



# **BIOLOGY**

# **BOOKS - SRIJAN BIOLOGY (ENGLISH)**

## HUMAN REPRODUCTION

**Illustrative Questions** 

1. Why is urethra of male called urinogenital canal?

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2. What is atresia?

#### 3. What is male climacteric?

**Watch Video Solution** 

4. What is heat period?

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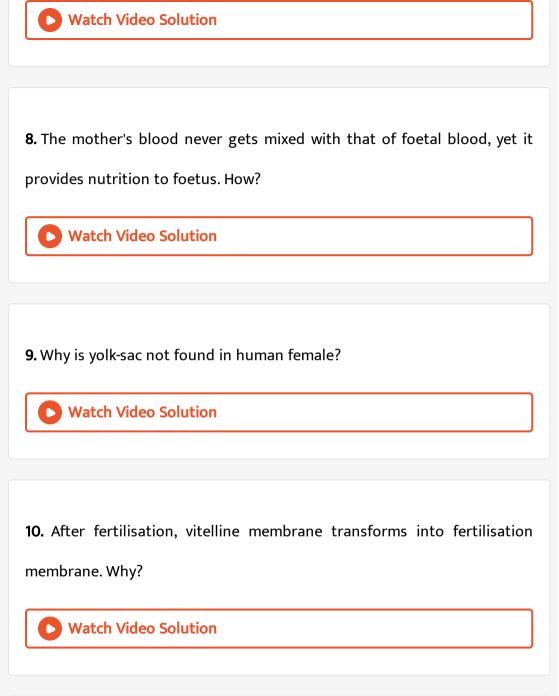
5. What is the significance of polar body formation during oogenesis?

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6. What is the significance of fertilisin-antifertilisin reaction?

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7. What is cumulus oophorus?



**11.** Name the ligaments that hold ovaries in place.

**12.** Is it right to name the layer of simple cuboidal epithelium on the surface of ovary as germinal epithelium?

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**13.** (a) Write the correct sequence of accessory ducts in human testis after seminiferous tubules.

(b) Fill in the blanks from Leydig cells, Sertoli cells, Spermatids, Spermatozoa: Castration of male cattle leads to destruction of \_\_\_\_\_ cells which secrete testosterone hormone.



**14.** In the given TS of human ovary, identify: Corpus luteum, Secondaryoocyte,Antrum,Primaryfollicle,Primary

oocytehttps://i2.wp.com/farm6.staticflickr.com/5682/23289962966\_7d4405c83a

resize=393%2C227&ssl=1.

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**15.** The given figure represents a mammalian spermatozoon.

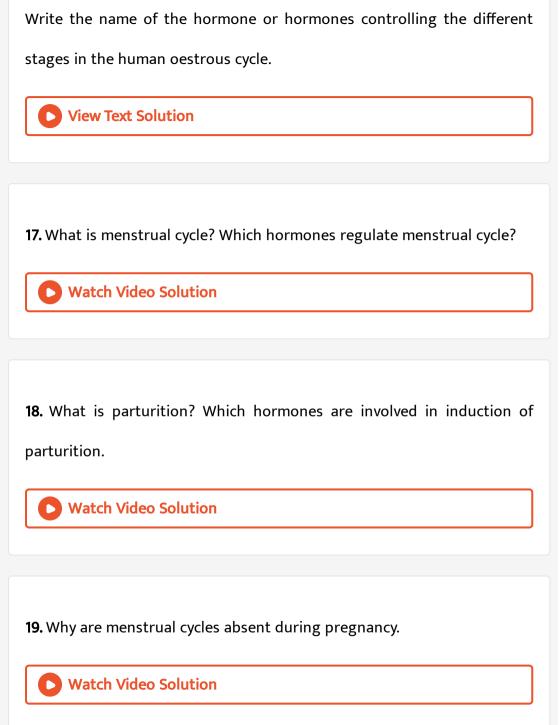
- (a) Name the parts labelled A-F.
- (b) Explain briefly the functions of the parts A, B and D.
- ( c) What events occur in the egg immediately following the entry of the

spermatozoon?

- (d) What is place of fertilisation in female reproductive tract?
- (e) At which stage does implantation take place?



**16.** The given figure illustrates the changes taking place during the human oestrous cycle.



**20.** Give the names and functions of the hormones involved in the process of spermatogenesis. Write the names of the endocrine glands from where they are released.

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**21.** How does zona pellucida of ovum help in preventing polyspermy?

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22. Why does oviduct open into the body cavity by a wide, funnel-shaped

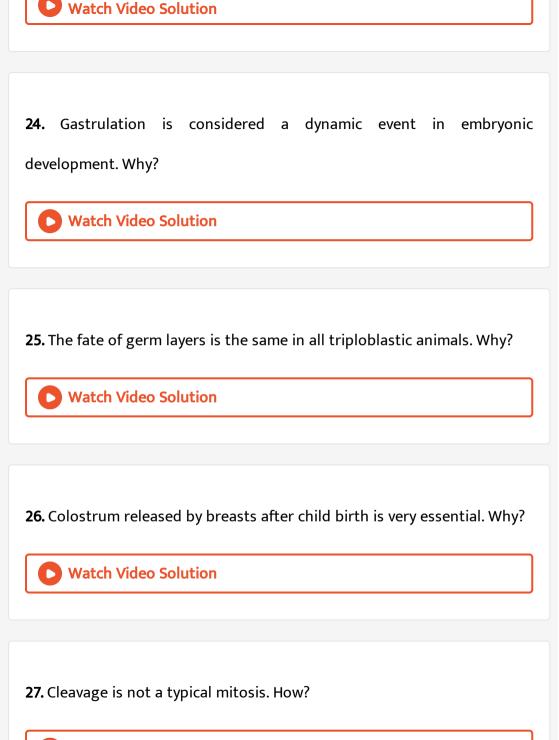
fimbriated ostium?



23. When the foetus is implanted after fertilisation, menstruation does

not occur. Why?





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29. How will you justify that a fertilised egg has a blue print of future
development?
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<b>30.</b> What do you mean by follicular atresia?
<b>Vatch Video Solution</b>
<b>31.</b> How many pairs of chromosomes are present in a human zygote and
where do they come from?
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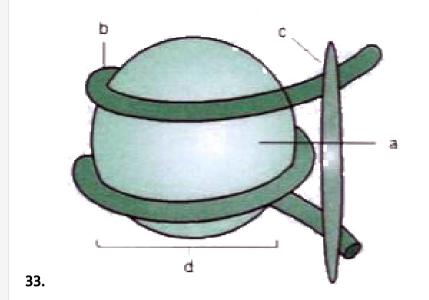
**32.** The given table refers to mammalian hormones concerned in the menstrual cycle.

(a) Complete the table by writing the name of the appropriate hormone in each case.

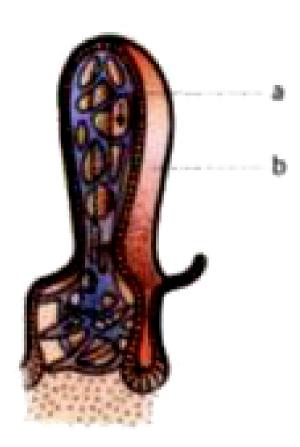
(b) Name two hormones involved in birth. For each state one effect.

(c) Which hormones help in lactation?

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Name the parts a, b, c and d.

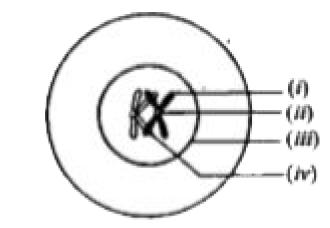


34.

Identify the part.



#### **35.** Identify the stage.





**36.** Study the following flow chart. Name the hormones involved at each

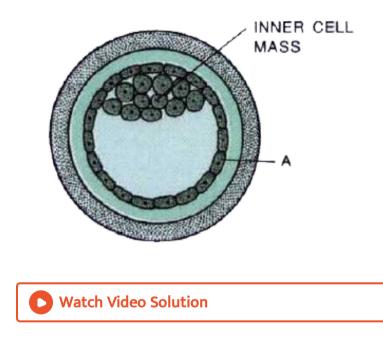
stage. Explain their functions.



37. Study the figure and answer the questions.

- (a) Name the stage of human embryo the figure represents.
- (b) Identify 'a' in the figure and mention its function.

- (c) Mention the fate of inner cell mass after implantation in the uterus.
- (d) Where are the stem cells located in this embryo?



38. FSH and LH get their names from their role in female reproductive

cycle, but they also function in males.

- (a) What are their functions in male?
- (b) How are their functions in females and males similar?

**1.** A spermatogonial cell has 30 chromosomes. How many chromosomes will be found in (i) the primary spermatocyte, (ii) a spermatid derived from this cell?

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2. What is the name of the cavity formed in the gastrula? How does it

form in the embryo?

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**3.** Name the enzyme which a sperm releases to penetrate the layer of corona radiata of an ovum.



## **4.** Name the hormone that influences secretion of estrogen.

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<b>5.</b> What is spermiogenesis?
Watch Video Solution
<b>6.</b> Name the ovarian hormones and give functions of any one of them.
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<b>7.</b> Why is oxytocin called a birth hormone?
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- (a) Kidney
- (b) Urinary bladder.

<b>Watch Video Solution</b>
<b>9.</b> Which germ layer forms CNS?
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<b>10.</b> Which germ layer forms the skeleton and muscles?
<b>Vatch Video Solution</b>

Watch Video Solution

11. What is the function of sperm lysins?



13. How does a sperm penetrate through the zona pellusida in human

ovum?

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14. What are Leydig's cells?

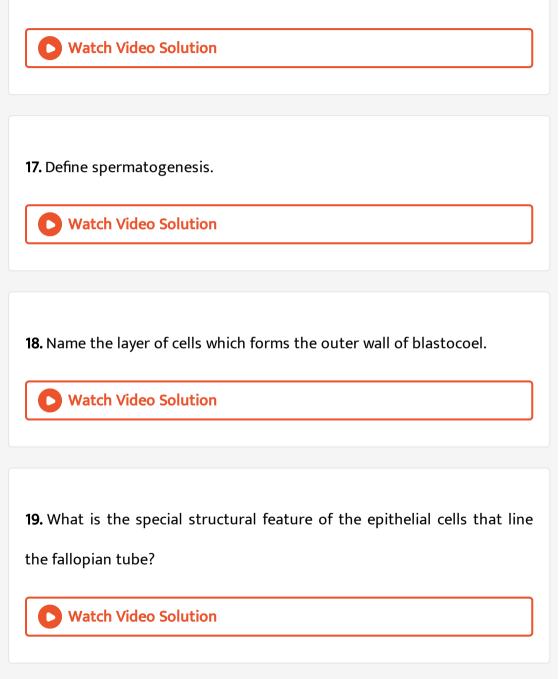
Watch Video Solution

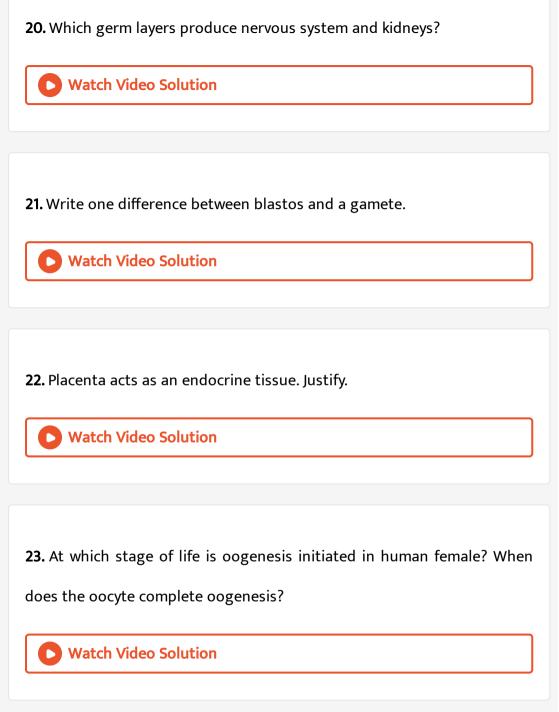
15. What term is used for the chemicals which occur in sperm's acrosome

and help in the sperm's entry into the egg?

16. What does the blastocoel of mammalian embryo phylogenetically

signify about the ancestors?





**24.** Name the various extraembryonic membranes.

• Watch Video Solution 25. Which cell organelle is modified to form the acrosome? Name the

chemical it secretes.

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26. Differentiate between menarche and menopause

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27. Where does fertilisation normally take place in a human female?

### 28. At what stage is mammalian embryo implanted in the uterus?

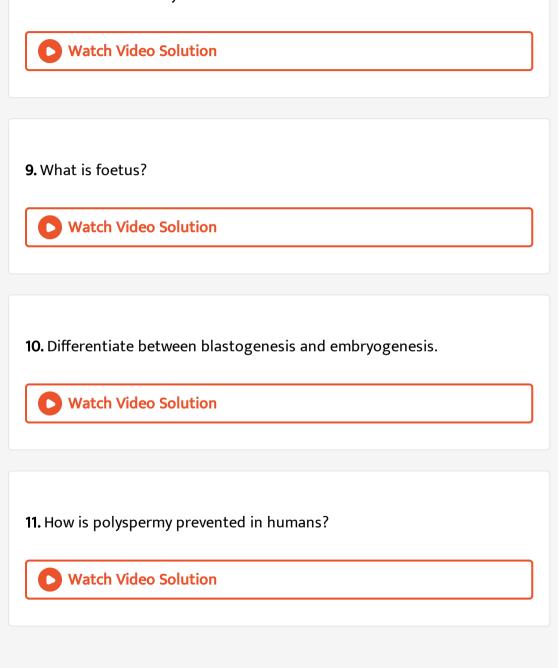
Vatch Video Solution
Practice Questions Short Answer Type I Questions
<ul> <li>What is colostrum? How is milk production hormonally regulated?</li> <li>Watch Video Solution</li> </ul>
2. Name the sperm lysins. Which organelle secretes it? What is its function?
Vatch Video Solution

3. Fertilisation performs two functions. What are these?

**4.** Human egg has an animal pole. Describe briefly the two events that take place at this pole.

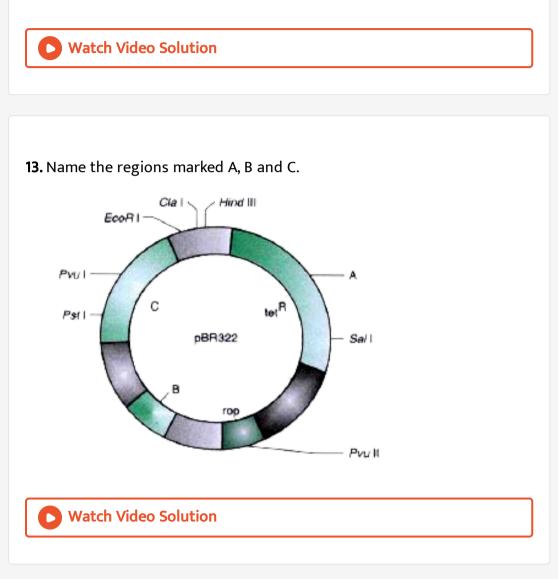
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5. State any two differences between spermatogenesis and oogenesis.
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<b>6.</b> Give two functions of testes.
<b>Watch Video Solution</b>
7. Where are Leydig cells located? What do they secrete?

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



12. Name the hormone responsible for the descent of testes into scrotum.

Why does the failure of this process result in sterility?



14. Where are fimbriae present in a human female reproductive system?

Give their function.



**15.** Name the muscular and the glandular layers of human uterus. Which one of these layers undergoes cyclic changes during menstrual cycle? Name the hormone essential for the maintenance of this layer.

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16. In human males testes lie in scrotum outside abdominal cavity. What

will be the effect if testes fail to descend and remain in the abdomen?



17. Differentiate between morula and blastula of mammals.





Practice Questions Short Answer Type li Questions

1. What is pregnancy hormone? Why is it so called? Name two sources of

the hormone in a human female.



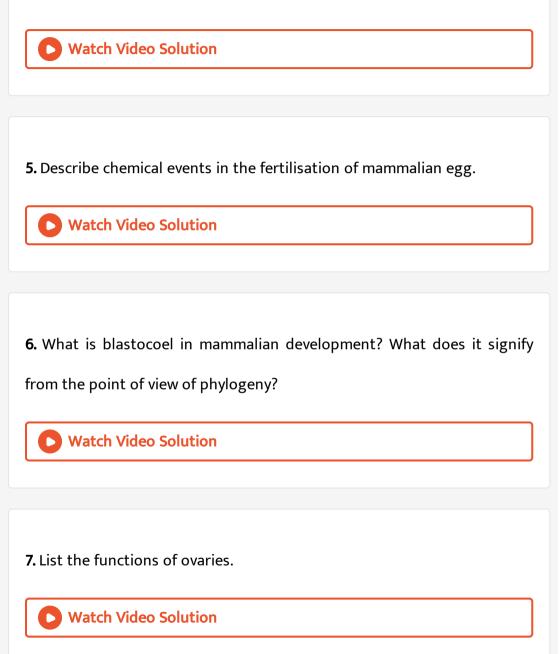
2. Draw an electron microscopic sketch of mammalian (human) sperm and

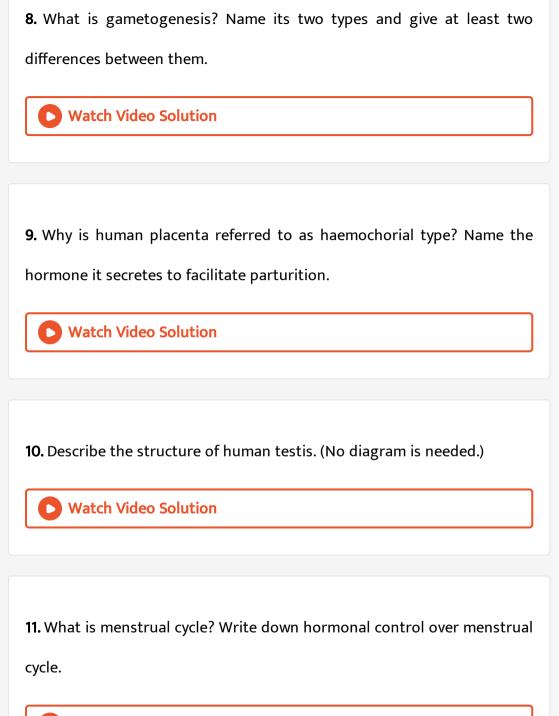
label mitochondria, axial filament, proximal centriole, acrosome.

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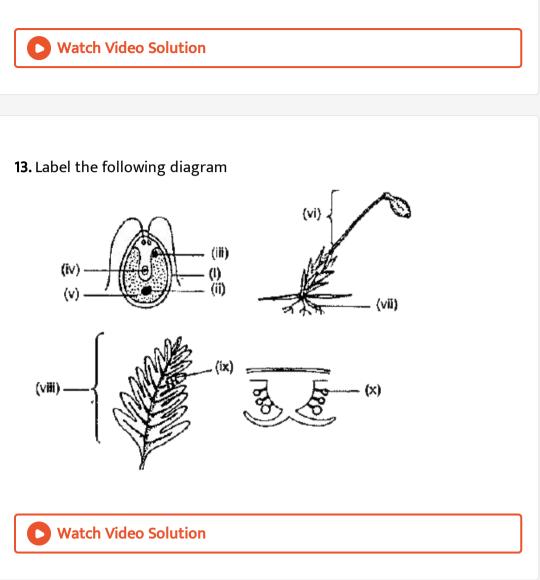
3. What is cleavage? Describe it in human zygote.

**4.** Briefly describe changes in the human ovary taking place under the influence of FSH.





### 12. What is oogenesis. What are its main steps?



14. (a) In which part of the human female reproductive system do the

following events take place?

(i) Release of 1st polar body

(ii) Release of 2nd polar body

(iii) Fertilisation

(iv) Implantation

(b) From where do signals for parturition originate and what does maternal pituitary release for stimulating uterine contractions for childbirth?

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**15.** In which organ are Leydig cells and Sertoli cells located? Differentiate between them with reference to their location in the organ and their function.



16. What is polyspermy? How is it prevented?

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

**18.** Define spermatogenesis and oogenesis.

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Watch Video Solution

19. What is spermatogenesis? Describe in detail.

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**20.** Draw a labelled diagram of the sectional view through a small part of seminiferous tubule of testis and label Sertoli cells, primary spermatocytes, spermatogonium and spermatozoa.

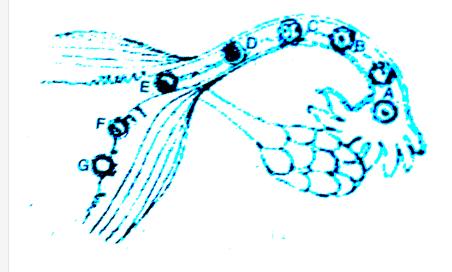
Practice Questions Long Answer Type Questions

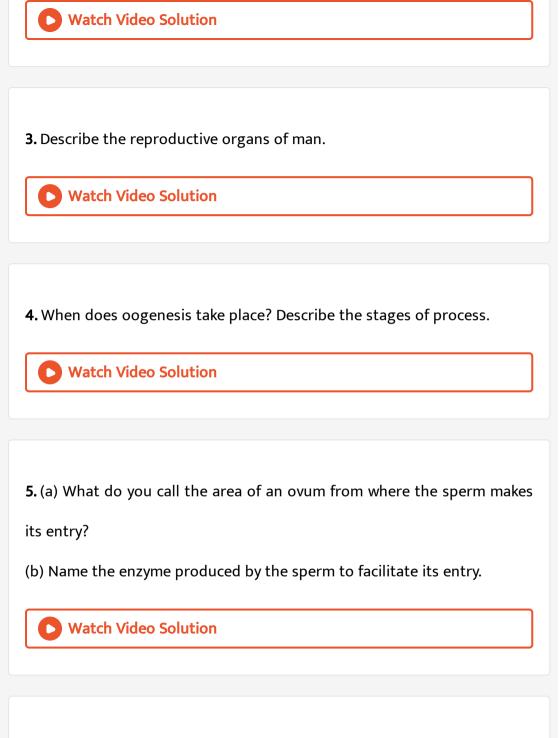
**1.** Where does fertilisation take place in women? What helps the sperm to gain an entry into the ovum and how? What is the significance of the point of entry of the sperm?

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2. Show diagrammatically the stages of embryonic development from

zygote upto implantation in humans .





6. What promotes completion of second meiotic division in oogenesis?

7. (a) When and where does spermatogenesis in human male begin to

take place?

(b) With the help of schematic diagram, trace the development of mature

spermatozoa in a human male.

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8. Describe oogenesis in human female.

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9. Explain the hormonal regulation of the process of spermatogensis in

humans.

Previous Years Board Paper Questions Very Short Answer Type Questions

**1.** Mention the hormone produced by cells of leydig (testes) and state the function of the hormone.

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2. Mention one significant difference between morula and blastula.

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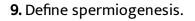
3. Give the site of secretion and the function of relaxin.



**4.** Give the exact location and function of the embryo sac.

5. Differentiate between capacitation and fertilisation.

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<b>6.</b> Give a scientific term for an act of expelling the full term foetus from mother's uterus at the end of gestation.
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<b>7.</b> Define menarche.
Watch Video Solution
8. Differentiate between spermatogenesis and oogenesis.



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# Previous Years Board Paper Questions Short Answer Type I Questions

1. Mention any four functions of placenta.

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- 2. Mention one significant difference between each of the following:
- (a) Sertoli cells and spermatogonial cells
- (b) Menarche and menopause



3. Give two functions of the amniotic fluid.

Previous Years Board Paper Questions Short Answer Type Ii Questions

**1.** Briefly describe the events that occur during the luteal phase of the menstrual cycle.

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2. Describe the events that take place from the time of entry of the

human sperm into the ovum till fertilisation is complete.

> Watch Video Solution

3. Briefly describe the events that occur during the proliferative phase of

the menstrual cycle.



4. Draw a labelled diagram of L.S. of human testis.

5. An element has a face-centred cubic (fcc) structure with a cell edge of a.
The distance between the centres of two nearest tetrahedral voids in the lattice is:

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Previous Years Board Paper Questions Long Answer Type Questions

1. Draw a neat labelled diagram of a transverse section of human ovary.

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**2.** Explain the process of oogenesis in humans.



**3.** An element has a face-centred cubic (fcc) structure with a cell edge of a.

The distance between the centres of two nearest tetrahedral voids in the

lattice is:

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**4.** Mention the role of hormones during the menstrual cycle.

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**5.** Briefly describe the secretory phase of the menstrual cycle.

6. Describe the physico-chemical events that take place during

fertilisation in humans.



**Review Questions** 

- **1.** Give one significant difference between each of the following:
- (i) Leydig cells and Sertoli cells
- (ii) Spermatogenesis and Spermiogenesis
- (iii) Follicular phase and Luteal phase of menstrual cycle
- (iv) Cleavage and Mitosis



**2.** Each of the following questions/statements has four suggested answers.

Rewrite the correct answer in each case:

Conversion of spermatid into a spermatozoa is called

A. Spermatogenesis

**B. Vitellogenesis** 

C. Spermiogenesis

D. Cytokinesis

#### Answer:

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**3.** Each of the following questions/statements has four suggested answers.

Rewrite the correct answer in each case:

Liver and pancreas are derivatives of

A. Ectoderm

B. Endoderm

- C. Ectoderm and mesoderm
- D. Ectoderm and endoderm

#### Answer:

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**4.** Each of the following questions/statements has four suggested answers.

Rewrite the correct answer in each case:

In Rabbit, head of epididymis present at the head of the testis, is called

A. Vas deferens

B. Cauda epididymis

C. Guberculum

D. Caput epididymis

#### Answer:





**5.** Each of the following questions/statements has four suggested answers.

Choose the correct answer:

Layers of an ovum from outside inside are:-

i. Corona radiata, zona pellucida and vitelline membrane

ii. Zona pellucida, corona radiata and vitelline membrane

iii. Vitelline membrane, zona pellucida and corona radiata

iv. Zona pellucida, vetelline membrane and corona radiata

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6. Mention one significant function of the following:

Sertoli cells

7. Mention one significant function of the following:

Bulbourethral glands

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 8. Mention one significant function of the following:
 Bartholin's glands

 • Watch Video Solution

9. Mention one significant function of the following:

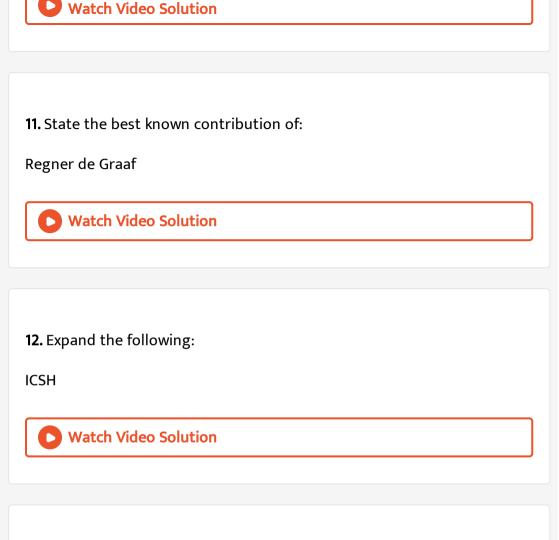
**Corpus** luteum

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10. State the best known contribution of:

Dr. Petrucci

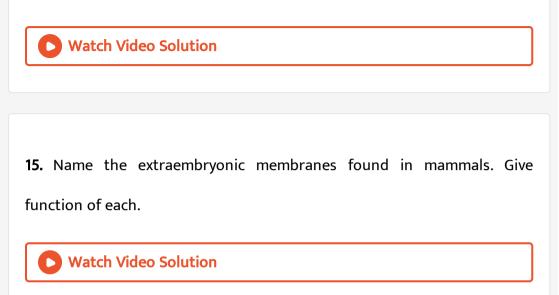




**13.** Expand the following:

GnRH

14. Summarise functions of placenta.



16. Describe hormonal control of cyclic changes during menstrual cycle in

ovary and wall of uterus.

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**Competition Corner Objective Type Questions Multiple Choice Questions** 

1. Which of the following controls the function of Sertoli cells?

A. FSH

**B. Estrogens** 

C. ACTH

D. Testosterone

Answer: A

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**2.** The process in which mature differentiated cells reverse to meristematic activity to form callus is called

A. Dedifferentiation

**B.** Differentiation

C. Cyto-differentiation

D. Redifferentiation

Answer: A



- 3. Which of the following is not the correct grouping?
  - A. Ectoderm-Retina, epidermis and nervous system
  - B. Mesoderm-Ovary, urinary bladder and kidneys
  - C. Mesoderm-kidneys, connective tissue and testis
  - D. Endoderm-Thyroid, pineal and thymus.

### Answer: A

- 4. Which of the following are haploid in nature?
- I. Spermatids
- II. Secondary spermatocytes
- III. Spermatogonia
- IV. Primary spermatocytes

A. I, II, III, are correct

B. I and II are correct

C. II and IV are correct

D. I and III are correct

#### Answer: B

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5. Corpus luteum secretes

A. Progesterone and estrogens

B. LH

C. Only progesterone

D. Progesterone and LH

#### Answer: A

6. Which hormone is responsible for milk ejection after the birth of the

baby?

A. Oxytocin

**B.** Progesterone

C. Prolactin

D. Estrogens

Answer: A

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7. Sertoli cells are found in testis. These cells are

A. Nurse cells

B. Reproductive cells

C. Receptor cells

D. None of these

## Answer: A



8. Which accessory genital gland occurs only in mammalian male?

A. Prostrate gland

B. Perineal gland

C. Cowper's gland

D. Bartholin gland

# Answer: C



9. On the basis of nature of maternal and foetal tissues, the types of

placentae are

I. Hemochorial placenta

- II. Hemoendothelial placenta
- III. Cotyledonary placenta
- IV. Deciduate placenta

Choose the correct answers

A. I, II, III are correct

B. I and II are correct

C. II and IV are correct

D. I, II and IV are correct

#### Answer: B



10. Cowper's glands secrete a substance to

I. Nourish sperms

- II. Neutralise the acidity
- III. Kill pathogens
- IV. Lubricate female vagina to facilitate copulation

A. I, II, III are correct

B. I and II are correct

C. II and IV are correct

D. I and III are correct

## Answer: C



11. Find out the wrong statement

A. Amnion is outer layer containing amniotic fluid that acts as shock

absorber to soft embryo

- B. Yolk sac is a foetal membrane that helps in nourishment of the embryo
- C. In mammals, allantois is not excretory in function
- D. Chorio-allantoic membrane develops villi and participates in

development of placenta

### Answer: A

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12. Accessory sexual character in female is promoted by

A. Androgens

**B.** Progesterone

C. Estrogens

D. Testosterone

## Answer: C



13. Blastopore is the opening to the exterior of

A. Coelom

B. Coelenteron

C. Archenteron

D. Blastocoel

### Answer: C



**14.** A common scent-producing gland among mammals is

A. Anal gland

B. Prostate gland

C. Adernal gland

D. Bartholin's gland

Answer: A

- 15. Yolk plug is formed during
- i. Morula formation
- ii. Blastula formation
- iii. Gastrula formation
- iv. Neurulation
  - A. Morula formation
  - **B. Blastula formation**
  - C. Gastrula formation

D. Neurulation

Answer: C

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**16.** In human female, menstruation can be deferred by the administration

of

A. FSH only

B. LH only

C. Combination of FSH and LH

D. Combination of estrogens and progesterone

Answer: D

**17.** Which part of ovary in mammals acts as an endocrine gland after ovulation?

A. Vitelline membrane

B. Graafian follicle

C. Stroma

D. Germinal epithelium

### Answer: B

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**18.** Which one of the following statements is incorrect about menstruation?

A. At menopause in the female, there is especially abrupt increase in

gonadotropic hormones.

B. The beginning of the cycle of menstruation is called menarche.

C. During normal menstruation, about 40 mL. blood is lost.

D. The menstrual fluid can easily clot.

Answer: A

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19. Which extraemryonic membrane in humans prevents desiccation fo

the embryo inside the uterus?

A. Yolk sac

B. Amnion

C. Chorion

D. Allantois

Answer: B

20. In human adult female oxytocin

i. Stimulates pituitary to secrete vasopresin

ii. strong uterine contractions during parturition

iii. Is secreted by anterior pituitary

iv. Stimulates growth of mammary glands.

A. Stimulates pituitary to secrete vasopresin

B. Causes strong uterine contractions during parturition

C. Is secreted by anterior pituitary

D. Stimulates growth of mammary glands.

#### Answer: B

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21. In humans, at the end of the first meiotic division, the male germ cells

defferentiate into the

A. Spermatids

B. Spermatogonia

C. Primary Spermatocytes

D. Secondary Spermatocytes.

### Answer: D

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22. The Leydig's cells secrete

A. Oestrogen

B. Testosterone

C. Progesterone

D. Corticosterone

Answer: B

23. At menopause, there is rise in urinary excretion of

A. FSH

B. STH

C. LH

D. MSH

Answer: A

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24. There is no DNA in

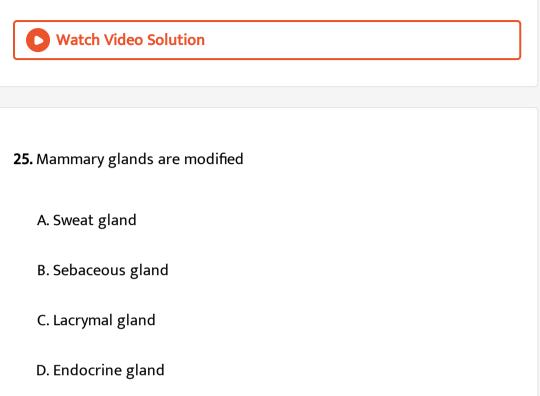
A. An enucleated ovum

B. Mature RBCs

C. A mature spermatozoan

D. Hair root

# Answer: A



## Answer: A



26. Where do sperms get matured?

A. In seminal vesicle

B. Seminiferous tubules

C. In epididymis

D. Vasa efferentia

## Answer: A

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27. The Leydig cells secrete

A. Oestrogen

**B.** Testosterone

C. Progesterone

D. Corticosterone

Answer: B

**28.** Which of the following is the group of external genitalia in human female?

A. Labium minora, labium majora, vagina

B. Labium minora, labium majora, clitoris

C. Labium minora, labium majora, oviduct

D. Labium minora, labium majora, cervix

## Answer: B

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29. The part of fallopian tube closest to the ovary is

A. Isthmus

B. Infundibulum

C. Cervix

D. Ampulla

### Answer: B



**30.** Which one of the following statements about human sperm is correct?

A. Acrosome has a conical pointed structure used for piercing and

penetrating the egg, resulting in fertilisation

B. The sperm lysins in the acrosome dissolve the egg envelope

facilitating fertilisation

C. Acrosome serves as a sensory structure leading the sperm towards

the ovum

D. Acrosome serves no particular function

#### Answer: B

- 31. Sertoli's cells are found in
  - A. Ovaries and secrete progesterone
  - B. Adrenal cortex and secrete adrenalina
  - C. Seminiferous tubules and provide nutrition to germ cells
  - D. Pancreas and secrete cholecystokinin

## Answer: C

- 32. Vasa efferentia are the ductules leading from
  - A. Testicular lobules to rete testis
  - B. Rete testis to vas deferens
  - C. Vas deferens to epididymis
  - D. Epididymis to urethra

## Answer: B

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<b>33.</b> Sertoli's cells are found in
A. Pancreas
B. Testes
C. Ovary
D. Liver
Answer: B
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**34.** If for some reason, the vasa efferentia in the human reproductive system get blocked, the gametes will not e transported from

- A. Testes to epididymis
- B. Epididymis to vas deferens
- C. Ovary to uterus
- D. Vagina to uterus

#### Answer: A



**35.** The testes in humans are situated outside the abdominal cavity inside

a pouch called scrotum. The purpose served is for

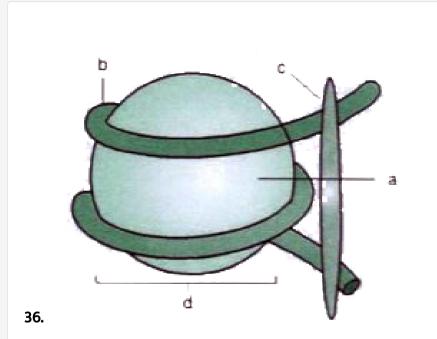
A. Maintaining the scrotal temperture lower than the internal body

temperature

- B. Escaping any possible compression by the visceral organs
- C. Providing more space for the growth of epididymis
- D. Providing a secondary sexual feature for exhibiting the male sex

# Answer: A

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Name the parts a, b, c and d.

A. (II) Endometrium, (III) Infundibulum, (IV) Fimbriae

B. (III) Infundibulum, (IV) Fimbriae, (V) Cervix

C. (IV) Oviducal funnel, (V) Uterus, (VI) Cervix

D. (I) Perimetrium, (II) Myometrium, (III) Fallopian tube

## Answer: B



37. Capacitation refers to changes in the

A. Sperm before fertilisation

B. Ovum before fertilisation

C. Ovum after fertilisation

D. Sperm after fertilisation

#### Answer: A



**38.** Which of these is not an important component of initiation of parturition in humans?

A. Increase in oestrogen and progesterone ratio

- B. Synthesis of prostaglandins
- C. Release of oxytocin
- D. Release of prolactin

#### Answer: D

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**39.** Which of the following cells during gametogenesis is normally diploid?

- A. Primary polar body
- **B.** Spermatid
- C. Spermatogonia
- D. Secondary polar body

#### Answer: C



40. Hysterectomy is surgical removal of

i. Uterus

ii. Prostate gland

iii. Vas deference

iv. Mammary glands

A. Uterus

B. Prostate gland

C. Vas deference

D. Mammary glands

#### Answer: A



**41.** Fertilisation in humans is practically feasible only if

i.The ovum and sperm are transported simultaneously to ampullaryisthmic junction of the cervix.

ii.The sperm are transported into cervix within 48 hours of release of ovum in uterus.

iii.The sperm are transported into vagina just after the release of ovum in fallopian tube.

iv.The ovum and sperm are transported simultaneously to ampullaryisthmic junction of the fallopian tube.

A. The ovum and sperm are transported simultaneously to ampullary-

isthmic junction of the cervix.

- B. The sperm are transported into cervix within 48 hours of release of ovum in uterus.
- C. The sperm are transported into vagina just after the release of ovum in fallopian tube.

D. The ovum and sperm are transported simultaneously to ampullary-

isthmic junction of the fallopian tube.

Answer: D

**Watch Video Solution** 

**42.** Select the incorrect statement.

i. LH and FSH decrease gradually during the follicular phase.

ii. LH triggers secretion of androgens from the Leydig cells.

iii. FSH stimulates the sertoli cells which helps in spermiogenesis.

iv. LH triggers ovulation in ovary.

A. LH and FSH decrease gradually during the follicular phase.

B. LH triggers secretion of androgens from the Leydig cells.

C. FSH stimulates the sertoli cells which helps in spermiogenesis.

D. LH triggers ovulation in ovary.

#### Answer: A

Competition Corner Objective Type Questions Assertion And Reason Type Questions

**1.** Assertion: Infection of the urethra is more common in males than in the females.

Reason: Urethra is shorter in the males than in the females.

A. (a) If both Assertion and Reason are true and the Reason is the

correct explanation of the Assertion.

B. (b) If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

- C. (c) If Assertion is true but the Reason is false.
- D. (d) If both Assertion and Reason are false.

#### Answer: D

**2.** Assertion: Most of the contents of the primary oocyte are retained by the ovum and is much larger than spermatozoon.

Reason: Ovum needs energy to go about in search of spermatozoa.

- A. (a) If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- B. (b) If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. (c) If Assertion is true but the Reason is false.

D. (d) If both Assertion and Reason are false.

#### Answer: C



**3.** Assertion: A woman passes hCG in the urine during pregnancy. Reason: Excess hormones are excreted by kidneys. hCG in the urine is the basis for pregnancy.

A. If both Assertion and Reason are true and the Reason is the correct

explanation of the Assertion.

B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. If Assertion is true but the Reason is false.

D. If both Assertion and Reason are false.

### Answer: A

Watch Video Solution

4. Assertion: Failure of testes to descend into the scrotum causes sterility

in man.

Reason: Higher temperature in the abdomen than in the scrotum is not suitable for sperm development.

A. If both Assertion and Reason are true and the Reason is the correct

explanation of the Assertion.

B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. If Assertion is true but the Reason is false.

D. If both Assertion and Reason are false.

#### Answer: A

Watch Video Solution

5. Assertion: Spermatogenesis occurs in the seminiferous tubules and testosterone secretion takes place in the interstitial cells of the testes.Reason: Growth and maturation of secondary sex organs and the

development of accessory sex characters are brought out by testosterone.

- A. If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. If Assertion is true but the Reason is false.

D. If both Assertion and Reason are false.

## Answer: B

Watch Video Solution

**6.** Assertion: Cervix contains the largest and the most powerful sphincter muscle in the body.

Reason: Cervix opens into the vagina by external OS.

A. If both Assertion and Reason are true and the Reason is the correct

explanation of the Assertion.

B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

- C. If Assertion is true but the Reason is false.
- D. If both Assertion and Reason are false.

### Answer: B

Watch Video Solution

7. Assertion: The cells divide without any increase in size up to morula

stage.

Reason: Zona pellucida remains intact till cleavage is complete.

A. If both Assertion and Reason are true and the Reason is the correct

explanation of the Assertion.

B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. If Assertion is true but the Reason is false.

D. If both Assertion and Reason are false.

#### Answer: B



**8.** Assertion: In a woman after hysterectomy (removal of uterus) the ovarian cycle is stopped.

Reason: Stoppage of FSH secretion.

A. If both Assertion and Reason are true and the Reason is the correct

explanation of the Assertion.

B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. If Assertion is true but the Reason is false.

D. If both Assertion and Reason are false.

#### Answer: B



**9.** Assertion:Holoblastic cleavage with almost equal sized blastomeres is a characteristic of placental animals.

Reason: Eggs of most mammals, including humans, are of centrolecithal type.

- A. If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- B. If both Assertion and Reason are true and the Reason is not the

correct explanation of the Assertion.

C. If Assertion is true but the Reason is false.

D. If both Assertion and Reason are false.

## Answer: D

Watch Video Solution

**Multiple Choice Questions** 

1. Role of placenta is to:

A. provide nutrition to developing embryo

- B. protect embryo from shock
- C. act as storage organ
- D. convey nerve impulses

#### Answer: A

View Text Solution

2. 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 duct

## Answer: C

View Text Solution

3. Clitoris in females is:

A. homologous to penis

B. analogous to penis

C. functional penis in female

D. non-functional

#### Answer: A

View Text Solution

**4.** Egg is liberated from ovary in:

A. secondary oocyte stage

B. primary oocyte stage

C. oogonial stage

D. mature ovum stage

Answer: A

View Text Solution

5. Site of fertilisation in human beings is:

A. ovary

B. uterus

C. vagina

D. fallopian tube

## Answer: D



6. Location and secretion of leydig cells are:

A. Liver-cholesterol

B. Ovary-estrogen

C. Testis-testosterone

D. Pancreas-glucagon

### Answer: C

View Text Solution

7. Which of the following is primary sex organ?

A. Scrotum

B. Penis

C. Testis

D. Prostate

Answer: C

View Text Solution

# 8. In 28 days of human ovarian cycle, ovulation occurs on

A. Day1

B. Day 5

C. Day 14/15

D. Day 28

## Answer: C

View Text Solution

9. Prostate gland is present-

A. on ureter

B. on kidney

C. on testis

D. around urethra

Answer: D

View Text Solution

10. hCG, HPL, and relaxin are produced in women:

A. during menstruation

B. at the time of menopause

C. only during pregnancy

D. at the time of puberty

# Answer: C

View Text Solution

11. Corpus luteum secretes:

A. LH

B. Estrogen

C. Progesterone

D. FSH

Answer: C

View Text Solution

12. Spermatozoa are nourished during their development by:

A. Sertoli cells

B. Interstitial cells

C. Connective tissue cells

D. None of the above

Answer: A

View Text Solution

**13.** Sperms produce an enzymatic substance for dissolving egg membrane called:

A. Hyaluronic acid

B. Hyaluronidase

C. Androgen

D. Estrogen

Answer: B

14. In uterus, endometrium increases in thickness in response to:

A. Oxytocin

B. LH

C. Estrogen

D. Relaxin

Answer: B

View Text Solution

15. Which of the following is immortal?

A. Somatic cell

B. Glomerular cell

C. Germ cell

D. Cells of pituitary

### Answer: C

View Text Solution

**16.** The spermatogonia undergo 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



17. The embryo at 16 celled stage is known as:

A. Morula

B. Gastrula

C. Blastula

D. Blastomere

Answer: A

View Text Solution

**18.** Amniocentesis is a technique used to:

A. Determine errors in amino acid metabolism in embryo

B. Pinpoint specific cardiac ailments in embryo

C. Determine any hereditary or genetic abnormality in embryo

D. All of the above

## Answer: C

View Text Solution

**19.** 1st polar body is formed at which stage of 'oogenesis:

A. 1st meiosis

B. 2nd mitosis

C. Ist mitosis

D. Differentiation

#### Answer: A

View Text Solution

20. Which layer develops first during embryonic development?

A. Ectoderm

B. Mesoderm

C. Endoderm

D. Both (b) and (c)

Answer: C

View Text Solution

**21.** A change in the amount of yolk and its distribution in the egg will affect:

A. Fertilisation

B. Formation of zygote

C. Pattern of cleavage

D. Number of blastomeres produced

Answer: C

22. Which among the following has 23 chromosomes?

A. Spermatogonia

B. Zygote

C. Secondary oocyte

D. Oogonia

Answer: C

View Text Solution

23. The Leydig cells found in the human body are the secretory source of:

A. Progesterone

**B.** Intestinal mucus

C. Glucagon

D. Androgens

## Answer: D



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

(i) Seminal vesicle (ii) Prostate gland

(iii) Urethra (iv) Bulbourethral gland

A. (i) and (ii)

B. (i), (ii) and (iv)

C. (i), (iii) and (iv)

D. (i) and (iv)

#### Answer: B

View Text Solution

**25.** Signals for parturition originate from:

A. Both placenta as well as fully developed foetus

B. Oxytocin released from maternal pituitary

C. Placenta only

D. Fully developed foetus only

## Answer: A

View Text Solution

26. In the absence of acrosome, the sperm:

A. Cannot get food

B. Cannot swim

C. Cannot penetrate the egg

D. Cannot get energy

## Answer: C

View Text Solution

27. What is present in the middle piece of sperm?

A. Acrosome

B. Mitochondria

C. Nucleus

D. Proximal centriole

#### Answer: B

View Text Solution

**28.** Hormone responsible for the secretion of milk after parturition is:

A. ICSH

**B.** Prolactin

C. ACTH

D. LH

Answer: B

View Text Solution

29. Gastrulation involves the differentiation of:

A. ectoderm and endoderm

B. ectoderm, endoderm and mesoderm

C. ectoderm and mesoderm

D. mesoderm and endoderm

### Answer: B

**View Text Solution** 

**30.** About which day in a normal human menstrual cycle does rapid secretion of LH (popularly called LH surge) normally occurs?

A. 14th day

B. 20th day

C. 5th day

D. 11th day

## Answer: A

View Text Solution

**31.** Sertoli cells are regulated by the pituitary hormone known as.

A. LH

B. FSH

C. GH

D. Prolactin

## Answer: B



32. Cleavage of zygote forms 2, 4, 6, 8, and 16 cells. These cells are called:

A. morula

B. inner cell mass

C. blastomeres

D. None of these

#### Answer: C

View Text Solution

33. Corpus luteum develops from:

A. Oocyte

B. Nephrostome

- C. Ruptured Graafian follicle
- D. None of the above

## Answer: C

View Text Solution

34. Graafian follicles are found in

A. testis of mammal

B. ovary of frog

C. ovary of cockroach

D. ovary of mammals

Answer: D

View Text Solution

35. The nutritive cells found in seminiferous tubules are:

A. placenta

B. Sertoli cells

C. Leydig's cells

D. chorionic villi

### Answer: B

View Text Solution

**36.** Select the feature of human female.

A. Well-developed mammary glands

B. High-pitched voice

C. Strong muscles

D. Both (a) and (b)

## Answer: B



**37.** The seminal plasma is rich in:

A. fructose and certain enzymes but it has low calcium.

B. glucose and certain enzymes but it has no calcium.

C. fructose and calcium but it has no enzymes.

D. fructose, calcium, and certain enzymes.

Answer: D

View Text Solution

38. The part of the sperm that plays an important role in penetrating the

egg membrane is:

A. tail

B. middle piece

C. nucleus

D. acrosome

Answer: D

View Text Solution

**39.** The phase of menstrual cycle when ovulation occurs is:

A. proliferative phase

B. secretory phase

C. menstrual phase

D. None of these

Answer: A

**1.** Which of the following is odd one out with reference to male sex accessory ducts?

A. Rete testis

**B.** Epididymis

C. Foreskin

D. Vasa efferentia

# Answer: C

View Text Solution

**2.** Which of the following is odd one out with reference to female reproductive system?

A. Oviducts

B. Spermatogonia

C. Cervix

D. Uterus

Answer: B

View Text Solution

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

A. Labia minora

B. Fimbriae

C. Infundibulum

D. Isthmus

Answer: A

**4.** Find the odd one out.

A. Clitoris

B. Mons pubis

C. Lactiferous duct

D. Labia majora

Answer: C

View Text Solution



**1.** Temperature of the scrotum which is necessary for sperm formation is always around below body temperature.

B.  $5^{\circ}C$ 

 $\mathsf{C.}\,4^{\circ}\,C$ 

D.  $3^\circ C$ 

Answer: A

View Text Solution

2. Testicular lobules contain.....seminiferous tubules.

A. 3-5

- B.1 3
- $\mathsf{C.}\,2-5$
- D.2-6

Answer: B

A. A-spermatogonia, B-Sertoli cells, C-rete testis, D-vasa efferentia, Eforeskin, F-glans penis

B. A-Sertoli cells, B-spermatogonia, C-vas deferens, D-rete testis, Eglans penis, F-urethral meatus

C. A-Sertolicells, B-spermatogonia, C-vasa efferentia, D-rete testis, E-

glans penis, F-foreskin

D. A-spermatogonia, B-Sertoli cells, C-rete testis, D-vasa efferentia, E-

glans penis, F-urethral meatus

Answer: C

A. A-additional sperms, B-egg

B. A-additional sperms, B-acrosome

C. A-eggs, B-Middle piece

D. A-additional sperms, B-tail

# Answer: B

View Text Solution

**5.** The milk produced during the initial few days of lactation is called colostrum which contains several ..... absolutely essential to develop resistance for the new-born babies.

A. proteins

B. minerals

C. antibodies

D. fats

Answer: C

View Text Solution

6. Soon after implantation, the inner cell mass differentiates into outer

A. A-mesoderm, B-endoderm, C-ectoderm

B. A-endoderm, B-mesoderm, C-ectoderm

C. A-ectoderm, B-mesoderm, C-endoderm

D. A-mesoderm, B-ectoderm, C-endoderm

# Answer: C

7. During embryonic development, differentiation of ...... occurs first.

A. cells

B. organs

C. organ systems

D. tissues

## Answer: A

View Text Solution

**8.** Identify A, B, C, and D in the given statement and select the correct option "During ......A...... phase of the menstrual cycle, if pregnancy does not happen, the ......B ........ Withers and dies, usually around day 22 in a 28-day cycle. The drop in ......C......... levels causes the lining of the uterus to fall away. This is known as.......D......

A. A-follicular, B-secondary oocyte, C-LH, D-menstruation

B. A-ovulatory, B-endometrium, C-FSH, D-menopause

C. A-luteal, B-corpus luteum, C-progesterone, D-menstruation

D. A-menstrual, B-Graafian follicle, C-oestrogen, D-menarche

## Answer: C

View Text Solution

**9.** A gonadotropin hormone ..... acts on interstitial cells and stimulates synthesis and secretion of androgens.

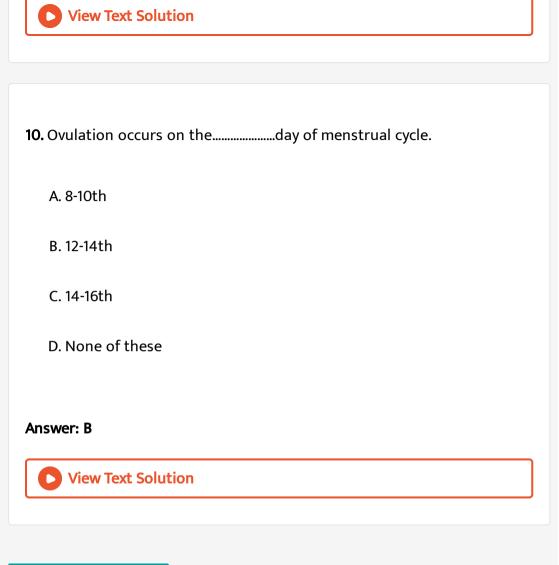
A. FSH

B. LH

C. GnRH

D. None of these

## Answer: A



Match The Following

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

Column I	Column II	
A. Trophoblast	<ul> <li>Embedding of blastocyst in the endometrium</li> </ul>	

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-(i), B-(iv), C-(iii), D-(i)

B. A-(iii), B-(iv), C-(i), D-(i)

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

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

Answer: B

**2.** Match the structures of male reproductive system given in column I with their features given in column II and select the correct match from the options given below:

Column I (Structures)	Column II (Features)
(A) Rete testis	(i) Facilitates insemination
(B) Leydig cells	(ii) Meiosis and sperm formation
(C) Seminiferous tubules	(iii) Connects seminiferous tubules to vasa efferentia
(D) Penis	(iv) Secrete androgens

A. A-(i), B-(iv), C-(iii), D-(i)

B. A-(iii), B-(iv), C-(i), D-(iii)

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

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

## Answer: D

3. Match column I with column II and select the correct option from the

codes given below.

Column I (Structures)	Column II (Features)
A. Gestation	<ul> <li>Production of milk at the end of pregnancy</li> </ul>
B. Implantation	(ii) Duration between pregnancy and birth
C. Lactation	(iii) Delivery of baby from uterus
D. Parturition	(iv) Attachment of blastocyst to endometrium

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

B. A-(iii), B-(1), C-(iv), D-(i)

C. A-(ii), B-(1), C-(iv), D-(iii)

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

# Answer: D

# View Text Solution

# 4. Match the column I with column II:

遡	Column I		Column II
Α.	Fertilisation	(i)	Period between fertilisation and the birth
B.	Implantation	(ii)	Fusion of egg and sperm
C.	Gestation	(iii)	Release of egg
D.	Ovulation	(iv)	Attachment of zygote to endometrium

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

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

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

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

## Answer: D



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

Column I	Column II
A. Head "	(i) Enzymes
B. Middle piece	(ii) Sperm motility
C. Acrosome	(iii) Energy
D. Tail	(iv) Genetic material

A. A-(i), B-(iv), C-(i), D-(iii)

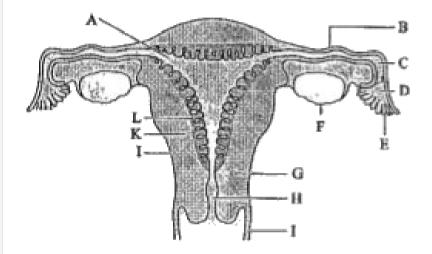
B. A-(iv), B-(iii), C-(i), D-(ii)

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

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

# Answer: B

**1.** The given figure depicts a diagrammatic sectional view of the human female reproductive system. Select the option with correctly identified parts.

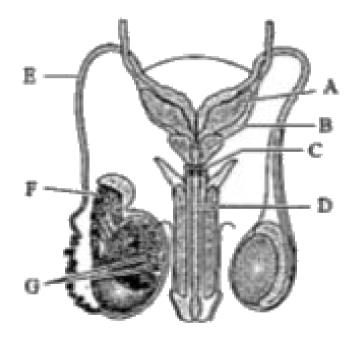


A. A - Ovary, G-Vagina, D- Fimbriae

- B. B Isthmus, I vagina, F-Perimetrium
- C. L Endometrium, H Cervical canal, C Ampulla
- D. E Infundibulum, J Endometrium, K Myometrium

## Answer: C

**2.** Match the functions given below with the associated part or parts of the human male reproductive system labelled from A to G in the figure given below.



- (i) Produces sperm
- (ii) Connects the epididymis with the urethra
- (iii) Produces secretion that lubricates the penis
- (iv) Conducts sperms through the penis to the outside of the body .

A. (i)-G, (ii)-C, (iii)-E, (iv)-D

B. (i)-G, (ii)-E, (iii)-C, (iv)-D

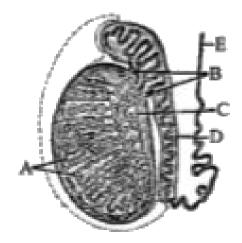
C. (i)-F, (i)-A, (iii)-E, (iv)-B

D. (i)-A, (ii)-E, (iii)-C, (iv)-G

## Answer: B

View Text Solution

3. Identify the parts labelled from A to E in the L.S. of testis given below.



A. A-Vas deferens, B-Seminiferous tubules, C-Rete testis, D-Vasa

efferentia, E-Epididymis

B. A-Epididymis, B-Vasa efferentia, C-Vas deferens, D-Rete testis, E-

Seminiferous tubules

C. A-Vas deferens, B-Seminiferous tubules, C-Vasa efferentia, D-Rete

testis, E-Epididymis

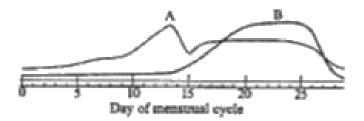
D. A-Seminiferous tubules, B-Vasa efferentia, C-Rete testis, D-

Epididymis, E-Vas deferens

#### Answer: D

View Text Solution

**4.** The following graph shows the levels of ovarian hormones during a menstrual cycle. Which hormones do the labels A and B represent?



A. A-LH, B-FSH

B. A-Progesterone, B-Oestrogen

C. A-FSH, B-LH

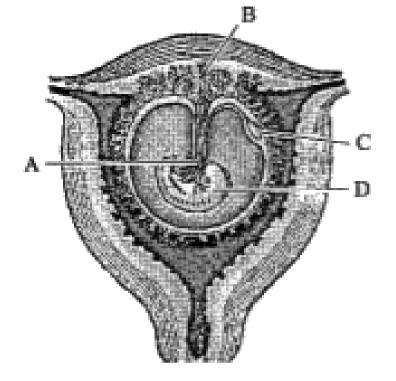
D. A-Oestrogen, B-Progesterone

Answer: A

View Text Solution

5. Identify the parts labelled from A to D in the given figure of developing

human embryo within the uterus.

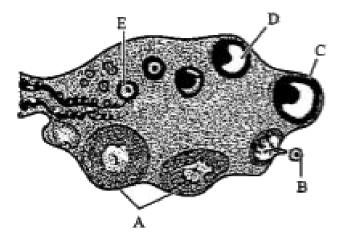


- A. A-Umbilical cord, B-Placental villi, C-Yolk sac, D-Embryo
- B. A-Placental villi, B-Embryo, C-Umbilical cord, D-Yolk sac
- C. A-Embryo, B-Yolk sac, C-Placental villi, D-Embryo
- D. A-Yolk sac, B-Umbilical cord, C-Embryo, D-Placental villi

Answer: A

6. In the given T.S. of human ovary, identify the structures labelled A to F

and select the correct option.



A. A- Primary follicle, B-Secondary follicle, C-Graafian follicle, D-Ovum, E-

**Tertiary follicle** 

B. A-Tertiary follicle, B-Corpus luteum, C-Primary follicle, D-Graafian

follicle, E-Ovum

C. A-Corpus luteum, B-Ovum, C-Graafian follicle, D-Tertiary follicle E-

**Primary follicle** 

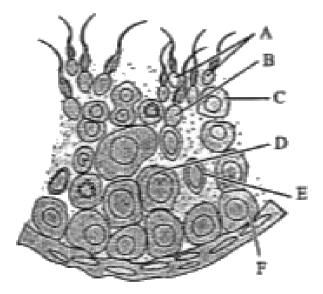
D. A-Graafian follicle, B-Primary follicle, C-Corpus luteum, D-Ovum, E-

**Tertiary follicle** 

# Answer: B

View Text Solution

7. The image given below shows the section of seminiferous tubule. Identify the labels that represent the spermatid and Sertolicells, respectively.



A. A and E

B. B and E

C. C and D

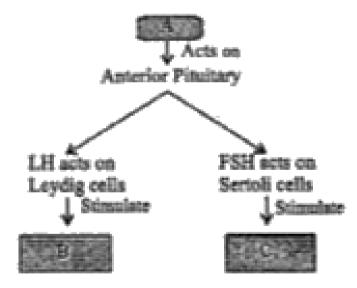
D. F and E

Answer: B



8. Select the correct option to complete the flow chart showing influence

of hormones on gametogenesis in males.



A. A-GnRH, B-Spermiogenesis,

C-Spermatogenesis

B. A-GnRH, B-Spermatogenesis,

C-Spermiogenesis

C. A-TRH, B-Spermatogenesis,

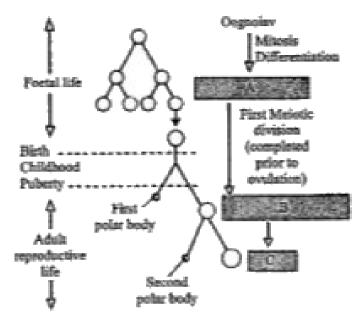
C-Spermiogenesis

D. A-FSH, B-Spermiogenesis,

C-Spermatogenesis

# Answer: B

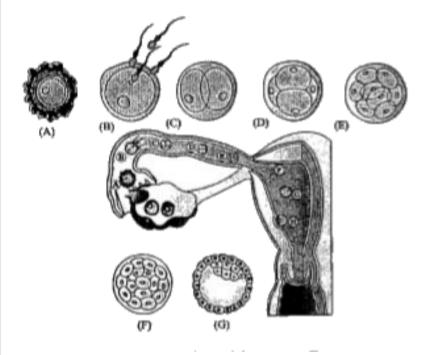
9. Identify A, B, and C in the figure given below:



- A. A-Secondary oocyte, B-Primary cocyte, C-Ovum
- B. A-Primary oocyte, B-Secondary oocyte, C-Ovum
- C. A-Secondary oocyte, B-Graafian follicle, C-Ovum
- D. A-Primary oocyte, B-Ovum, C-Secondary ,oocyte

## Answer: B

**10.** The diagram illustrates the fertilisation followed by cleavage and the early stages of embryonic development. Select the option with correct identification.



- A. Ovum-B, Morula-D, Blastocyst-F
- B. Ovum-A, Morula-E, Blastocyst-G
- C. Ovum-B, Morula-E, Blastocyst-G
- D. Ovum-A, Morula-D, Blastocyst-G

# Answer: D

View Text Solution

Assertion And Reason

**1.** Assertion: The myometrium undergoes cyclical changes during menstrual cycle.

Reason: The endometrium exhibits weak contractions during delivery of the baby.

- A. Both assertion and reason are true and reason is the correct explanation of assertion.
- B. Both assertion and reason are true, but reason is not the correct

explanation of assertion.

- C. Assertion is true, but reason is false.
- D. Both assertion and reason are false.

View Text Solution

**2.** Assertion: The sex of the baby is determined by the father and not by the mother.

Reason: 50% of sperms carry the sex chromosome X while the other 50% carry the sex chromosome Y.

A. Both assertion and reason are true and reason is the correct

explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct

explanation of assertion.

- C. Assertion is true, but reason is false.
- D. Both assertion and reason are false.

## Answer: B

**3.** Assertion: Progesterone is essential for maintenance of the endometrium.

Reason: Endometrium is essential for implantation of embryo.

A. Both assertion and reason are true and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct

explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

## Answer: A



**4.** Assertion: All copulations do not lead to fertilisation and pregnancy.

Reason: Fertilisation can only occur if the ovum and sperms are transported simultaneously to the ampullary- isthmic junction.

- A. Both assertion and reason are true and reason is the correct explanation of assertion.
- B. Both assertion and reason are true, but reason is not the correct explanation of assertion.
- C. Assertion is true, but reason is false.
- D. Both assertion and reason are false.

# Answer: C

View Text Solution

**5.** Assertion: Corpus luteum is produced by Graafian follicle after ovulation.

Reason: It secretes oestrogen which is necessary to maintain pregnancy.

A. Both assertion and reason are true and reason is the correct

explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct

explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

#### Answer: B

**View Text Solution** 

Source Based Questions

**1.** Adolescence is the period of dramatic physical and psychological changes in a person. An adolescent person is at high risk of falling in the trap of drug or alcohol abuse. Common causes are, curiosity, excitement,

experimentation, etc. Drugs are frequently used because of their perceived benefits. The inherent addictive nature of these substances results in addiction and dependence. Addiction is a psychological attachment to various effects of a substance. So, a person continues to take addictive substance even when he does not need it in the real sense. Tolerance level of the receptors ion our body increases with repeated use of addictive substances. This results in body craving for higher doses. Long term consequences of addiction can be highly devastating. Parents and teachers should take responsibility to identify situations which may trigger unwanted behaviour. Parents and teachers should instil self discipline adolescent persons. Peer pressure should be avoided at all cost. Proper steps should be taken to increase awareness. If the need arises, then professional help should also be taken.

Nicotine acts as a stimulant because it mimics the effect of:

A. Thyroxine

**B.** Acetylcholine

C. Testosterone

D. Dopamine

## Answer: D

# View Text Solution

2. Adolescence is the period of dramatic physical and psychological changes in a person. An adolescent person is at high risk of falling in the trap of drug or alcohol abuse. Common causes are, curiosity, excitement, experimentation, etc. Drugs are frequently used because of their perceived benefits. The inherent addictive nature of these substances results in addiction and dependence. Addiction is a psychological attachment to various effects of a substance. So, a person continues to take addictive substance even when he does not need it in the real sense. Tolerance level of the receptors ion our body increases with repeated use of addictive substances. This results in body craving for higher doses. Long term consequences of addiction can be highly devastating. Parents and teachers should take responsibility to identify situations which may trigger unwanted behaviour. Parents and teachers should instil self discipline adolescent persons. Peer pressure should be avoided at all cost. Proper steps should be taken to increase awareness. If the need arises,

then professional help should also be taken.

Continuous use of alcohol causes:

A. Gastritis

**B.** Neuritis

C. Swelling of liver

D. All of the above

## Answer: D

**View Text Solution** 

**3.** Adolescence is the period of dramatic physical and psychological changes in a person. An adolescent person is at high risk of falling in the trap of drug or alcohol abuse. Common causes are, curiosity, excitement, experimentation, etc. Drugs are frequently used because of their perceived benefits. The inherent addictive nature of these substances results in addiction and dependence. Addiction is a psychological attachment to various effects of a substance. So, a person continues to

take addictive substance even when he does not need it in the real sense. Tolerance level of the receptors ion our body increases with repeated use of addictive substances. This results in body craving for higher doses. Long term consequences of addiction can be highly devastating. Parents and teachers should take responsibility to identify situations which may trigger unwanted behaviour. Parents and teachers should instil self discipline adolescent persons. Peer pressure should be avoided at all cost. Proper steps should be taken to increase awareness. If the need arises, then professional help should also be taken.

Tobacco inhalation causes:

A. Stimulation of nerve induction and cough depressant.

B. Heart diseases and low blood pressure.

C. Inhibits the oxygen carrying capacity and increases the more

transportation of CO\_(2)`

D. Nerve stimulation, heart diseases, decrease in  $O_2$  carrying capacity,

lung cancer, chronic bronchitis etc.

Answer: B

4. Adolescence is the period of dramatic physical and psychological changes in a person. An adolescent person is at high risk of falling in the trap of drug or alcohol abuse. Common causes are, curiosity, excitement, experimentation, etc. Drugs are frequently used because of their perceived benefits. The inherent addictive nature of these substances results in addiction and dependence. Addiction is a psychological attachment to various effects of a substance. So, a person continues to take addictive substance even when he does not need it in the real sense. Tolerance level of the receptors ion our body increases with repeated use of addictive substances. This results in body craving for higher doses. Long term consequences of addiction can be highly devastating. Parents and teachers should take responsibility to identify situations which may trigger unwanted behaviour. Parents and teachers should instil self discipline adolescent persons. Peer pressure should be avoided at all cost. Proper steps should be taken to increase awareness. If the need arises, then professional help should also be taken.

Tunnel vision is caused by:

A. Drug addiction

B. Use of tobacco

C. Use of alcohol

D. Use of alcohol

## Answer: C

**View Text Solution** 

**5.** The main structures of the male reproductive system are located external to the body. The two testes (singular, testis) hang between the thighs in a sac of skin called the scrotum. The testes produce both sperm and testosterone. Resting on top of each testis is a coiled structure called the epididymis. The function of the epididymis is to mature and store sperm. The penis is a tubular organ that contains the urethra and has the ability to stiffen during sexual arousal. Sperm passes out of the body

through the urethra during a sexual climax. In addition to these organs, there are several ducts and glands that are internal to the body. At the time of ejaculation, the sperm are transported through the 'vas deferens' and fluid is added to the sperm from various glands, including the prostate and seminal vesicles during their journey. This mixture of secretions is known as semen.

What are two adaptive features of a human sperm cell?

1.Presence of jelly coat

2. Relatively high number of mitochondria

3. Presence of acrosome

4. Stores relatively high energy .

A. 1 and 2

B. 1 and 4

C. 2 and 3

D. 3 and 4

Answer: C

**View Text Solution** 

6. The main structures of the male reproductive system are located external to the body. The two testes (singular, testis) hang between the thighs in a sac of skin called the scrotum. The testes produce both sperm and testosterone. Resting on top of each testis is a coiled structure called the epididymis. The function of the epididymis is to mature and store sperm. The penis is a tubular organ that contains the urethra and has the ability to stiffen during sexual arousal. Sperm passes out of the body through the urethra during a sexual climax. In addition to these organs, there are several ducts and glands that are internal to the body. At the time of ejaculation, the sperm are transported through the 'vas deferens' and fluid is added to the sperm from various glands, including the prostate and seminal vesicles during their journey. This mixture of secretions is known as semen.

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

A. epididymis

B. ejaculatory duct

C. efferent duct

D. ureter

Answer: B



7. The main structures of the male reproductive system are located external to the body. The two testes (singular, testis) hang between the thighs in a sac of skin called the scrotum. The testes produce both sperm and testosterone. Resting on top of each testis is a coiled structure called the epididymis. The function of the epididymis is to mature and store sperm. The penis is a tubular organ that contains the urethra and has the ability to stiffen during sexual arousal. Sperm passes out of the body through the urethra during a sexual climax. In addition to these organs, there are several ducts and glands that are internal to the body. At the time of ejaculation, the sperm are transported through the 'vas deferens' and fluid is added to the sperm from various glands, including the prostate and seminal vesicles during their journey. This mixture of secretions is known as semen.

In spermatogenesis, reduction division occurs during conversion of:

A. spermatogonia to primary spermatocytes.

B. spermatids to sperms.

C. primary spermatocytes to secondary spermatocytes.

D. secondary spermatocytes to spermatids.

#### Answer: D

**View Text Solution** 

**8.** The main structures of the male reproductive system are located external to the body. The two testes (singular, testis) hang between the thighs in a sac of skin called the scrotum. The testes produce both sperm and testosterone. Resting on top of each testis is a coiled structure called the epididymis. The function of the epididymis is to mature and store sperm. The penis is a tubular organ that contains the urethra and has the ability to stiffen during sexual arousal. Sperm passes out of the body

through the urethra during a sexual climax. In addition to these organs, there are several ducts and glands that are internal to the body. At the time of ejaculation, the sperm are transported through the 'vas deferens' and fluid is added to the sperm from various glands, including the prostate and seminal vesicles during their journey. This mixture of secretions is known as semen.

The mature sperms are stored in the

A. Seminiferous tubules

B. Vas deferens

C. Epididymis

D. Seminal vesicle

#### Answer: B



**9.** Parturition is the completion of pregnancy and giving birth to the baby.

The series of events that expels the infant from the uterus is collectively

called "labour". Throughout pregnancy, the uterus undergoes periodic episodes of weak and strong contractions. As the pregnancy progresses, increase in the oestrogen concentration promotes uterine contractions. These uterine contractions facilitate downward movement of the foetus. The descent of the foetus causes dilation of cervix of the uterus and vaginal canal resulting in foetal ejection reflex. This initiates the secretion of oxytocin from the neurohypophysis which in turn brings about the powerful contraction of the uterine muscles and leads to the expulsion of the baby through the birth canal.

Foetal ejection reflex in human female is induced by:

A. Release of oxytocin from pituitary

- B. Pressure exerted by amniotic fluid
- C. Differentiation of mammary glands
- D. Fully developed foetus and placenta

# Answer: D

View Text Solution

10. Parturition is the completion of pregnancy and giving birth to the baby. The series of events that expels the infant from the uterus is collectively called "labour". Throughout pregnancy, the uterus undergoes periodic episodes of weak and strong contractions. As the pregnancy progresses, increase in the oestrogen concentration promotes uterine contractions. These uterine contractions facilitate downward movement of the foetus. The descent of the foetus causes dilation of cervix of the uterus and vaginal canal resulting in foetal ejection reflex. This initiates the secretion of oxytocin from the neurohypophysis which in turn brings about the powerful contraction of the uterine muscles and leads to the expulsion of the baby through the birth canal.

Scientifically, the delivery of the developed fetus is termed as:

A. ovulation

B. abortion

C. parturition

D. oviposition

#### Answer: C

## View Text Solution

11. Parturition is the completion of pregnancy and giving birth to the baby. The series of events that expels the infant from the uterus is collectively called "labour". Throughout pregnancy, the uterus undergoes periodic episodes of weak and strong contractions. As the pregnancy progresses, increase in the oestrogen concentration promotes uterine contractions. These uterine contractions facilitate downward movement of the foetus. The descent of the foetus causes dilation of cervix of the uterus and vaginal canal resulting in foetal ejection reflex. This initiates the secretion of oxytocin from the neurohypophysis which in turn brings about the powerful contraction of the uterine muscles and leads to the expulsion of the baby through the birth canal.

Vigorous contractions of the uterus during parturition are induced by:

A. neuroendocrine mechanism

B. endocrine mechanism

C. embryo pushing out

D. uterine fluids

Answer: A



12. Parturition is the completion of pregnancy and giving birth to the baby. The series of events that expels the infant from the uterus is collectively called "labour". Throughout pregnancy, the uterus undergoes periodic episodes of weak and strong contractions. As the pregnancy progresses, increase in the oestrogen concentration promotes uterine contractions. These uterine contractions facilitate downward movement of the foetus. The descent of the foetus causes dilation of cervix of the uterus and vaginal canal resulting in foetal ejection reflex. This initiates the secretion of oxytocin from the neurohypophysis which in turn brings about the powerful contraction of the uterine muscles and leads to the expulsion of the baby through the birth canal.

What is the correct sequence for parturition to occur?

A. Signal from fetus and placenta  $\rightarrow$  Uterine contractions  $\rightarrow$ Release of oxytocin  $\rightarrow$  Rise in oxytocin secretion Powerful contractions  $\rightarrow$  Parturition

B. Uterine contractions  $\rightarrow$  Release of oxytocin  $\rightarrow$  Rise in oxytocin

secretion  $\ o$  Powerful contractions Signal from fetus and placenta

 $\rightarrow$  Parturition

C. Signal from fetus and placenta  $\ 
ightarrow$  Release of oxytocin  $\ 
ightarrow$  Uterine

contractions  $\ \rightarrow \$  Rise in oxytocin secretion Powerful contractions

Parturition

D. Release of oxytocin  $\rightarrow$  Uterine contractions  $\rightarrow$  Signal from fetus

and placenta  $\rightarrow$  Rise in oxytocin secretion  $\rightarrow$  Powerful

contractions Parturition

Answer: C

View Text Solution

13. Parturition is the completion of pregnancy and giving birth to the baby. The series of events that expels the infant from the uterus is collectively called "labour". Throughout pregnancy, the uterus undergoes periodic episodes of weak and strong contractions. As the pregnancy progresses, increase in the oestrogen concentration promotes uterine contractions. These uterine contractions facilitate downward movement of the foetus. The descent of the foetus causes dilation of cervix of the uterus and vaginal canal resulting in foetal ejection reflex. This initiates the secretion of oxytocin from the neurohypophysis which in turn brings about the powerful contraction of the uterine muscles and leads to the expulsion of the baby through the birth canal.

If mammalian ovum fails to get fertilised, which one of the following is unlikely?

A. Corpus luteum will distintegrate.

- B. Progesterone secretion rapidly declines.
- C. Estrogen secretion increases.
- D. Primary follicle starts developing

#### Answer: C

## View Text Solution

14. During pregnancy, the placenta acts as a temporary endocrine gland and produces large quantities of human Chorionic Gonadotropin (hCG), human Placental Lactogen (HPL), oestrogen and progesterone which are essential for a normal pregnancy. A hormone called relaxin is also secreted during the later phase of pregnancy which helps in relaxation of the pelvic ligaments at the time of parturition. It should be noted that hCG, HPL and relaxin are produced only during pregnancy. In addition, during pregnancy the level of other hormones like oestrogen and progesterone, cortisol, prolactin, thyroxine, etc., is increased several folds in the maternal blood. These hormones are essential for supporting foetal growth.

Portion of placenta contributed by the embryo is the:

A. Chorion

B. Yolk sac

C. Amnion

D. Allantois

Answer: A

View Text Solution

15. During pregnancy, the placenta acts as a temporary endocrine gland and produces large quantities of human Chorionic Gonadotropin (hCG), human Placental Lactogen (HPL), oestrogen and progesterone which are essential for a normal pregnancy. A hormone called relaxin is also secreted during the later phase of pregnancy which helps in relaxation of the pelvic ligaments at the time of parturition. It should be noted that hCG, HPL and relaxin are produced only during pregnancy. In addition, during pregnancy the level of other hormones like oestrogen and progesterone, cortisol, prolactin, thyroxine, etc., is increased several folds in the maternal blood. These hormones are essential for supporting foetal growth.

Which hormone produced by the placenta causes the mother's pubic symphysis to loosen and widen?

A. FSH

B. progesterone

C. Estrogen

D. relaxin

Answer: D

**View Text Solution** 

**16.** During pregnancy, the placenta acts as a temporary endocrine gland and produces large quantities of human Chorionic Gonadotropin (hCG), human Placental Lactogen (HPL), oestrogen and progesterone which are essential for a normal pregnancy. A hormone called relaxin is also secreted during the later phase of pregnancy which helps in relaxation of the pelvic ligaments at the time of parturition. It should be noted that hCG, HPL and relaxin are produced only during pregnancy. In addition, during pregnancy the level of other hormones like oestrogen and progesterone, cortisol, prolactin, thyroxine, etc., is increased several folds in the maternal blood. These hormones are essential for supporting foetal growth.

Finger like out growth in surface of blastocysts:

A. implantation

B. chorion

C. placenta

D. chorionic villi

## Answer: C

View Text Solution

**17.** During pregnancy, the placenta acts as a temporary endocrine gland and produces large quantities of human Chorionic Gonadotropin (hCG), human Placental Lactogen (HPL), oestrogen and progesterone which are essential for a normal pregnancy. A hormone called relaxin is also secreted during the later phase of pregnancy which helps in relaxation of the pelvic ligaments at the time of parturition. It should be noted that hCG, HPL and relaxin are produced only during pregnancy. In addition, during pregnancy the level of other hormones like oestrogen and progesterone, cortisol, prolactin, thyroxine, etc., is increased several folds in the maternal blood. These hormones are essential for supporting foetal growth.

Which one of the following hormones is not secreted in any human chorionic placenta?

A. Progesterone/pregnancy hormone

B. Estrogen and hPL

C. Prolactin

D. hCG

#### Answer: C

View Text Solution

18. During pregnancy, the placenta acts as a temporary endocrine gland and produces large quantities of human Chorionic Gonadotropin (hCG), human Placental Lactogen (HPL), oestrogen and progesterone which are essential for a normal pregnancy. A hormone called relaxin is also secreted during the later phase of pregnancy which helps in relaxation of the pelvic ligaments at the time of parturition. It should be noted that hCG, HPL and relaxin are produced only during pregnancy. In addition, during pregnancy the level of other hormones like oestrogen and progesterone, cortisol, prolactin, thyroxine, etc., is increased several folds in the maternal blood. These hormones are essential for supporting foetal growth.

Select the unpaired structure in male.

A. Epididymis

B. Ejaculatory duct

C. Urethra

D. Vas deferens

#### Answer: C

## View Text Solution

19. At the start of the menstrual cycle, the lining of the uterus wall breaks down. As each follicle in the ovaries develops, the amount of oestrogen produced by the ovary increases. The oestrogen act on the uterus and cause its lining to become thicker and develop more blood vessels. These are changes that help an early embryo to implant. Two hormones, folliclestimulating hormone (FSH) and luteinising hormone (LH) promote ovulation. Once the ovum has been released, the follicle that produced it develops into a solid body called the corpus luteum. This produces a hormone called progesterone, which affects the uterus lining in the same way as the oestrogens, making it grow thicker and produce more blood vessels. If the ovum is fertilised, the corpus luteum continues to release progesterone and so keeps the uterus in a state suitable for implantation. If the ovum is not fertilised, the corpus luteum stops producing progesterone. As a result, the thickened lining of the uterus breaks down and loses blood, which escapes through the cervix and

vagina.

Which hormone maintains the thickness of the lining of the uterus

during pregnancy?

A. follicle stimulating hormone (FSH)

B. luteinising hormone (LH)

C. oestrogen

D. progesterone

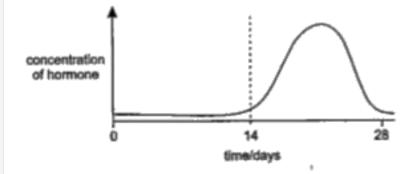
## Answer: D

View Text Solution

**20.** At the start of the menstrual cycle, the lining of the uterus wall breaks down. As each follicle in the ovaries develops, the amount of oestrogen produced by the ovary increases. The oestrogen act on the uterus and cause its lining to become thicker and develop more blood vessels. These are changes that help an early embryo to implant. Two hormones, follicle-stimulating hormone (FSH) and luteinising hormone (LH) promote

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The graph shows a hormone that is involved in controlling the human female menstrual cycle.



Which hormone is shown by the curve?

A. FSH

B. LH

C. oestrogen

D. progesterone

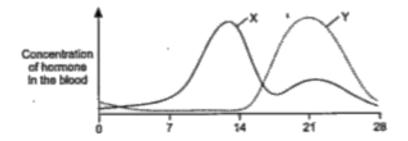
Answer: D

View Text Solution

**21.** At the start of the menstrual cycle, the lining of the uterus wall breaks down. As each follicle in the ovaries develops, the amount of oestrogen produced by the ovary increases. The oestrogen act on the uterus and cause its lining to become thicker and develop more blood vessels. These are changes that help an early embryo to implant. Two hormones, follicle-stimulating hormone (FSH) and luteinising hormone (LH) promote ovulation. Once the ovum has been released, the follicle that produced it develops into a solid body called the corpus luteum. This produces a hormone called progesterone, which affects the uterus lining in the same way as the oestrogens, making it grow thicker and produce more blood

vessels. If the ovum is fertilised, the corpus luteum continues to release progesterone and so keeps the uterus in a state suitable for implantation. If the ovum is not fertilised, the corpus luteum stops producing progesterone. As a result, the thickened lining of the uterus breaks down and loses blood, which escapes through the cervix and vagina.

Two hormones, X and Y, are secreted by the ovaries. The graph shows the concentrations of these hormones in the blood during one complete menstrual cycle. What are hormones X and Y?



A. Hormone X is oestrogen and Y is progesterone.

B. Hormone X is progesterone and Y is oestrogen.

- C. Hormone X is FSH and Y is LH.
- D. Hormone X is LH and Y is FSH.

#### Answer: A

## View Text Solution

22. At the start of the menstrual cycle, the lining of the uterus wall breaks down. As each follicle in the ovaries develops, the amount of oestrogen produced by the ovary increases. The oestrogen act on the uterus and cause its lining to become thicker and develop more blood vessels. These are changes that help an early embryo to implant. Two hormones, folliclestimulating hormone (FSH) and luteinising hormone (LH) promote ovulation. Once the ovum has been released, the follicle that produced it develops into a solid body called the corpus luteum. This produces a hormone called progesterone, which affects the uterus lining in the same way as the oestrogens, making it grow thicker and produce more blood vessels. If the ovum is fertilised, the corpus luteum continues to release progesterone and so keeps the uterus in a state suitable for implantation. If the ovum is not fertilised, the corpus luteum stops producing progesterone. As a result, the thickened lining of the uterus breaks down and loses blood, which escapes through the cervix and

vagina.

Assuming ovulation occurs on day 14, which event occurs at the time of ovulation?

A. a fall in the levels of oestrogen and progesterone

B. a fall in the level of progesterone only

C. a rise in the level of oestrogen

D. a rise in the level of progesterone and fall in the level of oestrogen

# Answer: D

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