

B.Sc. Semester - 6 (CBCS) Examination**March/April -2020****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.
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Q.1**a. Answer the following. (Any one out of two)****(07 marks)**

1. Explain the structure and function of mammary gland
2. Describe in detail the structure and function of mammalian sperm.

b. Attempt any one. (Out of two)**(04 marks)**

1. Explain the process of oogenesis.
2. Distinguish between zona pellucida and corona radiata.

c. Attempt any three. (Out of five)**(03 marks)**

1. Define spermiogenesis.
2. Mature mammalian oocyte is also known as_____.
3. Sperm lysins are present in acrosome of sperm (True/ False).
4. Name the hormone which causes release of milk.
5. Write the function of oolema in an egg.

Q.2**a. Answer the following. (Any one out of two)****(07 marks)**

1. Types of placenta on the basis of nature of uterine wall after parturition.
2. Explain the process of epimorphic regeneration giving suitable example.

b. Attempt any one. (Out of two)**(04 marks)**

1. Explain the process of mixed parthenogenesis.
2. Schematic diagram of 24 hours chick embryo.

c. Attempt any three. (Out of five)**(03 marks)**

1. Disadvantage of parthenogenesis.
2. Define amphitoky.
3. Dedifferentiated mass of cells formed after injury is known as_____.
4. Any two functions of placenta.
5. Function of Henson's node in an Avian embryo.

Q.3**a. Answer the following. (Any one out of two)****(07 marks)**

1. Describe Nearctic and Neo-tropical regions.
2. Explain Mesozoic and Cenozoic Era of Geological Time Scale.

b. Attempt any one. (Out of two)**(04 marks)**

1. Describe in brief: Oriental region.
2. Explain the "Age of Fishes".

c. Attempt any three. (Out of five)**(03 marks)**

1. What are different sub-regions of Australian realm?
2. Neotropical region is also known as "Headquarter of Urodels"(True/False).
3. When did Appalachian revolution occurred?
4. _____ era is known as "Age of Reptiles".
5. Name any two process required for evolution.

Q.4**a. Answer the following. (Any one out of two)****(07 marks)**

1. Give detail account of Air pollutants found in the air and their effects.
2. Describe Soil pollution.

b. Attempt any one. (Out of two)**(04 marks)**

1. What are major causes of Water pollution?
2. Comment on hazardous effects of Acid Rain.

c. Attempt any three. (Out of five)**(03 marks)**

1. Define oligotrophic state.
2. What is biomagnification phenomenon?
3. NO₂ is responsible for global warming (True/False).
4. List out the constituent of photochemical smog.
5. Name the layer in stratosphere which provides UV protection.

Q.5**a. Answer the following. (Any one out of two)****(07 marks)**

1. Define succession. Give an account of general process of succession in nature.
2. Describe Mortality with different survivorship curves.

b. Attempt any one. (Out of two)**(04 marks)**

1. Write note on Monoclimax.
2. Explain the sulphur cycle.

c. Attempt any three. (Out of five)**(03 marks)**

1. Age pyramid with broad base indicates high percentage of _____ individuals.
2. Define Climax.
3. Write difference between fertility rate and fecundity rate.
4. Who gave a generalised model of Y-shaped energy flow model?
5. Give an example of any sedimentary cycle.
