

B.Sc. Semester - 6 (CBCS) Examination**April/May-2022 (OLD COURSE)****REPROD. PHYSIO, EMBRYO, EVO, ENV POLLUTION AND ECOLOGY(CORE)****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 structure of mammary gland with the help of schematic diagram.
2. Explain the process of oogenesis in detail

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

1. Draw a schematic diagram of mature ovum.
2. Describe the stages in spermatogenesis.

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

1. Cortical granules present in thick cytoplasm of ovum prevents _____.
2. Before the process of spermiationsperm heads are embedded in_____cells.
3. What is nebenkern?
4. Mitochondria present in the middle piece of spermprovide energy for mobility – True/False.
5. How many glandular lobes are present in each mammary glands.

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

1. Describe the development of 24 hours chick embryo with labelled diagram.
2. Define regeneration and explain regeneration process in vertebrates.

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

1. Short note on 48 hours chick embryo.
2. Difference between diffused and coteledonary placenta.

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

1. Give an example of an organism which shows haploid parthenogenesis.
2. _____are produced in arrhenotoky parthenogenesis.
3. Define neoblast cells.
4. Placenta is endocrine in nature-True/false.
5. Which hormone is secreted in females during preparation for childbirth.

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

1. Explain in detail Geological Time Scale.
2. Describe Palearctic and Australian zoogeographical regions.

- Q.3(B) **Attempt any one out of two.** (04)
1. Explain the Devonian period of geological time scale.
 2. Difference between macro and micro evolution.
- Q.3(C) **Attempt any three out of five.** (03)
1. Ceylonian, Indo-china, Indo-Malayan are subregions of _____ realm.
 2. “Headquarter of Urodela” is also other name for _____ region.
 3. Define gene pool.
 4. Which era is also known as “Age of Mammals, Birds, Insects and Angiosperms”?
 5. Appalachian Revolution occurred in _____?
- Q.4(A) **Answer the following. (Any one out of two)** (07)
1. Explain Soil pollution.
 2. Explain Water pollution.
- Q.4(B) **Attempt any one out of two.** (04)
1. Mention the hazardous effects of Acid Rain.
 2. What are major causes of Air pollution?
- Q.4(C) **Attempt any three out of five.** (03)
1. Defines eutrophication?
 2. Define biomagnification.
 3. Main gas responsible for _____ is carbon dioxide.
 4. Name the chief constituent of photochemical smog.
 5. Which layer in stratosphere provides UV protection.
- Q.5(A) **Answer the following. (Any one out of two)** (07)
1. Explain age structure and natality in population ecology.
 2. Explain any one atmospheric cycle in detail.
- Q.5(B) **Attempt any one out of two.** (04)
1. Write short note on Sulphur cycle.
 2. Write short note on pyramid of number.
- Q.5 (C) **Attempt any three out of five.** (03)
1. Write full form of IUCN.
 2. Name the bacteria responsible for Nitrification.
 3. The sedimentary phase of phosphorus cycle remains comparatively slow than the organic phase (True/False).
 4. What is minimum mortality?
 5. What is climax?
