

Zoology (Hons.) Paper-IV

Answer any five questions, selecting at least two from each Group in which Q.No. 1 is compulsory.

1. Select the correct option in the following :
- (a) Meroblastic cleavage is characteristic of :
 (i) Frog (ii) Chick (iii) Man (iv) All of the above
- (b) Acrosome is formed by :
 (i) Ribosome (ii) Lysosome (iii) GC (iv) Nucleus
- (c) GF is characteristic of :
 (i) Frog's ovary (ii) Mammal's ovary (iii) Frog's testis (iv) Chick ovary
- (d) Gastrocoel is another name of :
 (i) Pseudocoel (ii) Blastocoel (iii) Archenteron (iv) Cytoproct
- (e) Which is a sex cell ?
 (i) Leydi cell (ii) Follicle cell (iii) Gamete cell (iv) Germ cell
- (f) Hormone stimulating the let-down of milk from mammary gland is :
 (i) Prolactin (ii) Oxytocin (iii) Relaxin (iv) Progesterone
- (g) Which is a solid embryo ?
 (i) Morula (ii) Blastula (iii) Gstrula (iv) All of these
- (h) Chorion is a product of :
 (i) Somatopleure (ii) Splanchnopleure (iii) Both of these (iv) None of these
- (i) The primary organizer is :
 (i) Dorsal lip of blastopore (ii) Ventral lip of blastopore
 (iii) Archenteron (iv) All of these
- (j) Gland which regresses with age is :
 (i) Thymus (ii) Adrenal (iii) Thyroid (iv) Gonad
- (k) Parthenogenesis is antithesis of :
 (i) Fertilization (ii) Regeneration (iii) Competence (iv) All of these
- (l) Which is endodermal in origin ?
 (i) Thyroid (ii) Adrenal (iii) Pituitary (iv) All of these
- (m) Cleavage of egg is :
 (i) Mitotic (ii) Endomitotic (iii) Paramitotic (iv) Meiotic
- (n) Morphogenesis is an outcome of : (i) Pre-gastrulation event
 (ii) Post-gastrulation event (iii) Blastulation (iv) Post-cleavage event
- (o) The embryonic tissue to exert an inductive effect is called :
 (i) Inducer (ii) Evocator (iii) Organizer (iv) Promoter

Group-A

- Describe the functional anatomy of audit mammalian ovary.
- Describe the structure of mammary gland and add a note on its differentiation.
- Mention the process of in vitro fertilization and its application.
- Explain any two of the following : (a) Zygote transport (b) Parturition and its regulation (c) Structure of sperm (d) Sperm-egg interactions

Group-B

- Describe the process of fate-map construction in frog and chick.
- What are Extra-embryonic membranes ? Explain briefly their features and importance.
- Write an essay on 'Parthenogenesis in Animals'.
- Write short notes on any four of the following : (a) Ageing-its concepts and models (b) Regeneration (c) Primary organizer (d) Primary germ layers (e) Concept of determination (f) Holoblastic cleavage