Exam Code: 211201   Paper Code: 8339 (40)

Programme: M.Sc. (Zoology) Sem: I

Course Title: Functional Organization of Animals-I

Course Code: MZOL-1481

Time Allowed: 3 Hours   **Max Marks: 80**

Note:

Candidates are required to attempt five questions, selecting at least one from each section. The fifth question may be attempted from any section.

Section-A

1. Symbiosis with microbes often play key role in animal feeding and nutrition. Justify the statement . (16)

2. (a) Explain the structure and function of digestive system of bivalve molluses. (8)

    (b) Discuss the mechanism of digestion of lipids in animals. (8)

Section-B

3. Give detailed account of process of circulation in mammals. (16)

4. (a) Discuss in short the circulation plan of squid and octopuse.(8)

(b) Write Short note on circulation in sponges. (8)

Section-C

5. Explain the mechanism of aerial mode of respiration. (16)

6. (a) Write a note on various larval forms of non-chordates. (8)

(b) Discuss the structure of urino-genital system in mammals. (8)

Section-D

7. Explain the excretory structure in non-chordates. (16)

8. (a) Write a note on structural organization of chordate kidney.(8)

(b)Explain the water and salt physiology of animals in freshwater. (8)

Exam Code: 211201   Paper Code: 8340 (40)

Programme: M.Sc. (Zoology) Sem: I

Course Title: Animal Ecology

Course Code: MZOL-1482

Time Allowed: 3 Hours   Max Marks: 80

Note:

Attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. All questions carry 16 marks.

Section-A

1. Explain structure and function of following Ecosystem.
   (a) Grassland
   (b) Aouatic   8x2=16

2. (a) Explain light as a climatic factor of an ecosystem.   10
   (b) Differentiate Eurythermal and Stenothermal Organisms   3
   (c) What is Cyclomorphosis and Glogeis rule.   3

Section-B

3. Write a note on the followings:
   (a) Food web

(b) Ecological Succession

(c) Commensalism

(d) Predation   4x4=16

4. Write in detail about the intra specific interactions with suitable examples.   16

Section-C

5. Explain Co-adaption and different types of mimicry with examples.   16

6. Write a note on the followings
   (a) Biotic potential and Ecesis   4
   (b) Differentiate between sigmoid and J-shaped curve.   4
   (c) Enumerate the various characteristics of population.   8

Section-D

7. Write in detail about modeling and use of remote sensing in Ecology.   16

8. What do you know about the Bio monitoring of environment using animal species.   16

Exam Code : 211201   Paper Code : 8341 (40)
Programme : M.Sc. (Zoology) Semester-I
Course Title : Cell Biology
Course Code : MZOL-1483

Time Allowed : 3 Hours   Max Marks : 80

Note: Attempt Five questions in all by selecting at least one question from each section. All questions carry equal marks.

Section-A

Q. 1. Explain Davson–Danielli model of cell membrane. What are its drawbacks and how scientist later justify these points?

Q. 2. Historically, how the origin of life on earth has been take place. Explain whole process with suitable example?

Section-B

Q. 3. Describe in detail types, structure and functions of Endoplasmic reticulum.

Q. 4. Why Golgi apparatus is called post office of the cell? Explain with well-labelled diagram how these components work together in endo-membrane syatem.

Section-C

Q. 5. Describe structure and different functions of Peroxisome. What are the pathologies associated with peroxisomes disorder?

Q. 6. (a.) How peroxisome similar as well as different from lysosome?

(b.) What is the significance of electron transport chain?

Section-D

Q. 7. In the diagram to the right, label the three tRNA sites, codons and anticodons, peptide and mRNA. List the sequence of events that will occur when the in-coming tRNA sets into its binding site. Redraw the diagram, as it will appear immediately after the next peptide bond is formed. Explain the model with suitable example.
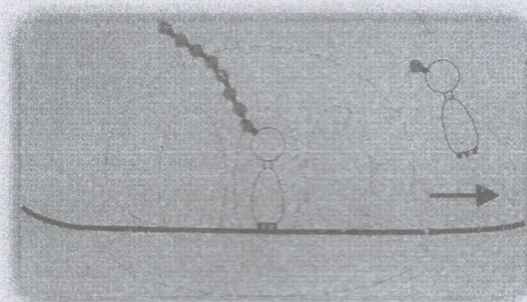
Q. 8. Write note on nuclear membrane. Describe structure of nuclear pore. Give mechanism of transport across nuclear membrane.

Exam Code: 211201   Paper Code: 8342 (40)

Programme: M.Sc. Zoology Sem: I

Course Title: Computer Programming & Data processing

Course Code: MZOM-1134

Time Allowed: 3 Hours   **Max Marks: 25**

Note:

Attempt five questions, selecting at least one question from each section. Fifth question may be attempted from any section.

Section-A

1. Write short note on various generation of computer.   (5)

2. Explain various limitations of computer.   (5)

Section-B

3. How to format a document in MS-WORD?   (5)

4. Write steps of creating a power point presentation.   (5)

Section-C

5. Write a short note on various operators available in C. (5)

6. Write the syntax of scanf statement?

Explain its usage in C. (5)

Section-D

7. Explain various control statements available in C. (5)

8. Explain various types of an array in C. How to declare & initialize them? (5)