



DR-003-1016023

Seat No. _____

Third Year B. Sc. (Sem. VI) (CBCS) Examination

April - 2022

Zoology : Paper - 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 answers with neat and labelled diagram.

(2) Figures to the right side indicate full marks for the question.

- 1 (a) Answer the following questions : 4
- (1) What is the size of Human Ova ?
 - (2) What is the function of Vitelline membrane in human ova ?
 - (3) What is the function of Acrosome in human sperm ?
 - (4) What is the function of Lactiferous sinus ?
- (b) Answer in brief : (any **one**) 2
- (1) Write the function of Zona pellucida.
 - (2) Describe functions of mammary gland.
- (c) Answer in detail : (any **one**) 3
- (1) Draw, labelled diagram of human ovum.
 - (2) Write a note on lactiferous duct.
- (d) Write a note on : (any **one**) 5
- (1) Write a short note on the Human sperm.
 - (2) Describe the structure of the human Ovum.

- 2** (a) Answer the following questions : **4**
- (1) What is Parthenogenesis ?
 - (2) What is Zygote ?
 - (3) What is regeneration ?
 - (4) Define Superficial implantation.
- (b) Answer in brief : (any **one**) **2**
- (1) Describe chronic placenta.
 - (2) Describe Yolk of chick egg.
- (c) Answer in detail : (any **one**) **3**
- (1) Write short note on cleavage.
 - (2) Describe significance of parthenogenesis.
- (d) Write a note on : (any **one**) **5**
- (1) Describe structure of 48 hours of chick embryo.
 - (2) Describe Morphallaxis regeneration.
- 3** (a) Answer the following questions : **4**
- (1) Define Zoogeographical realms.
 - (2) What is Microevolution ?
 - (3) Which is non directional process of evolution ?
 - (4) Which era is known as Age of Reptiles ?
- (b) Answer in brief : **2**
- (1) Give a list of avifauna of the Palearctic region.
 - (2) Define microevolution with one example.
- (c) Answer in detail : **3**
- (1) Describe secondary gene pool.
 - (2) Give list of mammals in the Australian region.
- (d) Write a note on : **5**
- (1) Describe evolution of horse.
 - (2) Short note on genetic drift.

- 4 (a) Answer the following questions : 4
- (1) Define Eutrofication.
 - (2) What is the greenhouse effect ?
 - (3) Give any two names of secondary air pollutants.
 - (4) Give full form of SPM.
- (b) Answer in brief : (any **one**) 2
- (1) Describe ground water pollution.
 - (2) Explain effect of soil pollution.
- (c) Answer in detail : (any **one**) 3
- (1) Write short note on control of Air pollution.
 - (2) Describe causes water pollution.
- (d) Write a note on : (any **one**) 5
- (1) Explain Greenhouse effect.
 - (2) Write short note on source of air pollution.
- 5 (a) Answer the following questions : 4
- (1) Define ecological succession.
 - (2) Which type of pyramid represents the declining of the population ?
 - (3) How many percentage of Oxygen present in atmosphere ?
 - (4) What is Mortality ?
- (b) Answer in brief : (any **one**) 2
- (1) Write salient features of the population.
 - (2) Explain population density.
- (c) Answer in detail : (any **one**) 3
- (1) Described double channel energy flow in the ecosystem.
 - (2) Brief note on Oxygen cycle.
- (d) Write a note on : (any **one**) 5
- (1) Describe Oxygen cycle.
 - (2) Short note on the general process of succession.