



# **BIOLOGY**

## **BOOKS - OSWAAL BIOLOGY**

### **(KANNADA ENGLISH)**

## **HUMAN REPRODUCTION**

**Topic 1 Reproductive System And Gametogenesis  
Very Short Answer Type Questions**

1. Mention the role of LH during spermatogenesis.



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2. Sertoli cells are very much essential during's spermatogenesis. Why?



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3. Name the cells that secrete androgens.



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4. Where are Leydig cells present?



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5. What is the role of cervix of the human female system in reproduction?



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6. Female reproductive organs and associated functions are given below in column A and B.

Fill in the blank boxes.

Column A	Column B
Ovaries	Ovulation
Oviduct	A
B	Pregnancy
Vagina	Birth



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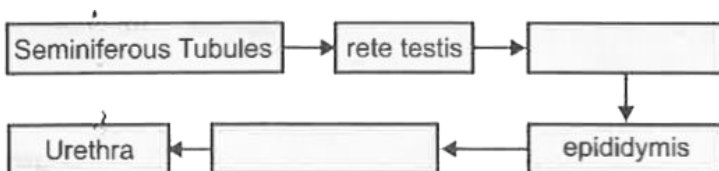
7. During reproduction, the chromosome number ( $2n$ ) reduces to half ( $n$ ) in the gametes and again resume the original number ( $2n$ ) in the offspring, what are the processes through which these events take place?



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8. The path of sperm transport is given below.

Provide the missing steps in blank boxes.





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9. What is the significance of epididymis in male fertility?



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10. Which type of cell division forms spermatids from the secondary spermatocytes?



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**11.** From which germ layers do the following organs differentiate :

(a) Kidney

(b) Urinary bladder



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**12.** At what stage of life is oogenesis initiated in a human female? When does the oocyte complete oogenesis?



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**13.** When the sperm enters the egg. Despite their many differences, male and female reproductive systems have two purposes in common. What are they?



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**14.** Where is acrosome present in humans?  
Write its functions.



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**15.** Mention the location and function of leydig cells in humans.



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**16.** When do the oogenesis and the spermatogenesis initiate in human females and males respectively?



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**17.** List the changes the primary oocyte undergoes in the tertiary follicular stage in the human ovary.



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**18.** Write the location and function of the sertoli cells in humans.



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**19.** What is antrum?



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20. Mature sperms are stored in



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21. How many sperms will be produced from 100 primary spermatocytes and how many eggs will be produced from 100 primary oocytes?



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22. What is the significance of scrotum?



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23. Describe the structure of a seminiferous tubule.



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24. What are spermatogonia?





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25. Name the duct through which seminal vesicle opens into the urethra.



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26. Name the finger shaped projections of fallopian tube near the ovary.



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**27.** The corona radiata of an ovum acts as a barrier for the penetration of sperms. How do sperms overcome this barrier?



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**28.** Name the layer of uterus that undergoes cyclical changes or shedding during menstrual cycle.



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**29.** Name the cluster of cells in mammary lobes.



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**30.** What is spermatogenesis?



**Watch Video Solution**

**31.** Define spermiogenesis.



**Watch Video Solution**

**32.** What is spermiation?



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**33.** Name the hormone that stimulates spermato genesis.



**Watch Video Solution**

**34.** Mention the function of LH?





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**35.** What is semen?



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**36.** What causes rupturing of Graafian follicle and release of ovum?



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**37.** What is corpus luteum? What is its function?



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**38.** What is the function of corpus luteum?



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**39.** Name the hormone that is essential for maintenance of the endometrium.



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**40.** Sperms have a tail, whereas eggs do not.

Why?



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## Topic 1 Reproductive System And Gametogenesis Short Answer Type Questions I

**1.** Give two differences between spermatogenesis and oogenesis.



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2. What are the major functions of male accessory ducts and glands?



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3. Where are fimbriae present in human female reproductive system? Give their function?



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4. Write two major functions each of testis and ovary.



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5. What is the difference between a primary oocyte and a secondary oocyte?



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6. Males in whom testes fail to descent to the scrotum are generally infertile. Why?



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7. Meiotic division during oogenesis is different from that in spermatogenesis. Explain how and why?



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8. Why are the testes of human males considered extra bdominal? What is the significance of this condition?



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9. Name the sperm lysine, which organelle secretes it? What is its function?



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**10.** Define spermiogenesis. Where does it occur?



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**11.** Where are the leydig cells present? What is their role in reproduction?



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**12.** Name the hormones involved in the regulation of spermatogenesis.



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**13.** What are the major components of seminal plasma?



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**Topic 1 Reproductive System And Gametogenesis  
Short Answer Type Questions II**

1. Describe the structure of a seminiferous tubule.



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2. What is Spermatogenesis ? Explain the process of spermatogenesis.



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3. Mention the accessory ducts of male reproductive system.



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4. Describe the glands associated with male reproductive system



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5. Write down the functions of ovaries.



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6. (a) Draw a neat labelled diagram of sectional view of seminiferous tubule.

(b) Explain the mechanism of parturition with the help of foetal ejection reflex.



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**Topic 1 Reproductive System And Gametogenesis  
Long Answer Type Questions**

1. Draw a neat labelled diagram of sectional view of human female reproductive system.



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2. Draw a neat labelled diagram of human sperm.



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**3.** Draw the diagram of the sectional view of the female reproductive system in humans.



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**4.** Draw a neat diagrammatic view of the male reproductive system.



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5. Draw neat labeled diagram of the sectional view of human mammary glands.



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6. Explain oogenesis with a schematic representation



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7. Draw a neat labeled diagram of T.S. of mammalian testis ?



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8. Give a brief account of oogenesis.



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9. When and where are primary oocytes formed in a human female? Trace the



development of these oocytes till ovulation.



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**10.** Draw the diagram of the sectional view of the female reproductive system in humans.



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**11.** Differentiate between spermatogenesis and oogenesis.



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## Topic 2 Menstrual Cycle Fertilisation And Pregnancy Very Short Answer Type Questions

1. What is foetal-ejection reflex?



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2. 1. Name the hormone that induces rupturing of the Graafian follicle.



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3. Why is oxytocin necessary for parturition?



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4. What is ovulation?



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5. Define implantation.



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6. Oxytocin is called birth hormone?



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7. Name the organic connection between the mother and the foetus that helps in physiological exchange?



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8. Given below are the events in human reproduction. Write them in correct sequential order. Insemination, gametogenesis, fertilisation, parturition, gestation, implantation.



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9. Mention the essential of LH surge during menstrual cycle.



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**10.** What is the significance of ampullary-isthmic junction in the female reproductive tract?



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**11.** Which part of the blastula is destined to form germ layers of the developing embryo in humans?



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**12.** At what stage is the mammalian embryo implanted in the uterus?



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**13.** What is the fate of trophoblast in mammalian embryo?



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**14.** Name the layer of cells that forms the outer wall of blastocyst.



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**15.** Where does fertilization take place in human female?



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**16.** How is the entry of only one sperm and not many ensured into an ovum during fertilization in humans?



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**17.** Define Placenta?



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**18.** Name the endocrine part of the testes.



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**19.** What is Colostrum?



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**20.** What is menopause?



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**21.** What is cleavage?



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**22.** What is morula?



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**23.** Where does the implantation of blastocyst occur?



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**24.** Name the structure that connects placenta to the embryo.



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**25.** What is the function of umbilical cord?



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**26.** What are stem cells?



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**27.** Name the hormone released by the ovary in the later phase of pregnancy.



**Watch Video Solution**

**28.** What is gestation period ?



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**29.** What is menarche?



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30. Name the hormone which stimulates the secretion of ovarian hormones.



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## Topic 2 Menstrual Cycle Fertilisation And Pregnancy Short Answer Type Questions I

1. "Unless foetal ejection reflex is produced , normal parturition does not occur

".Substantiate the statement .



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2. List any four hormones secreted by placenta.



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3. Name two gonadotropins.



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4. Menstrual cycles are absent during pregnancy. Why?



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5. Women experiences two major events in their life time one at menarche and the second at menopause, mention the characteristics of both the events



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6. Corpus luteum in pregnancy has a long life. However, if fertilisation does not take place it remains active only for 10-12 days, Why?



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7. Placenta has endocrine function. Does it have other functions? Explain.



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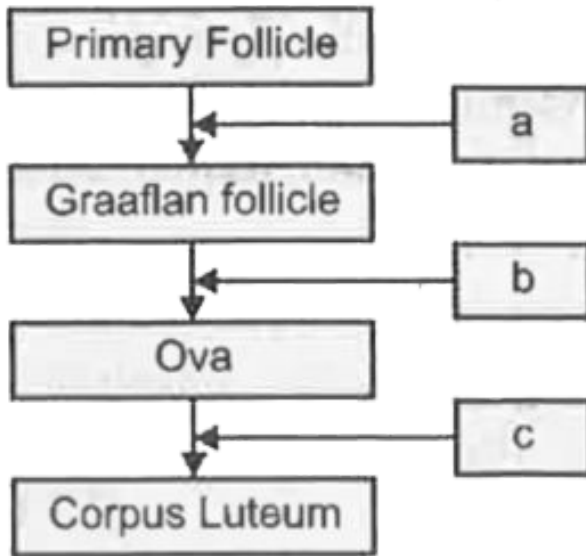
**8.** What are the events taking place in the ovary and uterus during follicular phase of the menstrual cycle.



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**9.** Given below is a flow chart showing ovarian changes during menstrual cycle. Fill in the spaces with the hormonal factor/s responsible

for the events shown.



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10. Differentiate between morula and blastocyst as stages in human embryonic development. Which of these stages gets

implanted in the uterine wall and about how many days after fertilization?



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**11.** Name the hormone responsible for the descent of testes into the scrotum. Why does the failure of the process result in sterility?



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**12.** What is pregnancy hormone? Why is it so called? Name two sources of this hormone in a human female.



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**13.** (a) Name the foetal membrane that provides a fluid medium to the developing embryo. (b) Mention its two functions.



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**14.** What structure forms the corpus luteum and at what stage? Name two hormones secreted by it?



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**15.** Differentiate between the action of LH in males and females.



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**16.** Mention the significance of fertilization.



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**17.** What is fertilization membrane? How it is formed?



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**18.** What is parturition ? Which hormones are involved in induction of parturition ?



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**19.** What is menstrual cycle? Which hormones regulate menstrual cycle?



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**20.** Differentiate between menarche and menopause.



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**21.** What is corpus luteum? Under what conditions does it undergo degeneration?



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**22.** What is colostrum? How the milk production hormonally regulated?



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**23.** What is placenta? Give its functions?





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## Topic 2 Menstrual Cycle Fertilisation And Pregnancy Short Answer Type Questions li

1. Draw a labelled diagram of a section through ovary.



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2. What role does pituitary gonadotrophins play follicular and ovulatory phases of

menstrual cycle and also explain the shift in steroidal secretions.



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**3.** What is cleavage ? Where does it occur in human female ? What does it lead to ?



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**4.** Where does fertilization place in a woman?  
What helps the sperm to entry eventually ?

What is the significance of the point of entry of sperm ?



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5. Describe the role of hormones in the female reproductive cycle.



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6. When and how does placenta develop in human female ?



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7. How is the placenta connected to the embryo?



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8. Placenta acts as an endocrine gland. Explain.



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## Topic 2 Menstrual Cycle Fertilisation And Pregnancy Long Answer Type Questions

1. Explain the menstrual cycle with a diagram.



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2. Explain the formation and fate of primary layers in the human embryo.



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3. Show diagrammatically the stages embryonic development from zygote upto implantation in humans.



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4. A woman has conceived and implantation has occurred in her uterus. Explain the sequaence of changes up to parturition which take place within her body.



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5. Describe the post-zygote events leading to implantation and placenta formation in humans. Mention any two functions of placenta.



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6. Where is morula formed in humans? Explain the process of its development from zygote.



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7. Fertilization is the physicochemical process,  
Explain.



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8. (a) Draw a neat labelled diagram of sectional view of seminiferous tubule.

(b) Explain the mechanism of parturition with the help of foetal ejection reflex.



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9. With a neat labelled diagram describe the structure of Graafian follicle.



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10. Define fertilization. Explain the steps involved in fertilization.



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**Topic 2 Menstrual Cycle Fertilisation And Pregnancy Multiple Choice Questions**

1. Choose the incorrect statement from the following:

A. In birds and mammals internal fertilisation takes place.

B. Colostrum contains antibodies and nutrients.

C. Polyspermy is prevented by the chemical changes in the egg surface

D. In the human female implantation occurs almost seven days after fertilisation.

**Answer: C**



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2. Identify the wrong statement from the following:

- A. High levels of estrogen triggers the ovulatory surge.
- B. Orgonial cells start to proliferate and give rise to functional ova in regular cycles from puberty onwards
- C. Sperms released from seminiferous tubules are poorly motile /non-motile.
- D. Progesterone level is high during the post ovulatory phase of menstrual cycle

**Answer: B**



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**3. Spot the odd one out from the following structures with reference to the male reproductive system :**

A. Ret testis

B. Epididymis

C. Vasa efferentia

D. Isthmus

**Answer: D**



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4. Seminal plasma, the fluid part of semen, is contributed by.

(i) Seminal vesicle (ii) Prostate (iii) Urethra (iv)

Bulbourethral gland

A. i and ii

B. i, ii and iv

C. ii, iii and iv

D. i and iv

**Answer: B**



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5. Spermiation is the process of the release of sperms from:

- A. Seminiferous tubules
- B. Vas deferens
- C. Epididymis
- D. Prostate gland



**Answer: A**



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**6.** Mature Graafian follicle is generally present in the ovary of a healthy human female around  
stet:

- A. 5-8 day of menstrual cycle.
- B. 11 – 17 day of menstrual cycle.
- C. 18 - 23 day of menstrual cycle.
- D. 24 - 28 day of menstrual cycle

**Answer: B**



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7. Acrosomal reaction of the sperm occurs due to :

A. Its contact with zona pellucida of the ova.

B. Reactions within the uterine environment of the female.

C. Reactions within the epididymal environment of the male.

D. Androgens produced in the uterus.

**Answer: C**



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**8. Which one of the following is not a male accessory gland ?**

A. Seminal vesicle

B. Ampulla

C. Prostate

D. Bulbourethral gland

**Answer: B**



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9. The immature male germ cell undergoes division to produce sperms by the process of spermatogenesis. Choose the correct one with reference to above.

- A. Spermatogonia have 46 chromosomes and always undergo meiotic cell division
- B. Primary spermatocytes divide by mitotic cell division.
- C. Secondary spermatocytes have 23 chromosomes and undergo second meiotic division
- D. Spermatozoa are transformed into spermatids.

**Answer: C**



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**10.** Match between the following representing parts of the sperm and their functions and choose the correct option.

Col. A	Col. B
(a) Head	(i) Enzymes
(b) Middle piece	(ii) Sperm motility
(c) Acrosome	(iii) Energy
(d) Tail	(iv) Genetic material

A. A-ii,B-iv,C-i,D-iii

B. A-iv,B-iii,C-i,D-ii

C. A-iv,B-i,C-ii,D-iii

D. A-ii,B-i,C-iii,D-iv

**Answer: B**



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**11.** Which among the following has 23 chromosomes?

A. Spermatogonia

B. Zygote

C. Secondary oocyte

## D. Oögonia

**Answer: A**



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**12. Match the following and choose the correct options:**

- |                     |   |
|---------------------|---|
| (a) Trophoblast     | (i) Embedding of blastocyst in the endometrium              |
| (b) Cleavage        | (ii) Group of cells that would differentiate as embryo      |
| (c) Inner cell mass | (iii) Outer layer of blastocyst attached to the endometrium |
| (d) Implantation    | (iv) Mitotic division of zygote                             |

**A. A-ii,B-i,C-iii,D-iv**



B. A-iii,B-iv,C-ii,D-i

C. A-iii,B-i,C-ii,D-iv

D. A-ii,B-iv,C-iii,D-i

**Answer: B**



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**13.** Which of the following hormones is not secreted by human placenta?

A. HCG

B. Estrogens

C. Progesterone

D. LH

**Answer: D**



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**14.** The vas deferens receives duct from the seminal vesicle and opens into urethra as :

A. Epididymis

B. Ejaculatory duct

C. Efferent ductile

D. Ureter

**Answer: B**



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**15. Urethral meatus refers to the :**

A. Urinogenital duct

B. Opening of vas deferens into urethra

C. External opening of the urinogenital duct

D. Muscles surrounding the urinogenital ducts

**Answer: A**



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**16. Morula is a developmental stage:**

A. Between the zygote and blastocyst

B. Between the blastocyst and gastrula

C. After the implantation

D. Between implantation and parturition

**Answer: A**



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**17.** The membranous cover of the ovum at ovulation Activate Windows Go to PC settings to activa is :

A. Corona radiata

B. Zona radiata

C. Zona pellucida

D. Chorion

**Answer: C**



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**18. Identify the odd one from the following:**

A. Labia minora

B. Fimbriae

C. Infundibulum

D. Isthmus

**Answer: A**



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