REV-01
BSZ/32/37

2023/06

SET B

B.Sc. ZOOLOGY
SIXTH SEMESTER
REPRODUCTIVE BIOLOGY
BSZ-603
[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs. **Full Marks: 70**

(Objective)

Time: 30 mins. **Marks: 20**

Choose the correct answer from the following: ***1×20=20***

1. Which statement is completely true?
   a. Sperm present inside the seminiferous tubule
   b. Sperm present in the lumen of the of seminiferous tubule
   c. Sperm present in the lumen of seminiferous tubule anchoring in the sertoli cell
   d. Sperm present in the interstitium of the testes

2. Which is not a secondary sexual character in male?
   a. Presence of muscle
   b. Narrower pelvic bone
   c. Facial hair
   d. Aggression

3. Gonadal hormone have their receptor in:
   a. Cytopasm of target organ
   b. Nucleus of the target organ
   c. Cell surface
   d. None

4. Which of the following act as a negative regulator of hypothalamic-pituitary-ovarian axis?
   a. Androgen
   b. Progestin
   c. Inhibin
   d. Activin

5. The maleness and femaleness is dependent on:
   a. The presence or absence of X chromosome
   b. The presence or absence of Y chromosome
   c. The presence or absence of TDF in Y chromosome
   d. Presence of Testosterone

6. The cyclic release of which two hormones promotes breast development?
   a. HCG and prolactin
   b. Estrogen and prolactin
   c. Progesterone and prolactin
   d. Estrogen and progesterone

7. Select the correct option.
   a. Secondary follicle-secretes progesterone
   b. Corpus albicans-secretes ostrogen
   c. Tertiary follicle-secretes FSH and LH
   d. Corpus luteum-secretes progesterone

8. The contraceptive option that prevents sperm motility and also disables implantation is:
   a. Copper T
   b. Birth control pills
   c. Condom
   d. All of these

9. Lactogenesis takes place:
   a. During the second half of pregnancy
   b. After puberty
   c. After parturition
   d. From the first month of pregnancy

10. Ovulation is most likely to take place between which days of a normal 28 day menstrual cycle?
    a. 8-10
    b. 18-20
    c. 12-16
    d. 20-28

11. In blood testes barrier the two compartments of seminiferous tubule separated by:
    a. Basement membrane
    b. Capillary network
    c. Hemi junction
    d. Tight zonular junction

12. The ejaculation of sperm from seminiferous tubule to rete testes is due to the effect of:
    a. Mayoid cell
    b. Ejaculatory duct
    c. Prostate gland
    d. None of the above

13. The length of epididymis is:
    a. 5m
    b. 6m
    c. 7m
    d. None

14. The enzyme that converts testosterone into estrone and estradiole is:
    a. Androstenedione
    b. Aromatase
    c. DHEA
    d. All of these

15. The external genitalia of male and female are in indifferent state during:
    a. 6^{th} week of gestation
    b. 8^{th} week of gestation
    c. 1^{st} week of gestation
    d. None of the above

16. A glycoprotein layer that acts as a barrier, helps in sperm binding and acrosomal reaction is:
    a. Cortical granules
    b. Zona pellucida
    c. Vitelline membrane
    d. Amnion

17. Which statement about human reproduction is false?
    a. Fertilisation occurs in the oviduct
    b. An oocyte completes meiosis only after a sperm penetrates it
    c. Spermatogenesis and oogenesis requires different temperatures
    d. Oogenesis is initiated during puberty

18. Which of the following substances can pass through the placenta?
    a. Glucose, oxygen and blood cells
    b. Glucose, oxygen and hormones
    c. Hormones, nutrients and blood cells
    d. Glucose, oxygen, hormones and blood cells

19. Menstruation is triggered due to the abrupt fall of which hormone?
    a. Estrogen
    b. Progesterone
    c. Oxytocin
    d. Relaxin

20. Placenta is formed from the union of..... and chorion frondosum.
    a. Decidua peritalis
    b. Decidua basalis
    c. Decidua frontalis
    d. None of these

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Descriptive

Time : 2 hr. 30 mins. **Marks : 50**

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

1. Draw and describe the female internal reproductive structure and mention their functions. What is ectopic pregnancy? 8+2=10
2. What do you mean by spermatogenesis? Describe the process of system cell renewal in spermatogenesis process. Draw a labeled diagram of TS of testes showing its all compartments. 2+6+2=10
3. What is TDF? Mention how it is responsible for determination of male and female gonads with diagram. Write shortly about some disorders of gonadal differentiation. 1+6+3=10
4. What is parturition? Mention the role of different hormones that help in parturition and lactation. 2+8=10
5. What is folliculogenesis? Describe the different stages of folliculogenesis with diagrams. 2+8=10
6. Write short notes on: 5+5=10
   a) Glands of Male reproductive system
   b) Mechanism of Gonadal hormone action
7. Write short notes on: 5+5=10
   a) Sterilisation methods
   b) Structure of ovum
8. Explain about hypothalamo-hypophyseal-gonadal axis and briefly write about gonadotropins. 5+5=10

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