

PYQSide

NEET HUMAN REPRODUCTION — GAMETOGENESIS: SPERMATOGENESIS AND OOGENESIS — PYQS

Max. Marks: 84

Questions: 21

Section A (MCQ)

Q.1 Arrange the following cell layers/structures around the female gamete, from outer to inner side :

- A. Zona pellucida
- B. Perivitelline space
- C. Corona radiata
- D. Plasma membrane of ovum

Choose the correct answer from the options given below :

[NEET (UG) 2026]

- (1) D, B, A, C
- (2) A, C, B, D
- (3) C, A, D, B
- (4) C, A, B, D

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Q.2 Spermatogonia undergo a series of cell divisions to produce sperms.

- A. Spermatogonia always undergo meiotic cell division.
- B. Primary spermatocytes divide mitotically to produce secondary spermatocytes.
- C. Secondary spermatocytes, through their second meiotic division, produce haploid spermatids.
- D. Spermatids produce spermatozoa through mitosis.
- E. Spermatids transform into spermatozoa by spermiogenesis.

Select the correct statements from the following:
Choose the correct answer from the options given below :

[NEET (UG) 2026]

- (1) A, C and E only
- (2) C and E only
- (3) A and E only
- (4) B, C and D only

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Q.3 The covering of ovum at ovulation is _____.

[RE-NEET (UG) 2026]

- (1) chorion
- (2) endometrium
- (3) zona radiata
- (4) zona pellucida

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Q.4 Match List-I with List-II.

List - I		List - II	
A.	Head	I.	Enzymes
B.	Middle piece	II.	Sperm motility

List - I		List - II	
C.	Acrosome	III.	Energy
D.	Tail	IV.	Genetic material

Choose the correct answer from the options given below :

[NEET (UG) 2025]

- (1) A-III, B-IV, C-II, D-I
- (2) A-III, B-II, C-I, D-IV
- (3) A-IV, B-III, C-I, D-II
- (4) A-IV, B-III, C-II, D-I

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Q.5 Consider the following :

- A. The reductive division for the human female gametogenesis starts earlier than that of the male gametogenesis.
- B. The gap between the first meiotic division and the second meiotic division is much shorter for males compared to females.
- C. The first polar body is associated with the formation of the primary oocyte.
- D. Luteinizing Hormone (LH) surge leads to disintegration of the endometrium and onset of menstrual bleeding.

Choose the correct answer from the options given below:

[NEET (UG) 2025]

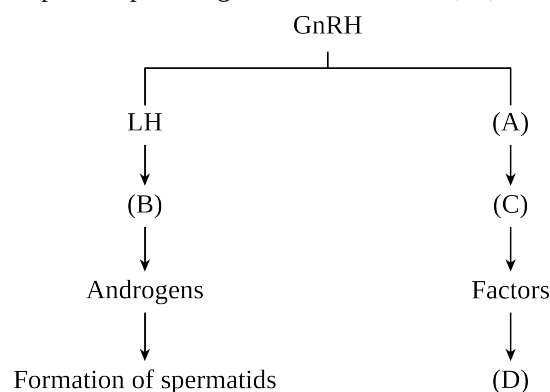
- (1) B and D are true
- (2) B and C are true
- (3) A and B are true
- (4) A and C are true

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Q.6 Identify the correct option (A), (B), (C), (D) with respect to spermatogenesis.

[NEET (UG) 2024]



- (1) FSH, Leydig cells, Sertoli cells, spermiogenesis.
 (2) ICSH, Interstitial cells, Leydig cells, spermiogenesis.
 (3) FSH, Sertoli cells, Leydig cells, spermatogenesis.
 (4) ICSH, Leydig cells, Sertoli cells, spermatogenesis.

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- Q.7** Which of the following statements are true for spermatogenesis but do not hold true for Oogenesis?
 A. It results in the formation of haploid gametes
 B. Differentiation of gamete occurs after the completion of meiosis
 C. Meiosis occurs continuously in a mitotically dividing stem cell population
 D. It is controlled by the Luteinising Hormone (LH) and Follicle Stimulating Hormone (FSH) secreted by the anterior pituitary
 E. It is initiated at puberty
 Choose the most appropriate answer from the options given below : [NEET (UG) 2022]
- (1) C and D only (2) B and C only
 (3) B, D and E only (4) B, C and E only

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- Q.8** Given below are two statements:
Statement-I: The release of sperms into the seminiferous tubules is called spermiation.
Statement-II: Spermiogenesis is the process of formation of sperms from spermatogonia.
 In the light of the above statements, choose the most appropriate answer from the options given below: [NEET (UG) 2022]
- (1) Both Statement-I and Statement-II are correct
 (2) Both Statement-I and Statement-II are incorrect
 (3) Statement-I is correct but Statement-II is incorrect
 (4) Statement-I is incorrect but Statement-II is correct

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- Q.9** At which stage of life the oogenesis process is initiated? [NEET (UG) 2022]
- (1) Puberty
 (2) Embryonic development stage
 (3) Birth
 (4) Adult

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- Q.10** How many secondary spermatocytes are required to form 400 million spermatozoa? [NEET (UG) 2022 (Phase 2)]
- (1) 400 million (2) 50 million
 (3) 100 million (4) 200 million

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- Q.11** The difference between spermiogenesis and spermiation is [NEET 2018]
- (1) in spermiogenesis spermatids are formed, while in spermiation spermatozoa are formed
 (2) in spermiogenesis spermatozoa are formed, while in spermiation spermatids are formed
 (3) in spermiogenesis spermatozoa from Sertoli cells are released into the cavity of seminiferous tubules, while in spermiation spermatozoa are formed
 (4) in spermiogenesis spermatozoa are formed, while in spermiation spermatozoa are released from Sertoli cells into the cavity of seminiferous tubules

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- Q.12** Identify the correct statement on 'inhibin'. [NEET 2016 (Phase 1)]
- (1) Is produced by granulosa cells in ovary and inhibits the secretion of LH
 (2) Is produced by nurse cells in testes and inhibits the secretion of LH
 (3) Inhibits the secretion of LH, FSH and prolactin
 (4) Is produced by granulosa cells in ovary and inhibits the secretion of FSH

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- Q.13** Match **column I** with **column II** and select the correct option using the codes given below.

[NEET 2016 (Phase 2)]

Column I		Column II	
a.	Mons pubis	i.	Embryo formation
b.	Antrum	ii.	Sperm
c.	Trophectoderm	iii.	Female external genitalia
d.	Nebenkern	iv.	Graafian follicle

- (1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
 (2) (a)-(iii), (b)-(iv), (c)-(i), (d)-(ii)
 (3) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)
 (4) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)

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Q.14 In human females, meiosis-II is not completed until

[AIPMT 2015]

- (1) uterine implantation (2) birth
(3) puberty (4) fertilisation

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Q.15 Which of the following layers in an antral follicle is acellular?

[AIPMT 2015]

- (1) Stroma (2) Zona pellucida
(3) Granulosa (4) Theca interna

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Q.16 Which of the following cells during gametogenesis is normally diploid?

[AIPMT 2015 (Cancelled)]

- (1) Spermatogonia (2) Secondary polar body
(3) Primary polar body (4) Spermatid

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Q.17 What is the correct sequence of sperm formation?

[NEET 2013]

- (1) Spermatogonia, spermatozoa, spermatocytes, spermatids
(2) Spermatogonia, spermatocytes, spermatids, spermatozoa
(3) Spermatids, spermatocytes, spermatogonia, spermatozoa
(4) Spermatogonia, spermatocytes, spermatozoa, spermatids

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Q.18 Which one of the following statements about human sperm is correct?

[AIPMT 2010 (Prelims)]

- (1) Acrosome has a conical pointed structure used for piercing and penetrating the egg, resulting in fertilisation
(2) The sperm lysins in the acrosome dissolve the egg envelope facilitating fertilisation
(3) Acrosome serves as a sensory structure leading the sperm towards the ovum
(4) Acrosome serves no particular function

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Q.19 The correct sequence of spermatogenetic stages leading to the formation of sperms in a mature human testis is:

[AIPMT 2009]

- (1) spermatocyte - spermatogonia - spermatid - sperms
(2) spermatogonia - spermatid - spermatocyte - sperms
(3) spermatid - spermatocyte - spermatogonia - sperms
(4) spermatogonia - spermatocyte - spermatid - sperms

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Q.20 In humans, at the end of the first meiotic division, the male germ cells differentiate into the:

[AIPMT 2008]

- (1) secondary spermatocytes
(2) spermatogonia
(3) primary spermatocytes
(4) spermatids

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Q.21 Sertoli cells are regulated by the pituitary hormone known as-

[AIPMT 2006]

- (1) LH (2) FSH (3) GH (4) Prolactin

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	2	4	3	3	1	4	3	2	4	4
Ques.	12	13	14	15	16	17	18	19	20	21	
Ans.	4	2	4	2	1	2	2	4	1	2	