

B.Sc. Semester - 6 (CBCS) Examination
April/May-2022 (NEW COURSE)
Embryology, Evolution, Biostatistics (Core (New))

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

Q.1(A) Answer the following (Any one out of two). (07)

1. Explain the process of diploid parthenogenesis.
2. Describe the development of 72 hours chick embryo with labelled diagram.

Q.1(B) Attempt any one out of two. (04)

1. Short note on types of placenta on the basis of histological structure.
2. Write a short note on Epimorphic regeneration.

Q.1(C) Attempt any three out of five. (03)

1. Arrhenotoky is also known as _____.
2. What is the type of egg in Aves on the basis of amount of yolk?
3. Organisms formed in water sac are known as _____.
4. Give an example of post-embryonic development stage.
5. What is placenta?

Q.2(A) Answer the following (Any one out of two). (07)

1. Explain Ethiopian region in detail.
2. Describe the bottleneck and founder effect with suitable examples.

Q.2(B) Attempt any one out of two. (04)

1. Write short note on probability sampling.
2. Write short note on Devonian period.

Q.2(C) Attempt any three out of five. (03)

1. _____ is a bio-geographical designation for a group of mainly Indonesian islands separated by deep-water straits from the Asian and Australian continents.
2. Give the names of sub-regions of oriental realm.
3. The sum total of all _____ of a population taken together is known as gene pool.
4. Calculate the standard deviation for the following sample data: 2, 4, 8, 6, 10, and 12.
5. Mutation in Covid mutants and Bacterial strains are examples of which type of evolution.

Q.3(A) Answer the following (Any one out of two). (07)

1. Define Pollution and explain air pollutants and their effects on environment.
2. Describe Biodegradable and Non-degradable wastes.

- Q.3(B) **Attempt any one out of two.** (04)
1. Write short note on acid rain.
 2. Write short note on global warming.
- Q.3(C) **Attempt any three out of five.** (03)
1. Write few contributors of soil pollution.
 2. Primary causes of water pollution is due to human activities - True/False.
 3. Tides are consequence of ozone layer depletion - True/False.
 4. Discarded electrical or electronic devices are type of _____ wastes.
 5. Reason behind difficulty in recycling plastics is _____.
- Q.4(A) **Answer the following (Any one out of two).** (07)
1. Explain the process by which bats do communication.
 2. Describe the courtship behaviour with suitable examples.
- Q.4(B) **Attempt any one out of two.** (04)
1. Persuasion & appeasement in stickleback.
 2. Difference between imprinting and habituation.
- Q.4(C) **Attempt any three out of five.** (03)
1. What is ethology?
 2. The genetically programmed behaviours are called _____.
 3. Pheromones are intraspecific – True/False.
 4. In which animal Head bobbing is seen during persuasion and appeasement behaviour?
 5. What type of mating ritual is observed in balloon fly?
- Q.5(A) **Answer the following (Any one out of two).** (07)
1. Describe Age structure and natality in population ecology.
 2. Define ecological succession and explain the general process of it.
- Q.5(B) **Attempt any one out of two.** (04)
1. Explain dispersion in population ecology.
 2. Differentiate between autogenic and allogenic succession.
- Q.5 (C) **Attempt any three out of five.** (03)
1. Give an example of urn shaped pyramid figure.
 2. Define xerarch.
 3. Development of a bare area without any form of life is known as _____.
 4. What is climax community?
 5. Define maximum natality.
