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SUBJECT CODE NO: - FF-6514
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) (Zoology)
Examination January-2023
Developmental Biology ZOO-301

[Time: 3:00 Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

N. B

- 1) All questions carry equal marks.
- 2) Draw well labelled diagram whenever necessary.

PART A

Q1 Attempt the following MCQ.

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- 1) How many polar bodies are formed during oogenesis from single primary oocyte?
 - a) One
 - b) Two
 - c) Three
 - d) Four
- 2) In spermatogenesis which type of division takes place
 - a) Meiosis
 - b) Mitosis
 - c) Both a and b
 - d) None of above
- 3) Which of the following statement is correct during cleavage?
 - a) Embryo size decrease
 - b) Cell size decrease
 - c) Cell size increase
 - d) Embryo size increase

- 4) Blastopore is found in which stage of frog embryology?
- a) Morula
 - b) Blastula
 - c) Gastrula
 - d) Neurula
- 5) The extra embryonic membrane enclosed the embryo in a fluid filled cavity is
- a) Yolk sac
 - b) Allantois
 - c) Chorion
 - d) Amnion
- 6) What is the type of human placenta?
- a) Mesolecithal
 - b) Epitheliochorial
 - c) Haemochorial
 - d) Endotheliochorial
- 7) The condition in which retention of larval trait in adult body is called
- a) Epiboly
 - b) Aestivation
 - c) Neotony
 - d) Morphataxis
- 8) Which of the following hormone control metamorphosis in frog?
- a) Adrenalin
 - b) Oxytocin
 - c) Thyroxin
 - d) FSH

- 9) Regeneration of limb or tail is an example of
- Hypertrophy
 - Neotony
 - Epimorphosis
 - Morphataxis
- 10) is an any substance that causing abnormal structure or congenital disabilities in embryo
- Estrogen
 - Carbon compound
 - Polar bodies
 - Teratogen

PART B

Attempt any five.

- Q2 Describe structure of mammalian ovum & add a note on types of eggs based on amount of yolk & distribution of yolk 12
- Q3 Describe process of spermatogenesis and add a note on acrosome formation. 12
- Q4 Describe process of cleavage. Explain pattern of cleavage. 12
- Q5 Give an account on cell differentiations and explain its significance. 12
- Q6 Give an account of types of placenta in mammal add a note on Physiology of placenta. 12
- Q7 Define metamorphosis. explain structural & physiological changes during metamorphosis in frog. 12
- Q8 Attempt any two of the following. 12
- Teratogenesis
 - Gastrulation
 - Totipotency