

2025

(Session : 2022-26)

Time : 3 hours

Full Marks : 75

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from both the Sections as directed.

Section – A

(Compulsory)

1. Choose the correct answer of the following :

1×5 = 5

(a) What is the stage of the cell cycle at which primary oocytes are arrested ?

(i) Prophase I

- (ii) Metaphase I
 - (iii) Prophase II
 - (iv) Metaphase II
- (b) What hormone is produced by the corpus luteum after ovulation ?
- (i) FSH
 - (ii) Estrogen
 - (iii) Progesterone
 - (iv) LH
- (c) In a mammalian embryo, what is the name of the hollow ball of cells formed after cleavage ?
- (i) Morula
 - (ii) Blastocyst
 - (iii) Trophoblast
 - (iv) Inner cell mass
- (d) In amphibians, Organ of Jacobson is for :
- (i) Temperature
 - (ii) Pressure

- (iii) Smell
 - (iv) Sound
- (e) Which of the following hormones is not produced by the placenta ?
- (i) hCG
 - (ii) hPL
 - (iii) Androgens
 - (iv) Estrogens

2. Write a short note on Types of Placenta. 5
3. Write a short note on Estrus cycle. 5

Section - B

Answer any four questions of the following :

15×4 = 60

4. Discuss, in brief, the process of Spermatogenesis. Give necessary diagrams.
5. Describe Regeneration and the different types of Regeneration.
6. Discuss Teratogenesis : Teratogenic agents and their effects on embryonic development.

7. Discuss Implantation of embryo in humans.
8. Describe the different types of cleavages and state the factors which are responsible for these.
9. Write short notes on any **two** of the following :
 - (a) Types of Egg
 - (b) In Vitro Fertilization (IVF)
 - (c) Metamorphosis in Amphibians

