K23U 0546

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/ Improvement) Examination, April 2023
(2019 and 2020 Admissions)
CORE COURSE IN ZOOLOGY
6B12 ZLG : Developmental Biology

Time : 3 Hours Max. Marks : 40

I. Essay questions (**Each** question carries **8** marks) Answer **any two.**

1) Discuss the different types of parthenogenesis. Mention the significance of parthenogenesis.
2) Elaborate the fate map of frog, with the help of a diagram. Explain any three methods of construction of fate map.
3) Describe the events and different types of regeneration. Add a note on the factors influencing regenerative process.
4) Describe the development of eye in frog. **(8×2=16)**

II. Short essay questions (**Each** question carries **4** marks) Answer **any two.**

5) Explain any four assisted reproductive techniques.
6) Describe the different types of blastula.
7) Elaborate the salient features of 48 hour chick embryo. **(4×2=8)**

III. Short answer questions (**Each** question carries **2** marks) Answer **any six.**

8) What is parturition ?
9) What is teratology ? Give examples for drugs which act as teratogens.
10) Classify egg membranes.
11) What are the functions of yolk sac ?

P.T.O.

12) Differentiate totipotency and pluripotency.
13) Draw a neatly labelled diagram of structure of human sperm.
14) What are the morphological changes during amphibian metamorphosis ?
15) What is epiboly ? **(2×6=12)**

IV. Multiple choice questions (**Each** question carries **0.5** marks) Answer **all.**

16) The period of development of foetus within the mother is
a) Parturition b) Implantation c) Capacitation d) Gestation

17) Hormone which induces lactation
a) Thyroxine b) Prostaglandins
c) hCG d) Prolactin

18) Which of the following organs is a derivative of ectoderm ?
a) Brain b) Bone c) Kidney d) Heart

19) Any agent that causes an abnormality following foetal exposure during pregnancy is
a) Teratogen b) Organizer c) Morphogen d) Inductor

20) Eggs of insects are
a) Telolecithal b) Macrolecithal
c) Slightly telolecithal d) Centrolecithal

21) Formation of central nervous system is
a) Gastrulation b) Notogenesis c) Neurulation d) Organogeny

22) Which of the following is a primary organiser in amphibian development ?
a) Chorda mesoderm b) Lens
c) Optic vesicle d) Optic cup

23) Which of the following genes play significant role in patterning anterio-posterior axis in animals ?
a) Homeotic genes b) Hox genes
c) Segment polarity genes d) Gap genes **(8×0.5=4)**