

Model Question Paper

I Semester B.Sc. Degree examination

ZOOLOGY

Paper: Cytology, Genetics and Infectious Diseases
Course Code: ZOO1DSC01

Time: 2Hrs

Maximum Marks: 60

Instructions to Candidates:

1. Draw neat labelled 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. Which protein is present in microfilament of cell?
2. Name the nitrogenous base found only in DNA
3. Write the phenotypic ratio of Mendel's dihybrid cross?
4. Beard in males is an example of which trait?
5. Name the causative agent of Trichomonas vaginalis.

PART- B

II. Answer any five of the following: (5x3=15)

1. Mention the cytoskeletal structures present in an animal cell.
2. List any three functions of endoplasmic reticulum.
3. Describe the structure of the peroxisome.
4. What are the types of RNA present in a cell?
5. What is Lygaeus type of sex determination?

6. Write the genotype of A, B and AB blood groups.
7. What is X linked inheritance? Give an example.

PART- C

III. Answer any four of the following (4x5=20)

1. Describe the function of the mitochondrion.
2. Explain stages of Zygotene and Pachytene of Prophase I of meiosis.
3. Write short notes on cell surface receptors.
4. Elucidate cytoplasmic inheritance with reference to kappa particles in *Paramecium*.
5. With an example explain autosomal recessive pattern of inheritance.
6. Give the occurrence, disease caused, mode of transmission and preventive measures of *Wuchereria bancrofti*.

PART- D

IV. Answer any two of the following (2x10=20)

1. With a neat labelled diagram describe the fluid mosaic model of the plasma membrane.
2. a. Describe the structure of the eukaryotic nucleus.
b. Draw and label the cell cycle.
3. With reference to inheritance of Comb shape in poultry fowls, work out the following crosses:
 - a. Homozygous rose comb is crossed with single comb
 - b. Homozygous pea comb is crossed with single comb
 - c. Conduct a cross between F₁ of a & b, find the offspring.
4. With suitable diagrams explain the life cycle of *SARS Covid -2*.

Model Question Paper

I Semester Open Elective

Paper: Entrepreneur Zoology

Course Code: ZOO1OE01

Time: 2 Hrs

Maximum Marks: 60

Instruction to Candidates:

1. Draw neat labelled 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. Write mulberry and non-mulberry species in India.
2. Name any two poultry breeds.
3. Define composite fish culture.
4. Write the zoological name for marine prawn.
5. Give the products of Lac.

PART- B

II. Answer any five of the following: (5X3=15)

1. Draw a neat labelled diagram of life cycle of *Apis indica*.
2. Write a note on division of labour in Honeybees.
3. Give the feed formulation for chicks.
4. Differentiate between loose housing system and conventional barn system.
5. Write the advantages of vermicomposting.
6. Write a note on Lac composition.
7. Mention the nutritive value of egg and meat.

PART- C

III. Answer any four of the following:

(4x5=20)

1. Write a note on silk worm rearing technique.
2. List the methods and equipment's for Bee keeping.
3. Write the advantages and limitations of diary forming.
4. Explain the maintenance and management of pond culture.
5. Describe the modern technique of fish seed production.
6. Write a note on preservation and processing of prawns.

PART- D

IV. Answer any two of the following

(2x10=20)

1. Explain the life cycle of Bombyx mori with a neat labelled diagram.
2. Write a note on the following:
 - a) Maintenance and Management of pearl culture.
 - b) Disease of poultry and its controlling measures.
3. Describe the methodology of Vermicomposting.
4. Explain: a) Diseases and pests of earth worm.
 - b) Ornamental fish culture.

Scheme of Practical Examination

I Semester BSc. Zoology

Cytology, Genetics and Infectious diseases

Course Code: ZOO1PRA01

Duration: 3 hours

Max. Marks: 25

1. Prepare a temporary squash of the given material. Identify & comment on stage observed. (For mitosis or meiosis) (08 M)

OR

Stain, identify and comment on the given cells/tissue (epithelial/mitochondrial staining)

2. Prepare a whole mount of the given material (Fish scale/Mouthparts of insect) (05 M)
3. Mount and stain the Polytene chromosome/Permeability of cells/Sex comb. (07 M)
4. Identify and comment on the given spotters A and B (2.5 X 2= 05 M)

Infectious pathogens/ Identify the given karyotype and comment / Pedigree analysis (any two as A and B).
