

## SECTION: I (MCQ's)

Time Allowed: 20 Minutes

Max. Marks: 20

NOTE: Encircle the correct/ best answer in each of the followings. Each Question carries 1 mark. Use of remover carries zero mark. Cutting and Overwriting is not allowed.

## Q1.

- The notochord is essential for all except
  - a) to develop into mesoderm
  - b) to establish axis of the body
  - c) to establish nervous tissue in ectoderm
  - d) influence embryonic folding
- The segmented blocks of tissue that develop on each side of notochord are called as
  - a) Somites
  - b) Neural tube
  - c) Neural crest
  - d) Adrenal medulla
- Morphogenesis is concerned with
  - a) Shape of tissue organ and entire organisms
  - b) Cell growth
  - c) Cell differentiation
  - d) All of the above
- During development, if a cell has committed to a particular fate, it is said to be
  - a) Pluripotent
  - b) Totipotent
  - c) Determined
  - d) Differentiated
- Gonads develop from which cell layer?
  - a) Endoderm
  - b) Intermediate mesoderm
  - c) Paraxial mesoderm
  - d) Ectoderm
- The first phase in the sexual reproduction of organisms is
  - a) Spermatogenesis
  - b) Oogenesis
  - c) Spermiogenesis
  - d) Gametogenesis
- Cells become variable in morphology and function in different regions of the embryo. The process is
  - a) Differentiation
  - b) Metamorphosis
  - c) Organization
  - d) Rearrangement
- Egg is liberated from ovary in
  - a) Secondary oocyte stage
  - b) Primary oocyte stage
  - c) Oogonial stage
  - d) Mature ovum stage.
- Fertilin are emitted by
  - a) Immature eggs
  - b) Mature eggs
  - c) Sperms
  - d) Polar bodies.
- Extrusion of second polar body from egg nucleus occurs
  - a) After entry of sperm before completion of fertilization
  - b) After completion of fertilization
  - c) Before entry of sperm
  - d) Without any relation of sperm entry.
- Capacitation started by the removal of cholesterol from the sperm cell membrane, which allows the influx of following except
  - a) Bicarbonate ions ( $\text{HCO}_3^-$ )
  - b) Calcium ions ( $\text{Ca}^{2+}$ )
  - c)  $\text{Na}^+$
  - d) None
- Spermatozoa are nourished during their development by
  - a) Interstitial Cells
  - b) Connective Cells
  - c) Sertoli Cells
  - d) All of the above
- Formation of primitive streak marks the beginning of
  - a) Neurulation
  - b) Gastrulation
  - c) Folding
  - d) Notochord formation
- The signals for parturition arises from
  - a) Placenta
  - b) Oxytocin
  - c) Fetus
  - d) Placenta and fully developed fetus
- Which type of tissue gives rise to notochord?
  - a) Mesoderm
  - b) Endoderm
  - c) Ectoderm
  - d) Ovum
- Mesoderm gives rise to all the structures except
  - a) Gonads
  - b) Circulatory system
  - c) Nervous system
  - d) Muscular system
- Which of the following embryo has a parasitic mode of nutrition?
  - a) Mammalian embryo
  - b) Bird's embryo
  - c) Amphibian embryo
  - d) Reptilian embryo
- Fertilization of sperm and ovum takes place in
  - a) Ampulla of oviduct
  - b) Isthmus of oviduct
  - c) Fimbriae of oviduct
  - d) Uterus