

**B.Sc. BIOTECHNOLOGY
FOURTH SEMESTER
DEVELOPMENTAL BIOLOGY
BBT-402**

**SET
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

Marks: 10

(Objective)

Choose the correct answer from the following:

1 × 10 = 10

- Which cells produce Androgens?
 - Leydig cells
 - Sertoli cells
 - Male germ cells
 - Epididymis
- Who first observed fertilization in Sea Urchin?
 - Oscar Hertwig
 - Oscar Piastri
 - Oscar Isaac
 - Oscar Wilde
- The length of fallopian tube:
 - 10-12 cm
 - 5-6 cm
 - 55-60 cm
 - 15-20cm
- Father of Animal Embryology?
 - Karl Lagerfeld
 - Karl Jacobs
 - Karl Von Baer
 - Karl Marx
- The hormone responsible for behavioral and physiological changes in pregnant women?
 - hCG
 - Estrogen
 - Relaxin
 - Progesterone
- Corpus luteum and Corpus albicans also known as:
 - Yellow body and white body
 - White body and yellow body
 - Pink body and yellow body
 - Yellow body and pink body
- What is the function of germ pore?
 - Emergence of radicle
 - Absorption of water for seed germination
 - Initiation of pollen tube
 - Release of male gametes
- Double fertilization is due to the fusion of:
 - Male gametes with egg and synergid
 - Male gametes with egg and polar nuclei
 - Male gametes with egg and secondary nucleus
 - Male gametes with two eggs
- Which cell Phagocytose dead and abnormal sperms?
 - PGC
 - Primary oocyte
 - Primary follicle
 - Sertoli cells

10. At which cell stage Zona Pellucida ruptures?
- a. 256 cell stage
 - b. 32 cell stage
 - c. 64-128 cell stage
 - d. 8-16 cell stage

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(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

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|---|--------|
| 1. Explain the steps in fertilization. | 5 |
| 2. Draw and explain the structures of:
a) Embryo Sac
b) A typical anatropous ovule | 5+5=10 |
| 3. Explain the function of tapetum.
Explain the development of male gametophyte. | 2+8=10 |
| 4. Draw and explain the structure of Human Sperm.
Explain spermatogenesis. | 5+5=10 |
| 5. Explain various stages of follicle development inside ovary.
Explain the types of eggs. | 5+5=10 |

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