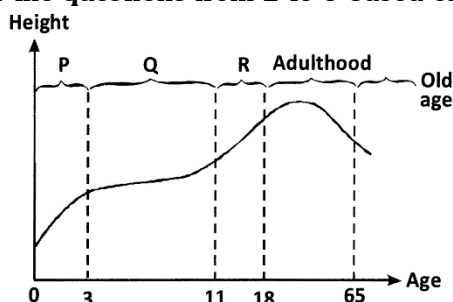




Reaching the Age of Adolescence

1. Which of the following statements is true?
 - (a) Boys reach puberty at an earlier age than girls.
 - (b) Girls reach puberty earlier than boys.
 - (c) At the end of rapid growth, girls are normally heavier than boys.
 - (d) Between the age of 4 to 12, girls grow faster than boys.

Answer the questions from 2 to 5 based on the graph given below.



2. Which of the following represents growth periods labelled as P, Q and R?
 - (a) P - infancy, Q - Childhood, R - Old age
 - (b) P - infancy, Q - Childhood, R - Adolescence
 - (c) P - Adulthood, T - Adolescence, R- Old age
 - (d) P - Childhood, Q - infancy, R - Adolescence
3. When does adolescence occur?
 - (a) 0 to 3 years
 - (b) 3 to 13 years
 - (c) 11 to 18 years
 - (d) 18 to 45 years
4. What are the two different periods that show rapid growth rate?
 - (a) Infancy and adolescence
 - (b) Adulthood and old age
 - (c) Infancy and childhood
 - (d) Adolescence and old age
5. During which of the following stages of growth in height is maximum?
 - (a) At the end of adulthood
 - (b) Before puberty
 - (c) At the beginning of old age
 - (d) At the beginning of adulthood
6. What is the role of sperms in reproduction?
 - (a) To stimulate ovum
 - (b) To fertilize the egg
 - (c) To form foetus
 - (d) To initiate changes in male during puberty
7. What causes changes in females at the time of puberty?
 - (a) Sex cells
 - (b) Enzymes
 - (c) Nutrients
 - (d) Sex hormones

- 8.** Which of the following will occur in females at puberty?
(a) Ovulation
(b) Enlargement of breasts
(c) Broadening of hips
(d) All of these
- 9.** A girl has menstruation on the 6th day of the month. When is ovulation most likely to occur?
(a) 15th-17th day (b) 18th - 20th day
(c) 23rd - 25th day (d) 27th - 28th day
- 10.** When do girls overtake boys in height?
(a) Childhood (b) Adolescence
(c) Adulthood (d) Old age
- 11.** In girls, secondary sexual characteristics develop between
(a) 9 and 11 years. (b) 11 and 14 years.
(c) 15 and 18 years. (d) 19 and 21 years.
- 12.** Why is a diet rich in proteins essential at puberty?
(a) For supplying sufficient energy
(b) For the formation of new cells during growth
(c) the formation of strong bones and teeth
(d) protection from diseases
- 13.** Which of the following is NOT a secondary sexual characteristic feature of girls?
(a) The enlargement of breasts.
(b) The deepening of voice.
(c) The menstruation begins.
(d) The growth of hair at armpit.
- 14.** Which of the following is/are true of secondary sexual characteristics of boys?
(a) Growth of facial hair
(b) Development of bones and muscles
(c) Production of sperms
(d) All of these
- 15.** The menstrual cycle stops in a women at about 50 years old. The woman is said to have reached
(a) puberty.
(b) menopause.
(c) menarche.
(d) adolescence.
- 16.** Which of the following does not take place during the final stage of the menstrual cycle?
(a) Further thickening of the uterine lining.
(b) Repair and growth of the uterine lining.
(c) Ovulation.
(d) Both (B) and (C)
- 17.** Which of these hormones is secreted by endocrine gland located on the top of kidneys?
(a) Adrenaline
(b) Insulin
(c) Progesterone
(d) Testosterone

18. Which of the following pairs of hormones and minerals is associated with the occurrence of goitre?

	Minerals	Hormones
(a)	Iron	Insulin
(b)	Iodine	Thyroxine
(c)	Calcium	Thyroxine
(d)	Phosphorus	Adrenaline

19. Incomplete development of male secondary sexual characteristics is caused due to deficiency in?
(a) Estrogen. (b) Progesterone.
(c) Adrenaline. (d) Testosterone.
20. Which of the following hormones initiates metamorphosis in insects?
(a) Thyroxine (b) Insulin
(c) Growth hormone (d) Adrenaline
21. Which chromosomes determine the sex of an individual?
(a) Autosomes (b) Allosomes
(c) Plasmid (d) Giant chromosomes
22. What is the legal age for boys and girls to get married in our country?
(a) 18 years for boys, 21 years for girls.
(b) 21 years for boys, 18 years for girls.
(c) 23 years for boys, 20 years for girls.
(d) 25 years for boys, 18 years for girls.
23. Which of the following is called the master gland in the human body?
(a) Thyroid (b) Adrenal
(c) Islets of Langerhans (d) Pituitary
24. Which of the following hormones controls the menstrual cycle, the ovulation process and the development of the uterus in the females?
(a) Estrogen (b) Progesterone
(c) Testosterone (d) Both (A) and (B)
25. Which of the following transports hormones from the place of origin to the place of target?
(a) Ducts
(b) Blood
(c) Nerves
(d) All of these
26. Arjun kept losing weight even though he was taking his meals regularly. He felt thirsty all the time. When the doctor tested Arjun's urine, the test showed a high concentration of glucose. What disease is Arjun suffering from?
(a) Goitre.
(b) Cancer.
(c) Diabetes mellitus.
(d) Cirrhosis of the liver.
27. Which of the following processes involves the fusion of a male and female gamete?
(a) Fertilisation
(b) Fission
(c) Implantation
(d) Insemination

28. Which of the following factors determine the sex of the offspring in humans?

- (a) Mother's sex chromosomes
- (b) Father's sex chromosomes
- (c) Mother's vegetative chromosomes
- (d) Father's vegetative chromosomes

29. Identify the correct sequence that is followed during the growth of human being?

1. Foetus	2. Zygote
3. Embryo	4. Baby
5. Adult	6. Adolescent
7. Child	

- (a) 2, 3, 1, 4, 7, 6, 5.
- (b) 2, 1, 3, 4, 7, 5, 6.
- (c) 3, 2, 1, 4, 6, 7, 5.
- (d) 1, 3, 2, 4, 7, 6, 5.

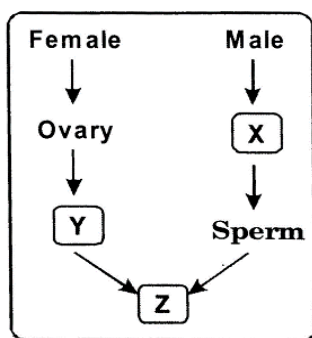
30. The given table has various stages.

W - The ovum dies within 24 hours after ovulation.
X - The uterus wall thickens with blood vessels.
Y - The uterus wall breaks down.
Z - The ovary discharges an ovum.

Which of these sequence is correct of the menstrual cycle?

- (a) W, Y, X, Z
- (b) X, Z, W, Y
- (c) Y, W, Z, X
- (d) Z, X, Y, W

31. What do X, Y and Z represent in the figure given below?



- (a) X - Ovum, Y - testes, Z - Ovulation
- (b) X - Testes, Y - Ovum, Z - Implantation
- (c) X - Ovum, Y - Testes, Z - Implantation
- (d) X - Testes, Y - Ovum, Z - Fertilization

32. Which of the following parts secretes testosterone?

- (a) Tunica albuginea
- (b) Interstitial cells
- (c) Germinal epithelium
- (d) Sertoli cells of testes

- 33.** Which of the following endocrine glands is nearest to the heart?
- (a) Thyroid
 - (b) Pancreas
 - (c) Thymus
 - (d) Adrenal
- 34.** Which of the following represents the composition of female destined zygote in human beings?
- (a) $22+X$.
 - (b) $44+XY$.
 - (c) $33+Y$.
 - (d) $44+XX$.
- 35.** Which of the following body fluids does not transmit HIV?
- (a) Blood
 - (b) Breast milk
 - (c) Tears
 - (d) Semen

Answers With Solutions

1. (b) Girls reach puberty earlier than boys. In girls, adolescence may begin a year or two earlier than in boys.
2. (b) Growth is the process in which the size of an individual increases permanently from the zygote stage to the adult stage. The first three years is the infancy period, followed by childhood. Adolescence begins around the age 11 and lasts up to 18 or 19 years of age.
3. (c) The period after childhood is that of the adolescence. It begins around the age of 11 and lasts up to 18 or 19 years of age.
4. (a) Growth takes place by cell division. During infancy growth rate is very fast. Growth slows down during childhood (3-11 years) and during adolescence very rapid growth occurs.
5. (d) At the beginning of adulthood, the growth is maximum.
6. (b) The testes produce male gametes called sperms which fertilise the egg to form a zygote.
7. (d) Hormones are chemical substances. The changes which occur at adolescence are controlled by hormones. Testosterone is the male hormone. Oestrogen and progesterone are the female hormones.
8. (d) The onset of puberty brings about the growth of the reproductive organs. In girls, production of egg cells and menstruation, growth of pubic hair and armpit hair, enlargement of breasts and buttocks take place during adolescence.
9. (b) The release of the egg cell is called ovulation. During menstrual cycle, 13th to 15th day after menstruation, an egg cell is most likely to be released from an ovary.
10. (b) Girls reach puberty earlier than boys and they overtake boys in height during adolescence.
11. (b) The human body undergoes several changes during adolescence. These changes mark the onset of puberty. During puberty, secondary sexual characteristics develop. Girls reach puberty earlier than boys.
12. (b) Adolescence is a stage of rapid growth and development. Hence, a balanced diet rich in proteins is essential.
13. (b) Deepening of voice is a secondary sexual characteristic of a boy.

- 14.** (d) During puberty, physical and emotional changes take place in the adolescents. These changes are called secondary sexual characteristics.
- 15.** (b) During menopause, the menstrual cycle stops. It is likely to occur when a woman is about 45 to 50 years old.
- 16.** (c) Repair and growth of the uterine lining and ovulation does not take place during the final stage of menstrual cycle.
- 17.** (b) Adrenaline hormone is secreted by the adrenal cortex of kidney.
- 18.** (b) Iodine is essential for the efficient functioning of thyroid gland.
- 19.** (d) The changes which occur at adolescence are controlled by sex hormones. The male hormone or testosterone controls the development of male secondary sexual characteristics.
- 20.** Thyroxine is secreted by the thyroid gland. Metamorphosis in insects is controlled by thyroxine.
- 21.** (b) Chromosomes concerned with sex are called allosomes or sex chromosomes. They are XX in female and XY in male.
- 22.** (b) In our country, the legal age for marriage is 18 years for girls and 21 years for boys.
- 23.** (d) Pituitary gland is also known as the master gland as it controls other endocrine glands.
- 24.** (d) Ovaries secrete hormones such as oestrogen and progesterone, which controls the different phases of the menstrual cycle.
- 25.** (b) Hormones are secreted in small quantities directly into the bloodstream.
- 26.** (c) Hypo secretion of insulin hormone by pancreas leads to diabetes mellitus.
- 27.** (a) Fertilization is the process during which a sperm fuses with an egg cell to form a zygote.
- 28.** (b) Sex of the offspring in humans is determined by father's sex chromosomes.
- 29.** (a) The correct sequence of the stages of growth is: zygote, embryo, foetus, baby, child, adolescent, adult.

- 30.** (b) The correct sequence of the menstrual cycle follows is the uterus wall thickness with blood vessels, the ovary discharges an ovum, the ovum dies within 24 hours after ovulation and the uterus wall breaks down.
- 31.** (d) In the figure X is testes, Y is ovum and Z is fertilization.
- 32.** (d) Sertoli cells of testes secrete testosterone.
- 33.** (c) Thymus gland is nearest to the heart.
- 34.** (d) $44 + XX$ represents the composition of female destined zygote in human beings.
- 35.** (c) Tears do not transmit HIV.