

Total No. of Printed Pages: 02

**SUBJECT CODE NO: - SS-6658**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**M.Sc. (Zoology) (Sem-III)**  
**Examination May / June - 2023**  
**Developmental Biology ZOO-301**

[Time: 3:00 Hours]

[Max. Marks:80]

N. B

Please check whether you have got the right question paper.

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

**Part -A**

Q1 Attempt the following MCQ.

20

- 1) Grey crescent is present in which stage of frog development  
 a) fertilized egg b) unfertilized egg c) neurula d) gastrula
- 2) During the formation of spermatozoa acrosome is develop from  
 a) Mitochondria b) Golgi complex c) Lysosome d) Centrioles
- 3) Archenteron is a cavity found in which stage of frog development  
 a) morula b) blastula c) gastrula d) Neurula
- 4) The portion of placenta contributed by the embryo is  
 a) yolk sac b) allantois c) chorion d) amnion
- 5) In which embryonic membrane, blood cells formed in early stage of development  
 a) allantois b) chorion c) yolk sac d) amnion
- 6) What happen when cleavage is goes on ----  
 a) cell size increase b) embryo size decrease  
 c) cell size remains same d) cell size decrease
- 7) Which of the following hormone take part in metamorphosis of frog  
 a) adrenalin b) oxytocin c) thyroxine d) LH
- 8) Which of the following extra.embryonic membrane enclosed the embryo is a fluid filled cavity?  
 a) yolk sac b) allautois c) chorin d) amnion
- 9) The substance which cause abnormal structure in an developing embryo is ----  
 a) teratogen b) estrogen c) progesterone d) none
- 10) In oogenesis haploid ovum is form due to  
 a) mitosis b) meiosis c) chorion d) none

**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 steps involved in fertilization add a note on significance of fertilization 12
- Q4 Explain the mechanism (process) of Gastrulation. Give its significance. 12
- Q5 Give an account of development of Heart 12
- Q6 Describe morphological process (Mechanism) is amphibian limb regeneration 12
- Q7 Give detail account of teratology 12
- Q8 Attempt any two of the following 12
- a) Endocrine control of metamorphosis
  - b) Fate map
  - c) Functions of placenta