



DCK-003-1016023

Seat No. _____

B. Sc. (Sem. VI) (CBCS) (W.E.F. 2016) Examination

July - 2022

Zoology : Z-603

***(Reproductive Physiology, Embryology, Evolution,
Environmental Pollution & Ecology)***

Faculty Code : 003

Subject Code : 1016023

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :** (1) Illustrate your answer with neat and labelled diagram.
(2) Figures to right indicate full marks of question.

- 1 (a) Give answer of the following questions : 4
- (1) Mother's milk doesn't have any antibodies.
State True or False.
 - (2) Glandular tissues contain _____ at the ends.
 - (3) The first meiotic division which is unequal results
in the formation of haploid _____ and tiny first
polar body.
 - (4) Which cells give nourishment to spermatozoa ?
- (b) Write any one out of two : 2
- (1) Where is acrosome present in humans ? Write its
function.
 - (2) Differentiate between : Spermatogenesis and
Spermiogenesis.
- (c) Write any one out of two : 3
- (1) Draw a schematic diagram of a human sperm and
label the cellular components. Give the functions
of any three parts.
 - (2) Draw a labelled sectional view of a human ovary.

- (d) Write any one out of two : 5
- (1) Draw well labelled diagram of lactating and non-lactating mammary gland and state difference between them.
 - (2) Detail note on Oogenesis.
- 2 (a) Give answer of the following questions : 4
- (1) _____ number of pair of somites are present in 48 hours of chick embryo.
 - (2) Crustaceans, spiders and insects are able to regenerate their limbs.
State True or False.
 - (3) Define : Parthenogenesis
 - (4) Define : Placenta
- (b) Write any one out of two : 2
- (1) State the functions of Placenta
 - (2) Explain word : Epimorphosis Regeneration
- (c) Write any one out of two : 3
- (1) State the significance of Parthenogenesis
 - (2) Explain the type of Placenta according to the distribution pattern of chorionic villi.
- (d) Write any one out of two : 5
- (1) Draw a well labelled diagram of 72 hour chick embryo.
 - (2) Detail note on Thelytokous Parthenogenesis.
- 3 (a) Give answer of the following questions : 4
- (1) The first vertebrates in the form of armoured Jawless fishes, called ostracoderms found in _____ period.
 - (2) Who is considered father of zoogeography?
 - (3) Kangaroo is found in which _____ zoogeographic region.
 - (4) Slight genetic change over a few generations in a population that does not result in the evolution of a new species is known as _____

- (b) Write any one out of two : 2
- (1) Explain : Gene Flow
 - (2) Give two examples of Microevolution.
- (c) Write any one out of two : 3
- (1) Note on Triassic period
 - (2) Note on Macroevolution
- (d) Write any one out of two : 5
- (1) Write a detail note on Oriental Region.
 - (2) Detail note on Genetic Drift.
- 4 (a) Give answer of the following questions : 4
- (1) Give full form of CFC.
 - (2) Define Air pollutant.
 - (3) Define Water pollution
 - (4) Give two examples of Soil pollutants.
- (b) Write any one out of two : 2
- (1) Make a list of Air pollutants.
 - (2) Short note on Ecological effect of Soil pollution.
- (c) Write any one out of two : 3
- (1) What is the impact of air pollution on human health?
 - (2) What are the causes of soil pollution ? Mention the steps to prevent soil pollution?
- (d) Write any one out of two : 5
- (1) Write a detail note on causes and control of water pollution.
 - (2) Detail note on Green House Effect.

- 5 (a) Give answer of the following questions : 4
- (1) Biotic succession occurring on a previously unoccupied or bare land is which type of succession?
 - (2) Which is the main source of energy in energy flow?
 - (3) Define biological nitrogen fixation.
 - (4) The collection of individuals which belong to the same species when live together in a region is known as _____
- (b) Write any one out of two : 2
- (1) Write a note on factors affecting pollution growth.
 - (2) Define mortality and natality.
- (c) Write any one out of two : 3
- (1) Note on primary succession.
 - (2) Draw only diagrammatic representation of N_2 cycle.
- (d) Write any one out of two : 5
- (1) Detail note on Energy flow.
 - (2) Detail note on O_2 cycle.
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