

Exercise - I (Conceptual Questions)

Build Up Your Understanding

THE MALE REPRODUCTIVE SYSTEM

1. Which one of the following is a primary sex organ of human male ?
 (1) Scrotum (2) Penis
 (3) Testis (4) Prostate gland

BHR001

2. Secondary sex organ in human male is :-
 (1) testis (2) ovary
 (3) beard (4) vas deferens

BHR002

3. Vasa efferentia connect the :-
 (1) testis with epididymis
 (2) kidney with urinary bladder
 (3) testis with scrotal wall
 (4) None of the above

BHR003

4. In human, failure of testes to descend into scrotum is known as :-
 (1) paedogenesis (2) castration
 (3) cryptorchidism (4) impotency

BHR004

5. Common duct formed by union of vas deferens and duct from seminal vesicle is :-
 (1) urethra
 (2) tunica vasculosa
 (3) ejaculatory duct
 (4) spermatic duct

BHR005

6. Scrotum communicates with abdominal cavity through :-
 (1) urethra (2) inguinal canal
 (3) vas deferens (4) epididymis

BHR006

7. Tunica albuginea is the covering around :-
 (1) oviduct (2) testis
 (3) kidney (4) heart

BHR007

8. The functional unit of testis is :-
 (1) uriniferous tubules
 (2) malpighian tubules
 (3) seminiferous tubules
 (4) acini or lobules

BHR008

9. Penile urethra traverses through :-
 (1) corpus cavernosum
 (2) corpus spongiosum
 (3) corpus callosum
 (4) corpus striatum

BHR009

10. Seminiferous tubules are composed of :-
 (1) spermatogonia
 (2) glandular epithelium
 (3) sensory epithelium
 (4) germinal epithelium

BHR010

11. In human, the testes are located in :-
 (1) abdominal cavity
 (2) thoracic cavity
 (3) extra-abdominal cavity
 (4) pericardial cavity

BHR011

12. Bundles of erectile tissues in penis are :-
 (1) corpora cavernosa
 (2) corpus spongiosum
 (3) Both (1) & (2)
 (4) None of the above

BHR012

13. Glans penis is covered by :-
 (1) areolar membrane (2) prepuce
 (3) metrium (4) None of these

BHR013

14. In human, the testes occur in scrotal sacs, outside the viscera because of the :-
 (1) presence of urinary bladder
 (2) presence of rectum
 (3) long vas-deferens
 (4) requirement of low temperature for spermatogenesis

BHR014

15. Read the following statements.
 (a) It is paired structure
 (b) It is present on lateral side of male urethra
 (c) It help in lubrication of penis
 In above statements 'it' refers to :-
 (1) seminal vesicle
 (2) Bartholin's gland
 (3) bulbourethral gland
 (4) prostate

BHR015

16. Cells of Leydig occur in :-
 (1) liver (2) ovary
 (3) testis (4) spleen

BHR016

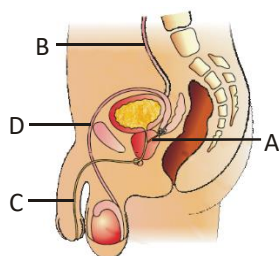
17. Seminiferous tubules occur in the :-
 (1) liver (2) kidney
 (3) ovary (4) testis

BHR017

18. Fructose is present in the secretion of:-
 (1) seminal vesicle (2) perineal gland
 (3) Cowper's gland (4) Bartholin's gland

BHR018

19. It is a diagrammatic sectional view of male reproductive system. Identify common duct which forms from the fusion of duct of seminal vesicle and vas deferens.



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

BHR019

20. Temperature of scrotum as compared to abdominal cavity is less by :-
 (1) 1°C (2) 5°C
 (3) 3°C (4) 10°C

BHR020

21. Outer coat of seminiferous tubules is composed of fibrous connective tissue and is called as :-

- (1) tunica propria (2) lamina propria
 (3) plica semilunaris (4) tunica albuginea

BHR021

22. Secretions from which one of the following glands are rich in fructose, calcium and some enzymes ?

- (1) Salivary glands
 (2) Female sex accessory glands
 (3) Male sex accessory glands
 (4) Liver

BHR022

23. Which is an unpaired gland of male reproductive system ?

- (1) Bartholin's gland (2) Seminal vesicle
 (3) Prostate gland (4) Cowper's gland

BHR023

24. In human, maturation of sperms take place at a temperature :-

- (1) equal to that of body
 (2) higher than that of body
 (3) lower than that of body
 (4) at any temperature

BHR024

25. Circumcision is the procedure of :-

- (1) cutting the glans penis
 (2) removal of whole skin of penis
 (3) removal of movable skin (prepuce) of glans penis
 (4) reduction of the body part of penis

BHR025

26. Prostate gland produces a secretion for :-

- (1) attracting sperms
 (2) stimulating sperm activity
 (3) attracting egg
 (4) None of the above

BHR026

27. Testes descend into scrotum in human for:-
 (1) spermatogenesis
 (2) fertilization
 (3) development of sex organs
 (4) development of visceral organs

BHR027

28. Tunica vaginalis is found in :-
 (1) ovary of female (2) testis of male
 (3) vagina of female (4) None of the above

BHR028

29. Spermatozoa are nourished during their development by :-
 (1) Sertoli cells
 (2) interstitial cells
 (3) connective tissue cells
 (4) None of the above

BHR029

30. Release of sperms from testis is called as :-
 (1) spermiation (2) semination
 (3) insemination (4) ejaculation

BHR030

THE FEMALE REPRODUCTIVE SYSTEM

31. A secondary sexual character of human female is :-
 (1) breasts (2) ovaries
 (3) testes (4) thyroid gland

BHR031

32. Which is not a secondary sex organ in human?
 (1) Vagina (2) Penis
 (3) Prostate (4) Mammary gland

BHR032

33. At puberty, woman starts producing :-
 (1) sperms (2) urine
 (3) young ones (4) ova

BHR033

34. Eggs from ovary are released in :-
 (1) oviduct (2) kidney
 (3) ureter (4) coelom

BHR034

35. Lower narrow end of uterus is called as :-
 (1) urethra (2) cervix
 (3) clitoris (4) vulva

BHR035

36. Germinal epithelial cells are cuboidal and these are found in :-
 (1) testes (2) ovaries
 (3) Both (1) & (2) (4) None of the above

BHR036

37. Degenerative process of follicles or eggs in ovary is called :-
 (1) metagenesis (2) atresia
 (3) regression (4) None of the above

BHR037

38. Endometrium is lining of :-
 (1) testis (2) urinary bladder
 (3) uterus (4) ureter

BHR038

39. Clitoris is present at the upper junction of :-
 (1) labia majora (2) mons pubis
 (3) perineum (4) labia minora

BHR039

40. Parturition canal in female is :-
 (1) uterus (2) oviduct
 (3) vagina (4) urethra

BHR041

SPERMATOGENESIS AND STRUCTURE OF HUMAN SPERM

41. During differentiation, the spermatids remain associated with :-
 (1) Leydig's cells (2) Kupffer's cells
 (3) Spermatogonia (4) Sertoli cell

BHR042

42. In gametogenesis, reduction division takes place during :-
 (1) multiplication phase
 (2) growth phase
 (3) first maturation division
 (4) second maturation division

BHR043

43. Which type of division takes place during second maturation division ?
 (1) Reduction division
 (2) Equational division
 (3) Amitosis
 (4) None of the above

BHR044

44. Longest phase of spermatogenesis is :-
 (1) multiplication phase
 (2) growth phase
 (3) maturation phase
 (4) germinal phase

BHR045

45. During spermatogenesis, how many spermatozoa are formed from a single primary spermatocyte ?
 (1) 1 (2) 2 (3) 4 (4) 8

BHR046

46. Correct order of spermatogenesis is :-
 (1) Spermatids → Spermatogonium → Spermatocytes → Sperms
 (2) Spermatogonium → Primary spermatocyte → Secondary Spermatocytes → Spermatids → Sperms
 (3) Primary spermatocyte → Spermatogonium → Secondary spermatocytes → Sperms → Spermatids
 (4) Spermatogonium → Secondary spermatocytes → Primary spermatocyte → Spermatids → Sperms

BHR047

47. Which part of sperm is called power house ?
 (1) Head (2) Neck
 (3) Middle piece (4) Tail

BHR048

48. The acrosome plays a role in :-
 (1) fusion of nuclei of gametes
 (2) motility of sperm
 (3) penetration of sperm into ovum
 (4) All of the above

BHR049

49. The head of a mature sperm is mainly composed of :-
 (1) elongated nucleus and acrosomal material
 (2) mitochondria, cytoplasm and nucleus
 (3) two centrioles and the axial filament
 (4) All of the above

BHR050

50. A mature sperm has :-
 (1) a pair of flagella
 (2) a nucleus, an acrosome and a centriole
 (3) a nucleus, an acrosome and a pair of centrioles
 (4) a nucleus, an acrosome and a pair of centrioles and a tail

BHR051

51. Which part of the spermatid forms acrosome of sperm ?
 (1) Mitochondria (2) Golgi body
 (3) Nucleus (4) Lysosome

BHR052

52. Which of the following sets of vitamins is essential for gametogenesis ?
 (1) Vitamin A and vitamin E
 (2) Vitamin C and vitamin D
 (3) Vitamin E and vitamin K
 (4) Vitamin E and vitamin B complex

BHR053

O O G E N E S I S

53. At the time of birth, egg is arrested in the form of :-
 (1) oogonia (2) primary oocyte
 (3) secondary oocytes (4) ovum

BHR054

54. A human female has the maximum number of primary oocytes in her ovaries :-
 (1) at menopause
 (2) at puberty
 (3) at birth
 (4) early in her fertile years

BHR055

55. Egg is liberated from ovary in human at :-

- (1) secondary oocyte stage
- (2) primary oocyte stage
- (3) oogonial stage
- (4) mature ovum stage

BHR056

56. During oogenesis, first meiotic division starts in :-

- (1) first polar body
- (2) second polar body
- (3) primary oocyte
- (4) secondary oocyte

BHR057

57. Which of the following are haploid cells ?

- (1) Primary spermatocytes and primary oocytes
- (2) Secondary spermatocytes and secondary oocytes
- (3) Spermatogonia and oogonia
- (4) Germinal cells.

BHR058

58. The process of spermatogenesis and oogenesis in human are under the influence of which hormone ?

- (1) Oxytocin (2) FSH
- (3) ACTH (4) ICSH

BHR059

59. During which stage of gametogenesis meiosis occurs?

- (1) Growth phase
- (2) Multiplication phase
- (3) Maturation phase
- (4) None of the above

BHR060

60. The primary egg membrane of human egg is:-

- (1) chorion
- (2) corona radiata
- (3) zona pellucida
- (4) None of the above

BHR061

61. Which of the following are diploid cells ?

- (1) Secondary spermatocytes
- (2) Spermatozoa and ova
- (3) Spermatogonia, oogonia and primary spermatocytes
- (4) Secondary oocytes

BHR062

62. Stored food of oocyte is :-

- (1) nucleus (2) cytoplasm
- (3) corticle granules (4) yolk

BHR063

63. Polar body is produced during the formation of :-

- (1) sperm (2) secondary oocyte
- (3) oogonium (4) spermatocytes

BHR064

INTERNAL STRUCTURE OF OVARY, OLICULAR DEVELOPMENT AND MENSTRUAL CYCLE

64. Central stroma of ovary is made up of :-

- (1) fibrous connective tissue
- (2) reticular tissue
- (3) adipose connective tissue
- (4) None of the above

BHR065

65. Ovarian follicles are present in :-

- (1) medulla
- (2) germinal epithelium
- (3) cortex
- (4) mesovarium

BHR066

66. Graafian follicle contains :-

- (1) many oocytes
- (2) many sperms
- (3) a single oocyte
- (4) site for fertilisation of egg

BHR067

67. In human, corpus luteum is found in :-

- (1) brain (2) ovary
- (3) liver (4) eyes

BHR068

- 68.** Antrum is filled with fluid and is found in :-
 (1) bone marrow of bone
 (2) cavity of brain
 (3) Graffian follicle of ovary
 (4) pericardium of heart

BHR069

- 69.** Which one of the following is fibrous layer of follicle ?
 (1) Theca externa
 (2) Zona pellucida
 (3) Membrana granulosa
 (4) Vitelline membrane

BHR070

- 70.** In case of non fertilization, corpus luteum :-
 (1) stops secreting progesterone
 (2) changes into corpus albicans
 (3) starts producing progesterone
 (4) None of the above

BHR071

- 71.** Lutein cells are found in :-
 (1) primary follicle (2) corpus albicans
 (3) corpus luteum (4) All of the above

BHR072

- 72.** Corpus luteum is a/an :-
 (1) excretory structure
 (2) endocrine structure
 (3) digestive structure
 (4) respiratory structure

BHR073

- 73.** Luteal phase is the other name of :-
 (1) follicular phase
 (2) proliferative phase
 (3) menstrual flow phase
 (4) secretory phase

BHR074

- 74.** Follicular phase of menstrual cycle is also known as :-
 (1) proliferative phase
 (2) secretory phase
 (3) luteal phase
 (4) menstruation phase

BHR075

- 75.** Loss of reproductive capacity in women after age of approximately 45 years is known as :-

- (1) menstruation (2) ageing
 (3) menopause (4) menarche

BHR076

- 76.** Which of the following hormones induces the development of corpus luteum ?

- (1) LH (2) Oestrogen
 (3) FSH (4) LTH

BHR077

- 77.** The process of releasing the mature female gamete from the ovary is called as :-

- (1) ovulation (2) parturition
 (3) implantation (4) fertilisation

BHR078

- 78.** Ovulation hormone is :-

- (1) FSH (2) ICSH
 (3) LH (4) testosterone

BHR079

- 79.** Onset of pregnancy :-

- (1) stimulates testosterone secretion
 (2) inhibits further ovulation
 (3) leads to degeneration of ovary
 (4) inhibits fusion nuclei of egg and sperm

BHR080

- 80.** Which of the following statements is correct ?

- (1) Menstrual cycle is present in all mammals.
 (2) Menstrual cycle is present in all primates.
 (3) Estrous cycle occurs in all mammals.
 (4) Most of the mammals are ovoviviparous.

BHR081

- 81.** Yellow corpus luteum occurs in a human in :-

- (1) heart to initiate heart beat
 (2) skin to function as pain receptor
 (3) brain and connects cerebral hemispheres
 (4) ovary for the secretion of progesterone

BHR082

82. The fall in progesterone level leads to :-
 (1) gestation (2) menopause
 (3) lactation (4) menstruation

BHR083

83. In uterus, endometrium proliferates in response to :-
 (1) relaxin (2) oxytocin
 (3) progesterone (4) oestrogen

BHR084

84. Pregnancy hormone is :-
 (1) estrogen (2) progesterone
 (3) LH (4) FSH

BHR085

85. Pregnancy is detected with the help of presence of which hormones in urine of a pregnant female ?
 (1) LH (2) Progesterone
 (3) FSH (4) hCG

BHR086

STRUCTURE OF HUMAN EGG AND FERTILIZATION

86. Site of fertilization in human is :-
 (1) ovary (2) uterus
 (3) vagina (4) fallopian tube

BHR087

87. During fertilization, intermixing of chromosome of male and female gametes is called :-
 (1) syngamy
 (2) plasmogamy
 (3) karyogamy
 (4) amphimixis

BHR088

88. After cortical reaction, formation of fertilization membrane occurs :-
 (1) outside of corona radiata
 (2) inside of corona radiata
 (3) in perivitelline space
 (4) inside of membrane of oocyte

BHR089

89. Which of the following is responsible for division in fertilised egg ?
 (1) Centriole of ovum
 (2) Proximal centriole of sperm
 (3) Distal centriole of sperm
 (4) Mitochondria of sperm

BHR090

90. Capacitation of sperm occurs in :-
 (1) urethra (2) vas deferens
 (3) vagina (4) seminal vesicle

BHR091

91. Which part of sperm enters in egg in human?
 (1) Complete sperm
 (2) Only head
 (3) Head and middle piece
 (4) Head and acrosome

BHR092

EMBRYONIC DEVELOPMENT

92. Cleavage starts in :-
 (1) fallopian tube (2) uterus
 (3) vagina (4) None of these

BHR093

93. Cells formed as a result of cleavage are called as :-
 (1) megameres (2) micromeres
 (3) blastocyst (4) blastomeres

BHR094

94. Which of the following characteristics does not belong to cleavage ?
 (1) Decrease in size of blastomeres
 (2) Rapid mitotic cell division
 (3) Interphase of very short duration
 (4) Differentiation of blastomeres

BHR095

95. How many of the following structures may found in fallopian tube ?
 Morula, Secondary oocyte, Primary oocyte, Secondary follicle, Ovum, Zygote, Blastocyst, Gastrula.
 (1) 3 (2) 2 (3) 4 (4) 5

BHR096

96. What is true for cleavage ?
 (1) Size of embryo is increased
 (2) Size of cells is decreased
 (3) Size of cells is increased
 (4) Size of embryo is decreased
BHR097
97. Solid ball of cell produced by repeated cleavage is called as :-
 (1) gastrula (2) blastocyst
 (3) morula (4) None of the above
BHR098
98. In gastrula stage, which layer(s) is/are formed ?
 (1) ectoderm (2) mesoderm
 (3) endoderm (4) All of the above
BHR099
99. Morphogenetic movements of blastomeres result in:-
 (1) morula stage (2) blastocyst stage
 (3) gastrula stage (4) zygote
BHR100
100. Gastrulation is a process :-
 (1) which starts the formation of germ layers
 (2) that occurs just after morulation
 (3) that occurs just after cleavage
 (4) of rapid growth in blastomeres
BHR101
101. In which stage of development, the embryonic cells form the germinal layers?
 (1) Morula (2) Blastocyst
 (3) Gastrula (4) Zygote
BHR102
102. Sexually reproducing multicellular animals start their embryonic development from :-
 (1) gastrula stage
 (2) morula stage
 (3) unicellular zygote
 (4) ovum
BHR103

103. Placenta is a region where :-
 (1) foetus is attached to mother by spermatic cord
 (2) foetus is provided with mother's blood
 (3) foetus receives nourishment from mother's blood
 (4) foetus is covered by membranes
BHR104
104. In human embryo, the extra embryonic membranes are formed by :-
 (1) inner cell mass (2) trophoblast
 (3) formative cells (4) follicular cells
BHR105

PARTURITION

105. The expulsion of fully developed foetus from the uterus is known as :-
 (1) ovulation (2) menstruation
 (3) gestation (4) parturition
BHR106
106. Oxytocin helps in mainly :-
 (1) milk production (2) child birth
 (3) urine formation (4) gametogenesis
BHR107
107. Which of the following is not true about parturition process ?
 (1) Secretion of oxytocin hormone by posterior pituitary
 (2) Narrowing of pelvic cavity by relaxin hormone
 (3) Secretion of progesterone hormone is stopped
 (4) General position of foetus is occipito-anterior
BHR108
108. Foetal ejection reflex in human female is induced by :-
 (1) differentiation of mammary glands
 (2) pressure exerted by amniotic fluid
 (3) release of oxytocin from pituitary gland
 (4) fully developed foetus and placenta
BHR109

EXTRA POINTS

109. In the female, which structure is homologous to penis of male ?

- (1) Cervix (2) Vagina
(3) Uterus (4) Clitoris

BHR111

110. Puberty occurs in females at the age of :-

- (1) 8 - 10 years (2) 11-14 years
(3) 15-17 years (4) 18-20 years

BHR112

111. Which is not correct about secondary sexual characters of female ?

- (1) Development of mammary glands
(2) Presence of pubic hair
(3) Voice of low pitch
(4) Menarche

BHR113

112. Hyaluronic acid which binds cells of corona radiata is a :-

- (1) homopolysaccharide
(2) amino acid
(3) glycoprotein
(4) mucopolysaccharide

BHR115

113. Identical twins will be produced when :-

- (1) one spermatozoon fertilises two ova
(2) one ovum is fertilised by two spermatozoa
(3) two eggs are fertilised
(4) one fertilised egg divides into two blastomeres and they become separate

BHR117

EXERCISE-I (Conceptual Questions)

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	3	4	1	3	3	2	2	3	2	4	3	3	2	4	3
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	3	4	1	1	3	1	3	3	3	3	2	1	2	1	2
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	1	4	4	4	2	3	2	3	4	3	4	3	2	3	3
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	2	3	3	1	4	2	1	2	3	1	3	2	2	3	3
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	3	4	2	1	3	3	2	3	1	2	3	2	4	1	3
Question	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Answer	1	1	3	2	2	4	4	4	2	4	4	4	3	2	3
Question	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
Answer	1	1	4	4	3	2	3	4	3	1	3	3	3	2	4
Question	106	107	108	109	110	111	112	113							
Answer	2	2	4	4	2	3	4	4							

Exercise - II (Previous Year Questions)

AIPMT/NEET

AIPMT 2014

1. The main function of mammalian corpus luteum is to produce :
 (1) estrogen only
 (2) progesterone
 (3) human chorionic gonadotropin
 (4) relaxin only

BHR143

2. Select the correct option describing gonadotropin activity in a normal pregnant female :-
 (1) High level of FSH and LH stimulates the thickening of endometrium.
 (2) High level of FSH and LH facilitate implantation of the embryo.
 (3) High level of hCG stimulates the synthesis of estrogen and progesterone.
 (4) High level of hCG stimulates the thickening of endometrium.

BHR144

AIPMT 2015

3. Capacitation refers to changes in the :-
 (1) Ovum before fertilization
 (2) Ovum after fertilization
 (3) Sperm after fertilization
 (4) Sperm before fertilization
- BHR145**
4. Hysterectomy is surgical removal of :-
 (1) Prostate gland (2) Vas-deferense
 (3) Mammary glands (4) Uterus
- BHR146**
5. Which of the following cells during gametogenesis is normally diploid?
 (1) Spermatid
 (2) Spermatogonia
 (3) Secondary polar body
 (4) Primary polar body

BHR147

6. Which of these is not an important component of initiation of parturition in humans?
 (1) Synthesis of prostaglandins
 (2) Release of oxytocin
 (3) Release of prolactin
 (4) Increase in estrogen and progesterone ratio

BHR148

Re-AIPMT 2015

7. Ectopic pregnancies are referred to as :-
 (1) Pregnancies terminated due to hormonal imbalance
 (2) Pregnancies with genetic abnormality.
 (3) Implantation of embryo at site other than uterus.
 (4) Implantation of defective embryo in the uterus
- BHR149**
8. Which of the following events is not associated with ovulation in human female?
 (1) LH surge
 (2) Decrease in estradiol
 (3) Full development of Graafian follicle
 (4) Release of secondary oocyte

BHR150

9. In human females, meiosis-II is not completed until?
 (1) birth
 (2) puberty
 (3) fertilization
 (4) uterine implantation

BHR151

10. Which of the following layers in an antral follicle is acellular?
 (1) Zona pellucida (2) Granulosa
 (3) Theca internal (4) Stroma

BHR152

NEET-I 2016

11. Fertilization in humans is practically feasible only if:-
- (1) the sperms are transported into vagina just after the release of ovum in fallopian tube
 - (2) the ovum and sperms are transported simultaneously to ampullary isthmic junction of the fallopian tube
 - (3) the ovum and sperms are transported simultaneously to ampullary - isthmic junction of the cervix
 - (4) the sperms are transported into cervix within 48 hrs of release of ovum in uterus

BHR153

12. Select the incorrect statement :-
- (1) FSH stimulates the sertoli cells which help in spermiogenesis
 - (2) LH triggers ovulation in ovary
 - (3) LH and FSH decrease gradually during the follicular phase
 - (4) LH triggers secretion of androgens from the Leydig cells

BHR154

13. Changes in GnRH pulse frequency in females is controlled by circulating levels of :-
- (1) estrogen and progesterone
 - (2) estrogen and inhibin
 - (3) progesterone only
 - (4) progesterone and inhibin

BHR155

14. Identify the correct statement on 'inhibin' :-
- (1) Inhibits the secretion of LH, FSH and Prolactin.
 - (2) Is produced by granulosa cells in ovary and inhibits the secretion of FSH.
 - (3) Is produced by granulosa cells in ovary and inhibits the secretion of LH.
 - (4) Is produced by nurse cells in testes and inhibits the secretion of LH.

BHR156

NEET-II 2016

15. Several hormones like hCG, hPL, estrogen, progesterone are produced by :-
- (1) Fallopian tube
 - (2) Pituitary
 - (3) Ovary
 - (4) Placenta
16. Which of the following depicts the correct pathway of transport of sperms?
- (1) Rete testis → Vas deferens → Efferent ductules → Epididymis
 - (2) Efferent ductules → Rete testis → Vas deferens → Epididymis
 - (3) Rete testis → Efferent ductules → Epididymis → Vas deferens
 - (4) Rete testis → Epididymis → Efferent ductules → Vas deferens

BHR157

BHR158

17. Match Column-I with Column-II and select the correct option using the codes given below:

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

Codes:

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

BHR159

NEET-UG 2016

18. Capacitation occurs in :-
- (1) Epididymis
 - (2) Vas deferens
 - (3) Female reproductive tract
 - (4) Rete testis

BHR160

19. A temporary endocrine gland in the human body is:-

- (1) Corpus cardiacum (2) Corpus luteum
(3) Corpus allatum (4) Pineal gland

BHR161

20. GnRH, a hypothalamic hormone, needed in reproduction, acts on:-

- (1) anterior pituitary gland and stimulates secretion of LH and FSH.
(2) posterior pituitary gland and stimulates secretion of oxytocin and FSH.
(3) posterior pituitary gland and stimulates secretion of LH and relaxin.
(4) anterior pituitary gland and stimulates secretion of LH and oxytocin.

BHR162

NEET-UG 2018

21. Hormones secreted by the placenta to maintain pregnancy are :

- (1) hCG, hPL, progesterones, prolactin
(2) hCG, hPL, estrogens, relaxin, oxytocin
(3) hCG, hPL, progesterones, estrogens
(4) hCG, progesterones, estrogens, glucocorticoids

BHR163

22. The difference between spermiogenesis and spermiation is :-

- (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.

BHR164

23. The amnion of mammalian embryo is derived from :-

- (1) ectoderm and mesoderm
(2) endoderm and mesoderm
(3) mesoderm and trophoblast
(4) ectoderm and endoderm

BHR165

NEET-UG 2019

24. Select the correct sequence of transport of sperm cells in male reproductive system :-

- (1) Testis → Epididymis → Vasa efferentia → Rete testis → Inguinal canal → Urethra
(2) Seminiferous tubules → Rete testis → Vasa efferentia → Epididymis → Vas deferens → Ejaculatory duct → Urethra → Urethral meatus
(3) Seminiferous tubules → Vasa efferentia → Epididymis → Inguinal canal → Urethra
(4) Testis → Epididymis → Vasa efferentia → Vas deferens → Ejaculatory duct → Inguinal canal → Urethra → Urethral meatus

BHR166

25. Extrusion of second polar body from egg nucleus occurs :

- (1) after entry of sperm but before fertilization
(2) after fertilization
(3) before entry of sperm into ovum
(4) simultaneously with first cleavage

BHR167

NEET-UG 2019 (Odisha)

26. No new follicles develop in the luteal phase of the menstrual cycle because :

- (1) Follicles do not remain in the ovary after ovulation
(2) FSH levels are high in the luteal phase
(3) LH levels are high in the luteal phase
(4) Both FSH and LH levels are low in the luteal phase

BHR168

NEET-UG 2020

27. Which of the following hormone levels will cause release of ovum (ovulation) from the Graafian follicle?

(1) Low concentration of FSH
 (2) High concentration of Estrogen
 (3) High concentration of Progesterone
 (4) Low concentration of LH

BHR169

28. Match the following columns and select the correct option :-

Column-I

Column-II

(a) Placenta	(i) Androgens
(b) Zona pellucida	(ii) Human Chorionic Gonadotropin (hCG)
(c) Bulbo-urethral glands	(iii) Layer of the ovum
(d) Leydig cells	(iv) Lubrication of the Penis

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

BHR170

29. Meiotic division of the secondary oocyte is completed :-

(1) At the time of fusion of a sperm with an ovum
 (2) Prior to ovulation
 (3) At the time of copulation
 (4) After zygote formation

BHR171

NEET-UG 2021

30. Receptors for sperm binding in mammals are present on:-

(1) Corona radiata
 (2) Vitelline membrane
 (3) Perivitelline space
 (4) Zona pellucida

BHR172

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

(1) Increase in estrogen and progesterone ratio
 (2) Synthesis of prostaglandins
 (3) Release of Oxytocin
 (4) Release of Prolactin

BHR173

32. Which of the following secretes the hormone, relaxin, during the later phase of pregnancy?

(1) Graafian follicle
 (2) Corpus luteum
 (3) Foetus
 (4) Uterus

BHR174

NEET-UG 2022

33. 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:

(1) Both **Statement I** and **Statement II** are incorrect
 (2) **Statement I** is correct but **Statement II** is incorrect
 (3) **Statement I** is incorrect but **Statement II** is correct
 (4) Both **Statement I** and **Statement II** are correct

BHR175

34. 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:

- (1) (b) and (c) only
- (2) (b), (d) and (e) only
- (3) (b), (c) and (e) only
- (4) (c) and (e) only

BHR176

Re-NEET-UG 2022

35. Arrange the components of mammary gland. (from proximal to distal)

- (a) Mammary duct
- (b) Lactiferous duct
- (c) Alveoli
- (d) Mammary ampulla
- (e) Mammary tubules

Choose the most appropriate answer from the options given below :

- (1) (c) → (a) → (d) → (e) → (b)
- (2) (b) → (c) → (e) → (d) → (a)
- (3) (c) → (e) → (a) → (d) → (b)
- (4) (e) → (c) → (d) → (b) → (a)

BHR177

36. How many secondary spermatocytes are required to form 400 million spermatozoa ?

- (1) 50 million
- (2) 100 million
- (3) 200 million
- (4) 400 million

BHR178

37. Given below are two statements :

One is **labelled** as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : During pregnancy the level of thyroxine is increased in the maternal blood.

Reason (R) : Pregnancy is characterised by metabolic changes in the mother.

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

- (1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**
- (2) Both **(A)** and **(R)** are correct but **(R)** is not the correct explanation of **(A)**
- (3) **(A)** is correct but **(R)** is not correct
- (4) **(A)** is not correct but **(R)** is correct

BHR179

NEET-UG 2023

38. Which of the following statements are correct regarding female reproductive cycle?

- A. In non-primate mammals cyclical changes during reproduction are called oestrus cycle.
- B. First menstrual cycle begins at puberty and is called menopause.
- C. Lack of menstruation may be indicative of pregnancy.
- D. Cyclic menstruation extends between menarche and menopause.

Choose the **most appropriate** answer from the options given below :

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

BHR265

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

Assertion A : Endometrium is necessary for implantation of blastocyst.

Reason R : In the absence of fertilization, the corpus luteum degenerates that causes disintegration of endometrium.

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

- (1) Both **A** and **R** are true but **R** is NOT the correct explanation of **A**.
- (2) **A** is true but **R** is false.
- (3) **A** is false but **R** is true.
- (4) Both **A** and **R** are true and **R** is the correct explanation of **A**.

BHR266

40. Given below are two statements :
- Statement I :** Vas deferens receives a duct from seminal vesicle and opens into urethra as the ejaculatory duct.

Statement II : The cavity of the cervix is called cervical canal which along with vagina forms birth canal.

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

- (1) Both Statement I and Statement II are false.
- (2) Statement I is correct but Statement II is false.
- (3) Statement I incorrect but Statement II is true.
- (4) Both Statement I and Statement II are true.

BHR267

NEET-UG 2023 (Manipur)

41. Arrange the sequence of different hormones for their role during gametogenesis.

- (A) Gonadotropin LH stimulates synthesis and secretion of Androgen
- (B) Gonadotropin releasing hormone from hypothalamus
- (C) Androgen stimulates spermatogenesis
- (D) Gonadotropin FSH helps in the process of spermiogenesis
- (E) Gonadotropins from anterior pituitary gland.

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

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

BHR268

42. Given below are two statements regarding oogenesis:

Statement I : The primary follicles get surrounded by more layers of granulosa cells, a theca and shows fluid filled cavity antrum. Now it is called secondary follicle.

Statement II : Graffian follicle ruptures to release the secondary oocyte from the ovary by the process called ovulation.

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

- (1) Statement I is correct but Statement II is false.
- (2) Statement I is incorrect but Statement II is true
- (3) Both Statement I and Statement II are true
- (4) Both Statement I and Statement II are false.

BHR269

NEET-UG 2024

43. Which of the following is not a component of Fallopian tube?

(1) Uterine fundus (2) Isthmus
(3) Infundibulum (4) Ampulla

BHR270

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

Assertion A : Breast-feeding during initial period of infant growth is recommended by doctors for bringing a healthy baby.

Reason R : Colostrum contains several antibodies absolutely essential to develop resistance for the new born baby.

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

- (1) Both A and R are correct and R is the correct explanation of A.
(2) Both A and R are correct but R is NOT the correct explanation of A.
(3) A is correct but R is not correct.
(4) A is not correct but R is correct.

BHR271

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

Assertion A: FSH acts upon ovarian follicles in female and Leydig cells in male.

Reason R: Growing ovarian follicles secrete estrogen in female while interstitial cells secrete androgen in male human being.

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

- (1) Both A and R are true and R is the correct explanation of A.
(2) Both A and R are true but R is NOT the correct explanation of A.
(3) A is true but R is false.
(4) A is false but R is true.

BHR272

46. Given below are two statement :

Statement I : The presence or absence of hymen is not a reliable indicator of virginity.

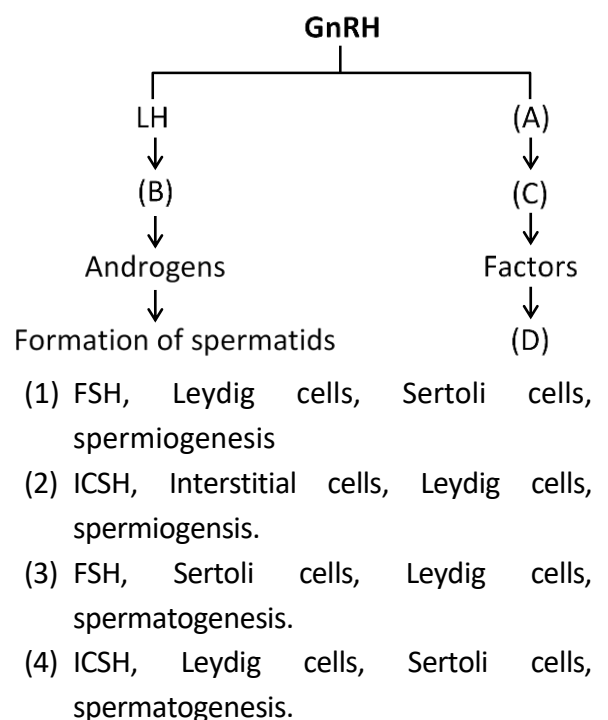
Statement II : The hymen is torn during the first coitus only.

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

- (1) Both Statement I and Statement II are true
(2) Both Statement I and Statement II are false.
(3) Statement I is true but Statement II is false.
(4) Statement I is false but Statement II is true.

BHR273

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



BHR274

RE-NEET-UG 2024

48. Given below are two statements : One is labelled as **Assertion A** and the other is labelled as **Reason R**.

Assertion : During menstrual cycle, the ovulation takes place approximately on 14th day.

Reason : Rapid secretion of LH in the middle of menstrual cycle induces rupture of Graafian follicle and thereby the release of ovum.

In the light of the above statements, choose the **most appropriate** answer form the options given below.

- (1) **A** is correct but **R** is not correct.
- (2) **A** is not correct but **R** is correct.
- (3) Both **A** and **R** are correct and **R** is the correct explanation of **A**.
- (4) Both **A** and **R** are correct and **R** is NOT the correct explanation of **A**.

BHR275

49. Arrange the following parts in human Mammary gland, traversing the route of milk ejection.

- A. Mammary duct
- B. Lactiferous duct
- C. Mammary alveolus
- D. Ampulla
- E. Mammary tubule

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

- (1) D → C → E → A → B
- (2) C → E → B → A → D
- (3) C → E → A → D → B
- (4) A → C → E → D → B

BHR276

50. Match **List-I** with **List-II** relating to human female external genitalia :

List-I (Structures)		List-II (Features)	
A.	Mons pubis	I.	A fleshy fold of tissue surrounding the vaginal opening
B.	Clitoris	II.	Fatty cushion of cells covered by skin and hair
C.	Hymen	III.	Tiny finger – like structure above labia minora
D.	Labia majora	IV.	A thin membrane-like structure covering vaginal opening

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

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

BHR277

51. Match **List-I** with **List-II**.

List-I		List-II	
A.	Parturition	I.	Several antibodies for new-born babies
B.	Placenta	II.	Collection of ovum after ovulation
C.	Colostrum	III.	Foetal ejection reflex
D.	Fimbriae	IV.	Secretion of the hormone hCG

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

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

BHR278

Exercise - II (Previous Year Questions)
ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	2	3	4	4	2	3	3	2	3	1	2	3	1	2	4
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	3	4	3	2	1	3	4	1	2	1	4	2	1	1	4
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	4	2	2	3	3	3	1	3	1	4	3	2	1	1	4
Question	46	47	48	49	50	51									
Answer	3	1	3	3	1	1									

Exercise - III

Master Your Understanding

(A) NCERT BASED QUESTIONS

1. How many testicular lobules are present in each testis ?
 (1) About 100 (2) About 150
 (3) About 250 (4) Infinite

BHR180

2. The male accessory glands include :-
 (1) prostate gland
 (2) bulbourethral glands
 (3) seminal vesicles
 (4) All of the above

BHR181

3. In male, penis is covered by a loose fold of skin called as :-
 (1) foreskin (2) urethral meatus
 (3) external genitalia (4) fimbriae

BHR182

4. The function of fimbriae is :-
 (1) to collect ovum after ovulation
 (2) to maintain the shape of ovary
 (3) to provide the path to sperm during fertilization
 (4) None of the above

BHR183

5. Which of the following statements is wrong ?
 (1) Mammary lobes contain clusters called as alveoli.
 (2) Uterus is also called as womb.
 (3) The last part of the oviduct is called as ampulla.
 (4) Stroma of ovary is divided into two zones.

BHR184

6. Secretion of which of the following hormones induces spermatogenesis ?
 (1) GnRH (2) LTH
 (3) Oxytocin (4) Relaxin

BHR185

7. Antrum is :-
 (1) follicular cavity filled with fluid
 (2) an inner theca layer
 (3) the mature follicle
 (4) follicular cavity with no fluid

BHR186

8. Ovulation is :-
 (1) Release of secondary oocyte from ovary
 (2) Release of primary oocyte from ovary
 (3) Release of polar body
 (4) Release of Graafian follicle

BHR187

9. For normal fertility, how much percentage of total sperms must have normal shape and size ?
 (1) 50 % (2) 25 %
 (3) 40 % (4) 60 %

BHR188

10. When do both LH & FSH attain a peak level in a menstrual cycle ?
 (1) In last week of the cycle
 (2) In mid of the cycle
 (3) During Initial days of cycle
 (4) On 4th day of cycle

BHR189

11. Which of the following statements is not correct ?
 (1) In the absence of fertilization, the corpus luteum is degenerated.
 (2) During pregnancy, all events of menstrual cycle are stopped.
 (3) The secretion of LH and FSH decreases gradually during the follicular phase.
 (4) The menstrual flow results due to breakdown of endometrial lining.

BHR190

- | | |
|--|--|
| <p>12. In which phase of menstrual cycle Graafian follicle is transformed into corpus luteum ?
 (1) Luteal phase
 (2) Proliferative phase
 (3) Follicular phase
 (4) Growth phase
 BHR191</p> <p>13. Which of the hormones is essential for maintenance of the endometrium ?
 (1) FSH (2) LH
 (3) Progesterone (4) Testosterone
 BHR192</p> <p>14. Which of the following is an indicator of normal reproductive phase and extends between menarche and menopause ?
 (1) Menstrual cycle
 (2) Estrous cycle
 (3) Ovulation
 (4) Implantation
 BHR193</p> <p>15. In human, fertilization takes place in :-
 (1) cervix (2) ampulla
 (3) isthmus (4) vagina
 BHR194</p> <p>16. The embryo with 8 to 16 blastomeres is called as :-
 (1) morula (2) blastocyst
 (3) gastrula (4) foetus
 BHR195</p> <p>17. During Implantation, the blastocyst gets embedded in which layer of the uterus?
 (1) Trophoblast (2) Endometrium
 (3) Myometrium (4) Perimetrium
 BHR196</p> <p>18. The mitotic division starts as the zygote moves through the _____ of the oviduct called cleavage towards the uterus.
 (1) ampulla (2) isthmus
 (3) fimbriae (4) infundibulum
 BHR197</p> | <p>19. During fertilization, a sperm comes in contact with which layer of the ovum ?
 (1) Jelly coat
 (2) Zona pellucida
 (3) Vitelline membrane
 (4) Perivitelline space
 BHR198</p> <p>20. Function of placenta is to :-
 (1) supply O₂ to embryo
 (2) removal CO₂ produced by the embryo
 (3) produce several hormones
 (4) All of the above
 BHR199</p> <p>21. Stem cells are found in :-
 (1) inner cell mass (2) ectoderm
 (3) endoderm (4) mesoderm
 BHR200</p> <p>22. The first sign of growing foetus may be noticed by :-
 (1) listening to the heart sound carefully with the help of stethoscope
 (2) appearance of hair
 (3) appearance of head
 (4) appearance of eye lids
 BHR201</p> <p>23. Placenta contains :-
 (1) only chorionic villi
 (2) only uterine tissue
 (3) chorionic villi and uterine tissue
 (4) trophoblast and chorionic villi
 BHR202</p> <p>24. The average duration of human pregnancy is about nine months which is known as :-
 (1) gestation period (2) parturition
 (3) lactation (4) implantation
 BHR203</p> <p>25. The signals for parturition originate from :-
 (1) fully developed foetus
 (2) placenta
 (3) both fully developed foetus and placenta
 (4) uterus
 BHR204</p> |
|--|--|

26. Which hormone acts on uterine myometrium during parturition ?

- (1) Oxytocin (2) LH
(3) Estrogen (4) Relaxin

BHR205

27. Which gland of female human undergoes differentiation during pregnancy ?

- (1) Adrenal gland (2) Mammary gland
(3) Pituitary gland (4) Thymus gland

BHR206

28. Which of the following is correct for colostrum ?

- (1) It contains several antibodies.
(2) It is produced during the last few days of lactation.
(3) It is a pheromone.
(4) It is white in colour.

BHR207

29. Human beings are :-

- (1) ovoviviparous (2) oviparous
(3) parthenogenetic (4) viviparous

BHR208

(B) ANALYTICAL QUESTIONS

30. What does happen if vasa deferentia are cut in a man ?

- (1) Sperms become non nucleated.
(2) Spermatogenesis does not occur.
(3) Semen is ejaculated without sperms.
(4) Sperms have no motility.

BHR209

31. If epididymis is removed, then what does happen in a man ?

- (1) Sperms have shorter life span.
(2) Sperms travel the pathway in lesser time.
(3) Functional maturation of sperms takes lesser time.
(4) Sperms are incapable for fertilization.

BHR210

32. Which of the following is not correct about sustentacular cells ?

- (1) These are present in between the germinal epithelial cells.
(2) These are related with the nutrition of sperm.
(3) These form blood testis barrier.
(4) These form testosterone from oestrogen.

BHR211

33. After some time of ejaculation, semen liquefies due to presence of an enzyme which is found in the secretion of :-

- (1) vagina (2) seminal vesicle
(3) prostate gland (4) Cowper's gland

BHR212

34. If Cowper's gland is removed, then which of the following would be affected ?

- (1) Sexual attraction
(2) Capacitation of sperms
(3) Hardness of penis
(4) Copulation and fertilization

BHR213

35. Which of the following releases inhibin to control spermatogenesis ?

- (1) Rete testis
(2) Follicular cells
(3) Leydig's cells
(4) Sustentacular cells

BHR214

36. Correct order of spermatogenesis is :-

- (1) Spermatocytes, Spermatogonium, Spermatids, Sperms
(2) Spermatogonium, Spermatids, Spermatocytes, Sperms
(3) Spermatids, Spermatogonium, Spermatocytes, Sperms
(4) Spermatogonium, Primary Spermatocytes, Secondary Spermatocytes, Spermatids, Sperms

BHR215

37. Given below are two statements:

Statement-I : The edge of the infundibulum posses finger like projections called fimbriae, which helps in collection of ovum after ovulation.

Statement-II : Uterus is supported by tendons attached to the pelvic wall.

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

- (1) Both Statement-I and II both are incorrect.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and Statement-II are correct.

BHR216

38. How many secondary spermatocytes form 400 spermatozoa ?

- (1) 100
- (2) 400
- (3) 40
- (4) 200

BHR217

39. Match the column-A with column-B.

Column A		Column B	
A	Mons pubis	i	Fleshy folds of tissue
B	Labia majora	ii	Paired folds of tissue
C	Labia minora	iii	Finger-like structure
D	Clitoris	iv	Cushion of fatty tissue

- (1) A-iv, B-i, C-ii, D-iii
- (2) A-ii, B-iv, C-i, D-iii
- (3) A-iv, B-ii, C-i, D-iii
- (4) A-iii, B-iv, C-ii, D-i

BHR218

40. At which stage of spermatogenesis, sperms acquire their whole structural maturity and now these contain a haploid nucleus & other organelles ?

- (1) Spermiogenesis
- (2) Growth phase
- (3) Multiplication phase
- (4) Maturation phase

BHR219

41. How many sperms and ova are formed respectively from 50 secondary oocytes and 50 secondary spermatocytes in human ?

- (1) 50 ova and 200 sperm
- (2) 50 ova and 100 sperm
- (3) 100 ova and 200 sperm
- (4) 100 ova and 400 sperm

BHR220

42. Human egg has :-

- (1) one Y-chromosome
- (2) one X-chromosome
- (3) two Y-chromosome
- (4) one X-chromosome and one Y-chromosome.

BHR221

43. Given below are two statements:

Statement-I : LH act on leydig cells and stimulates synthesis and secretion of androgens.

Statement-II : FSH acts on the sertoli cells and stimulates secretion of some factors which help in the process of spermiogenesis

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

- (1) Both Statement-I and II both are incorrect.
- (2) Statement-I is correct but statement-II is incorrect.
- (3) Statement-I is incorrect and Statement-II is correct.
- (4) Both Statement-I and Statement-II are correct.

BHR222

44. Oocyte is liberated from ovary under the influence of LH, after completing :
- (1) meiosis and before liberating polar bodies
 - (2) meiosis I and before liberating second polar body
 - (3) meiosis
 - (4) meiosis II after release of first polar body

BHR223

45. Extrusion of second polar body from egg nucleus occurs :-
- (1) after entry of sperm but before completion of fertilization
 - (2) after completion of fertilization
 - (3) before entry of sperm
 - (4) without any relation to sperm entry.

BHR224

46. If both ovaries are removed from human then level of which hormone is decreased in blood?
- (1) Oxytocin
 - (2) Prolactin
 - (3) Estrogen
 - (4) Gonadotrophic releasing factor

BHR225

47. In a 30 years old lady, eggs are released in the form of :-
- (1) oogonia
 - (2) primary oocyte
 - (3) secondary oocyte
 - (4) atretic follicle

BHR226

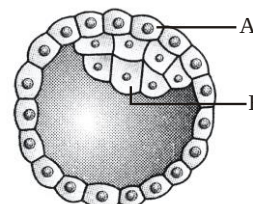
48. Phases in a menstrual cycle are :-
- (1) Recovery phase and proliferative phase
 - (2) Proliferative phase and secretory phase
 - (3) Proliferative phase, secretory phase and menstrual phase
 - (4) Recovery phase, secretory phase and menstrual phase

BHR227

49. After ovulation, follicles are converted into:-
- (1) corpus luteum
 - (2) corpus albicans
 - (3) corpus cavernosa
 - (4) corpus callosum

BHR228

50. In following structure, identify A & B and their respective functions.



Blastocyst

	A	B	Function of	
			A	B
(1)	Trophoblast	Inner cell mass	Attachment with endometrium	Differentiation as embryo
(2)	Trophoblast	Inner cell mass	Differentiation as embryo	Attachment with endometrium
(3)	Mesoderm	Inner cell mass	Differentiation as embryo	Attachment with endometrium
(4)	Ectoderm	Mesoderm	Attachment with endometrium	Differentiation as embryo

BHR229

51. In a menstrual cycle, ovulation normally takes place :-
- (1) at the end of proliferative phase
 - (2) at the mid of secretory phase
 - (3) just before the end of secretory phase
 - (4) at the beginning of the proliferative phase

BHR230

52. In a menstrual cycle, hormones start increasing in which order from the beginning of menstruation ?
- (1) FSH, progesterone, estrogen
 - (2) Estrogen, FSH, progesterone
 - (3) FSH, estrogen, progesterone
 - (4) Estrogen, progesterone, FSH

BHR231

53. At the time of ovulation, the human egg is covered by a membrane called as :-
 (1) chorion (2) zona pellucida
 (3) corona radiata (4) Both (2) & (3)

BHR232

54. How many cleavage divisions are required for the formation of 16 blastomeres ?
 (1) 2 (2) 4
 (3) 6 (4) 8

BHR233

55. The blastomeres in the blastocyst are arranged into an outer layer called A, and inner group of cells attached to trophoblast called the B. What are 'A' and 'B' respectively?
 (1) trophoblast, inner cell mass
 (2) inner cell mass, trophoblast
 (3) chorion, amnion
 (4) amnion, chorion

BHR234

56. What is true about cleavage ?
 (1) Nucleocytoplasmic ratio remains unchanged.
 (2) Size of an embryo does not increase.
 (3) There is less consumption of oxygen.
 (4) The division is similar to meiosis.

BHR235

57. What is true about cleavage in a fertilized egg of human ?
 (1) Cleavage require low O_2 .
 (2) It starts when egg reaches in uterus.
 (3) It starts in fallopian tube.
 (4) It is identical to normal mitosis.

BHR236

58. Which type of cell division occurs during cleavage?
 (1) Amitosis (2) Mitosis
 (3) Closed mitosis (4) Meiosis

BHR237

59. Fertilisation has following processes :-
 (a) Plasmogamy (b) Karyogamy
 (c) Syngamy (d) Amphimixis
 Arrange these in correct sequence.

- (1) $a \rightarrow b \rightarrow c \rightarrow d$ (2) $b \rightarrow a \rightarrow d \rightarrow c$
 (3) $c \rightarrow a \rightarrow b \rightarrow d$ (4) $c \rightarrow a \rightarrow d \rightarrow b$

BHR238

60. Correct sequence of embryonic development is :-
 (1) Fertilization $\rightarrow$ Zygote $\rightarrow$ Cleavage $\rightarrow$ Morula $\rightarrow$ Blastula $\rightarrow$ Gastrula
 (2) Fertilization $\rightarrow$ Zygote $\rightarrow$ Blastula $\rightarrow$ Morula $\rightarrow$ Cleavage $\rightarrow$ Gastrula
 (3) Fertilization $\rightarrow$ Cleavage $\rightarrow$ Morula $\rightarrow$ Zygote $\rightarrow$ Blastula $\rightarrow$ Gastrula
 (4) Cleavage $\rightarrow$ Zygote $\rightarrow$ Fertilization $\rightarrow$ Morula $\rightarrow$ Blastula $\rightarrow$ Gastrula

BHR239

61. The lytic enzyme present in semen is :-
 (1) ligase (2) estrogenase
 (3) androgenase (4) hyaluronidase

BHR240

62. Given below are two statements:
Statement-I : hCG, hPL and relaxin are produced in women only during pregnancy.
Statement-II : By end of about 12 weeks, the body of foetus is covered with hairs, eye-lids separate, and eye lashes are formed.

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

- (1) Both Statement-I and II both are incorrect.
 (2) Statement-I is correct but statement-II is incorrect.
 (3) Statement-I is incorrect and Statement-II is correct.
 (4) Both Statement-I and Statement-II are correct.

BHR241

- 63.** Which one of following parts is present in male but not in female ?
 (1) Urethra (2) Fallopian tube
 (3) Vagina (4) Vas deferens
BHR242
- 64.** Which hormone is not involved in the process of parturition ?
 (1) Oxytocin (2) Prolactin
 (3) Estrogen (4) Cortisol
BHR243
- 65.** Accessory sexual characters in female is promoted by :-
 (1) androgen (2) progesterone
 (3) estrogen (4) testosterone
BHR244
- 66.** The cellular layer that disintegrates and regenerates again and again in human is :-
 (1) endometrium of uterus
 (2) cornea of eye
 (3) dermis of skin
 (4) endothelium of blood vessels
BHR245
- 67.** The functional maturation of sperms takes place in :-
 (1) oviduct (2) epididymis
 (3) vagina (4) All of these
BHR246
- 68.** In human, the estrogen is secreted by the Graafian follicle from its :-
 (1) external theca (2) internal theca
 (3) zona pellucida (4) corona radiata
BHR248
- 69.** Supporting cells found in the germinal epithelium of testis are called as :-
 (1) Interstitial cells of Leydig
 (2) Sertoli cells
 (3) granular cells
 (4) phagocytes
BHR249
- 70.** Atretic follicles are found in the :-
 (1) fallopian tube (2) uterus
 (3) labia majora (4) ovary
BHR250
- 71.** Which of the following hormones are produced in women only during pregnancy ?
 (a) hPL (b) Relaxin
 (c) Androgen (d) FSH
 (e) hCG (f) LH
 (1) a,b,e (2) b & e
 (3) c,d,e,f (4) a,b,c,d,e,f
BHR251
- 72.** Which of the following cells undergoes spermiogenesis ?
 (1) Spermatids
 (2) Spermatogonia
 (3) Primary spermatocytes
 (4) Secondary spermatocytes
BHR252
- 73.** Various changes in human sperm which prepare it to fertilise the ovum are called collectively as :-
 (1) capacitation
 (2) regeneration
 (3) growth
 (4) None of these
BHR253
- 74.** During oogenesis, the small structure separated from egg is known as :-
 (1) polar body
 (2) secondary endosperm
 (3) Herring body
 (4) Hela cell
BHR254
- 75.** In human foetus, the heart begins to beat at developmental age of :-
 (1) 4 weeks (2) 3 weeks
 (3) 6 weeks (4) 8 weeks
BHR255

- 76.** Polar bodies are produced during the formation of :-
 (1) sperms
 (2) oogonia
 (3) spermatocytes
 (4) secondary oocytes

BHR256

- 77.** Which of the following does not occur during natural menopause in a female ?
 (1) Progesterone level in blood is decreased.
 (2) FSH and LH levels in blood are decreased.
 (3) Estrogen level in blood is decreased.
 (4) Uterine changes are stopped.

BHR257

- 78.** In a sperm, the mitochondria are occurred :-
 (1) in tail (2) in acrosome
 (3) in middle piece (4) in head

BHR259

- 79.** Which of the following sets of enzymes is found in the acrosome of human sperm ?
 (1) Hyaluronidase, Collagenase
 (2) Hyaluronidase, Zona lysin
 (3) Hyaluronidase, Peptidase
 (4) Only hyaluronidase

BHR260

- 80.** Fixing up of the blastocyst in the wall of the uterus is known as :-
 (1) fertilization
 (2) implantation
 (3) impregnation
 (4) placentation

BHR261

- 81.** Placenta in human beings is formed by :-
 (1) amnion
 (2) chorion
 (3) allantois
 (4) chorion and uterine wall

BHR262

- 82.** The phenomenon of nuclear fusion of sperm and egg is known as :-
 (1) karyogamy
 (2) parthenogenesis
 (3) vitellogenesis
 (4) oogenesis

BHR263

- 83.** Sertoli cells are involved in :-
 (1) respiration
 (2) nutrition of sperms
 (3) excretion
 (4) development of sex organs

BHR264

Exercise - III

ANSWER KEY

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Answer	3	4	1	1	3	1	1	1	4	2	3	1	3	1	2
Question	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Answer	1	2	2	2	4	1	1	3	1	3	1	2	1	4	3
Question	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Answer	4	4	3	4	4	4	2	4	1	1	2	2	4	2	1
Question	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Answer	3	3	3	1	1	1	3	4	2	1	2	3	3	3	1
Question	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Answer	4	2	4	2	3	1	2	2	2	4	1	1	1	1	1
Question	76	77	78	79	80	81	82	83							
Answer	4	2	3	2	2	4	1	2							

Important Notes