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**6 SEM TDC ZOOH (CBCS) C 13**

**2 0 2 3**

( May/June )

**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) The \_\_\_\_\_ membrane is a structure surrounding the outer surface of plasma membrane of an ovum.

(b) \_\_\_\_\_ pattern arises from the spatial and temporal regulation and coordination of the events.

(c) In vertebrate, protein yolk is synthesized in \_\_\_\_\_.

( 2 )

(d) The placental barrier between the maternal and foetal blood is minimum in \_\_\_\_\_.

(e) \_\_\_\_\_ is the temporary connection between the maternal and foetal tissues.

2. Distinguish between the following (any two) :  
2×2=4

(a) Capacitation and Acrosome reaction

(b) Intra- and Inter-cellular differentiation

(c) Genetic teratogenesis and Environmental teratogenesis

3. Write short notes on the following (any two) :  
5×2=10

(a) IVF

(b) Cytoplasmic determinants

(c) Amniocentesis

4. What is gametogenesis? Discuss the various events that take place during spermatogenesis.  
2+8=10

Or

Discuss about fertilizin-antifertilizin reaction. How can polyspermy be prevented?  
7+3=10

( 3 )

5. Discuss the fate of germ layers. Write a note on implantation of an embryo in human.  
6+6=12

Or

What are organisers? Mention its role in the process of development. Add a note on fate map.  
2+6+4=12

6. What is regeneration? Discuss its different modes.  
2+10=12

Or

What is metamorphosis? Discuss in detail about the insect metamorphosis.  
2+10=12

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