# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

### I ROUND TEST-JANUARY - 2023

### I B.Sc – I SEMESTER - NEP

### PAPER – I (CYTOLOGY, GENETICS AND INFECTIOUS DISEASES)

**Duration: 1.30 Hrs** **Max. Marks: 30**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer **any SIX** of the following: **(1X4=4)**

1. Who proposed the Fluid mosaic model of plasma membrane.
2. Mention the nitrogen base present only in DNA.
3. Write the phenotypic ratio of dihybrid cross.
4. Give an example for numerical aberration.

**II.** Answer **any TWO** of the following: **(3X2=06)**

5. What is endomembrane system?
6. Draw a neat labelled diagram of Nucleolus.
7. Write a note on monohybrid test cross.
8. Briefly explain duplication.

**III.** Answer **TWO** of the following: **(5X2=10)**

9. Briefly explain exocytosis.
10. Describe Down's syndrome.

**IV.** Answer **ONE** of the following: **(10X1=10)**

11. What is Endocytosis? Explain its types
12. Describe types of DNA.

# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- AUGUST - 2023

## I B.Sc – II SEMESTER - NEP

## PAPER – II BIOCHEMISTRY AND PHYSIOLOGY

**Duration: 1 Hr** **Max. Marks: 30**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer the following: **(1X4=4)**

1. Define disaccharides.
2. Removal of amino group from amino acids is known as_____
3. What is myoglobin?
4. Expand RMP.

**II.** Answer **any TWO** of the following: **(3X2=06)**

5. List the biological importance of monosaccharides
6. Explain is gluconeogensis?
7. Explain Best and Taylor theory?
8. Draw a neat labelled diagram of multipolar neurons.

**III.** Answer **TWO** of the following: **(5X2=10)**

9. Differentiate between saturated and unsaturated fatty acids.
10. Explain glycolysis in detail
11. What is blood pressure? How is it regulated?

**IV.** Answer **ONE** of the following: **(10X1=10)**

12. Explain the structure and functions of polysaccharides?
13. Explain the carbon dioxide transport in the blood?
14. Describe the urea cycle.

# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- AUGUST - 2023

## I B.Sc – II SEMESTER – NEP – OPEN ELECTIVE

## PAPER – II (PARASITOLOGY)

**Duration: 1 Hr** **Max. Marks: 30**

**INSTRUCTIONS:**

3) Draw diagrams **wherever** necessary.
4) Write in **neat and legible** handwriting.

I. Answer the following: **(4X2=8)**

01. Define host. Give one example
02. Name the disease caused by *Wuchereria bancrofti.* & Preventive measure of it.
03. What is parasitism? Give one example
04. Write any two parasitic behaviour of cookicutter shark.

II. Answer **any THREE** of the following: **(3X4=12)**

05. List out the differences between parasitism from commensalism.
06. Draw a neat labelled diagram of *Hymenolepis nana.*
07. Write notes on gall formation in plants.
08. List out biological importance of ticks.

III. Answer **ONE** of the following: **(1X10=10)**

09. List out the parasitic adaptations of leech.
10. Describe the lifecycle of *Ascaris lumbricoides* with neat labelled diagram.

**K.L.E's S. NIJALINGAPPA COLLEGE**
**DEPARTMENT OF ZOOLOGY**
**I ROUND TEST- JANUARY - 2023**

**II B.Sc – III SEMESTER - NEP**

**PAPER – III (MOLECULAR BIOLOGY, BIO-INSTRUMENTATION & TECHNIQUES IN BIOLOGY)**

**Duration: 1.30 Hrs** **Max. Marks: 30**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer **four** of the following: **(1X4=04)**

1. What is gene?
2. What is Operon concept?
3. Expand SEM & TEM.
4. Define colorimetry.

**II.** Answer **any TWO** of the following: **(3X2=06)**

7. Define ciston, recon & muton.
8. Mention the principles of centrifugation.
9. Briefly explain Beer- Lambert's Law.

**III.** Answer **TWO** of the following: **(5X2=10)**

12. Briefly explain RNA polymerase I and II.
13. Write a note on inducible operon.
14. Write the principle & application of pH meter.
15. Mention the principle and applications of Light microscopy.

**IV.** Answer **ONE** of the following: **(10X1=10)**

16. Differentiate between Transcription in Prokaryotes and Eukaryotes.
17. Write a detailed account on trp- operon.

KLE's S. Nijalingappa College Rajajinagar, Bengaluru

PREPARATORY EXAMINATION JANUARY -2023

ZOOLOGY

**PAPER: MOLECULAR BIOLOGY, BIOINSTRUMENTATION AND TECHNIQUES IN BIOLOGY**

**COURSE CODE: DSCC5Z00T3**

Time: **02 hrs** Max Marks: 60

**Instructions:** 1) Draw neat labeled diagrams wherever necessary.
2) Answer should be completely in English.

## PART- A

**I. Answer the following in one word or one sentence** (5X1 =5)

1. Define endomembrane system
2. Differentiate G1 from G2.
3. Who discovered ABO blood groups in Man?
4. Gynaecomastia is common feature of_____
5. The common name of *Wuchereria bancrofti* is filarial worm. True/False

## PART- B

**II. Answer any FIVE of the following** (5X3=15)

1. Explain Co-Translational translocation.
2. What are the functions of Endocytosis?
3. Mention the different forms of DNA.
4. Write a short note on p53 protein.
5. What is Norm of reaction? Explain with reference to *potentilla glandulosa*
6. Write a note on Environmental sex determination.
7. Write pathogenecity of *Giardia*

## PART- C

**III. Answer any FOUR of the following** (4X5=20)

1. Describe the structure of microtubule and its functions.
2. Explain the mechanism of cell signaling.
3. With reference to kappa particles in *paramoecium*, elucidate cytoplasmic inheritance
4. Describe inheritance of X linked recessive character in humans, with reference to Colourblindness
5. Explain Down's syndrome.
6. Mention any five diseases of bacteria.

## PART- D

**IV. Answer any TWO of the following** **(2X10=20)**

1. With a neat labelled diagram describe the fluid mosaic model of plasma membrane.
2. Compare and comment on the prophase stage of mitosis and meiosis.
3. Explain
   a. Erythroblastosis foetalis.
   b. Gynandromorphs
4. With suitable diagrams explain the life cycle, disease caused and symptoms of *Trypanosoma*

# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- AUGUST - 2023

## II B.Sc – IV SEMESTER - NEP

## PAPER – IV GENE TECHNOLOGY, IMMUNOLOGY AND COMPUTATIONAL BIOLOGY

**Duration: 1 Hr** **Max. Marks: 30**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer the following: **(1X4=4)**

1. Expand REN.
2. What is first line of defence?
3. Define immunization.
4. Find out the Mode of 6, 5, 6, 3, 4, 2 &1

**II.** Answer **any TWO** of the following: **(3X2=06)**

5. Name any two nucleic acid modifying enzymes.
6. Explain antigen presenting cells.
7. Explain immunity against bacterial diseases.
8. Calculate mean of the number of seeds per plant 39,55,35,45,49,52,48,33,47,51,53 &48

**III.** Answer **TWO** of the following: **(5X2=10)**

9. Describe pBR322
10. With neat labelled diagram explain thymus as functional immune organ..
11. Write a note on graft rejection and immune suppressor.

**IV.** Answer **ONE** of the following: **(10X1=10)**

12. What is direct gene transfer technique? Explain .liposome.
13. What is vaccine? Explain its types and uses.
14. Describe the role of B and T cells in immunity

**KLE's S. Nijalingappa College Rajajinagar, Bengaluru**

**I ROUND INTERNAL TEST JAN-2023**

**ZOOLOGY PAPER- V**

**ENVIRONMENTAL BIOLOGY AND ETHOLOGY**

**Time: 1.30 hrs** **Max Marks: 35**

**Instructions:** 1) Draw diagrams wherever necessary
2) Write in **neat and legible** handwriting

**PART- A**

**I. Answer all the questions** **6X1 =6**

1. Who coined the term Ecology?
2. What is autecology?
3. Define Taxes.
4. Define habitat
5. What is ethology?
6. Define pheromone

**PART- B**

**II. Answer any three of the following** **3X3=9**

7. Describe trophic niche with suitable example.
8. Explain the II law of Thermodynamics.
9. Write a note on gross primary productivity.
10. Write a note on historical perception of Ethology
11. What is imprinting? Give an example.

**PART- C**

**III. Answer any two of the following** **2X5=10**

12. Briefly explain the multidimensional niche.
13. Write a short on ecological effects of temperature on animals.
14. Write a note on energy flow in the ecosystem.
15. Explain motivation with an example.

**PART- D**

**IV. Answer any one of the following** **1X10=10**

16. Soil is abiotic factor. Substantiate
17. Explain
    a. Social behavior in honey bees
    b. Habituation.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**I ROUND TEST JANUARY - 2023**

**III B.Sc – V SEMESTER**

**ZOOLOGY PAPER – VI**

# GENETICS & BIOTECHNOLOGY

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

**01.** Define phenocopy.
**02.** What is test cross?
**03.** What is Rh factor?
**04.** What is the function of DNA ligase?
**05.** What is artificial chromosome vector?
**06.** What is Transgenesis?

**II.** Answer **any three** of the following **(3X3=09)**

**07.** What is Norm of reaction? Potentilla glandulosa.
**08.** Explain hypertrichosis.
**09.** Define plasmid and mention its functions.
**10.** Explain electroporation method of gene transfer.

**III.** Answer **any two** of the following: **(5X2=10)**

**11.** Write a note on Erythroblastosis foetalis.
**12.** In a medico-legal case of disputed paternity, both the child and the mother belong to blood group 'O'. The men under disputed paternity have 'AB' and 'A' blood groups. Who could be the real father and why?
**13.** What is vector? Explain pBR322

**IV.** Answer **any one** of the following: **(10X1=10)**

**01.** Write a note on
a. Fur colour in Himalaya rabbit.
b. Kappa particles in paramecium

**02.** Write a notes on
a. Alkaline phosphatase
b. Host cells

KLE's S. Nijalingappa College, Rajajinagara, Bengaluru

**I ROUND TEST JUNE - 2023**

Zoology - VII

## Developmental Biology and Organic Evolution

Time: 1 ½ hrs Marks: 35

**Instructions:** 1) Draw diagrams wherever necessary

2) Write in **neat and legible** handwriting

### PART-A

**I. Answer the following in one word or one sentence** **6X1 =6**

1. State Biogenetic law.
2. Define macrolecithal egg.
3. Give an example for viviparity.
4. What is gene pool?
5. Define mutation.
6. What is speciation?

### PART- B

**II. Answer any three of the following** **3X3=09**

7. What is mosaic egg? Give an example
8. Write a note on Oviparity with an example
9. Explain primary egg membranes with example.
10. Name any three post mating isolation.

### PART- C

**III. Answer any two of the following** **2X5=10**

12. Draw a neat labeled diagram of Hen`s egg.
13. Define Hardy Weinberg law and mention its significance.
14. Describe the directional selection with an example?

### PART- D

**IV. Answer any one of the following** **1X10=10**

15. Explain the Oestrous cycle and its hormonal regulation?
16. Explain geographical and reproductive isolation?

# K.L.E'S S. NIJALINGAPPA COLLEGE

## I ROUND TEST JUNE -2023

## IIIB.Sc – VI SEMESTER

## ZOOLOGY - PAPER – VIII

### PHYSIOLOGY AND TECHNIQUES IN BIOLOGY

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

1. ----- digestion is present in ruminants.
2. Which group of animals possess haemoglobin pigment?
3. Define Bohr effect.
4. 97% of the oxygen transported as oxyhaemoglobin. True / False
5. Mention the use of DPX in Micro technique.
6. Define electrophoresis.

**II.** Answer **any three** of the following **(3X3=09)**

7. Mention any three gastrointestinal mucosal hormones.
8. Define haemocyanin. Give two examples.
9. Explain Fuld and Spiro's theory of blood clotting.
10. Differentiate direct respiration from indirect respiration.

**III.** Answer **any two** of the following: **(5X2=10)**

11. Explain digestion in ruminants.
12. Briefly explain effects of temperature and body size on oxygen dissociation curves.
13. List out the applications of electrophoresis.

**IV.** Answer **any one** of the following: **(10X1=10)**

14. Explain different ways of carbon dioxide transport by blood.
15. Write notes on:
    a) Uses of alcohol in micro techniques.
    b) Differential staining..

**KLE's S. Nijalingappa College Rajajinagar, Bengaluru**
**PREPARATORY EXAMINATION MARCH -2022**
**ZOOLOGY**
**PAPER: CYTOLOGY, GENETICS AND INFECTIOUS DISEASES**
**COURSE CODE: DSCC5Z00T1**

**Time: 02 hrs** **Max Marks: 60**

**Instructions:** 1) Draw neat labeled diagrams wherever necessary.
2) Answer should be completely in English.

## PART- A

**I. Answer the following in one word or one sentence** **(5X1 =5)**

1. Define endomembrane system
2. Differentiate G1 from G2.
3. Who discovered ABO blood groups in Man?
4. Gynaecomastia is common feature of_____
5. The common name of *Wuchereria bancrofti* is filarial worm. True/False

## PART- B

**II. Answer any FIVE of the following** **(5X3=15)**

1. Explain Co-Translational translocation.
2. What are the functions of Endocytosis?
3. Mention the different forms of DNA.
4. Write a short note on p53 protein.
5. What is Norm of reaction? Explain with reference to *potentilla glandulosa*
6. Write a note on Environmental sex determination.
7. Write pathogenecity of *Giardia*

## PART- C

**III. Answer any FOUR of the following** **(4X5=20)**

1. Describe the structure of microtubule and its functions.
2. Explain the mechanism of cell signaling.
3. With reference to kappa particles in *paramoecium*, elucidate cytoplasmic inheritance
4. Describe inheritance of X linked recessive character in humans, with reference to Colourblindness
5. Explain Down's syndrome.
6. Mention any five diseases of bacteria.

## PART- D

**IV. Answer any TWO of the following** **(2X10=20)**

1. With a neat labelled diagram describe the fluid mosaic model of plasma membrane.
2. Compare and comment on the prophase stage of mitosis and meiosis.
3. Explain
   a. Erythroblastosis foetalis.
   b. Gynandromorphs
4. With suitable diagrams explain the life cycle, disease caused and symptoms of *Trypanosoma*

# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- FEBRUARY - 2022

## I B.Sc – I SEMESTER – NEP – OPEN ELECTIVE

## PAPER – I (ECONOMIC ZOOLOGY)

**Duration: 1.30 Hrs** **Max. Marks: 30**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer **any FOUR** of the following: **(4X2=8)**

1. Define Moriculutre. Mention the types.
2. Mention any two species of honey bees.
3. List out any four techniques of diary management.
4. Write a note on milk and mention its by-products.

**II.** Answer **any THREE** of the following: **(3X4=12)**

5. Explain nutritive value of egg and meat.
6. Briefly explain any two diseases of cattle.
7. Briefly explain any two species of silkworms.
8. Explain division of labour and communication in honey bees.

**III.** Answer **ONE** of the following: **(1X10=10)**

9. Explain loose housing system and Conventional barn system in detail.
10. Describe morphology of *Bombyx mori* and its life cycle.

Zoology

# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- SEPTEMBER - 2022

## I B.Sc – II SEMESTER - NEP

## PAPER – II BIOCHEMISTRY AND PHYSIOLOGY

**Duration: 1 Hr** **Max. Marks: 30**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer the following: **(1X4=4)**

1. Define carbohydrates.
2. Removal of amino group from amino acids is known as_____
3. Expand ECG.
4. What is the function of Schwann cells in neuron?

**II.** Answer **any TWO** of the following: **(3X2=06)**

5. List the general properties of α- amino acids.
6. Name the ketone bodies.
7. Explain Best and Taylor theory.
8. Write a short note on polarisation and de-polarisation.

**III.** Answer **TWO** of the following: **(5X2=10)**

9. What is glycolysis? Explain it with schematic representation
10. Explain the structure of Histidine and proline.
11. Describe the structure of Mammalian heart, with a neat labelled diagram.

**IV.** Answer **ONE** of the following: **(10X1=10)**

12. Illustrate β- oxidation of saturated fatty acids with even number of carbon atoms.
13. Give a detailed account of mechanical, chemical digestion and absorption of food.
14. Describe the regulation of enzyme action.

# K.L.E's S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- SEPTEMBER - 2022

## I B.Sc – II SEMESTER – NEP – OPEN ELECTIVE

## PAPER – II (PARASITOLOGY)

**Duration: 1 Hr** **Max. Marks: 30**

**INSTRUCTIONS:**

3) Draw diagrams **wherever** necessary.
4) Write in **neat and legible** handwriting.

I. Answer the following: **(4X2=8)**

01. Define parasite.
02. Write the zoological name of hook worm.
03. Filariasis is commonly known as_____
04. What is serodiagnosis ?

II. Answer **any THREE** of the following: **(3X4=12)**

05. List out the differences between definitive host and intermediate host.
06. Write a short note on parasitism and mutualism with an example for each.
07. Write the pathogenecity of *Trichinella spiralis.*
08. Mention the Significance of Pediculus.

III. Answer **ONE** of the following: **(1X10=10)**

09. List out the parasitic adaptations of leech.
10. Describe the lifecycle of *Ascaris lumbricoides* with neat labelled diagram.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST- JULY-2022

## II B.Sc – IV SEMESTER

## PAPER – IV COMPARATIVE ANATOMY, HUMAN ANATOMY, CELL BIOLOGY, IMMUNOLOGY & HISTOLOGY

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. Answer **any SIX** of the following: (1X6=6)

1. In avian heart, auricles and ventricles externally separated by.....
2. Mention any two meninges of brain.
3. Plasma membrane is selectively permeable. True/False
4. Define phagocytosis
5. Name the endocrine part of pancreas.
6. Where do you find rugae?

II. Answer **any THREE** of the following: (3X3=09)

7. Write any three differences between heart of fish and amphibian.
8. Define the terms Pinocytosis, Osmosis, Diffusion
9. Name the types of lingual papillae.
10. Draw a neat labelled diagram of Histology of Liver.

III. Answer **TWO** of the following: (5X2=10)

11. Comment on brain of lizard with neat labelled diagram.
12. Write a note on chemical composition of plasma membrane.
13. Give histological details of thyroid gland.

IV. Answer **ONE** of the following: (10X1=10)

14. Describe fluid mosaic model of plasma membrane with a neat labelled diagram.
15. With a neat labelled diagram describe histology of Kidney.

# KLE's S. Nijalingappa College, Rajajinagar, Bengaluru

**I ROUND TEST JULY -2022**

## Zoology- VII

## Developmental Biology and Organic Evolution

Time: 1 ½ hrs Marks: 35

**Instructions:**1) Draw diagrams wherever necessary

2) Write in **neat and legible** handwriting

PART-A

**I. Answer the followingin one word or one sentence** 5X1 =5

1. State Von Baer`s law
2. Define telolecithal egg
3. Give an example for Ovoviviparity
4. What is Genetic drift?
5. Name any two premating isolation

PART- B

**II. Answer any five of the following** **5X3=15**

6. What is preformation theory? Who proposed it?
7. Classify the eggs based on the distribution of yolk
8. Draw a neat labeled diagram of Hens egg.
9. Differentiate between mosaic and regulative egg with an example
10. State Hardy Weinberg law
11. Write a note on Stabilizing selection
12. Briefly explain the Geographical isolation

PART- C

**III. Answer any one of the following** **5X1=5**

13. Explain presumptive organ forming areas in frog
14. Describe the reproductive isolating mechanism?

PART- D

**IV. Answer any one of the following** **1X10=10**

15. Explain the major events of Oestrous cycle and its hormonal regulation
16. What is speciation? Explain phyletic and sympatric speciation

K.L.E'S S. NIJALINGAPPA COLLEGE

I ROUND TEST JULY- 2022

III B.Sc – VI SEMESTER

ZOOLOGY PAPER – VIII

# ANIMAL PHYSIOLOGY AND TECHNIQUES IN BIOLOGY

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

01. Mention the function of gastrin.
02. Mention non protein part of Haemoglobin.
03. What is Ammonotelism? Give examples.
04. Define rigor mortis.
05. Mention the structural and functional unit of nervous system.
06. Name any one peptide hormone.

II. Answer **any three** of the following **(3X3=09)**

07. Explain secretion of saliva from salivary gland.
08. Explain about Fuld & Spiro's theory of blood clotting.
09. Write a note on oxidative deamination of amino acids.
10. Write a note on saltatory conduction.

III. Answer **any two** of the following: **(5X2=10)**

11. Write a note on different types of respiratory pigments.
12. Explain Ornithine cycle.
13. Describe the sliding filament theory of muscle contraction.

IV. Answer **any one** of the following: **(10X1=10)**

14. Describe Neuro-hormonal control of gastric juice secretion.
15. Explain Axonic propagation of nerve impulse with neat labelled diagram.

K.L.E'S S. NIJALINGAPPA COLLEGE

I ROUND TEST JULY- 2022

III B.Sc – VI SEMESTER

ZOOLOGY PAPER – VIII

# ANIMAL PHYSIOLOGY AND TECHNIQUES IN BIOLOGY

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

**01.** Mention the function of gastrin.

**02.** Mention non protein part of Haemoglobin.

**03.** What is Ammonotelism? Give examples.

**04.** Define rigor mortis.

**05.** Mention the structural and functional unit of nervous system.

**06.** Name any one peptide hormone.

**II.** Answer **any three** of the following **(3X3=09)**

**07.** Explain secretion of saliva from salivary gland.

**08.** Explain about Fuld & Spiro's theory of blood clotting.

**09.** Write a note on oxidative deamination of amino acids.

**10.** Write a note on saltatory conduction.

**III.** Answer **any two** of the following: **(5X2=10)**

**11.** Write a note on different types of respiratory pigments.

**12.** Explain Ornithine cycle.

**13.** Describe the sliding filament theory of muscle contraction.

**IV.** Answer **any one** of the following: **(10X1=10)**

**14.** Describe Neuro-hormonal control of gastric juice secretion.

**15.** Explain Axonic propagation of nerve impulse with neat labelled diagram.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**I ROUND TEST JANUARY - 2021**

**I B.Sc – I SEMESTER**

**ZOOLOGY PAPER – I: NON – CHORDATA – I**

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

1. What is radial symmetry?
2. Name the locomotory organelles of mastigophorans.
3. Mention any two types of cells of sycon body wall.
4. Define polymorphism.
5. Write the function of flame cells.
6. Which is the secondary host of *Leishmania donovani*?

**II.** Answer **any three** of the following **(3X3=09)**

7. Explain cellular level of body organization. Give an example.
8. List out six important characters of phylum Porifera.
9. Assign the following animals to their respective classes

   a) *Planaria.* b) *Liver fluke.* c) *Tapeworm*

10. Name any three larval stages of life history of *Fasciola hepatica.*

**III.** Answer **any two** of the following: **(5X2=10)**

11. What is metamerism? Differentiate pseudometamerism and the eumetamerism citing suitable examples.
12. Mention the functions of following in phylum Protozoa.

    i) Food vacuoles. ii) Contractile vacuoles. iii) Pseudopodia. iv) Macronucleus.

    v) Micronucleus.

13. List out the general characters of phylum Annelida.

**IV.** Answer **any one** of the following: **(10X1=10)**

14. a) Explain morphology of *planaria* with neat labelled diagram.

    b) Draw a neat labelled diagram of digestive system of earthworm.

15. a) Enumerate any five salient features of phylum Aschelmenthes.

    b) Write occurrence, disease caused, mode of transmission and preventive measures of *Entamoeba histolytica.*

# K.L.E'S S. NIJALINGAPPA COLLEGE

## I ROUND TEST JUNE -2021

## I B.Sc – II SEMESTER

## Zoology Paper – II (NON-CHORDATA)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

### PART - A

I. **Answer the following:** (1X6=06)

1. Mention any two excretory organs of Arthropod.
2. Give an example for crustacea.
3. What is function of mantle?
4. What is radula?
5. What is Madreporite?
6. Mention any two species of silkworm.

### PART - B

II. Answer **any three** of the following (3X3=09)

7. Sketch and label the sectional view of shell of Unio.
8. Mention any six unique features of peripatus.
9. Assign the following to their respective classes
   a. Brittle star b. Sea urchin c. Sea lilies
10. Mention the by-products of Sericulture.

### PART - C

III. Answer **any two** of the following: (5X2=10)

11. Brief on rearing and management practices of sericulture.
12. Describe the Digestive system of Unio.
13. With a neat labelled diagram explain morphology of Starfish.

### PART - D

IV. Answer **any one** of the following: (10X1=10)

14. List out the general characters of phylum Arthropoda and classify upto classes with an example each.
15. Describe the water vascular system in Asterias with suitable diagram.

**K.L.E's S. NIJALINGAPPA COLLEGE**

**I ROUND TEST JANUARY -2021**

**II B.Sc – III SEMESTER**

**ZOOLOGY**

**PAPER – III: CHORDATA**

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

1. Where is notochord present in Chordata?
2. Mention the function of tunic.
3. What are Myotomes?
4. What is retrogressive metamorphosis?
5. Mention the fore-limb modification of Aves.
6. What is composting fish farming?

**II.** Answer **any three** of the following **(3X3=09)**

7. Draw a neat labelled diagram of externals of Herdmania.
8. Mention the types of respiration in amphibians.
9. Write a note on Metatheria.
10. Write a note on birds of English class.
11. Mention any three differences between Ratitae and Carinatae.

**III.** Answer **any two** of the following: **(5X2=10)**

12. Enumerate the general characteristics of class Reptilia with examples.
13. Give an account on Products and by-products of Poultry.
14. Write a note on Ammocoete larva and its significance.

**IV.** Answers **any one** of the following: **(10X1=10)**

15. Explain the digestive system of rat with appropriate labelled diagram.
16. Write explanatory notes on Fish processing and preservation.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**I ROUND TEST JANUARY - 2021**

**III B.Sc – V SEMESTER**

Zoology Paper - V

# Ecology and Ethology

**Duration:** 1 ½ hrs **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

## PART-A

**I.** Answer **all** the questions **6X1 = 6**

1. What is Microhabitat?
2. What is niche?
3. Define I law of thermodynamics.
4. What is natality?
5. What is toxicology?
6. What is kinesis?

## PART- B

**II.** Answer any **three** of the following **3X3 = 9**

7. What is Synecology? Give an example.
8. Write a note on net primary productivity?
9. Define pesticides? Give two examples.
10. Write a note on aims and objectives of Ethology?

## PART- C

**III.** Answer any **two** of the following **2X5 = 10**

11. Briefly explain the scope of ecology?
12. What is biomagnification? Explain with an example.
13. Write a note on Habituation?

## PART- D

**IV.** Answer any **one** of the following **1X10 = 10**

14. Discuss temperature as an Abiotic factor.
15. Write a note on Taxes, Trial and Error type of learning with suitable examples.

**KLE's S. Nijalingappa College Rajajinagar, Bengaluru**

I ROUND INTERNAL TEST DEC-2021

ZOOLOGY PAPER- V

**ENVIRONMENTAL BIOLOGY AND ETHOLOGY**

**Time: 1.30 hrs** Max Marks: 35

**Instructions:** 1) Draw diagrams wherever necessary
2) Write in **neat and legible** handwriting

## PART- A

**I. Answer all the questions** 6X1 =6

1. What is autecology?
2. Define habitat
3. What is niche?
4. Define Soil
5. What is kinesis?
6. Define pheromone

## PART- B

**II. Answer any three of the following** 3X3=9

7. Describe trophic niche with suitable example.
8. Explain the II law of Thermodynamics.
9. Write a note on net primary productivity.
10. Write a note on historical perception of Ethology
11. What are instincts? Give an example.

## PART- C

**III. Answer any two of the following** **2X5=10**

12. Briefly explain the scope of ecology.
13. Write a short on ecological effects of light on animals.
14. Write a note on imprinting.
15. Explain motivation with an example.

## PART- D

**IV. Answer any one of the following** 1X10=10

16. Temperature is Abiotic factor. Substantiate
17. Explain
    a. Social behavior in termites
    b. Taxes behaviour

K.L.E'S S. NIJALINGAPPA COLLEGE

I ROUND TEST DECEMBER - 2021

III B.Sc – V SEMESTER

ZOOLOGY PAPER – VI

# GENETICS & BIOTECHNOLOGY

**Duration: 1.30 Hrs** Max Marks: 35

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

I. **Answer the following:** (1X6=06)

01. Define Genotype.
02. Write phenotypic and genotypic ratio of Mendel's law of purity of gametes.
03. What is Rh factor?
04. What are Lampbrush chromosomes?
05. Who proposed Genic balance theory of sex determination in *D. Melanogaster*.
06. Define Aneuploidy.

II. Answer **any three** of the following **(3X3=09)**

07. What is Norm of reaction? Explain it with an example.
08. What is test cross? Explain it with Monohybrid cross.
09. A man heterozygous for blood group "A" marries women heterozygous for blood group "B". What types of blood groups are expected in their children?
10. Explain Cri-du-chat Syndrome.

III. Answer **any two** of the following: (5X2=10)

11. Write a note on Erythroblastosis foetalis.
12. Briefly explain Gynandromorphs & its types.
13. Explain XX-XO and ZW-ZZ mechanism of sex determining systems.

IV. Answer **any one** of the following: (10X1=10)

14. Explain the law of independent assortment with suitable example.
15. Describe polytene chromosome with a neat labelled diagram.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**I ROUND TEST DECEMBER - 2021**

**III B.Sc – V SEMESTER**

**ZOOLOGY PAPER – VI**

# GENETICS & BIOTECHNOLOGY

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

**01.** Define Genotype.
**02.** Write phenotypic and genotypic ratio of Mendel's law of purity of gametes.
**03.** What is Rh factor?
**04.** What are Lampbrush chromosomes?
**05.** Who proposed Genic balance theory of sex determination in *D. Melanogaster*.
**06.** Define Aneuploidy.

**II.** Answer **any three** of the following **(3X3=09)**

**07.** What is Norm of reaction? Explain it with an example.
**08.** What is test cross? Explain it with Monohybrid cross.
**09.** A man heterozygous for blood group "A" marries women heterozygous for blood group "B". What types of blood groups are expected in their children?
**10.** Explain Cri-du-chat Syndrome.

**III.** Answer **any two** of the following: **(5X2=10)**

**11.** Write a note on Erythroblastosis foetalis.
**12.** Briefly explain Gynandromorphs & its types.
**13.** Explain XX-XO and ZW-ZZ mechanism of sex determining systems.

**IV.** Answer **any one** of the following: **(1X1=10)**

**14.** Explain the law of independent assortment with suitable example.
**15.** Describe polytene chromosome with a neat labelled diagram.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## I ROUND TEST MARCH -2020

## I B.Sc – II SEMESTER

## Zoology Paper – II (NON-CHORDATA)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. **Answer the following**: **(1X6=06)**

1. Give an example for the class Crustacea.
2. Name the appendage involved in excretory and balancing in function.
3. What is function of mantle?
4. Define pentamerous radial symmetry.
5. Mention the function of pyloric caeca.
6. Name any two species of Honeybees.

II. Answer **any three** of the following **(3X3=09)**

7. Draw a neat labelled diagram of Antennule.
8. Briefly explain the sectional view of Unio shell.
9. Explain the Coelom of Balanoglossus.
10. Mention the by-products of Sericulture.

III. Answer **any two** of the following: **(5X2=10)**

11. Explain the unique features of Peripatus.
12. With suitable diagram explain water-vascular system of Asterias.
13. Describe the Digestive system of Unio.

IV. Answer **any one** of the following: **(10X1=10)**

14. List out the general characters of phylum Mollusca and classify upto classes with an example each.
15. Explain the bee keeping and management practices.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## I ROUND TEST- March -2020

## II B.Sc – IV SEMESTER

## ZOOLOGY PAPER – IV

### COMPARATIVE ANATOMY, HUMAN ANATOMY, CELL BIOLOGY & HISTOLOGY

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

**01.** What is swim bladder?
**02.** Give an example for venous heart.
**03.** What is heterodont?
**04.** Which is the longest and strongest bone in human body?
**05.** Mention the function of Von Kupffer cells in Liver?
**06.** Name the types of Chromophil cells in Pituitary gland.

**II.** Answer **any three** of the following **(3X3=09)**

**07.** Mention the respiratory organs of amphibians.
**08.** Draw a neat labelled diagram of human Kidney.
**09.** Name the ear ossicles.
**10.** Explain the taste bud with neat labelled diagram.

**III.** Answer **any two** of the following: **(5X2=10)**

**11.** Give an account of amphibian heart.
**12.** Explain the lungs of human.
**13.** Explain the histological feature of mammalian Pituitary.

**IV.** Answer **any one** of the following: **(10X1=10)**

**14.** Compare and comment on lungs of reptiles and birds. Add a note on their evolutionary significance.
**15.** Explain the histology of mammalian Pancreas with neat labelled diagram.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## I ROUND TEST- March -2020

## II B.Sc – IV SEMESTER

## ZOOLOGY PAPER – IV

### COMPARATIVE ANATOMY, HUMAN ANATOMY, CELL BIOLOGY & HISTOLOGY

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

**01.** What is swim bladder?
**02.** Give an example for venous heart.
**03.** What is heterodont?
**04.** Which is the longest and strongest bone in human body?
**05.** Mention the function of Von Kupffer cells in Liver?
**06.** Name the types of Chromophil cells in Pituitary gland.

**II.** Answer **any three** of the following **(3X3=09)**

**07.** Mention the respiratory organs of amphibians.
**08.** Draw a neat labelled diagram of human Kidney.
**09.** Name the ear ossicles.
**10.** Explain the taste bud with neat labelled diagram.

**III.** Answer **any two** of the following: **(5X2=10)**

**11.** Give an account of amphibian heart.
**12.** Explain the lungs of human.
**13.** Explain the histological feature of mammalian Pituitary.

**IV.** Answer **any one** of the following: **(10X1=10)**

**14.** Compare and comment on lungs of reptiles and birds. Add a note on their evolutionary significance.
**15.** Explain the histology of mammalian Pancreas with neat labelled diagram.

# K.L.E'S S. NIJALINGAPPA COLLEGE

**I ROUND TEST- MARCH 2020**

**III B.Sc – VI SEMESTER**

## ZOOLOGY PAPER – VII

**(GENETICS AND BIOTECHNOLOGY)**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams wherever necessary.
2) Write neat and legible handwriting.

**I.** Answer **any five** of the following: **(3X5=15)**

1. Define genotype, phenotype and phenocopy.
2. What is hypertrichosis? Explain
3. Explain Turner's syndrome.
4. Define cistron, recon and muton.
5. Mention the names of:
   a) Molecular scissor b) Molecular glue c) Molecular vector
6. Explain microinjection.

**II.** Answer **any two** of the following: **(5X2=10)**

7. Explain law of purity of gametes with suitable example.
8. Explain erythroblastosis foetalis.
9. Explain:
   a) Lipofection b) Electroporation

**III.** Answer **any one** of the following: **(10X1=10)**

10. Describe inheritance of comb shapes in poultry.
11. Explain Transgenesis in mice and give the significance.
12. What are gene mutagens? Explain physical, chemical and biological mutagens.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## I ROUND TEST- MARCH 2020

### III B.Sc – VI SEMESTER

## ZOOLOGY PAPER – VIII

### (PHYSIOLOGY AND TECHNIQUES IN BIOLOGY)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams wherever necessary.
2) Write neat and legible handwriting.

**I.** Answer **any five** of the following. **(5X3=15)**

1. Explain Haemoglobin as a respiratory pigment.
2. Mention the chemical compositions of muscle fibre.
3. List the hormones of islet of Langerhans with one function each.
4. What is oxygen dissociation curve? Name any two factors affecting it.
5. Write a note on Uricotelism with an example.
6. What is Goitre? Mention its cause
7. State the function of :
   a) Cholecystokinin
   b) Enterokinin
   c) Villikinin

**II.** Answer **any two** of the following. **(2X5=10)**

8. Explain symbiotic digestion in Ruminants.
9. Write an explanatory note on nervous mechanism of regulation of respiration.
10. Schematically represent Ornithine cycle and explain.
11. Explain the hormonal control of metamorphosis in insects.

**III.** Answer **any one** of the following. (1X10=10)

12. Describe different means of transport of carbon-di-oxide.
13. With suitable diagram explain the sliding filament theory of muscle contraction.
14. Discuss the action of the hormones of Adenohypophysis and add a note on hypo and hyper secretion of growth hormone.

K.L.E'S S. NIJALINGAPPA COLLEGE

I ROUND TEST JANUARY - 2021

III B.Sc – V SEMESTER

ZOOLOGY PAPER – VI

GENETICS & BIOTECHNOLOGY

**Duration: 1.30 Hrs** Max Marks: 35

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.

2) Write in **neat and legible** handwriting.

**I. Answer the following:** (1X6=06)

**01.** Define Phenocopy.

**02.** What is polygenic inheritance?

**03.** Mention two recessive traits in garden pea.

**04.** Who discovered ABO blood group in man?

**05.** What is numerical Aneuploidy?

**06.** What are Lampbrush chromosomes?

**II.** Answer **any three** of the following (3X3=09)

**07.** What is Norm of reaction? Explain it with an example.

**08.** Mention the Mendel's monohybrid

**a.** Phenotypic ratio **b.** Genotypic ratio **c.** Test cross ratio

**09.** What are Gynandromorphs? Mention the types.

**10.** Explain Turner's Syndrome

**III.** Answer **any two** of the following: **(5X2=10)**

**11.** Explain Law of independent assortment with suitable example.

**12.** Explain Erythroblastosis foetalis.

**13.** Give an account of Thalassemia.

**IV.** Answer **any one** of the following: **(10X1=10)**

**14.** With reference to interaction of genes, describe inheritance of comb shape in poultry.

**15.** Describe Polytene chromosome with a neat labelled diagram.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

## I ROUND TEST MARCH -2019

## I B.Sc – II SEMESTER

## Paper – II (NON-CHORDATA)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. **Answer the following**: (1X6=06)

1. In which organism you find Book lungs?
2. Define Haemocoel.
3. What is Cephalization?
4. What is pentamerous radial symmetry
5. Mention the function of Madreporite.
6. Mention any two by products of sericulture.

II. Answer **any three** of the following (3X3=09)

1. List out unique characters of peripatus.
2. Briefly explain simple eye of arthropods with neat labelled diagram.
3. Draw a neat labelled diagram of oral view of Sea star.
4. Mention any 3 species of silkworm.

III. Answer **any two** of the following: (5X2=10)

1. Define metamorphosis. Explain Ametabola and Paurometabola types with an example for each.
2. Mention the function of Cephalic appendages.
3. Write a note on :

   A) Pedicillariae

   B) Pests of silkworm

IV. Answer **any one** of the following: (10X1=10)

1. List out the general characters of phylum Arthropoda and classify upto classes with an example each.
2. List out the general characters of phylum Echinodermata and classify upto classes with an example each.

K.L.E's S. NIJALINGAPPA COLLEGE

DEPARTMENT OF ZOOLOGY

I ROUND TEST MARCH -2019

## II B.Sc – IV SEMESTER

### Paper – IV

**Comparative anatomy, cell biology, immunology and histology**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. Answer **any five** of the following **(3X5=15)**

1. Name any three derivatives of integument of birds.
2. Write a note on mesonephros.
3. Sketch and label fluid-mosaic model of plasma membrane.
4. Define the following;
   a) Exocytosis.
   b) Pinocytosis.
   c) Active transport
5. Mention any three properties of cytoplasm.
6. Write a note on ribosomes.

II. Answer **any two** of the following: **(5X2=10)**

1. Explain integument of cartilaginous fish with neat labelled diagram.
2. Draw a neat labelled diagram of dorsal and ventral view of brain of shark.
3. Explain the structure of Golgi complex with neat labelled diagram and mention any two functions of it.

III. Answer **any one** of the following: **(10X1=10)**

1. Compare and comment on the skin of amphibian and reptile.
2. Describe the structure of mitochondria with neat labelled diagram. Mention its functions.

**K.L.E's S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**I ROUND TEST MARCH -2019**

## III B.Sc – VI SEMESTER

**Paper – VIII**

**Physiology and techniques in biology.**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

5) Draw diagrams **wherever** necessary.
6) Write in **neat and legible** handwriting.

VII. Answer **any five** of the following **(3X5=15)**

1. State the function of gastrin, secretin and somatostatin.
2. Write notes on haemoglobin.
3. Explain Fuld and spiro's theory of blood clotting.
4. What is oxygen dissociation curve? Mention any two factors that shift the curve.
5. Explain root effect.
6. Give the applications of autoradiography.

VIII. Answer **any two** of the following:
**(5X2=10)**

1. Explain transport of oxygen.
2. Explain symbiotic digestion in ruminants.
3. Mention the uses of dehydration in microtechnique.

IX. Answer **any one** of the following: **(10X1=10)**

1. Explain different ways of $CO_2$ transport by blood.
2. Describe chemical regulation of respiration.

K.L.E's S. NIJALINGAPPA COLLEGE

DEPARTMENT OF ZOOLOGY

I ROUND TEST MARCH -2019

## III B.Sc – VI SEMESTER

### Paper – VII

### Genetics and Bio-technology.

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. Answer **any five** of the following **(3X5=15)**

1. Define the concept of Genotype, Phenotype and Phenocopy.
2. What is test cross? Explain it with Monohybrid cross.
3. Write the genotypes of A, B, AB
4. Explain the host cells of rDNA technology.
5. What is Transfection and Transformation?
6. Write a note on electroporation.

II. Answer **any two** of the following: **(5X2=10)**

1. List the applications of blood groups
2. Explain the mechanism and action of Restriction enzymes.
3. In man brown eye (B) is dominant over blue (b). A man and his wife both brown eyed have a blue eyed child. What are the genotypes of the parents and child?

III. Answer **any one** of the following: **(10X1=10)**

1. Explain the law of independent assortment with suitable example.
2. What is vector? Explain the types.

**K.L.E's S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**I ROUND TEST MARCH -2019**

## III B.Sc – VI SEMESTER

### Paper – VIII

**Physiology and techniques in biology.**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

2) Draw diagrams **wherever** necessary.
3) Write in **neat and legible** handwriting.

**4)** Answer **any five** of the following **(3X5=15)**

1. State the function of gastrin, secretin and somatostatin.
2. Write notes on haemoglobin.
3. Explain Fuld and spiro's theory of blood clotting.
4. What is oxygen dissociation curve? Mention any two factors that shift the curve.
5. Explain root effect.
6. Give the applications of autoradiography.

**5)** Answer **any two** of the following: **(5X2=10)**

1. Explain transport of oxygen.
2. Explain symbiotic digestion in ruminants.
3. Mention the uses of dehydration in microtechnique.

6) Answer **any one** of the following: **(10X1=10)**

1. Explain different ways of $CO_2$ transport by blood.
2. Describe chemical regulation of respiration.

K.L.E's S. NIJALINGAPPA COLLEGE

DEPARTMENT OF ZOOLOGY

I ROUND TEST MARCH -2019

## III B.Sc – VI SEMESTER

### Paper – VIII

**Physiology and techniques in biology.**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

2) Draw diagrams **wherever** necessary.
3) Write in **neat and legible** handwriting.

4) Answer **any five** of the following **(3X5=15)**

1. State the function of gastrin, secretin and somatostatin.
2. Write notes on haemoglobin.
3. Explain Fuld and spiro's theory of blood clotting.
4. What is oxygen dissociation curve? Mention any two factors that shift the curve.
5. Explain root effect.
6. Give the applications of autoradiography.

5) Answer **any two** of the following: **(5X2=10)**

1. Explain transport of oxygen.
2. Explain symbiotic digestion in ruminants.
3. Mention the uses of dehydration in microtechnique.

6) Answer **any one** of the following: **(10X1=10)**

1. Explain different ways of $CO_2$ transport by blood.
2. Describe chemical regulation of respiration.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

### I ROUND TEST- September-2018

## I B.Sc – I SEMESTER

### Paper – I (NON-CHORDATA)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. **Answer the following:** **(1X6=06)**

1. What is pseduocoelom? Give an example.
2. Mention the function of contractile vacuole.
3. Name the free swimming larva of poriferans.
4. Define is syncytial epidermis?
5. Mention the stages of life cycle of entamoeba histolytica.
6. Why Taenia solium is known as pork tape worm?

II. Answer **any three** of the following **(3X3=09)**

1. Define body symmetry. Mention the types.
2. Mention any three types of nutrition in protozoa with one example each.
3. Draw a neat labelled diagram of externals of sycon.
4. List any three interesting features of Nematoda.
5. With reference to leishmaniasis answer the following:
   a. Causative organism.
   b. Mode of transmission.
   c. Infective stage in man.

III. Answer **any two** of the following: **(5X2=10)**

1. Define metamerism. Differentiate pseudometamerism from true metamerism.
2. Enumerate the general characters of phylum protozoa and classify up to classes with an example for each.
3. What is canal system? Explain it with reference to leuconoid type.
4. Briefly explain the life cycle of Fasciola hepatica.

IV. Answer **any one** of the following: **(10X1=10)**

1. Explain the following:
   a. Protoplasmic and tissue level of body organisation.
   b. Nervous system of planaria with a neat labelled diagram.
2. List out the general characters of phylum porifera and classify upto classes with an example each.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**I ROUND TEST- September-2019**

# I B.Sc – ZOOLOGY – I SEMESTER

**Paper – I (NON-CHORDATA)**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

1. Define Spherical symmetry.
2. Mention the function of food vacuole.
3. Name the cells of sponges.
4. Which are the excretory organs of platyhelminthes?
5. Write the causative organism of Amoebiosis.
6. Name the hosts of Taenia solium.

**II.** Answer **any three** of the following **(3X3=09)**

1. Mention the types of germ layers with example.
2. Explain Holozoic type of nutrition in protozoa with an example.
3. Explain the Syconoid type of canal system.
4. Draw a neat labelled diagram of Planaria.
5. With reference to Entamoeba histolytica answer the following:
   a. Occurrence
   b. Disease caused
   c. Mode of transmission.

Answer **any two** of the following: **(5X2=10)**

1. What is Coelom? Explain Acoelom and Pseudocoelom
2. Enumerate the general characters of phylum Protozoa and classify up to classes with an example for each.
3. Explain Morphology of sycon with a neat labelled diagram.
4. Briefly explain the life cycle of Leishmania donovani

**IV.** Answer **any one** of the following: **(10X1=10)**

1. List out the general characters of phylum Porifera and classify upto classes with an example each.
2. Explain the following:
   a. True metamerism.
   b. Parasitism types with examples.

(a) Details of the project/scheme completed or ongoing with the P.I - NIL

| Name of the Agency | Year | | Total | Equipment/Infrastructure Created |
|---|---|---|---|---|
| ---------- | Started | Completed | | |
| | NIL | NIL | NIL | NIL |

9. Institutional and Departmental facilities available for the proposed work:

   a) Equipment:

   Autoclave, Laminar air flow, Hot air oven, BOD Incubator, Digital PH meter, Double drum Autoclave

   b) Other Infrastructure: Spacious well equipped Laboratories

10. Any other information which the Principal Investigator may like to give in support of this project proposal which may be helpful in evaluating

    Subject specialization in Hydrobiology and Environmental Biology

KLE Society's S. Nijalingappa College Bengaluru 560 010

# K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

### II ROUND TEST APRIL -2019

### I B.Sc – II SEMESTER

### PAPER – II (NON-CHORDATA)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I. Answer the following:** **(1X6=06)**

1. Name the organism which is connecting link between Annelida and Arthropoda.
2. What is radula?
3. Define autotomy.
4. What is royal jelly?
5. What are stigmata?
6. Mention the function of tube feet.

**II.** Answer **any three** of the following **(3X3=09)**

7. Mention the function of following :
   a) Mandible
   b) Chelate leg
   c) Pleopod
8. Sketch and label the shell of unio.
9. Assign the following to their respective classes
   A) Asterias
   B) Ophiothrix
   C) Holothuria
10. Mention different species of honey bee.

**III.** Answer **any two** of the following: **(5X2=10)**

11. Write a note on book lungs.
12. Explain the digestive system of unio
13. Give an account on Silkworm rearing

**IV.** Answer **any one** of the following: **(10X1=10)**

14. Describe the compound eye of an arthropoda.
15. Sketch, label and explain water vascular system in Asterias.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**I ROUND TEST- September-2018**

**II B.Sc – III SEMESTER**

**Paper – III (CHORDATA)**

**Duration: 1.30 Hrs** **Max Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer **any five** of the following: **(3X5=15)**

1. Draw a neat labelled diagram of Ascidian tadpole.
2. State any three general characters of Agnatha.
3. List out any six important characters of Chondricthyes with an example.
4. What are temporal fossae? Mention the different types.
5. Enumerate any three interesting features of sphenodon?
6. Mention any three unique features of Cetacea.

**II.** Answer **any two** of the following: **(5X2=10)**

1. Draw a neat labelled diagram of Amphioxus.
2. Give a brief account of origin of Amphibia?
3. Mention the interesting features of Ungulata?

**III.** Answer **any one** of the following: **(10X1=10)**

1. With the help of neat labelled diagram, describe the digestive system of Scoliodon.
2. Enumerate the general characters of class mammalia. Classify up to sub class with an example each.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

**I ROUND TEST- SEPTEMBER-2018**

**III B.Sc – V SEMESTER**

**PAPER – V**

**(ENVIRONMENTAL BIOLOGY AND ETHOLOGY)**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams wherever necessary.

2) Write neat and legible handwriting.

**I.** Answer **any five** of the following: (3X5=15)

1. Briefly explain micro habitat citing an example.
2. Write a note on tropical niche.
3. Write a note on aims and objectives of ethology.
4. Mention the causes and effects of acid rain.
5. What is stereotyped behaviour? Mention its types.
6. Explain briefly the concept of productivity.

**II.** Answer **any two** of the following: **(5X2=10)**

1. Explain energy flow in an eco system with an illustration.
2. Write an explanatory note on
   a. Natality
   b. Mortality
3. What are pheromones? Explain their role in insects.

**III.** Answer **any one** of the following: **(10X1=10)**

1. What is ecological succession? Explain with reference to hydrosere.
2. Explain social organisation in primates.

# K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

**I ROUND TEST- SEPTEMBER-2018**

**III B.Sc – V SEMESTER**

**PAPER – VI**

**(DEVELOPMENTAL BIOLOGY AND ORGANIC EVOLOUTION)**

Duration: **1.30 Hrs** Max. Marks: 35

**INSTRUCTIONS:**

1) Draw diagrams wherever necessary.

2) Write neat and legible handwriting.

I. Answer **any five** of the following. (5X3=15)

1. Give the views of spermists and ovists.
2. Explain determinate type of eggs citing examples.
3. Name any three factors that lead to speciation.
4. What is regeneration? Explain in sponges.
5. Define oviparity. Give two examples.
6. Explain proestrous phase of oestrous cycle.

II. Answer **any two** of the following. (2X5=10)

1. Differentiate between Geographical and Reproductive isolation.
2. Explain slow block mechanism to polyspermy.
3. Explain the effect of yolk on cleavage.

III. Answer **any one** of the following. **(1X10=10)**

1. Describe the mechanism of fertilization in animals.
2. Write a note on following :

   a) Oogenesis

   b) Spermiogenesis

K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

I ROUND TEST- FEBRUARY - 2017

III B.Sc – VI SEMESTER

## PAPER – VIII

(PHYSIOLOGY AND TECHNIQUES IN BIOLOGY)

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams wherever necessary.

2) Write in neat and legible handwriting.

I. Answer **any five** of the following: **(3X5=15)**

1. Explain Hamberger's phenomenon.
2. Differentiate between Bohr Effect and Haldane effect.
3. What is oxygen dissociation curve? Mention any two factors that shift.
4. Explain Best and Taylor's theory of blood clotting.
5. Write notes on Haemoglobin.
6. Explain the neural control of salivary secretion.

II. Answer **any two** of the following: **(5X2=10)**

1. List the major gastro-intestinal hormones and their functions.
2. What are respiratory pigments? Describe their role in respiration.
3. Explain nervous mechanism of regulation of respiration.

III. Answer **any one** of the following: **(10X1=10)**

1. Describe symbiotic digestion in Ruminants.
2. Explain different ways of carbon dioxide transport by blood.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**I ROUND TEST- FEBRUARY - 2017**

**III B.Sc - VI SEM**

**PAPER – VII**

**(GENETICS AND BIOTECHNOLOGY)**

**Duration: 1.30Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. Answer **any five** of the following: **(3X5=15)**

1) Define: a) Genotype b) Norm of reaction c) Phenotype
2) Write genotype of blood group A, B, AB and O.
3) Define Phenocopy with an example.
4) What is test-cross? Illustrate with an example.
5) On the basis of Mendel's hypothesis and observations, predict the result from the following crosses in garden pea:
   i) Pure tall variety crossed with dwarf variety.
   ii) The progeny from above cross is selfed.
6) A man with blood group Heterozygous 'A' marries a woman with blood group Heterozygous 'B'. What will be the blood group of their children.

II. Answer **any two** of the following: **(5X2=10)**

1) Explain the Mendels law of Independent assortment. Explain with a suitable example.
2) Write a note on Erythroblastosis foetalis.
3) When a single trait is crossed, the phenotype ratio is 9:3:3:1. Explain this with suitable example.

III. Answer **any one** of the following: **(10X1=10)**

1) What is X-linked inheritance? Explain with reference to colour blindness in man.
2) With reference to inheritance of comb shape in fowl workout the following crosses.
   i. Rose comb (RRpp) X Single comb (rrpp).
   ii. Pea comb (rrPP) X Single comb (rrpp).
   iii. Rose comb (RRpp) X Pea comb (rrPP).

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**I ROUND TEST- FEBRUARY – 2017**

**II B.Sc – IV SEMESTER**

## Paper – IV

**(COMPARATIVE ANATOMY, CELL BIOLOGY, IMMUNOLOGY AND HISOLOGY)**

**Duration: 1.30 Hrs** Max. Marks: 35

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer **any five** of the following: (3X5=15)

1) Explain the evolutionary trends of heart of amphibian and aves.
2) Write a short note on swim bladders.
3) Name the Types Of Respiration In Amphibians.
4) Sketch the neat labelled diagram of T.S of tongue.
5) Briefly explain about the role of lipids in maintaining the fluidity of cell membrane.
6) Write a note on gap junctions.

**II.** Answer **any two** of the following: (5X2=10)

1) Write a comparative note on respiratory organs of birds and Mammals.
2) Draw a neat labelled diagram of Fluid-Mosaic Model and explain.
3) Compare and comment on the skin of reptiles and amphibians with neat labelled diagram.

**III.** Answer **any one** of the following: **(10X1=10)**

1) Comment on the skin of fishes with neat labelled diagram
2) Give an account of the evolution of aortic arches in pisces and amphibians.

K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

I ROUND TEST- FEBRUARY - 2017

## I B.Sc – II SEMESTER

PAPER – II (NON-CHORDATA)

**DURATION- 1.30 HRS** **MAX. MARKS: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. Answer **any five** of the following: **(3X5=15)**

1) Write a note on class insecta.
2) Write a note on Ophiopluteus larva.
3) Draw The Neat Labelled Diagram of digestive system ofstar fish.
4) Draw a neat labelled diagram of antennae of Penaeus.
5) Mention general characteristics of Phylum Echinodermata.
6) Explain features of order Chilopoda with an example.

II. Answer **any two** of the following: **(5X2=10)**

1) Mention the functions of following:
   a) Antennae.
   b) Maxillae.
   c) Maxillipedes.
   d) Antennules.
   e) Mandible.
2) Explain the morphology of star fish.
3) Describe larval stages of star fish.
4) Explain with neat labelled diagram of externals of Peripatus.

III. Answer **any one** of the following: **(10X1=10)**

1) Describe the water vascular system of Star fish with a neat labelled diagram.
2) Describe the general characters of phylum Arthropoda.

**K.L.E'S S. NIJALINGAPPA COLLEGE**

**DEPARTMENT OF ZOOLOGY**

**II ROUND TEST- MARCH – 2017**

**II B.Sc – IV SEMESTER**

## Paper – IV

**(COMPARATIVE ANATOMY, CELL BIOLOGY, IMMUNOLOGY AND HISOLOGY)**

**Duration: 1.30 Hrs** **Max. Marks: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

**I.** Answer **any five** of the following: **(3X5=15)**

1) Write any six differences between brain of fish and frog.
2) Write short note on Islets of Langerhans.
3) Draw a neat labelled diagram of Graaffian follicle.
4) Explain histology of spleen.
5) Write the differences between Osmosis and Diffusion.
6) Write a note on phagocytosis.

**II.** Answer **any two** of the following: **(5X2=10)**

1) Briefly explain pronephros and mesonephros.
2) Describe endoplasmic reticulum with neat labelled diagram.
3) Describe histology of thyroid with a neat labelled diagram.

**III.** Answer **any one** of the following: **(10X1=10)**

1) Give a comparative account of brain of bird and rabbit.
2) Describe histological features of adrenal gland with supporting diagram.

K.L.E'S S. NIJALINGAPPA COLLEGE

## DEPARTMENT OF ZOOLOGY

II ROUND TEST- MARCH - 2017

I B.Sc – II SEMESTER

PAPER – II (NON-CHORDATA)

**DURATION- 1.30 HRS** **MAX. MARKS: 35**

**INSTRUCTIONS:**

1) Draw diagrams **wherever** necessary.
2) Write in **neat and legible** handwriting.

I. Answer **any five** of the following: (3X5=15)

1) Write a note on simple eye of Arthropods.
2) Mention the coelomic spaces in balanoglossus.
3) Name any three species of honey bee.
4) Mention any three classes of phylum Mollusca with an example each.
5) Mention the affinities of Hemichordata with Echinodermata.
6) Write a short note on book lungs.

II. Answer **any two** of the following: **(5X2=10)**

1) Explain male reproductive system of Penaeus with neat labelled diagram.
2) List out by-products of silk industry and mention the species of silkworm.
3) Define metamorphosis. Explain paurometabola with an example.
4) Explain with neat labelled diagram morphology of balanoglossus.

III. Answer **any one** of the following: (10X1=10)

1) Describe the rearing and management practices of silkworm.
2) Describe the circulatory system of Penaeus with supporting diagrams.