

**B.Sc. ZOOLOGY
SIXTH SEMESTER
REPRODUCTIVE & DEVELOPMENTAL BIOLOGY
BSZ-601**

**SET
A**

[USE OMR FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

1X20=20

Choose the correct answer from the following:

- During which phase of the menstrual cycle does decidualization begin?
 - Menstrual phase
 - Proliferative phase
 - Ovulatory phase
 - Secretory phase
- Which of the following cells is diploid (2n)?
 - Primary oocyte
 - Secondary oocyte
 - Ovum
 - Polar body
- Which structure carries sperm from the testes to the urethra?
 - Vas deferens
 - Epididymis
 - Seminal vesicle
 - Ureter
- What is the role of the cervix in the female reproductive system?
 - Produces sperm
 - Connects uterus to vagina
 - Filters urine
 - Produces hormones
- In males, high levels of testosterone result in:
 - Increased secretion of luteinizing hormone (LH)
 - Decreased secretion of GnRH
 - Increased production of FSH
 - No effect on the hypothalamus
- During folliculogenesis, which structure immediately precedes the formation of the mature (Graafian) follicle?
 - Primordial follicle
 - Primary follicle
 - Secondary follicle
 - Corpus luteum
- Which hormone maintains the corpus luteum if pregnancy occurs?
 - FSH
 - LH
 - HCG
 - Progesterone
- In which part of the female reproductive system does fertilisation typically occur after ovulation?
 - Ovary
 - Uterus
 - Vagina
 - Fallopian tube

9. What is added to sperm before freezing to protect them during the freezing and thawing process?
 - a. Antibiotics
 - b. Cryoprotectants
 - c. Hormones
 - d. Glucose
10. Which hormone causes the thickening of the uterine lining during the menstrual cycle?
 - a. Progesterone
 - b. Testosterone
 - c. FSH
 - d. Oxytocin
11. Which one of the following cells has haploid numbers of chromosome?
 - a. Oogonia
 - b. Primordial germ cell
 - c. Primary Oocyte
 - d. Secondary Oocyte
12. Embryo is most susceptible to teratogenic agents during the stage of -
 - a. Cleavage
 - b. Blastoderm formation
 - c. Gastrulation
 - d. Organogenesis
13. Which one of the following conditions does **not** occur due to Teratogenesis?
 - a. Cerebral palsy
 - b. Cleft lips
 - c. Obesity
 - d. Amelia
14. Which one of the following is the primary egg membrane of mammalian egg?
 - a. Zona pellucida
 - b. Zona radiata
 - c. Jelly envelop
 - d. Vitelline membrane
15. Centrolecithal eggs are laid by-
 - a. Bird
 - b. Placental mammal
 - c. Insect
 - d. Frog
16. Which one of the following uterine membranes takes part in implantation of mammalian embryo?
 - a. Endometrium
 - b. Myometrium
 - c. Perimetrium
 - d. All of the above
17. The embryonic tissue that exerts an influence on other tissues to form an organ or structure is termed as-
 - a. Evocator
 - b. Donor
 - c. Competent
 - d. None of the above
18. In gastrulation, Embolic morphogenetic movements occur in the prospective-
 - a. Mesodermal cells
 - b. Endodermal cells
 - c. Ectodermal cells
 - d. Both A & B

19. Function of amniotic cavity of chick embryo is -

- | | |
|---------------------------------|---------------------|
| a. Removal of waste product | b. Supply nutrition |
| c. Protect from external injury | d. Supply oxygen |

20. In which part of the female reproductive system placenta is attached?

- | | |
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| a. Ovary | b. Oviduct |
| c. Uterus | d. Cervix |

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(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Describe with a diagram the internal structure of the female reproductive system. What is the function of the prostate gland in males? | 8+2=10 |
| 2. Give a brief account of the gonadal hormones and their functions in male and female human bodies. What is decidualization of endometrium? | 8+2=10 |
| 3. What is ovulation? Describe in detail the process of development of follicles inside the ovary and their hormonal regulation. | 1+7+2=10 |
| 4. Write short notes on:
a) Mechanism of action of steroid hormones
b) Sperm bank | 5+5=10 |
| 5. Describe the mechanism of fertilization. Mention its significance. | 8+2=10 |
| 6. What is cleavage? Write a note on types of cleavage. | 2+8=10 |
| 7. Write the development of extra embryonic membranes in bird. Mention their functions. | 5+5=10 |
| 8. Write about the types of stem cells present in embryo and adult bodies. Mention the unique properties of stem cells. | 8+2=10 |

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