT	
	ALKUNTE TEJASWINI GANPAT		
4	CHAVAN JEEVAN ASARAM	REAL ESTATE MANAGEMENT SYSTEM	
	CHAVAN SUJIT DNYANESHWAR		
5	KAMBLE SAGAR VIKAS	CUSTOM CHATBOT#ASK ME	
	HAVLE SAURAV AVINASH		
6	TAKIK MANGESH SHRIDHAR	HOTEL MANAGEMENT	
	GORE ADITYA ISHWAR		
7	MALI VIKAS SHIVAJI	STARTUP IDEA WEBSITE	
	NAIKWADE PRADIP JALINDAR		
8	ZANZANE NIKITA DEEPAK	PERSONAL PORTFOLLIO WEBSITE	
	KALE BHAGESHREE SUDARSHAN		
9	KULKARNI ADITI RAJESH	LUNG CANCER DETECTION	
	KULKARNI DHANASHREE SUNIL		
10	SHAIKH AFREEN HANIF	E-LIBRARY MANAGEMENT SYSTEM	
	SHELKE SHIVKANYA SANJAY		
11	JAGDALE MEGHRAJ HANUMAN	ONLINE FOOD ORDER	
(0)0855	SHINDE VAIBHAV NAVNATH	ONE TOOD ONDER	
12	JOSHI VAISHNAVI GOVINDRAO	ONLINE EXAMINATION SYSTEM	

## Dr. Babasaheb Ambedkar Marathwagan University, Aurangabad

Mrs. K.S.K. College Beed



This is to certify that the project entitled Personal Portfolio website by MR.ONKAR SHIVAJI RAUT

Seat no: -

PRN NO:- 20190152003199986

MISS.BHAWANA ARVIND MULE

Seat no:-

PRN NO:- 2018015200779604

in partial fulfillment of M.Sc. Computer Science during the academic year 2023- 2024

Jan 180

Date: 22/04/2024

Internal Examiner

Examiner

### Dr. Babasaheb Ambedkar Marath University, Aurangabad

Mrs. K.S.K. College Beed



This is to certify that the project entitled Startup Idea Website by

Mr. Vikas Shivaji Mali

Seat no: - GXD401344

PRN NO :- 2018015200166791

Mr. Pardip Naikwade

Seat no: - GXD 401347

PRN NO: - 2018015200109296

in partial fulfillment of M.Sc. Computer Science during the academic year 2023- 2024

Date: // 2024

Thomas -

Internal Examiner

Mr. Wuzhomore K.S.

### MRS. KESHARBAI SONJIRAO KSHIRSAGAR ALIAS KAK

Arts, Science & Commerce College, Beed.

ISO 21001:2018 Certified & NAAC Accredited A Grade

Academic year (2023 - 2024)

Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

#### CERTIFICATE

Certified that this Report

Submitted by,

Mr. Vikas Shivaji Mali

Mr. Pardip Naikwade

The student of the course of Master in Computer Science (M.Sc) as a part of Practical work as prescribed by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. For the subject Major Project, for Major Project titled "Startup Idea Website".

We have guided him for the said work, assessed the same & we satisfied that it is up to the standards envisaged for the level of course. The said work may be presented for the level of course. The said work may presented for the partial fulfilment of the project work as prescribed by the Dr. BAMU, Aurangabad.

PRN no: 2018015200166791

Place:Mrs.K.S.K.College,Beed

PRN no ::- 2018015200109296

Date: 22-04-24 Secot No: GND 401844

C1XD401344

Project Co-ordinator

Dr. A.R.Shaikh (H.O.D. of Department of computer Science)

### MRS. KESHARBAI SONJIRAO KSHIRSAGAR ALIAS KAKU

Jul Arts, So

Beed

Arts, Science & Commerce College, Beed.

ISO 21001:2018 Certified & NAAC Accredited A Grade

Academic year (2023 – 2024)

Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

#### CERTIFICATE

Certified that this Report

Submitted by,

MR.ONKAR SHIVAJI RAUT

MISS.BHAWANA ARVIND MULE

The student of the course of Master in Computer Science (M.Sc.) as a part of Practical work as prescribed by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. For the subject Major Project, for Major Project titled "STORE MANAGEMENT SYSTEM".

We have guided him for the said work, Assessed the same & we satisfied that it is up to the standards envisaged for the level of course. The said work may be presented for the level of course. The said work may be presented for the partial fulfilment of the project work as prescribed by the Dr. BAMU, Aurangabad.

PRN No: 20190152003199986

Place: Mrs. K.S.K. College, Beed

PRN No: 2018015200779604

Date: 22/04/2024

DR. A.R.SHAIKH

Project Co-ordinator

(H.O.D. of Department of computer Science)

### Dr. Babasaheb Ambedkar Marathwada University,

### Chhatrapati SambhajiNagar

Mrs. K.S.K. College Beed





This is to certify that project entitled student
Attendance

System By

MR. ANIKET PRADIP PATTEKAR

MR. SOHEL RASHID KHURESHI

Seat No :- GXD401348

Seat No :- GXD401341

In partial fulfilment of M.Sc. Computer Science during the academic year 23-24

Date :- 22/04/2024

**Internal Examiner** 

External Examiner

# MRS. KESHARBAI SONJIRAO KSHIRSAGAR ALIS KAKU

### ARTS, SCIENCE & COMMERCE COLLEGE, BEED

Academic year (2023 – 2024)



Chhatrapati Sambhaji Nagar

### CERTIFICATE

Certified that this Report
Submitted by

Mr. Aniket Pradip Pattekar

Mr. Sohel Rashid Khureshi

The student of the course of Master in Computer Science(M.Sc) as a part of Practical work as prescribed by Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhaji Nagar. For the subject Major Project, for Major Project titled "Retro Music Player".

We have guided him for the said work, Assessed the same & we satisfied that it is up to the standards envisaged for the level of course. The said work may be presented for the level of course. The said work may presented for the partial fulfilment of the project work as prescribed by the Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhaji Nagar.

PRN No. :- 2019015200054325

PRN No. :- 2019015200033766

Dr. Shaikh A.R.

Aid G

(guide, project co-ordinator & h.o.d)

External Examiner



Mrs. Kesherbai sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed.

### **CERTIFICATE**

Department of Computer Science This is to certify that this Project report entitled

### "ART GALLERY"

Being submitted by

MR AJAY GANESH WAKHARE MR YOGESH GANESH AVGHAD

The project is Completed Successfully, as per the course of B.sc III, Dept. of Computer Science, as a part of partial work as prescribed by Dr.BAMU Aurangabad(CHH.Sambhajinagar). for the subject "ONLINE EXAM SYSTEM" He submitted the project report in partial fullifillment of course for the academic year 2023-24.

SEAT NO: MAFG858673 , MAFG58894

PLACE: BEED

DATE:

Dr. SHAIKH A. R

MRS.GAWARE

**FXAMINAR** 

(HEAD OF DEPT)

(PROJECT GUIDE)

Mrs. Kesherbai sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed.



### CERTIFICATE

Department of Computer Science

This is to certify that this Project report entitled

### "ONLINE EXAM SYSTEM"

Being submitted by

MR SANKET KISHOR KALE

MR HRUSHIKESH RAVI GANGAVNE

The project is Completed Successfully, as per the course of B.sc III, Dept. of Computer Science, as a part of partial work as prescribed by Dr.BAMU Aurangabad(CHH.Sambhajinagar). for the subject "ONLINE EXAM SYSTEM" He submitted the project report in partial fullifillment of course for the academic year 2023-24.

SEAT NO: NAF658758

NAF658722

PLACE: BEED

DATE:

28-3-26

**EXAMINAR** 

Dr. SHAIKH A. R

(HEAD OF DEPT)

MRS.GAWARE

(PROJECT GUIDE)

#### CERTIFICALI



HOSPITAL MANEGMENT SYSTEM

SUBMITTED BY:-

#### **BHOSALE RUTUJA SATISH**

#### SATHE AAKANKSHA KAILAS

The project is Completed Successfully, as per the course of B.sc III, Dept.of Computer Science, as a part of partial work as prescribed by Dr.BAMU Aurangabad (CHH. Sambhajinagar).for the subject "HOEt Management submitted the project report in partial fulfillment of course for the academic

year 2023-24.

Place: Beed

**EXAMINAR** 

SEAT NO: NAF : 658690

NAF : 658841

Dr. SHAIKH A. R

DATE: 28 |03 | 24.

(HEAD OF DEPT

#### CERTIFICATE



HOSPITAL MANEGMENT SYSTEM

SUBMITTED BY:-

BHOSALE RUTUJA SATISH

SATHE AAKANKSHA KAILAS

The project is Completed Successfully, as per the course of B.sc III, Dept. of

Computer Science, as a part of partial work as prescribed by Dr.BAMU

Sp Hal Sambhajinagar).for the subject "HO kt Management

submitted the project report in partial fulfillment of course for the academic

year 2023-24.

Place: Beed

**EXAMINAR** 

SEAT NO: NAF : 658690

NAF : 658841

Dr. SHAIKH A. R

DATE: 28 |03 | 24.

(HEAD OF DEPT

Mrs. kesherbai Sonajirao Kshirsagar Alias

Arts, Science & Commerce College, Bee

Beed 431122

### CERTIFICATE

Department Of Computer Science

This is to certify that this Project report entitled

### "TIMESHEET MANAGEMENT"

Being submitted by

### MISS DIPIKA NAVNATH SOUNDALKAR

The project is Completed Successfully, as per the course of B.sc III, Dept.of Computer Science, as a part of partial work as preschibed by Dr.BABU (CHH.Sambhajinagar) for the subject "Timesheet management" she submitted the project report in partial fulfilment of course for the academic year 2023-24.

Place: Beed

EXAMINAR

Seat No: NAF658861

Mrs Gaware

(PROJECT GUIDE)

21

Dr Shaikh A R

(HEAD OF DEPT)

नवगण शिक्षण संस्था राजुरी नवगण सौ.केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काकू कला,विज्ञान व वाणिज्य महाविद्यालय,बीड

दिनांस 30 bl 10 02 4

### हिंदी विभाग

### सूचना

बी.ए. प्रथम, द्वितीय, तृतीय वर्ष के छात्र-छात्रओं को सूचित किया जाता है कि दिनांक -06/02/2024 से के ०७/०2/2024 को (Test & Tutorials) वर्ग चाचणी और गृहपाठ का आयोजन किया गया है।

उपरोक्त तिथि को सभी छात्र-छात्राऐं उपस्थित रहें।

हिंदी विभाग प्रमुख

हिंदी विभाग प्रमुख सौ.के.एस.के.महाविद्यालय, बीड (महाराष्ट्र) -431122



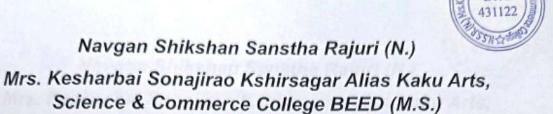
# PROJECT NAME LIST DEPARTMENT OF HINDI

### 2023-24

SR.	STUDENT NAME	TITLE OF PROJECT
1.	AUTE SAURABH PRAKASH	जयशंकर प्रसाद के काव्य का अनुशीलन
2.	GHUMRE SANJAY BHIMRAO	संत कबीरदास के काव्य का अनुशीलन
3/	RAUT SHUBHAM KIRAN	संत तुलसीदास के काव्य का अनुशीलन
4/	UJGARE NISHA VIKRAM	मोहन राकेश के काट्य का अनुशीलन
5/	ZODGE RAVIRAJ SHANKAR	प्रेमचंद का कथा साहित्य का अनुशीलन

HEAD OF DEPARTMENT

हिंदी विभाग प्रमुख सौ.के.एस.के.महाविधालय, बीड (महाराष्ट्र) -431122



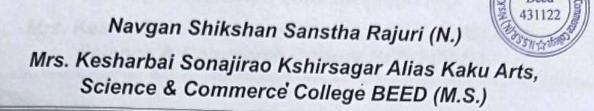
1122

# CERTIFICATE DEPARTMENT OF HINDI

This is to certify that Miss/Mr. AUTE SAURABH PRAKASH
class B.A. Third Year (Main Hindi) has completed project work
in title 'जयशंकर प्रसाद के काव्य का अनुशीलन' she/he has
completed satisfactory and submitted to Dr. Babasaheb
Ambedkar Marathwada University, Chhatrapati Sambhajinagar
for fulfilment of UG Degree in Hindi in the year 2023-2024.

Name & Sign of Incharge

Sign of
Head of Department
हिंदी विभाग प्रमुख
सौ.के.एस.के.महाविद्यालय,

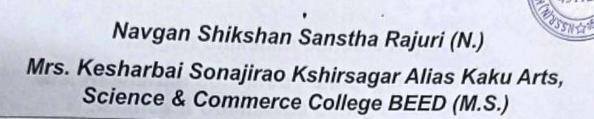


# CERTIFICATE DEPARTMENT OF HINDI

This is to certify that Miss/Mr. GHUMARE SANJAY BHIMRAO class B.A. Third Year (Main Hindi) has completed project work in title 'संत कबीरदास के काव्य का अनुशीलन' she/he has completed satisfactory and submitted to Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar for fulfilment of UG Degree in Hindi in the year 2023-2024.

Name & Sign of Incharge

Sign of
Head of Department
हिंदी विभाग प्रमुख
सो.के.एस.के.महाविद्यालय,



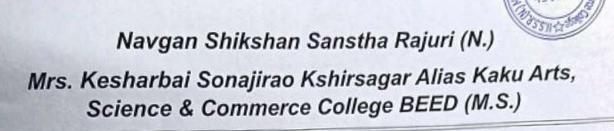
# CERTIFICATE DEPARTMENT OF HINDI

This is to certify that Miss/Mr. RAUT SHUBHAM KIRAN
class B.A. Third Year (Main Hindi) has completed project work
in title 'संत तुलसीदास के काव्य का अनुशीलन' she/he has
completed satisfactory and submitted to Dr. Babasaheb
Ambedkar Marathwada University, Chhatrapati Sambhajinagar
for fulfilment of UG Degree in Hindi in the year 2023-2024.

Name & Sign of Incharge

prof. RAKH.B.V

Sign of
Head of Department
हिंदी विभाग प्रमुख
सौ.के.एस.के.महाविद्यालय,



# CERTIFICATE DEPARTMENT OF HINDI

This is to certify that Miss/Mr. <u>UJGARE NISHA VIKRAM</u>
class B.A. Third Year (Main Hindi) has completed project work
in title 'मोहन राकेश के काव्य का अनुशीलन' she/he has completed
satisfactory and submitted to Dr. Babasaheb Ambedkar
Marathwada University, Chhatrapati Sambhajinagar for
fulfilment of UG Degree in Hindi in the year 2023-2024.

Name & Sign of Incharge

Head of Department

# Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College BEED (M.S.)

# CERTIFICATE DEPARTMENT OF HINDI

This is to certify that Miss/Mr. ZODGE RAVIRAJ SHANKAR
class B.A. Third Year (Main Hindi) has completed project work
in title 'प्रेमचंद के कथा-साहित्य का अनुशीलन' she/he has
completed satisfactory and submitted to Dr. Babasaheb
Ambedkar Marathwada University, Chhatrapati Sambhajinagar
for fulfilment of UG Degree in Hindi in the year 2023-2024.

Name & Sign of Incharge

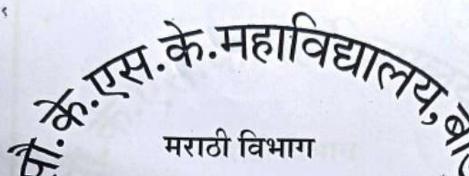
Sign of Head of Department हिंदी विभाग प्रमुखा सौ.के.एस.के.महाविद्यालय, बीड (महाराष्ट्र) -431122

### शै.वर्ष २०२३-२०२४ मधील बी.ए. तृतीय वर्ष मुख्य मराठी प्रकल्प लेखन विद्यार्थी यादी

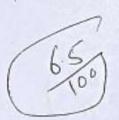


अ.क्र.	बैठक क्रमांक	विद्यार्थ्याचे नाव	विषय	शेरा
X.	NBF605557	कांबळे निखील संतोष	कुसुमाग्रजांचे चरित्र	
7.	NBF605601	राऊत प्रविण सतीश	मराठी (भाषा ) जागतीकरकरण	
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<b>X</b> .	NBF605623	तांदळे कावेरी सुदाम	पु.ल.देशपांडे यांचे साहित्य	

प्रमुख स्थित स्थाग गराठी विशामप्रमुख सी.के.एस.के.महाविद्यालय,थीन नवगण शिक्षण संस्था राजुरीचे

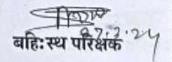


प्रमाणपत्र



प्रमाणित करण्यात येते की, कुमार/कुमारी- निकील संतीष कालाव याने/हिने मराठी विषयाच्या पेपर क्र. XII आणि XVI साठी कुन्यू माञ्चाजांत्वे न्विर हा -- या विषयावर प्रकल्प सादर केला. सदरील प्रकल्पाचे मुल्यांकन करुन तो मान्य / अमान्य करण्यात आला.

करिता प्रमाणित करण्यात येते. NBF-605557 दिनांक :2) /3 /24



नवगण शिक्षण संस्था राजुरीचे

क. महाविद्या है अपने के अपने अपने के अपने के

प्रमाणपत्र

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प्रमाणित करण्यात येते की, कुमार/कुमारी. राष्ट्रत प्रविवा त्यानेश याने/हिने मराठी विषयाच्या पेपर क्र. XII आणि XVI साठी - स्रिहि (क्राबा) जानितुरक् -या विषयावर प्रकल्प सादर केला. सदरील प्रकल्पाचे मुल्यांकन करुन तो मान्य / अमान्य करण्यात आला.

करिता प्रमाणित करण्यात येते. NB& 602601 दिनांक :27/3/25

नवगण शिक्षण संस्था राजुरीचे

क. महाविद्याला के अपने के स्टार्ग विभाग

प्रमाणपत्र

प्रमाणित करण्यात येते की, कुमार/कुमारी - क्रिने किया दिलीप याने/हिने मराठी विषयाच्या पेपर क्र. XII आणि XVI साठी - कुविधारी अहीनाय कि चौद्यरी माही लीया विषयावर प्रकल्प सादर केला. सदरील प्रकल्पाचे मुल्यांकन करुन तो मान्य / अमान्य करण्यात आला.

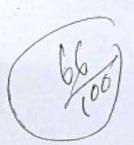
करिता प्रमाणित करण्यात येते. NBA.605614 दिनांक 27/3/24

नवगण शिक्षण संस्था राजुरीचे



क. महाविद्यालय

प्रमाणपत्र



प्रमाणित करण्यात येते की, कुमार/कुमारी. लोवले कि विशे कुतार याने/हिने मराठी विषयाच्या पेपर क्र. XII आणि XVI साठी पुल विषयां है शेरि शहिल्या विषयां प्रकल्प सादर केला. सदरील प्रकल्पाचे मुल्यांकन करुन तो मान्य / अमान्य करण्यात आला.

करिता प्रमाणित करण्यात येते. 605623 दिनांक :27/3/24



#### MRS. KESHRBAI SONAJIRAO KSHIRSAGAR ALIAS KAKU AR SCIENCE & COMMERCE COLLEGE, BEED -43 122 Beed Department of Urdu

B.A. Third Year project list 2023-2024

Sr/No	Name of the Student Name	Name of project	Prn number
01	Humera begum musa bagwan	Allahma Iqbal ek mukhtesar jayeza	2021015200283585
02	Pathan samreen ramzan	Allahma Iqbal ki talimi khidfmat	2020015200381644
03	Shaikh Mubashir shaikh azhar	Mirza galib aur urdu gazal	2020015200332192
04	Shaikh muzammil shaikh azhar	Urdu gazal ek taruf	2020015200349155
05	Syed shahebaz syed ahmed	Jadid zaraye ibragh aur urdu	2020015200332025

#### NSSR's

Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of Urdu

Name of student: Humera begum musa bagwan

PRN Number: 2021015200283585

Class: B.A third Year (Six semester)

Subject: Urdu

Year: 2023-2024

Name of Project: Allahma Iqbal ek mukhtesar jayeza

Seat Number:

It is certified mentioned the above mentioned person submitted the project is approved and the said project that was evaluated is certified by

Guide

Dr Syed Imaduddin Department of Urdu

Mrs K.S.K college Beed

External examiner

Department of Urdu

#### NSSR's

#### Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of Urdu

Name of student: Pathan samreen ramzan

PRN Number: 2020015200381644

Class: B.A third Year (Six semester)

Subject: Urdu

Year: 2023-2024

Name of Project: Allahma Iqbal ki talimi khidfmat

Seat Number:

It is certified mentioned the above mentioned person submitted the project is approved and the said project that was evaluated is certified by

Guide
Dr Syed Imaduddin
Department of Urdu
Mrs K.S.K college Beed



External examiner

Department of Urdu

Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of Urdu

Name of student: Shaikh Mubashir shaikh azhar

PRN Number: 2020015200332192

Class: B.A third Year (Six semester)

Subject: Urdu

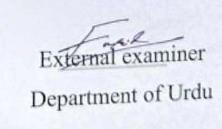
Year: 2023-2024

Name of Project: Mirza galib aur urdu gazal

Seat Number:

It is certified mentioned the above mentioned person submitted the project is approved and the said project that was evaluated is certified by

Guide
Dr Syed Imaduddin
Department of Urdu
Mrs K.S.K college Beed



#### Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of Urdu

Name of student: Shaikh muzammil shaikh azhar

PRN Number: 2020015200349155

Class: B.A third Year (Six semester)

Subject: Urdu

Year: 2023-2024

Name of Project: Urdu gazal ek taruf

Seat Number:

It is certified mentioned the above mentioned person submitted the project is approved and the said project that was evaluated is certified by

Dr Syed Imaduddin
Department of Urdu
Mrs K.S.K college Beed

External examiner

Department of Urdu

NSSR's

#### Mrs. Kesharbai sonajirao kshirsagar Alias Kaku Arts, science and Commerce college Beed.

Department of Urdu

Name of student: Syed shahebaz syed ahmed

PRN Number: 2020015200332025

Class: B.A third Year (Six semester)

Subject: Urdu

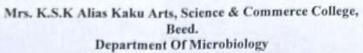
Year: 2023-2024

Name of Project: Jadid zaraye ibragh aur urdu

Seat Number:

It is certified mentioned the above mentioned person submitted the project is approved and the said project that was evaluated is certified by





A.Y 2023-2024

Research Project List

M.Sc. F.Y.



BF

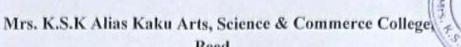
Sr.No.	Title Of Research Project	Name Of Student's	
1	Microbial tapestry: Investigative	Shaikh Jishan Shagir	
	Bacterial Colonization Patterns on the	Shaikh Arsalan Ibrahim	
	Human Skin.	Kundalkar Shrikant Digambar	
		Shaikh Akhlaque Riyaz	
		SadafuleVedant Dattatraya	
		Londhe Arhit	
	Annual Control of the	Bhalerao Gokul	
	The state of the s	Shaikh Tofik	
2		Deshmukh Snehal Haribhau	
	Bacteriological Quality of water, A	Siddiqui Jaweriya	
	case study of Beed city (MH) India.	Chumble Rangnath Gopoinath	
		Jaiswal Vaibhav Vijaylal	
		Bade Bhagyashri	
	Towns Control of the	Bankar Rutuja	
		Shinde Priyanka	
3	Bacteriological Analysis of water	Kahekasha Basharat Rasheed Ahmed	
3	Bacteriological Analysis of water	Syed Ayesha Parveen Khaja Mazharuddin	
		Sund Aema Ateeque	
		Momin Umme Ammara Tajammul Ahmed	
		Gole Shivani	
	BENEFIT TO THE PARTY OF THE PAR	Kalike Diksha	
		Wadmare Khandu	
		Gaikwad Pradnya Bhaskar	
	Isolation Of Bacteria from Packed	Ubale Nikita Mahadev	
		Thokal Sakshi Santosh	
	Yogurt.	Sayed Ayesha Rashid	
		Sheikha Anam Mohammed	
		Pawar Bhakti	
		Rade Abhiject	
	to the form	Kate Rushikesh Dattatraya	
	Isolation Bacteria Pathogen from	Sanap Nilesh Jagannath	
ALIES !	Dam/Lake/Sea Water/ A case of Study	Kaiwade Ajay Rajendra	
200	of Beed city (MH) India.	Nare Sagar Rajendra	
-		Pawar Shubham Jalindar	
		Puri Dnyaneshwar	
2		Vyawhare Rushikesh	
100		Vyawnaic Kaaniire	

HOD

Head

Dpt. of Microbiology

Mrs. K.S.K. College Beed



#### Beed.

4 Colle

#### Department Of Microbiology A.Y 2023-2024

#### Research Project List

M.Sc. S.Y.

Sr.No.	Title of Research Project	Name of Student's
1	Isolation of cellulose degrading Actinomycetes	Ahire Ahanksha Ramesh
	from soil	Mule Pratiksha Rajendra
		Maske Sneha Bhramhadatta
		Ubale Akshay Kishor
		Bansode Pooja
		Barde Mayuri
		Bhokare Mayur
2	Isolation of pigment Producing Bacteria from	Ahire Anamika Bhagwat
	Indoor & Outdoor.	Ghodke Mayuri Bhimrao
		Ghallal Sangram Sudhakar
		Gopalghare Sitaram
		Deshmukh Pranita
		Ghoble Pradnya
3	Canker Causing Bacteria in Citrus Limetta.	Mohare Vaishnavi Ganesh
		Ingole Ishwar
523		Jade Manish
		Khose Pawan
		Kute Akash
		Naikware Pawan
3		Palwade Amol
4	Microbiological quality of water, A case study	Deshmukh Snehal Haribhau
Wiles-	of Beed city (Pali) India	Waybase Neha Martand
		Chumble Rangnath Gopoinath
233		Jaiswal Vaibhav Vijaylal

Pansare Mahendra Salunke Sakshi College Saudarmal Sheha Somwane Nikhil Opt. of Microbiology Mrs. K.S.K. College Beed 1 . 1 21 21 21

Mrs. Keshrbai Sonajirao Kshirsagar,

Arts, Science & Commerce College, Beed

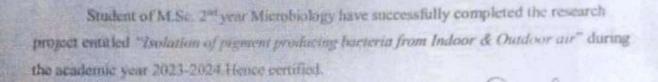
#### CERTIFICATE

This is to certify that

Miss. Ghodke Mayuri Bhimrao

Miss. Ahire Anamika Bhagwat

Mr. Ghallal Sangram Sudhakar



Project incharge

Head of Department

Dpt. of Microbiology Mrs K.S.K. College Beed

Examiner: -

Date: -



Mrs. Keshrbai Sonajirao Kshirsagar,

Arts, Science & Commerce College, Beed

#### CERTIFICATE

This is to certify that

Miss. Mule Pratiksha Rajendra

Miss. Ahire Akanksha Ramesh

Miss, Maske Sneha Bramhadatta

Mr. Ubale Akshay Kishor

Students of M.Sc. 2<sup>nd</sup> year Microbiology have successfully completed the research project entitled "Isolation of Cellulose Degrading Actinomycetes from Soil" during the academic year 2023-2024. Hence certified.

Project incharge

Examiner: -

Head of Department

Dpt. of Microbiology Mrs. K.S. K. College Beauti

Date: -23-4-2024

WOODGYCAL QUALITY OF WATER

#### CERTIFICATE

Mrs. Kesharbai Sonajirao Kshirsaga 4311 Arts, Science & Commerce College, Beet 1914



CERTIFICATE

Ms. Deshmukh Snehal Haribhau

Ms.Waybase Neha Martand

Mr. Chumble RangnathGopichan

Mr. Jaiswal Vaibhav Vijaylal

Above students are of M.Sc. 2<sup>nd</sup> Year Microbiology Have successfully completed the course project report in Microbiology during the academic year 2023-2024

Project incharge

**Head of Department** 

Examiner :-

Date:-

Department of Microbiology, Mrs. Ksk Art, science & commerce college beed

Commerce College, Beed.

# CERTIFICATE

This is to Certify that



Ms. Ghobale Pradnya Ashok

Ms. Barde Mayuri Kailas

Ms. Salunke Sakshi Santosh

Ms. Bansode Pooja Rohidas

Ms. Saundarmal Sneha Dattatray

Are student of M.Sc. Final Year Microbiology has successfully completed the course of Project report in Microbiology During the Academic year of 2023-2024.

Hence certified

Project in-charge

Head of Departm

Examiner:

Date:

8/ 8/ / 8/

#### CERTIFICATE

Mrs. Keshrbai Sonajirao Kshirsagar, Arts, Science & Commerce College, Beed.



#### CERTIFICATE

This is to certify that Mr Sitaram Tatyaram Gopalghare Mr Mayur Satish Bhokre Mr Ishwar Ankush Ingole

student of M.Sc 2<sup>nd</sup> year Microbiology

Has successfully complete the course project report in Microbiology

In during the academic year 2023-2024

Project incharge Head of Department

Examiner:-

Date :-

#### MRS. KESHARBAI SONAJIRAO KSHIRSAGAR ALIAS KAKU ARTS, SCIENCE & COMMERCE COLLEGE BEED

Year 2023-24

M.sc Second year (Sem-IV)

CHEO-424 Research Project

Allotment of Students for PG Dissertation (Project work)

Sr	NAME	I seemen or	(B) NEETE (B)		
No.	100 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -	MOBILE NO	Title of Project	Name of Guide	
	GAIKWAD SHREYA ABASAHEB	9420476661	One Pot Three Component Solvent Free synthesis of N-Substitued Tetrazoles using RuO2/MMT	d Dr. P. R. Khaki	
2.	ZODGE PRATIK KISHANRAO	9604962073	One Pot Three Component Solvent Free synthesis of N-Substitued Tetrazoles using RuO2/MMT	1.	
3.	AJABE MADHAVI PRALHADRAO	9355100100	One Pot Three Component Solvent Free synthesis of N-Substitued Tetrazoles using RuO2/MMT	- the	
4.	SAWANT NEHA RAMNATH	8793737314	One Pot Three Component Solvent Free synthesis of N-Substitued Tetrazoles using RuO2/MMT		
5.	BANSODE PRACHI BHARAT	7028619877	Synthesis Of Isoxazolines	Dr. P. R. Khakre	
6.	KHISTE NITIN ATMARAM	9970995309	Synthesis Of Isoxazolines		
7.	NAGARE POOJA MACHHINDRA	8369863519	Synthesis Of Isoxazolines	TE	
8.	KHAMBEKAR RUTUJA RAVISING	8975479421	Synthesis Of Isoxnizolines		
9.	CHAVAN SUDHIR CHAGAN	8275727375	Synthesis of Fused indeno pyrimidine derivatives	Dr. S. B. Maulage	
10.	KALE SHRADDHA KALYAN	8806927701	Synthesis of Fused indeno pyrimidine derivatives	Normal	
11.	KADAM DNYANESHWARI DHAIRYASHIL	8625976905	Synthesis of Fused indeno pyrimidine derivatives	47	
12.	BHALSHANKAR VARSHA ASHOK	7507790157	Synthesis of Fused indeno pyrimidine derivatives		

1	GHOGARE SNEHAL LAHU	8007862370	Analysis of heavy metal contaminants in environmental sample	
19	DHORE YUVARAJ YOGIRAJ	9075610535	77 Section 2011	
15.	RATHOD PALLAVI UTTAM	9403902780	Analysis of heavy metal contaminants in environmental sample water and soil	
16.	DHERE SANCHETI SANDIPAN	7403902780	Analysis of heavy metal contaminants in environments imple water and soil Beed	The state of the s
	SANDIPAN	9022940604	Analysis of heavy metal contaminants in environmental amples water and soil	
7 P	ANCHAL SACHIN DATTATRAY	The state of the s		
		8408860098	Synthesis and characterization of Zinc complex from Sulicyladelinde	Dr. S. V. Gayakwac
	SHIRSAGAR SAGAR SHARAD	9765545549	Synthesis and characterization of Zinc complex from Salicylaldehyde	Crime
9 K K	HAN SADAF KHANAM AZIZ AHMED HAN	9890759805	Synthesis and characterization of Zinc complex from Salicylaldehyde	-
0 P	ATEKAR RUTIK LAHU	9075133161	Synthesis and characterization of Zinc complex from Salicylaldehyde	
21.	MULE VIKAS GOPICHAND	9145548614	Assessment of Ground Water Quality Analysis of the beed city	Mr. G. A. Deshmane
22.	PHAD PRATIKSHA RAMESH	9561352282	Assessment of Ground Water Quality Analysis of the beed city	Cod-
23.	SIRSAT PRANALI KALYAN	8369863519	Assessment of Ground Water Quality Analysis of the beed city	
24.	KAMBLE ROHAN DADA	7083481041	Assessment of Ground Water Quality Analysis of the beed city	

ONDE DIPALI CHANDRAKANT	9657301982	1,3,7-Trimethylxanthine	Mr. A. A. Chavan
MISAL RUSHIKESH SHRIDHAR	8308999266	1,3,7-Trimethylxanthine	ad.
27. JADHAV PRIYANKA ASHOK	9356719171	1,3,7-Trimethylxand like 431122	gine !
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140			120h

Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

#### DEPARTMENT OF CHEMISTRY

#### **CERTIFICATE**

This is to certify that, the dissertation titled "Synthesis and characterization of zinc complex From salleyladehyde" is bonafide record of the research work carried out by PATEKAR RUTIK LAHU under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry (Academic year 2023-24) of Mrs.Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar.

Hence, certified.

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Dr. S. V. Gayakwad (Project Supervisor) Dr. P. R. Khakre

HOD

49)4)2024 External Examiner

seat. no :- GRD402207



# Mrs. Kesharbai Sonajirao Kshirsagar Alias

#### Kaku Arts, Science & Commerce College, Beed-431122

Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph.(02442)222641 Fax-02442)230197

#### CERTIFICATE

This is to certify that, the dissertation titled Synthesis of fused indeno pyrimidine derivatives is bonafide record of the research work carried out by Sudhir Chagan Chavan under the supervision and guidance Dr. S.B Maulage in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar.

Dr. S. B. Maulage

Professor in chemistry

Dr. P. R.Khakre

Head, Dept. of chemistry

Place :- Beed

Date :- 25/04/2024

(Sjelan Dr. A.J. 1 (cham) 2:3/4/2024





#### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

Website-kskcollegebeed.com E-mail-kskheed123@rediffinail.com Ph.(02442)222641 Fax-02442)230197

#### CERTIFICATE

This is to certify that, the dissertation titled Synthesis of fused indeno pyrimidine derivatives is bonafide record of the research work carried out by Varsha Ashok Bhalshankar under the supervision and guidance Dr. S.B Maulage in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar,

Dr. S. B. Maulage

Professor in chemistry

Dr. P. R.Khakre

Head, Dept. of chemistry

Place :- Beed

Date: 23/04/2024





#### Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph.(02442)222641 Fax-02442)230197

#### **CERTIFICATE**

This is to certify that, the dissertation titled Synthesis of fused indeno pyrimidine derivatives is bonafide record of the research work carried out by Varsha Ashok Bhalshankar under the supervision and guidance Dr. S.B Maulage in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry of Mrs. Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar.

Dr. S. B. Maulage

Professor in chemistry

Dr. P. R.Khakre

Head, Dept. of chemistry

Place :- Beed

Date :-2 9/04/2024



Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

#### DEPARTMENT OF CHEMISTRY

#### **CERTIFICATE**

This is to certify that, the dissertation titled "Synthesis and characterization of zinc complex From salicyladehyde" is bonafide record of the research work carried out by PANCHAL SACHIN DATTATRAY under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry (Academic year 2023-24) of Mrs.Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar.

Hence, certified.

M.

Dr. S.V. Gayakwad

(Project Supervisor)

Dr. P. R. Khakre

HOD



Mrs. Kesharbai Sonajirao Kshirsagar Alias Kaku Arts, Science & Commerce College, Beed-431122

#### DEPARTMENT OF CHEMISTR



#### **CERTIFICATE**

This is to certify that, the dissertation titled "Synthesis and characterization of zinc complex From salicyladehyde" is bonafide record of the research work carried out by SADAF KHANAM under my supervision and guidance in partial fulfilment of the requirement for the award of degree of Master of Science in Chemistry (Academic year 2023-24) of Mrs.Kesharbai Sonajirao Kshirsagar alias Kaku Arts, Science and Commerce College Beed affiliated to Dr. Babasaheb Ambedkar Marathwada University Chhatrapati Sambhaji Nagar.

Hence, certified.

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Dr. S.V. Gayakwad

(Project Supervisor)

Dr. P. R. Khakre

HOD

External Examiner



# सौ.केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काकू कला, विज्ञान व वाणिज्य महाविद्यालय, बीड इतिहास विभाग

प्रतिहास विभाग

बहिःस्य परिशक्त

हेब आंबेडकर मराठवाडा Beed 431122

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वातनातील परीकाशीची संस्था

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एकूण अनुपश्चित परीक्षाची

केंद्र प्रमुख्यानी सभी

तार वे द्र प्रभावाची स्ती।

५. प्रत्यक वर्ष आंग विधाशास्त्रवारिता लाव र भोगे संस्तृ

गुल्ह्यात प्रतिका प्रारम्भातार अध्योत्तासानै उद्ध हुमुखास रहत्व माम्बाह्यां कार्यां का एकार्वातीत क्याने लावून कुकारीयम उत्तरवायकात वहन वयाते.



Dr. Babasaheb Ambedkar Marathwada University

Blank Mark List For

B.A. - Regular-P-2013 - T.Y.B.A. - Sixth Semester For Apr/May-2024

Mts, Soignon Beed

College Mrs. K.S.K. Alis Kaku Arts, Science and Commerce College, Beed (34). Shivaji Nagar, Bond Bred Bred 81/131122 Project Work UA (Max Mark 100 Min Max 05 N

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4	NBF605567	2020015200373923	INGOLE PRATIKSHA CHANDRAKANT	75	15	96
5	NBF605580	2021015200251386	KOTULE NITA MAHADEV	72	18	30
6	NBF605608	2021015200256171	MISAL VITTHAL RAM	50	15	90
7	NBF605616	2021015200257874	SAPKAL NIKITA LAXMAN	46	14	
8	NBF605618	2021015200271487	SOLANKAR MAHESH RAMESH	80	10	60
9	NBF605629	2020015200445994	SURWASE RAVIRAJ TULSHIRAM	55		90
10	NBF605632	2021015200277991	WAGHMARE ADITYA VILAS	48	15	70
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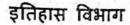


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प्रमाणपत्र



गाणित करण्यात येथे की, कुमार/कुमारी, - २-१५५७० जिस्ति। परिप्रेश - विषयाच्या पेपर क्र. XII आणि XVI साठी - - - या विषयावर प्रकल्प सादर केला. सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्याकन करण्यात आहे. किरिता प्रमाणित करण्यात येते.

दिनांक: 1 /4/२०२४

- Ashund मार्गदर्शक

ा. सौ. डॉ. शिंदे ए. व्ही.

इतिहास विभाग

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बहिःस्थ परिक्षक Dr. Sheikh, H I

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त्रांक: 3/4/२०२४

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ा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग े के. एस. के महाविदयालय, बीड. बहिस्थ परिक्षक Pd. sheirkh, H. I.

इतिहास विभाग Milliya त्यानुह किन्दर्य



www. Arts. Beed 431122

इतिहास विभाग

प्रमाणपत्र

प्रमाणित करण्यात येथे की, कुमार/कुमारी, र्रेड्यरेन रविराज लुळे कीराम् ---- याने∕हिने इतिहास विषयाच्या पेपर क्र. XII आणि XVI साठी ------. हर्न्यपती किलानी महाराजी ..... या विषयावर प्रकल्प सादर केला. सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्याकन करण्यात आले, करिता प्रमाणित करण्यात येते.

दिनांक: ७०/०३/२०२४

प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग

सौ. के. एस. के महाविदयालय, बीङ.

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दिनांक: 05/4/२०२४

मार्गदर्शक

प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग सौ. के. एस. के महाविद्यालय, बीड. बहिःस्य परिक्षक Do Shaikh. H. 1.

इतिहास विभाग Miliga जीरन, Bred





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प्रमाणपत्र



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य परिक्षक Dr. Shaikh . H. I

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दिनांक: 80/03/२०२४

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प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग सौ. के. एस. के महाविद्यालय, बीड. बहिस्यं परिक्षक Dd. Shailch. H. I

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दिनांक: 27/3/२०२४

<u> भागंदर्शक</u>

प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग सौ. के. एस. के महाविद्यालय, बीड. बहिःस्य परिक्षक

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Dr. shailch. H. I.

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प्रमाणपत्र

प्रमाणित करण्यात येथे की, कुमार/कुम्री, अध्न क्वर्ज र्नवनिक्री ---- याने∕हिने इतिहास विषयाच्या पेपर क्र XII आणि XVI साठी -----कि क्रेन्ड of mahagas hनेव्य -- या विषयावर प्रकल्प सादर केला सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्याकन करण्यात आले.

दिनांक : 13 14 / **2024** 

प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग सौ. के. एस. के. म हा विद्या ल य , बीड

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प्रमाणित करण्यात येथे की, कुमार/कुमारी, -- इंडिंग्गले - प्रतिहार चं प्रवर्जित -- याने/हिने इतिहास विषयाच्या पेपर क्र. XII आणि XVI साठी -- -- याने/हिने इतिहास विषयाच्या पेपर क्र. XII आणि XVI साठी -- -- या विषयावर प्रकल्प सादर केला. सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्याकन करण्यात आले, करिता प्रमाणित करण्यात येते.

दिनांक: 26/63/ २०२४

मार्गदर्शक

प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग सौ. के. एस. के महाविद्यालय, बीड. बहिःस्थ परिक्षक

Do Sheirch. H. I.

इतिहास विभाग Milliya College Beed



### नवगण शिक्षण संस्था राजुरी (न)



इतिहास विभाग

प्रमाणपत्र

प्रमाणित करण्यात येथे की, कुमार/कुमारी, -- कार्ल किता सहिद्य याने/हिने इतिहास विषयाच्या पेपर क्र. XII आणि XVI साठी - निर्वाबर्शनिया माहिती (पुरंदर ,राधार , जिथार पुन्हाळाडू या विषयावर प्रकल्प सादर केला. सदरील प्रकल्प मान्य करण्यात आला. संदरील प्रकल्पाचे मुल्याकन करण्यात आले, करिता प्रमाणित करण्यात येते.

दिनांक: 28 /3/२०२४

प्रा. सौ. डॉ. शिंदे ए. व्ही.

इतिहास विभाग

सौ. के. एस. के महाविद्यालय, बीड.

Dd. shaikh H. I

इतिहास विभाग



#### नवगण शिक्षण संस्था राजुरी (न)



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इतिहास विभाग

प्रमाणपत्र



प्रमाणित करण्यात येथे की, कुमार/कुमारी, भिकाल - रिवहत्त - प्राभ----- याने∕हिनें इतिहास विषयाच्या पेपर क्र. XII आणि XVI साठी --- भाइन्जिल्ले - विवधी - भाष्टिली - - - - या विषयावर प्रकल्प सादर केला. सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्याकन करण्यात आले. करिता प्रमाणित करण्यात येते.

दिनांक: 30/03/ २०२४

प्रा. सौ. डॉ. शिंदे ए. व्ही. इतिहास विभाग सौ. के. एस. के महाविद्यालय, बीड. Dr. Shaikh, H. I

इतिहास विभाग Milliga rollege Bred



#### Dr. Babasaheb Ambedkar Marathwada University

— . University Campus, Chhatrapati Sambhajinagar-431004, Maharashtra(India), Reaccredited with "A" Grade

Recognized by UGC U/s 2(f) and 12(B), NAAC

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Blank Mark List For

B.A - Regular-P-2013 - T.Y.B.A. - Sixth Semester For Apr/May-2024

College: Mrs. K.S.K. Alis Kaku Arts, Science and Commerce College, Beed (34), Shivaji Nagar, Beed, Beed

Paper Name: Economics Project Based on(Paper-XII & Paper-XVI) Project Work UA (Max Mark: 100 Min Mark) (ECO-15-13) Seat Number PRN Student Name No. und En 1 NBF605517 2020015200340984

DHAKANE HARIOM MADHUKAR 2 NBF605560 2021015200253644 MANDE DIKSHA MACHINDRA 30

डॉ वीथरी टिह एम अर्थशास्त्र विभाग प्रमुख कि.के एस.वे. १ कि हालय बीड.

शि.से.शि.म.मंडळाधे कता वरिष्ठ महाविद्यालय गांब्र (घाट). हा.केल, जि.हीड.

Seal

Signature of Examiner

Date

Instruction

1. While entering the marks, please ensure a clear, legible hand-writing, without any scratches or over-writing.

2. In case of scratches, over-writing or corrections, please re-write the marks separately with your signature.

3. Use English number while entering the marks.

4. Usage of whitner is strictly prohibited.

#### कार्य अहवाल

विषयाचे नाव -आज दिनांक / / रोजी तृतीय वर्षाचा अहवाल पेपर क्र. ( घेण्यात आली.त्याची उपस्थिती खालील प्रमाणे

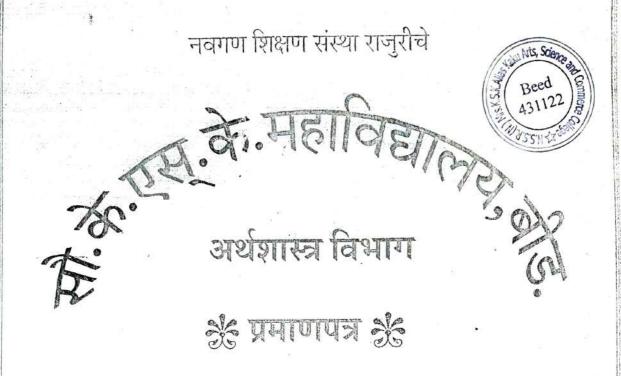


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अर्थशास्त्रकातिकातिक प्रमुख शि.से.शि.प्रमंडळावे काला वरिष्ठ अठाविसालय

पारक्षक

विभाग बहुन **स्थानिक**टी टिड एस. दर्भस्टम विभाग प्रभुख



प्रमाणित करण्यात येते की, कुम्रार/कुमारी. युर्वाउ विदेशा कि रिर्जे याने/हिने अर्थशास्त्र विषयाच्या पेपर क्र. XII आणि XVI साठी जिल्हा दुर्श्वच्यवसाय विकास वितास विकास व

करिता प्रमाणित करण्यात येते.

Gria :27/03/24

मार्गदर्शक

**बर्ध राहितारी टिट**.एस. **शर्यशा**स्त्र विभाग प्रमुख सी के गस के महाविद्यालय बीड. अर्थशार ने हिन्दी परिश्वक शासे.सि.प्र.मंडलबे कला वरिषठ महाविद्यालय नंत्र (घट). ता.केज, जि.बीड.



### गुण विभागणी तक्ता

### बी.ए.तृतीय वर्ष

अ.क्र.	प्रकल्पाचे नाव व कार्य	एक्ग	मिळालेले
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ξ.	प्रकल्पाचे नाव	04	04
٦.	प्रस्तावना	04	04.
₹.	संशोधन पध्दती /आणि	04	03
	संशोधन आराखडा	40 c	
٧.	गृहितके / उद्दिष्टे	04	03
५.	विषय विवेचन	40	42
ξ.	निष्कर्ष / शिफारशी	૦.ધ	03
٠e.	संदर्भसूची	04	04
۷.	तोंडी परीक्षा	२०	17
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	Project	Viva	Total
Maximum Marks	20	२०	१००
Marks Obtained	63	I7	80

अह्यास्य विभाग यमेल

ति.से.ति.प्र.पंडनावे करण खरिष्ठ सहाविद्यालय नोङ् (पर), स.फेज, जि.नीह. आव्यापप

विसाग प्रमुख

विभाग प्रमुख **बिकोच्यी विह**.एस.

खर्वसास विभाग प्रमुख

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योः केशदबार्ड योगानीद्राव सीरसागर उर्फ व्याकु कालाः पिसान-व वाणिज्य महाविद्याल्ज्य, क्षेत्रः

HAIS 21KA PAPIET ATT: 2023-2024

B. A.III year Project List
Paper. No-XII & XVI



S. NO.	Name of 9 tudent	class		Title ? the project
<b>1</b> /.	tnahakunde Sandip Sakhder.	B.A.III	NBF 605573	या कुले याचे सामाजिक कार्य.
2./	Kunte yogesh Jagannath	B.A.III	NBF 605570	झालमजुरी एक सामाजिक समस्य)
3/	Rode Ablishek Anjan	B.A.III.	NBF 605605	कांडेबिक हिंसापार

Head Dept. of Sociology
Mrs. K.S.K.College, Beed

नवगण शिक्षण संस्था राजूरीचे

क. एस .के. महाविद्यालय

समाजशास्त्र विभाग

### \* प्रमाणपत्र \*

प्रमाणित करण्यात येते की, कुमार /कुमारी -मार्कुड साहिए सिर्विट याने / हिने समाजशास्त्र विषयाच्या पेपर क्र. XII आणि XVI साठी -मार्कुड याने या विषयावर प्रकल्प सादर केला. सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्यांकन करण्यात आले.

करिता प्रमाणित करण्यात येते.

Seat No: HBF- 60557-3

दिनांक :30 /03/2024

मागंदर्शक: डेर्न राहोड की: र्जे. समामधाण्या विभाग प्रमुख सी के एप के महाविधातंत्रण,

बाह्य परिक्षक उन्ने डी. ट्रमः तैमान्याः जनमवानी शिक्षण प्रसारकमंडणके महीत्का महाविद्यात्वकः, विराद्ये नि स्वितः

Head Dept.of Sociology Mrs. K.S.K.College, Beets.

NS, Science of 122 land

नवगण शिक्षण संस्था राजुरीचे

प्राक्त. महाविद्याति

समाजशास्त्र विभाग

#### -: Khinina :-

करीता प्रमाणित करण्यात येते.

दिनांक्य है । है । 2024

seat NO NBF - 60 5570

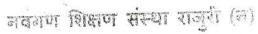
मार्गदर्शक डॉ. राठोड बी.जे. समाजशास्त्र विभाग प्रमुख सौ.के.एस.के.महाविद्यालय, बीड

बाह्य प्ररिक्षक

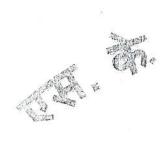
डाँ हो। हमः त्रीव्याः जगभवानी शिक्षणः स्थाः सरिक्षाः महाप्रिशालस्य तार् जोष्टार्धः स्त्री कराः

Head Dept.of Sociology Mrs. K.S.K.College, Beed













#### ganulus

प्रमाणित करण्यात येथे की, कुमार/कुमारी, - रोड हर रिकेटि डिंग्डरिटी - यामे/हिने समाजशात्र विषयाच्या पेपर क्र. XII आणि XVI साठी - - - या विषयावर प्रकल्प नादर केला. सदरील प्रकल्प मान्य करण्यात आला. सदरील प्रकल्पाचे मुल्याकन करण्यात आले, करिता प्रमाणित करण्यात येते.

Beat NO NBF 605605

मार्गदशक उठाउँ २५

प्रा. डॉ. राठोड बी. जे. समाजशात्र विभाग सौ. के. एस. के महाविद्यालय, बीड. बहिःस्थ परिक्षक उत् उति लग त्यात्वाउ अन्यम्यानी नात्रात्वाउ समाजशात्र विभाग





बी. ए. तृतीय वर्ष राज्यशास्त्र (प्रकल्प कार्य) मार्च / एप्रिल २०२३-२४ Navgan Shikshan Sanstha Rajuri (N)

### MRS. KESHARBAI SONAJIRAO KSHIRSAGAR ALIAS KAKU ARTS, SCIENCE AND COMMERCE COLLEGE, BEED -431122 16, Science

#### DEPARTMENT OF POLITICAL SCIENCE

#### PROJECT STUDENT LIST

**ACADEMIC YEAR- 2023-24** 

SR.NO.	PRN NO.	STUDENT NAME	PROJECT NAME
Y	2021015200389401	Ashetkar Abhishek Rajesh	Women Empowerment (Mahila Sablikaran)
2.	2021015200251316	Gaikwad Anjali Arun	Voter Behavior in Election Process (Nivadnuk Prakriyetil Matdar Vartavnuk Pravah
3.	2021015200336402	Harbhak rohini Diliprao	Election Commission of India (Bhartiya Nivadnuk Aayog)
<b>4.</b>	2021015200378916	Raut Abhishek Rajendra	Panchayat raj And Rural Development (Panchayat raj v Gramin Vikas)
1/5.	2021015200436442	Raut Suvarna Dattatray	Jadian party system (Bhartiya Paksh Padhati)

Subject Teacher

Head of the Department

Principal



डॉ. बाबासाहेब आंबेडकर मराठवाडा विदयापीठ, औरंगाबाद सौ. केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काक् कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

शैक्षणिक वर्ष-२०२३-२४

# प्रकल्प लेखन

विद्यार्थ्याचे नांव : Raut Abhishek Rajendra

विद्यार्थाचा PRN नंबर : 20 २००१५ २००३ 78916

वर्ग

B.A. III

प्रकल्प विषय

: पंचारत राज व वासीन निकास

प्रा.कदम जी.आर.

सहायक प्राध्यापक राज्यशास्त्र विभाग



### डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद सौ. केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काक् कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

#### शैक्षणिक वर्ष-२०२३-२४

## प्रकल्प लेखन

विद्यार्थाचे नांव : Raut Abhishek Rajendra

विद्यार्थ्याचा PRN नंबर : 20 २००।५ २००३ २८९। ८

वर्ग

B.A. III

प्रकल्प विषय

: पंचारत राज व गामीन विकास

प्रा.कदम जी.आर.

सहायक प्राध्यापक राज्यशास्त्र विभाग





#### नवगण शिक्षण संस्था राजुरी (न.)

स्ती. केशरबाई सोनाजीराब सीरसागर उर्फ काकू कला, विज्ञाल व वाणिज्य महाविद्यालय, बीड विकल्त जेल्जांक्य विभागतिय

शैक्षणिक वर्ष=२०२३-२४

मार्च - एप्रिल

विद्यार्थी / विद्यार्थिनी Raut Abhishek Rajendra

याने /हिने बी.ए.तृतीय वर्ष (राज्यशास्त्र) प्रकल्प कार्याअंतर्गत प्राधार ्राञ्च व सामीण विकास या विषयावर प्रस्तुत प्रकल्प कार्य स्वतः केलेले असून ते त्याने

/तिने समाधानकारकपणे लिहलेले आहे.

दिनांक:- 28/03/2024

आसन क्रमांक:- NBF 6055*98* 

प्राप्त गुण:-



### डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद सौ. केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काकु कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

शैक्षणिक वर्ष 2023-24

### प्रकल्प लेखन

विद्यार्थ्याचे नांव

राऊत खुवना दलात्रय

विद्यार्थ्याचा PRN नंबर

: 20200156200436442

वर्ग

: बी. ए. तृतीय वर्ष

प्रकल्प विषय

: भारतीय पश्च पर्-धती

: मार्गदर्शक:

प्रा.कदम जी.आर.

सहायक प्राध्यापक राज्यशास्त्र विभाग





नवगण शिक्षण संस्था जुरी (न.)

स्गी. बेजशरबाई सोनाजीरांब क्षीरसागर उर्पंत बताबूत कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

#### प्रकल्प मृल्यांकन प्रमाणपत्र

शैक्षणिक वर्ष 2023-24

	मार्च – एप्रिल							
विद्यार्थी / विद्यार्थिनी	स्कुवनी दलात्रय							
याने /हिने बी.ए.तृतीय वर्ष (राज्यशा प्र <u>ट</u> ्यती	·		पृष्ठा -या विषयावर					
प्रस्तुत प्रकल्प कार्य स्वतः केलेले असून ते त्याने तिने समाधानकारकपणे लिहलेले आहे.								
दिनांक:-	आसन क्रमांक:-	NBF 60E	6603					
निर्धारित गुण :- 20 + 80 12 हि0 प्राप्त गुण:-								



### डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद सौ. केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काकु कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

शक्षणिक वर्ष २०२३-२४

## प्रकल्प लेखन

विद्यार्थ्याचे नांव	सार्वक रोहिनी दिस्नीपराव
विद्यार्थ्याचा PRN नंबर	: 202405200336402
वर्ग	: B.A. III
प्रकल्प विषय	: भारतीय निवक्क अम्बोध

मार्गदर्शक:

प्रा.डॉ.पांडुरंग सुतार सहायक प्राध्यापक राज्यशास्त्र विभाग





#### नवगण शिक्षण संस्था राजुरी (न.)

सी. केशरबाई सोनाजीराव क्षीरसागर उर्फ काकू कता, विज्ञान व वाणिज्य महाविद्यालय, बीड प्रकल्प मुल्यांकृन प्रमाणपत्र

शैक्षणिक वर्ष-२०२३-२४

ਸਾਰੀ - एप्रिल

विद्यार्थी / विद्यार्थिनी हारबक रोहिंगी दिलीपराव

याने /हिने बी.ए.तृतीय वर्ष (राज्यशास्त्र) प्रकल्प कार्याअंतर्गत आरतीय

<u>जिंदर पूर्व श्रीयां या विषयावर प्रस्तृत प्रकल्प कार्य स्वतः केलेले</u> असून ते त्याने

/तिने समाधानकारकपणे लिहलेले आहे.

दिनांक:-

आसन क्रमांक:-

प्राप्त गुण:-

20 + 80

विभाग प्रमख

प्राचार्य



डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद सौ. केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काकु कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

शैक्षणिक वर्ष २०२३-२४

# प्रकल्प लेखन

विद्यार्थ्याचे नांव

गायकवाड अंजली अङ्ग

विद्यार्थ्याचा PRN नंबर : 20210)5200251316

वर्ग

B.A. III

प्रकल्प विषय

निवउ०,00 प्राकुशमील मतदार वर्तक्क प्रवाह

मार्गदर्शक:

प्रा.डॉ.पांडुरंग सुतार

सहायक प्राध्यापक राज्यशास्त्र विभाग





#### नवगण शिक्षण संस्था राजुरी (न.)

स्ती. केशरवाई सोनाजीराव सीरसागर उर्फ काकू

### विष्यांका प्रभाणायन

शैक्षणिक वर्ष-२०२३-२४

मार्च - एप्रिल

विद्यार्थी / विद्यार्थिनी विद्यार्थिनी विद्यार्थी अस्ति। अस्ति।

याने /हिने बी.ए.तृतीय वर्ष (राज्यशास्त्र) प्रकल्प कार्याअंतर्गत निवउठ्ये क

या विषयावर प्रस्तुत प्रकल्प कार्य स्वतः केलेले असून ते त्याने प्रक्रियो तीत्र मतदार ठातीठाक प्रवाह

/तिने समाधानकारकपणे लिहलेले आहे.

दिनांक:-

आसन क्रमांक:-

प्राप्त गुण:-

20 + 80 18 + 72 बाह्य परीक्षक अंतर्गत परीक्षक

ि (क्रिक्ट्रि) दिशिहाः विभाग प्रमख

प्राचार्य



डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद सौ. केशरबाई सोनाजीराव क्षीरसागर ऊर्फ काकु कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

शेक्षणिक वर्ष-२०२३-२४

# प्रकल्प लेखन

विद्यार्थ्याचे नांव

: अभिवेष क्रमेश आधिकर

विद्यार्थ्याचा PRN नंबर : 2021015200389401

वर्ग

: B.A. III

प्रकल्प विषय

: मिटिसा सबकी ७२००

प्रा.कदम जी.आर.

सहायक प्राध्यापक राज्यशास्त्र विभाग





#### नवगण शिक्षण संस्था राजुरी (न.)

स्त्री. केशरवाई सोनाजीराव सीरसागर उर्फ काक्

### व्रकल्प मूल्यांकन प्रमाणपत्र

शैक्षणिक वर्ष-२०२३-२४

	1 1 1 4 3 0	
मा्	र्व - एप्रिल	
विद्यार्थी / विद्यम्थिनी _ े ो	के नी जेश आवेट एड	
याने /हिने बी.ए.तृतीय वर्ष (राज्यशास्त्र) प्र	· 1	
असून ते त्याने	या विषयावर प्रस्तुत प्रकल्प कार्य स्वतः केलेले	
/तिने समाधानकारकपणे लिहलेले आहे.	· ·	
दिनांक:- 28/02/2024	आसन क्रमांक:- NBF60550	2
प्राप्त गुण:-		
20 + 80	= 100	



#### मवगण शिक्षण संस्था राजुरी नवगण सौ.केशरबाई सोनाजीराव क्षीरसागर उर्फ का कला,विज्ञान व वाणिज्य महाविद्यालय,बीड

Beed 431122

.<mark>प्राचार्य</mark> डॉ.एस.व्ही..क्षीरसागर Q

2018 NAAE reaccre

NAAC reaccredited -A Grade [3.18 CGPA as per New RAH] Green audit

सचिव डॉ.भारतभृषण क्षीरसागर

COLLEGE HTE SEVERTH ID- 06310100113

Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph.(02442)222641 Fax-02442)23013

जा.क्र.केएसकेसीबी/२०२३-२०२४

दिनांक २२/०३/२०२४

प्रति, मा.प्राचार्य, बलभीम कला,विज्ञान व वाणिज्य महाविद्यालय,बीड

विषय - बी.ए. तृतीय वर्ष राज्यशास्त्र विषयाचे प्रकल्प मुल्यांकन बहिस्थ परिक्षक म्हणून उपस्थित राहणे बाबत.

महोदय,

उपरोक्त विषयान्वये विनंती करण्यात येते की, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ,औरंगाबाद अंतर्गत होणाऱ्या मार्च/ एप्रिल २०२४ च्या बी.ए. तृतीय वर्ष राज्यशास्त्र प्रात्यक्षिक परिक्षेसाठी (प्रकल्पकार्य) दिनांक २८/०३/२०२४ रोजी आपल्या महाविद्यालयातील डॉ.आर.के.काळे राज्यशास्त्र विभाग प्रमुख यांना बहिस्थ परिक्षक म्हणून नियुक्ती करण्यात आली आहे.

तरी आपण त्यांना दिनांक २८/०३/२०२४ रोजी बहिस्थ परिक्षक म्हणून उपस्थित राहण्यासाठी कार्यमुक्त करण्यात यावे ही विनंती.

> प्राचार्य . Principal S K Alas Kaku Al

Mrs.K.S.K.Alias Kaku Arts, Science & Commerce College

प्रत

१ डॉ.आर.के.काळे राज्यशास्त्र विभाग प्रमुख बलभीम महाविद्यालय, बीर्ड यांना माहितीस्तव.



#### डॉ. बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ

उपस्थिती अहवाल : परीक्षा - मार्च-एप्रिल / ऑक्टो.-नोव्हें. २०

परीक्षा	केंद्र	21.0.0	थान्के-	महा- की	3

परीक्षा केंद्र क्रमांक : - - -सत्र : पहिले / दुसरे

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अ.ज.	रूचना : या प्रपत्राती बैठक क्रमांक	ल पराक्षायाच उत्तर पत्रिका क्रमांक	परीक्षार्थीची स्वाक्षरी	अ.क.	बैठक क्रमांक	उत्तर पत्रिका क्रमांक	परीक्षार्थींची स्वाक्षरी
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एकूण अनुपस्थित परीक्षार्थी - - -

केंद्र प्रमुखाची सही

सह केंद्र प्रमुखाची सही हर है

पर्यवेक्षकाची सही

सूचना :- ५. प्रत्येक वर्ग आणि विद्याशाखेकरिता स्वतंत्र फॉर्म भरावा.

- २. मुळप्रत परीक्षा प्रारंभानंतर अर्ध्यातासाने केंद्र प्रमुखास द्यावी.
- परीक्षार्थीच्या उत्तरपत्रिका मूळप्रतीतील क्रमाने लावून मूळप्रतीसह उत्तरपत्रिकांचे बंडल करावे.



#### Dr. Babasaheb Ambedkar Marathwada University

University Campus, Chhatrapati Sambhajinagar-431004, Maharashtra(India), Reaccredited with "A" Grade

Recognized by UGC U/s 2(1) and 12(8), NAAC

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Blank Mark List For

B.A - Regular-P-2013 - T.Y.B.A. - Sixth Semester For Apr/May-2024

College : Mrs. K.S.K. Alis Kaku Arts, Science and Commerce College, Beed (34), Shivaji Nagar, Beed Reed Pirk 33 122

	Paper I	Name: Political S XVI) (PO	Science Project Based on(I L-15-13)	Paper-XII & Paper-	Project Work UA (Max Mark: 100 Min Max	431 (20nt of	Student: 5
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	5	NBF605603	2020015200436442	RAUT SUVARNA	A DATTATRAY	60+12=72	sevent tu

Internal Examiner

Dr. P.R. Sutar Dept. of Political science Toms. K. S. K. College Beed

Internal examiner Mo. G.R. Kadam Dept. of political acience Mos. K.s. K. college, Beed

Seal

Signature of Examiner

DE. R. K. Kale

Instruction

1. White entering the marks, please ensure a clear, legible hand-writing, without any scratches or over-writing.

2. In case of scratches, over-writing or corrections, please re-write the marks separately with your signature.

3. Use English number while entering the marks.

4. Usage of whitner is strictly prohibited

Report Generated By Mrs. K.S.K. Ask Kaku Ar

DEDOOT	SUMMARY	
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#### Paper Wise Mark List (Against Seat Number)

This report contains Paper Wise Mark List (against Seat Number) of 5 Students.

Course	B.A - Regular-P-2013-T.Y.B.ASixth Semester	1/3	W ATS, SO	92	
Exam Event	Apr/May-2024	1	·	18	1
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ADEC Name: Mrs. K.S.K. Alis Kaku Arts, Science and Commerce College Beed (34)

Date: 04-25-2024

-----END OF SUMMARY - DETAILED REPORT BEGINS-----

Signature:	Signature:	Signature:
Name		
Name:	Name:	Name
Designation:	Designation:	Designation:
Date:	Date:	Date.

#### Dr. Babasaheb Ambedkar Marathwada University

Exam Event Aprillary-2024

User Nome All Users

Course B.A. Regular-P-2013-T.Y.B.A.-Sixth Semester

Paper: Political Science Project Based on(Paper-XII & Paper-XVI) (POL-15-13)

Project Work- Laboratory-University Assessment



#### Paper Wise Mark List (Against Seat Number)

Seat Number	Examiner Marks	Seat Number	Examiner Marks	Seat Number	Examiner Marks
NBF605502	77	NBF605524	90	NBF605539	90
NBF605598	75	NBF605603	72		

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Signature:	Signature:	Signature:
Name:	Name:	Name.
Designation:	Designation:	Designation:
Date:	Date:	Date:



#### नवगण शिक्षण संस्था, राजुरी नवगण सौ. केशरबाई सोनाजीराव क्षीरसागर उर्फ काकू कला, विज्ञान, वाणिज्य महाविद्यालय, बीड

प्राचार्य डॉ.एस. व्ही क्षीरसागर









NAAC reaccredited -A Grade Green audit [3.18 CGPA as per New RAF]



COLLEGE HTE SEVERTH ID- 06310100113

Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph. (02442)222641 Fax-02442)230197

Ref: kskcb/2023-28

Date: - २८/०३/२०२४

प्रति. मा. प्राचार्य, बलभीम कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

विषय - राज्यशास्त्र विषयाचे प्रकल्प मुल्यांकन बहिस्थ परिक्षक म्हणून कामातून कार्यम्क्त करणे बाबत...

महोदय,

आमच्या महाविदयालयात दिनांक २८/०३/२०२४ रोजी डॉ. बाबासाहेब आंबेडकर् मराठवाडा विद्यापीठ, छत्रपती संभाजीनगर अंतर्गत बी. ए. तृतीय वर्ष राज्यशास्त्र विषयाची प्रात्यक्षिक परीक्षा (प्रकल्प कार्य) घेण्यात आली. परीक्षेच्या मूल्यांकनाकरिता आपल्या महाविद्यालयातील राज्यशास्त्र विषयाचे डॉ. आर. के. काळे राज्यशास्त्र विभाग प्रमुख यांना बहिस्थ परीक्षक म्हणून निमंत्रीत करण्यात आले होते.

तरी परीक्षा संपल्यानंतर त्यांना दिनांक २८/०३/२०२४ रोजी कार्यालयीन वेळेनंतर कार्यमुक्त करण्यात आले.

Joseph Kale

Principal Mrs.K.S.K.Alias Kaku Arts. Science & Commerce College Beed-431122



#### नवगण शिक्षण संस्था, राजुरी नवगण सौ. केशरबाई सोनाजीराव क्षीरसागर उर्फ काकू कला, विज्ञान, वाणिज्य महाविद्यालय, बीड



प्राचार्य डॉ.एस. व्ही क्षीरसागर







डॉ. भारतभूषण क्षीरसागर

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COLLEGE HTE SEVERTH ID- 06310100113

Website-kskcollegebeed.com E-mail-kskbeed123@rediffmail.com Ph. (02442)222641 Fax-02442)230197

Ref: kskcb/2023-28

Date: - २८/०३/२०२४

प्रति. डॉ. आर. के. काळे राज्यशास्त्र विभाग प्रमुख, बलभीम कला, विज्ञान व वाणिज्य महाविद्यालय, बीड

विषय - राज्यशास्त्र विषयाचे प्रकल्प मुल्यांकन बहिस्थ परिक्षक म्हणून उपस्थित राहिल्याबद्दल आभार व्यक्त करणे बाबत...

#### महोदय,

आपण आमच्या महाविद्यालयात दिनांक २८/०३/२०२४ रोजी <u>डॉ. बाबासाहेब</u> आंबेडकर मराठवाडा विद्यापीठ, छत्रपती संभाजीनगर अंतर्गत बी. ए. तृतीय वर्ष राज्यशास्त्र विषयाची प्रात्यक्षिक परीक्षा (प्रकल्प कार्य) घेण्यात आली.

राज्यशास्त्र विभागाने आयोजित केलेल्या या परीक्षेकरीता बहीस्थ पर्यवेक्षक म्हणून उपस्थित राह्न आपण जे सहकार्य केले त्याबद्दल आपले आभार.

Jos R. K. Kale

प्रभारी विभागप्रम्ख,

राज्यशास्त्र विभाग. सौ. के. एस. के.कोलेज , बीड

# Mrs. K.S.K. College, Beed.

DEPARTMENT OF

### CERTIFICATE

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Principal

### Mrs. K.S.K. College, Beed.

DEPARTMENT OF Home Science

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# Mrs. K.S.K. College, Beed.

DEPARTMENT OF\_\_\_\_

### CERTIFICATE

Date .

Principal

# Mrs. K.S.K. College, Beed.

DEPARTMENT OF

### CERTIFICATE

This is to certify that Shri/Smt. Ku. Gho	Lap Akan	Kaha
Class B. A. S. Y	Roll No	has
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Secondary and Higher Secondary Educa	tion Pune, in th	e Mrs. K.S.K
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Principal

# Mrs. K.S.K. College, Beed.

DEPARTMENT OF

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# Mrs. K.S.K. College, Beed.

DEPARTMENT OF

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NAVAGAN SHIKSHAN SANSTHA RAJURI'S

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF

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L	Principal Head
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Mrs. K.S.K. College Beec

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Microbiology

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Kande Jyoti
Laxman
of Class B. SC. TY Roll No
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Microbiology Paper No. XXI+XXII
during the academic year 2023 -2024
during the academic year 2025 -20 24
Q.M.T.
PRN No: 2021015200265653
PKN 1401. 2021013200203033

Professor in Charg

Head of the Dep

Opt of Microbiology

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Microbiology

## CERTIFICATE

This is to certify that Shri/Smt. Ku. kande Tyoti
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Dr. B.A.M.U. Aurangabad.
In Subject Microbio logy Paper No. XVII + XVIII
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Dpt. of Microbiology Mrs. K.S.K. College Beed

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Physics

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Dhone Tyotivam
Dhyandev
of Class B.Sc. 1 year Roll No. 190
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Physics Paper No. XVII & XXI
during the academic year 2023 -20 24
Exam Seat No. 259434

Professor in Charge

Head of the Department

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Microbiology

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Atkare Ankita Rajul

of Class B.S. C. ITT Y'sem IlsentiRoll No.

has satisfactorily performed the practicals prescribed by the

Dr. B.A.M.U. Aurangabad.

In Subject Microbiology

Paper No.

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Professor in Charge

Head of the Department

Dot. of Microbiology Mrs. K.S.K. College Beed

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF physics

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Gholop Poonam Ashok

of Class BSc S.Y. Roll No. 147

has satisfactorily performed the practicals prescribed by the

Dr. B.A.M.U. Aurangabad.

In Subject Physics

Paper No. X & XIV

during the academic year 2023 -2027

Exam Seat No. CAD 458938

81

Professor in Charge

Head of the Department

NAVAGAN SHIKSHAN SANSTHA RAJURI'S

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF\_\_\_\_\_

## CERTIFICATE

Class B.Sc T.Y	Roll No	has
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## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Physica

## CERTIFICATE

This is to certify that Shri/Smt. K	u. Namayake Rohit		
QajKumae			
of Class BSc #nd	_Roll No. 264		
has satisfactorily performed the practicals prescribed by the			
Dr. B.A.M.U. Aurangabad.			
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during the academic year 2023	-2024		
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Professor in Charge

Head of the Department

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF\_\_\_\_\_

## CERTIFICATE

This is to	certify that Shri/S	Smt. Ku. Zoda e	je Shard	a Harnath
of Class_	B.Sc TII	Roll No.		
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Professor in Charge

Head of the Department

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## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Microbiology

### CERTIFICATE

	V.
This is to certify that Shri/Smt. Ku. Peatiks	ha Bharat
Survoise.	
of Class BSC. T.21 Roll No	
has satisfactorily performed the practicals p	rescribed by the
Dr. B.A.M.U. Aurangabad.	
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Mrs. K.S.K. College Beec

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Physics

## CERTIFICATE

This is to certify that Shri/Smt.	Ku. Athory Angharas
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of Class B.ScI	Roll No. 206
has satisfactorily performed th	e practicals prescribed by the
Dr. B.A.M.U. Aurangabad.	
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Professor in Charge

Head of the Department

NAVAGAN SHIKSHAN SANSTHA RAJURI'S

## Mrs. K.S.K. College, Beed.

**DEPARTMENT OF** 

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Raut Dipali Bhagawar
Class B.Sc III'ld Y.Roll No. has
satisfactorily performed the practicals prescribed by the Board of
Secondary and Higher Secondary Education Pune, in the Mrs. K.S.K.
Alias Jr. College, Beed.
In Subject Michobiolay Paper No. XXI
during the academic year 2023 -2024
Exam Seat No. NAF 6588.30
Lecturer in Charge
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Head Dpt.lofMicrobiologiced.

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Physics

## CERTIFICATE

This is to certify that	Shri/Smt.	Ku	Honde	Asha	Rammeth

of Class RSc 77. Roll No. 193

has satisfactorily performed the practicals prescribed by the

Dr. B.A.M.U. Aurangabad.

In Subject physics Paper No. 1x + x 111

during the academic year 2023 -2024

Exam Seat No. C A D 458947

1

Professor in Charge

Head of the Department

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Microbiology

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Kande Jyoti
Laxman
of Class B. SC. TY Roll No
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In Subject Microbiology Paper No. XXI+XXII
during the academic year 2023 -2024
during the academic year 2025 -20 24
Q.M.T.
PRN No: 2021015200265653
PKN 1401. 2021013200203033

Professor in Charg

Head of the Dep

Opt of Microbiology

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Chemistry

## **CERTIFICATE**

This is to ce	ertify that Shri/Smt. Ku	Dongare.	Jyoti	shamy
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Exam Seat No. CAD 458901

Professor in Charge

Head of the Department
Department of Chemistry

Mrs. K.S.K. College, Beed.

DEPARTMENT OF chemismy

## CERTIFICATE

This is to certify that Shri/Smt. Ku. Vaishnavi sqresh
Marke
of Class B.S.C. Dyear Roll No
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemistry Paper No. TX
during the academic year 20 23 - 20 24.
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Exam Seat No. CAD 459028

Professor in Charge

Head of the Department

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF CHEMISTR

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during the academic year 2023 -2024	Stolau Arts, Social
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Exam Seat No. CAD 458899

Professor in Charge

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF CHEMISTR

## CERTIFICATE

This is to certify that Shri/Smt. Ku
Kailas.
of Class B.sc. Dyear Roll No
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemisty Paper No. XII
during the academic year 2023-2024
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Exam Seat No. CAD 459123

Professor in Charge

Department of Geography

## CERTIFICATE

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	Head of the Department  Date 2003 2024	S) Geography	has satisfactorily performed the practicals

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Department of Geography

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during the academic year 2023-2024

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Department of Geography

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Head of the Department

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Department of Geography

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during the academic year 2023-2024

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## Department of Geography

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Department of Geography

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## Department of Geography

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Date	Lecture in Charge of hot 3.24	Exam. Seat No. BAD497760	during the academic year 2023-2024	In Subject Geography Paper No. Practical Geography	prescribed by the Dr. B. A. M. U. Aurangabad.	Class B. A. Tyear Roll No.	This is to certify that Shrisht./Ku. Sayali Shrisana Koleka
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## Exam. Seat No. BAD 404462 Lecture in Charge Albert, 3.20 Date Examined by In Subject In eagraphy Pape during the academic year 2023 -2024 prescribed by the Dr. B. A. M. U. Aurangabad Class B. A. S YCAT Roll No. This is to certify that Shri/Smt./Ku. Kothule Monika Sanjay Mrs. K. S. K. College, Beed. Department of Geography CERTIFICATE Paper No. has satisfactorily performed the practicals Head of the Department 18/03/2024

## Mrs. K.S.K. College, Beed.

DEPARTMENT	OF

## CERTIFICATE

This is to certify that Shri/Sint. Ku. Hadule Rushikesh
Mahendea
of Class B.sc F.y Roll No. CAA-164133
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemisted Paper No. TIL + III
during the academic year 2023 -2024
Exam Seat No. CAA 16 4133
(External Examinar)
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### Mrs. K.S.K. College, Beed.

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has satisfactorily performed the practicals pr	escribed by the
Dr. B.A.M.U. Aurangabad.	
In Subject Chemistry Pa	per No. TII'd & VI H
during the academic year 2023 -204	
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## Mrs. K.S.K. College, Beed.

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This is to certify that Shri/Smt. Ku. Kafe Rohit Kisan
of Class B.Sc III'rd-yr. Roll No
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemistry Paper No. XVIII the
during the academic year 2023 -2024
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Professor in Charge

Head of the Department

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## Mrs. K.S.K. College, Beed.

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Department of Chemistry

## Mrs. K.S.K. College, Beed.

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88888	Dr. B.A.M.U. Aurangabad.
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## Mrs. K.S.K. College, Beed.

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of Class Bose Ing- yr. Roll No. NAF 658668
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemistry Paper No. XV
during the academic year 2023 -2026
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## Mrs. K.S.K. College, Beed.

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## Mrs. K.S.K. College, Beed.

DEPARTMENT OF CHEMISTRY

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#### Mrs. K.S.K. College, Beed.

DEPARTMENT OF CHEMISTRY

#### CERTIFICATE

This is to certify that Shri/Smt. Ku
Kailas.
of Class B.Sc. Dyear Roll No.
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemistry Paper No. XII
during the academic year 2023-2024
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Professor in Charge

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Chemistry

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This is to certify that Shri/Smt. Ku. Dongare Jyoti shamy
of Class B.SC. IL year Roll No
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Chemistry Paper No. XII
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Professor in Charge

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zoology
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This is to certify that Shri/Smt. Ku. Son avanc pooja  Nashishth,
of Class B.Sc T.Y. Roll No. 872
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Zoology Paper No. XVIII + XXII
during the academic year 2023 -2024 Fishery Sci. IST
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Professor in Charge Head of the Department

## Mrs. K.S.K. College, Beed.



88888	DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY AURANGABAD.
388888888888888888888888888888888888888	Mrs. K.S.K. College, Beed.
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\$88888888888888888888888888888888888888	This is to certify that Shri/Smt. Ku. Shaikh Malik Wahed.
\$8888	of Class B.Sc.T.Y. Roll No. 27.
888888	has satisfactorily performed the practicals prescribed by the
888888	Dr. B.A.M.U. Aurangabad.
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DEPARTMENT OF Zoology



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## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zoology



This is to certify that Shri/Smt. Ku. Humbare Diksha Azun
of Class M·sc Tyeor Roll No
of Class M·sc Tyeor Roll No TIT (sem) has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Applied Biotechnology-I Paper No. 200-316
during the academic year 2023 -20 24
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Professor in Charge

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zoolog



This is to certify that Shri/Smt. Ku. Taux Aniket
Cangadhar
of Class Msc 2nd year Roll No. 12
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Applied Biotechnology-I Paper No. 700-316
during the academic year 2023 -2024
Exam Seat No. GZC 301096 Examined by

Professor in Charge

#### Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zoology

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This is to certify that Stri/Smt. Ku. Devale Vaishnow?
Sakharam.
of Class B. S.C. First Year Roll No. 34
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Zoology Paper No. 111+V)
during the academic year 2023 -2024
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Head of the Depart

# Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zoology

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of Class Best Roll No. 99
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In SubjectPaper No. 111 & VI
during the academic year 2023 -2024
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Professor in Charge Head of the Department

#### Mrs. K.S.K. College, Beed.

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This is to certify that Shri/Smt. Ku. Balier A Jay Bapusaheh
of Class Roll No. 54
has satisfactorily performed the practicals prescribed by the Dr.
B.A.M.U. Aurangabad.
In Subject 206/064 Paper II + VI
No.
during the academic year 2013 -2024
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Professor in Charge Head of the Department

BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY AUBANGAE

# Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zoo Con

# **CERTIFICATE**

This is to certify that Shri/Smt. Ku. Ghoske Snehal
Suraj
of Class B.S.F.y Roll No. 56
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Zoolegy Paper No. 111-0
during the academic year 2023 -2024
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Professor in Charge

## Mrs. K.S.K. College, Beed.

DEPARTMENT OF 706/084

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of Class	3.56. I	Roll No.	59
has satisfactorily	performed the p	racticals presc	cribed by the Dr.
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## Mrs. K.S.K. College, Beed.

DEPARTMENT OF Zealogy

This is to certify that Shri/Smt. Ku	amore	Sagar
Abhaman,		
of Class B.S. T. Roll I	No. 27	
has satisfactorily performed the practice	als prescribed	by the
Dr. B.A.M.U. Aurangabad.		
In Subject Zoology	Paper No	X+XIV
during the academic year 2023 -2024		
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### Mrs. K.S.K. College, Beed.

DEPARTMENT OF Loglogy
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This is to certify that Shri/Smt. Ku. Amate Arti
Ramesh.
of Class 16. Sc. 17 Roll No. 03
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Zoology Paper No. Paper No.

Exam Seat No. CAD 45 88 54

during the academic year 2023-2024

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#### Mrs. K.S.K. College, Beed.

<b>DEPARTMENT</b>	OF_	Lool	097	1
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This is to certify that Shri/Smt. Ku. Gaikwad Vakhnavi
Harnath.
of Class B. Se II Roll No. 12
has satisfactorily performed the practicals prescribed by the
Dr. B.A.M.U. Aurangabad.
In Subject Zoo (05). Paper No. X +XIII
during the academic year 2023-2024
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Head of the Department