



Seat No. \_\_\_\_\_

**HB-003-2016023**

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

**April - 2023**

**Zoology : Z-603**

*(Reproductive Physiology, Embryology, Development Biology,  
Wildlife, Ecology, Environment Pollution and Evolution)*

*(New Course)*

**Faculty Code : 003**

**Subject Code : 2016023**

Time :  $2\frac{1}{2}$  / Total Marks : 70

**Instructions :**

- (1) Draw neat and labelled diagram wherever necessary.
- (2) Numbers to the right side indicate full marks of the questions.

- 1 (a) Objective type questions : 4
- (1) What is Gametogenesis ?
  - (2) The cytoplasm of the egg is called \_\_\_\_\_.
  - (3) Describe function of mammalian sperm.
  - (4) The Primitive streak composed of which components ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Draw neat and clean “Typical Mammalian Sperm” with appropriate labels.
  - (2) Parenchyma
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Draw neat and clean “Mammalian Ovum” with appropriate labels.
  - (2) Describe “Blastula” stage of chick embryo.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Draw neat and clean “Mammary Glands Diagram” with appropriate labels.
  - (2) Structure of 48 hours chick embryo (Describe and diagram)

- 2 (a) Objective type questions : 4
- (1) Explain meaning of Parthenogenesis.
  - (2) Define Prenatal Development.
  - (3) What is Amnion ?
  - (4) What is Allantois ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Explain any 4 functions of Placenta.
  - (2) Draw neat and clean diagram “Chorio-vitelline placenta”.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Regeneration : Planaria
  - (2) Artificial Parthenogenesis.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Natural Parthenogenesis.
  - (2) Regeneration : Salamander
- 3 (a) Objective type questions : 4
- (1) Define : Endemic species.
  - (2) Note down any 3 methods of “In-situ Conservation”.
  - (3) Full form of “CITES”.
  - (4) WWF is working on which 3 direction ?
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Note down four factors that determine “Hotspots of Biodiversity”.
  - (2) Factors affecting Endemic animals of India.
- (c) Answer in detail : (any 1 out of 2) 3
- (1) Hotspots of Biodiversity in India.
  - (2) Note down the 10 “endangered animals” of India.
- (d) Write a note on : (any 1 out of 2) 5
- (1) Ex-situ Conservation.
  - (2) Keystone Species.
- 4 (a) Objective type questions : 4
- (1) What is acid rain ?
  - (2) Mention the six most common elements associated with organic molecules.
  - (3) Full name of CFC
  - (4) Define Population Equilibrium
- (b) Answer in brief : (any 1 out of 2) 2
- (1) Causes of Air Pollution.
  - (2) Age Distribution

- (c) Answer in detail : (any 1 out of 2) **3**  
 (1) Population Growth  
 (2) Erosion as pollution
- (d) Write a note on : (any 1 out of 2) **5**  
 (1) Green House Effect  
 (2) Effect of Water Pollution.
- 5** (a) Objective type questions : **4**  
 (1) Define : Microevolution”.  
 (2) Mention the 5 mains eras of the geological time scale.  
 (3) Mention the dominant organisms of “tertiary” era.  
 (4) Scientific name of “Cro-Magnon man”.
- (b) Answer in brief : (any 1 out of 2) **2**  
 (1) Mention six main zoogeographic regions of the world based on the proposal of Philip Sclater and Alfred Wallace.  
 (2) Features of “Homo neanderthalensis”.
- (c) Answer in detail : (any 1 out of 2) **3**  
 (1) Oriental Region  
 (2) Macro Evolution
- (d) Write a note on : (any 1 out of 2) **5**  
 (1) Primitive Hominids.  
 (2) Pithecanthropus erectus – Java man.
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