

B.Sc. Semester - 6 (CBCS) Examination**March/April -2019****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. Describe in detail the structure of spermatozoan with functions.
2. With the help of schematic diagram explain the structure of mammary gland.

b. Attempt any one out of following two (04 marks)

1. Difference between corona radiata and zona pellucida.
2. Describe the process of Oogenesis.

c. Attempt any three out of following five (03 marks)

1. During which cycle the secondary oocyte is released in females?
2. What is spermiogenesis?
3. Acrosome contains proteolytic and lysosomal enzymes popularly known as _____.
4. Name the hormone which stimulates the production of milk in females.
5. Hormone oxytocin causes release of milk in females. (True/False)

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

1. Explain Natural or spontaneous parthenogenesis.
2. What is placenta? Describe various types of placenta found in mammals.

b. Attempt any one out of following two (04 marks)

1. Growth factors responsible for regeneration.
2. Mention the characteristic feature of 72 hours chick embryo.

c. Attempt any three out of following five (03 marks)

1. In Amphitoky parthenogenetic eggs may produce individuals of either sex. (True /False)
2. _____ ionophores can activate artificial parthenogenesis in the eggs of many animals.
3. What is blastema in epimorphic regeneration?
4. What is placentation?
5. Hormone secreted by placenta is known as _____.

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

1. Describe Oriental and Australian zoogeographical regions.
2. Give the detailed account of Geological Time Scale.

b. Attempt any one out of following two

(04 marks)

1. Give details of faunal diversity of Neotropical region.
2. Explain the Mesozoic era of geological time scale.

c. Attempt any three out of following five

(03 marks)

1. Name the animals exclusively found in Ethiopian region.
2. Give names of zoogeographical regions found on earth.
3. What is genetic drift?
4. Which era is also known as “Age of Reptiles”?
5. When did Rocky Mountain Revolution occurred?

Q.4

a. Answer the following. (Any one out of two)

(07 marks)

1. Define Pollution. Give the detailed account of Air pollution.
2. What is Green house effect? Explain its causes and effects in detail.

b. Attempt any one out of following two

(04 marks)

1. What are major causes of Soil pollution?
2. Acid Rain.

c. Attempt any three out of following five

(03 marks)

1. Ozone layer is present in _____ part of atmosphere.
2. What is Oligotrophic state in a water body?
3. What are different factors responsible for soil degradation?
4. Which gas is responsible for global warming?
5. What is London smog?

Q.5

a. Answer the following. (Any one out of two)

(07 marks)

1. What is Energy flow? Describe in detail.
2. Define the term Population. Describe the mortality with survivorship curves.

b. Attempt any one out of following two

(04 marks)

1. Describe Age structure.
2. Explain any one sedimentary cycle.

c. Attempt any three out of following five

(03 marks)

1. What is Net Productivity?
2. Which types of food chains are present in an ecosystem with reference to energy flow?
3. Give an example of atmospheric cycle.
4. Write differences between fertility rate and fecundity rate.
5. Which type of survivorship curve is found in oysters?
