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6 SEM TDC ZOOH (CBCS) C 13

2025

(May)

ZOOLOGY

(Core)

Paper : C-13

(Developmental Biology)

Full Marks : 53

Pass Marks : 21

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks : 1×5=5
- (a) When yolk is concentrated in vegetal half then it is called _____ type of egg.
- (b) In _____ type of blastula, blastocoel is filled with yolk.
- (c) Mammals in which true placenta is present are called _____.

(d) _____ is the fetal membrane to store the waste products during embryonic development.

(e) _____ hormone promotes larva-to-larva molt in insect metamorphosis.

2. Write short notes on (any two) : $4 \times 2 = 8$

(a) Epimorphosis

(b) Egg membranes

(c) Embryonic induction

(d) Amniocentesis

3. Distinguish between (any two) : $3 \times 2 = 6$

(a) Artificial and natural marking in fate map of gastrulation

(b) External and internal fertilization

(c) Cleavage and blastula

(d) Oogenesis and spermatogenesis

4. What is implantation? Discuss different stages of implantation in human embryo. $1 + 7 = 8$

Or

Discuss briefly the placenta on the basis of structural organization. What are the different types of cells in the placenta? $6 + 2 = 8$

(3)

5. Define aging. Explain any three theories of aging. $2+6=8$

Or

Define metamorphosis. Discuss the changes occur during amphibian metamorphosis. Write briefly about hormonal control of amphibian metamorphosis. $1+4+3=8$

6. What is cleavage? Discuss briefly the patterns of cleavage with examples. $2+7=9$

Or

Discuss early development of frog up to gastrulation with proper diagrams. 9

7. Define teratogenesis. Discuss different teratogens and their effects on embryonic development. $1+8=9$

Or

What is in vitro fertilization? Write various stages of in vitro fertilization. Mention the merits and demerits of in vitro fertilization. $1+4+4=9$

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