

M.Sc. - I (Zoology) (CBCS Pattern) Semester-I  
**PSCZOOT04 Paper-IV - Advanced Reproductive Biology**

P. Pages : 1

Time : Three Hours



**GUG/S/25/11178**

Max. Marks : 80

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1. Explain in detail Asexual and sexual reproduction in protozoa. 16

**OR**

Write a note on

- a) Regeneration in Hydro. 8
- b) Vitellogenesis in Insects. 8
2. Describe cytological and molecular events that take place during the process of fertilization. 16

**OR**

Write notes on

- a) Hormonal regulation of Oogenesis 8
- b) Types of Cleavage 8
3. Give detailed idea what the biochemical composition of semen and write a note on sperm abnormalities. 16

**OR**

Write notes on

- a) Structure and function of male accessory sex glands in mammals 8
- b) Sperm capacitation and decapacitation. 8
4. Explain in detail merits and demerits of cryopreservation of gametes and embryos. 16

**OR**

Write notes on

- a) Neurohormonal control in fish reproduction. 8
- b) In-vitro fertilization. 8
5. Write short notes on
- a) Partial metamorphosis in insects. 4
- b) Ultra structure of spermatozoa. 4
- c) Pheromones 4
- d) Test-tube baby 4

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