# **Prachand NEET 2025**

# **Human Reproduction**

# Zoology

DPP 01

- Q1 Each seminiferous tubule is lined on its inside by:
  - (A) Leydig cells.
  - (B) primary spermatocytes.
  - (C) Sertoli cells.
  - (D) hepatocytes.
- **Q2** Which structure ascends to abdomen and loop over the urinary bladder?
  - (A) Epididymis
  - (B) Vas-deferens
  - (C) Seminiferous tubule
  - (D) Rete-testis
- Q3 Foetal ejection reflex in human females is induced by:
  - (A) fully developed foetus.
  - (B) placenta.
  - (C) the anterior pituitary gland of the foetus.
  - (D) both (A) and (B)
- **Q4** Which of the following is **correct** about spermiogenesis?
  - (A) Transforms spermatids into spermatozoa.
  - (B) It is a process to produce secondary spermatocytes.
  - (C) Process of conversion of spermatocytes to spermatids.
  - (D) Process of maturing sperms before ejaculation.
- **Q5** Which of the following hormones, is **not** secreted by the human placenta?
  - (A) hCG
- (B) GH

(C) hPL

(D) Progesterone

- **Q6** Find the **correct** order for the events of the menstrual cycle.
  - (A) Menstrual phase → Follicular phase → Secretory phase → Ovulatory phase
  - (B) Menstrual phase → Follicular phase → Ovulatory phase → Secretory phase
  - (C) Ovulatory phase → Follicular phase →Secretory phase → Menstrual phase
  - (D) Secretory phase → Follicular phase →Menstrual phase → Ovulatory phase
- **Q7** Given below are two statements:

**Statement I:** In the later phase of pregnancy, relaxin is released from the ovary.

**Statement II:** Chorionic villi are surrounded by the uterine tissue and maternal blood. In the light of the above statements, choose the

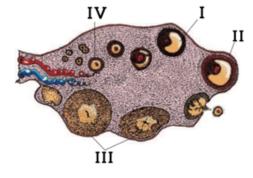
most appropriate answer from the options given below:

- (A) Statement I is correct but Statement II is incorrect.
- (B) Statement I is incorrect but Statement II is correct.
- (C) Both Statement I and Statement II are correct.
- (D) Both Statement I and Statement II are incorrect.
- **Q8** During embryonic development, oogonia starts dividing and enters into which stage and gets temporarily arrested?
  - (A) Metaphase II of the mitotic division.
  - (B) Prophase II of the mitotic division.
  - (C) Metaphase I of the meiotic division.

- (D) Prophase I of the meiotic division.
- **Q9** Identify the **correct** statement.
  - (A) For normal fertility, at least 40% of sperm should have a normal shape and size, and at least 60% must exhibit vigorous motility.
  - (B) Oogonial cells start to proliferate and give rise to functional zygotes in regular cycles from puberty onwards.
  - (C) Male germ cells give rise to primary oocytes.
  - (D) Progesterone level is high during the postovulatory phase of the menstrual cycle.
- Q10 Read the following statement (I- IV).
  - I. Cyclic changes occur in the endometrium during menstrual cycle.
  - II. The external thin membrane of the uterus is the perimetrium.
  - III. Strong uterine contraction occurs in myometrium at the time of parturition.
  - IV. The uterus opens into a narrow cervix through the vagina.

How many of the above statements are **correct**?

- (A) I and II only
- (B) I, II and III only
- (C) I, II and IV only
- (D) II and IV only
- Q11 In the given below diagram, which of the following represents the tertiary follicle?



(A) I

(B) II

(C) III

(D) IV

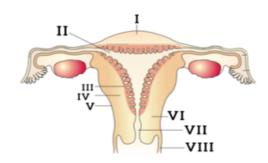
- Q12 The umbilical cord is the connection between:
  - (A) the embryo and the placenta.
  - (B) the uterus and the fallopian tube.
  - (C) the pituitary gland of the mother and the embryo.
  - (D) the myometrium and the placenta.
- Q13 Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: Breastfeeding during the initial period of infant growth is recommended by doctors.

Reason R: Milk produced in the initial days of lactation contains several antibodies essential to develop resistance for newborn babies and help them to stay healthy.

In the light of the above statements, choose the correct answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.
- (C) Both A and R are true and R is the correct explanation of A.
- (D) Both A and R are true but R is not the correct explanation of A.
- Q14 Which of the following is **not** included in female external genitalia?
  - (A) Vagina
- (B) Hymen
- (C) Mons pubis
- (D) Clitoris
- **Q15** Which of the following forms zona pellucida?
  - (A) Primary oocyte
  - (B) Primary follicle
  - (C) Secondary oocyte
  - (D) Secondary follicle
- Q16 Which of the following labelled parts in the given below diagram forms the birth canal?



- (A) I + II
- (B) III + IV
- (C) V + VI
- (D) VII + VIII
- Q17 Given below are two statements:

**Statement I:** Parturition is induced by a complex neuroendocrine mechanism.

**Statement II:** The functions of male sex accessory ducts and glands are maintained by androgens.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (A) Statement I is correct but Statement II is incorrect.
- (B) Statement I is incorrect but Statement II is correct.
- (C) Both Statement I and Statement II are correct.
- (D) Both Statement I and Statement II are incorrect.
- Q18 Choose the incorrect match.
  - (A) Corpus luteum- Secretory phase
  - (B) Ovulation- Release of secondary oocyte.
  - (C) Menstrual phase- On the 14<sup>th</sup> day of the menstrual cycle
  - (D) Oogenesis starts in foetal life.
- Q19 Read the following statements (I-V).
  - I. Androgens stimulate the process of spermatogenesis.
  - II. The first polar body is formed during first meiotic division of primary oocyte within tertiary follicle.

- III. One ovum is produced during the middle of each menstrual cycle.
- IV. No menstruation occurs during pregnancy.
- V. The hymen is not a reliable indicator of virginity.

How many of the above statements are **correct**?

- (A) Five
- (B) Four
- (C) Three
- (D) Two

# Q20 Match the List-I with List-II.

List	List I		List II	
(A)	Mons pubis	(I)	Fleshy folds of tissue.	
	Clitoris	(11)	Lies at the upper	
(B)			junction of two labia	
			minora.	
(C)	Labia	/III\	Paired folds of tissue	
(C)	majora	(III)	under labia majora.	
	Labia minora	(IV)	A cushion of fatty	
(D)			tissue covered by	
			pubic hairs and skin.	

Choose the **correct** answer from the options given below:

- (A) A-IV, B-II, C-I, D-III
- (B) A-I, B-III, C-II, D-IV
- (C) A-II, B-III, C-I, D-IV
- (D) A-III, B-I, C-II, D-IV
- **Q21** Given below are two statements:

**Statement I:** In spermatogenesis, the second meiotic division is unequal.

**Statement II:** The zygote carrying XX chromosomal pattern would develop into a female baby.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (A) Statement I is correct but Statement II is incorrect.
- (B)

- Statement I is incorrect but Statement II is correct.
- (C) Both Statement I and Statement II are correct.
- (D) Both Statement I and Statement II are incorrect.
- **Q22** Rupturing of the Graafian follicle leads to:
  - (A) formation of secondary oocyte.
  - (B) formation of tertiary follicles.
  - (C) release of secondary oocyte.
  - (D) release of the second polar body.
- **Q23** What is the primary function of the acrosome in sperm?
  - (A) Provide energy for motility
  - (B) Aid in fertilisation by releasing enzymes.
  - (C) Protect the sperm nucleus.
  - (D) Store genetic material.
- **Q24** Which of the following causes the expulsion of a fully developed foetus from the uterus?
  - (A) Contraction of the endometrium.
  - (B) Contraction of the skeletal muscles of the uterus.
  - (C) Contraction of the smooth muscle of the uterus.
  - (D) Contraction of the urinary bladder.
- Q25 Which of the following connects the mammary ducts to the lactiferous duct?
  - (A) Alveoli
  - (B) Mammary tubules
  - (C) Mammary ampulla
  - (D) Nipple
- **Q26** Where does fertilisation take place?
  - (A) Infundibulum of fallopian tube
  - (B) Isthmus of fallopian tube
  - (C) Fimbriae of fallopian tube
  - (D) Ampullary region of fallopian tube

**Q27** Given below are two statements: one is labelled as Assertion A and the other is labelled as Reason R:

**Assertion A:** The penis is the male external genitalia.

**Reason R:** This is made up of special tissue that helps in the erection to facilitate insemination. In the light of the above statements, choose the **correct** answer from the options given below:

- (A) A is true but R is false.
- (B) A is false but R is true.
- (C) Both A and R are true and R is the correct explanation of A.
- (D) Both A and R are true but R is not the correct explanation of A.
- results in the formation of a\_\_\_\_\_ polar body and a haploid ovum (ootid).

  Choose the option which fills the blanks correctly.
  - (A) equal, second
  - (B) equal, first
  - (C) unequal, first
  - (D) unequal, second
- What is the role of mitochondria in the middle piece of the sperm?
  - (A) Protect the nucleus.
  - (B) Produce enzymes to help the sperms in penetrating layers of the ovum.
  - (C) Produce energy for the movement of the tail.
  - (D) Maturation of sperm.
- Q30 Match List I with List II.

	List-I		List-II
(Δ	) Heart is	(I)	By the
	formed		end of the
			second

			month of
			pregnancy
	External		
	genital		After one
(B)	organs are	(II)	month of
	well		pregnancy
	developed		
	Limbs and digits are formed	(111)	By the
			end of the
(C)			first
(C)			trimester
			of
			pregnancy

(D)	The body	(1)()	By the
	of the		end of the
	foetus is		second
	covered		trimester
	with fine		of
	hairs		pregnancy

Choose the **correct** answer from the options given below:

- (A) A-IV, B-II, C-I, D-III
- (B) A-I, B-III, C-II, D-IV
- (C) A-II, B-III, C-I, D-IV
- (D) A-III, B-I, C-II, D-IV

# **Answer Key**

Q1	(C)	Q16	(D)
Q2	(B)	Q17	(C)
Q3	(D)	Q18	(C)
Q4	(A)	Q19	(A)
Q5	(B)	Q20	(A)
Q6	(B)	Q21	(B)
Q7	(C)	Q22	(C)
Q8	(D)	Q23	(B)
Q9	(D)	Q24	(C)
Q10	(B)	Q25	(C)
Q11	(A)	Q26	(D)
Q12	(A)	Q27	(D)
Q13	(C)	Q28	(D)
Q14	(A)	Q29	(C)
Q15	(C)	Q30	(C)

# **Hints & Solutions**

# Q1 Text Solution:

(C)

Each seminiferous tubule is lined on its inside by two types of cells called male germ cells (spermatogonia) and Sertoli cells.

[New NCERT Class 12<sup>th</sup> Page No. 27]

#### Q2 Text Solution:

(B)

The epididymis leads to vas deferens that ascend to the abdomen and loop over the urinary bladder. It receives a duct from the seminal vesicle and opens into the urethra as the ejaculatory duct.

[New NCERT Class 12<sup>th</sup> Page No. 27]

#### Q3 Text Solution:

(D)

The foetal ejection reflex in human females is induced by a fully developed foetus and placenta.

[New NCERT Class 12th Page No. 38]

#### Q4 Text Solution:

(A)

The process by which spermatids transform into spermatozoa is called spermiogenesis.

[New NCERT Class 12th Page No. 31]

# Q5 Text Solution:

(B)

The placenta acts as an endocrine tissue and produces several hormones like human chorionic gonadotropin (hCG), human placental lactogen (hPL), estrogens, progestogens, etc during pregnancy.

[New NCERT Class 12<sup>th</sup> Page No. 37]

# Q6 Text Solution:

(B)

The correct order for the events of the menstrual cycle is:

Menstrual phase  $\rightarrow$  Follicular phase  $\rightarrow$  Ovulatory phase  $\rightarrow$  Secretory phase

[New NCERT Class 12<sup>th</sup> Page No. 35]

# Q7 Text Solution:

(C)

- In the later phase of pregnancy, relaxin is released from the ovary.
- Chorionic villi are surrounded by the uterine tissue and maternal blood.

[New NCERT Class 12<sup>th</sup> Page No. 37]

# **Q8** Text Solution:

(D)

During embryonic development, oogonia start division, enter prophase-I of the meiotic division, and get temporarily arrested, becoming primary oocytes.

[New NCERT Class 12<sup>th</sup> Page No. 32]

#### Q9 Text Solution:

(D)

- For normal fertility, at least 60% of sperm should have a normal shape and size, and at least 40% must exhibit vigorous motility.
- Oogonial cells start to proliferate and give rise to primary oocytes.
- Male germ cells give rise to primary spermatocytes.
- Progesterone levels are high during the postovulatory phase of the menstrual cycle.

[New NCERT Class 12<sup>th</sup> Page No. 31, 32, 34]

# Q10 Text Solution:

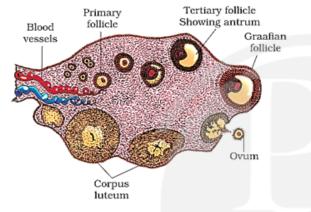
(B)

- Cyclic changes occur in the endometrium during menstrual cycle.
- The external thin membrane of the uterus is the perimetrium.
- Strong uterine contraction occurs in myometrium at the time of parturition.
- The uterus opens into the cervix, which then connects to the vagina

[New NCERT Class 12<sup>th</sup> Page No. 30]

## Q11 Text Solution:

(A)



[New NCERT Class 12<sup>th</sup> Page No. 33]

# Q12 Text Solution:

(A)

The umbilical cord is the connection between the embryo and the placenta.

[New NCERT Class 12<sup>th</sup> Page No. 37]

# Q13 Text Solution:

(C)

Doctors recommend breastfeeding during the initial period of infant growth because milk produced in the initial days of lactation (colostrum) contains several antibodies that are essential to developing resistance in newborn babies and helping them stay healthy.

[New NCERT Class 12<sup>th</sup> Page No. 38]

# Q14 Text Solution:

(A)

The female external genitalia include mons pubis, labia majora, labia minora, hymen and clitoris.

[New NCERT Class 12<sup>th</sup> Page No. 30]

# Q15 Text Solution:

(C)

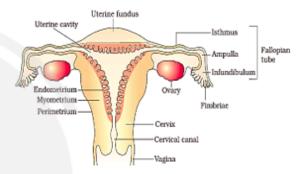
The secondary oocyte forms a new membrane called zona pellucida surrounding it.

[New NCERT Class 12<sup>th</sup> Page No. 33]

# Q16 Text Solution:

(D)

The cavity of the cervix (cervical canal) and vagina forms the birth canal.



# [New NCERT Class 12th Page No. 29]

#### Q17 Text Solution:

(C)

- Parturition is induced by a complex neuroendocrine mechanism.
- The function of male sex accessory ducts and glands are maintained by androgens.

[New NCERT Class 12<sup>th</sup> Page No. 31, 38]

# Q18 Text Solution:

(C)

- The cycle starts with the menstrual phase, when menstrual flow occurs and it lasts for 3-5 days.
- The menstrual flow results due to the breakdown of the endometrial lining of the uterus and its blood vessels which forms a liquid that comes out through the vagina.

# [New NCERT Class 12<sup>th</sup> Page No. 34]

## Q19 Text Solution:

(A)

- Androgens stimulates the process of spermatogenesis.
- First polar body is formed during first meiotic division of primary occyte within tertiary follicle.
- One ovum is produced during the middle of each menstrual cycle.
- No menstruation occurs during pregnancy.
- The hymen is not a reliable indicator of virginity.

[New NCERT Class 12<sup>th</sup> Page No. 30, 31, 32, 33, 35]

## Q20 Text Solution:

(A)

V7			
	A cushion of fatty tissue		
Mons pubis	covered by pubic hairs and		
	skin.		
Clitoris	Lies at the upper junction		
Cirtoris	of two labia minora.		
Labia majora	Fleshy folds of tissue.		
Labia minora	Paired folds of tissue under		
Lavia IIIIIOra	labia majora.		

[New NCERT Class 12th Page No. 30]

#### Q21 Text Solution:

(B)

- In spermatogenesis, the second meiotic division is equal, producing four haploid spermatids from two secondary spermatocytes.
- The zygote carrying XX chromosomal pattern would develop into a female baby.

[New NCERT Class 12<sup>th</sup> Page No. 31, 36]

## Q22 Text Solution:

(C)

Rupturing of the Graafian follicle leads to the release of secondary oocyte.

[New NCERT Class 12<sup>th</sup> Page No. 33]

# Q23 Text Solution:

(B)

The acrosome contains enzymes that help the sperm penetrate the protective layers surrounding the ovum, facilitating fertilisation.

[New NCERT Class 12<sup>th</sup> Page No. 32]

# Q24 Text Solution:

(C)

During parturition, the smooth muscle of the uterus contracts rhythmically to help expel the fully developed fetus from the uterus.

[New NCERT Class 12<sup>th</sup> Page No. 38]

## Q25 Text Solution:

(C)

- Several mammary ducts join to form a wider mammary ampulla.
- The mammary ampulla connects to the lactiferous duct through which milk is sucked out.

[New NCERT Class 12th Page No. 31]

# Q26 Text Solution:

(D)

The fertilisation takes place in the ampullary region of the fallopian tube.

[New NCERT Class 12<sup>th</sup> Page No. 35]

# Q27 Text Solution:

(D)

- The penis is the male external genitalia.
- The penis is made up of special tissue that helps in the erection to facilitate insemination.

[New NCERT Class 12<sup>th</sup> Page No. 28]



# **Q28** Text Solution:

(D)

The second meiotic division is unequal and results in the formation of a second polar body and a haploid ovum (ootid). Soon the haploid nucleus of the sperms and that of the ovum fuse together to form a diploid zygote.

[New NCERT Class 12<sup>th</sup> Page No. 36]

# Q29 Text Solution:

(C)

The middle piece possesses numerous mitochondria, which produce energy for the movement of the tail that facilitates sperm motility essential for fertilisation.

[New NCERT Class 12<sup>th</sup> Page No. 32]

# Q30 Text Solution:

(C)

<b>( - /</b>		
Heart is formed	After one month of	
rieart is formed	pregnancy	
External genital	By the end of the	
organs are well	first trimester of	
developed	pregnancy	
limbo and digita are	By the end of the	
Limbs and digits are formed	second month of	
lormea	pregnancy	
The body of the	By the end of the	
foetus is covered	second trimester of	
with fine hairs	pregnancy	

[New NCERT Class 12<sup>th</sup> Page No. 38]



