

## Human Reproduction

Question 1.

Ovulation in the human female normally takes place during the menstrual cycle

- (a) at the mid secretory phase
- (b) just before the end of the secretory phase
- (c) at the beginning of the proliferative phase
- (d) at the end of the proliferative phase.

Answer:

- (d) at the end of the proliferative phase.

Question 2.

After ovulation Graafian follicle regresses into

- (a) corpus atresia
- (b) corpus callosum
- (c) corpus luteum
- (d) corpus albicans

Answer:

- (c) corpus luteum

Question 3.

Immediately after ovulation, the mammalian egg is covered by a membrane known as

- (a) chorion
- (b) zona pellucida
- (c) corona radiata
- (d) vitelline membrane.

Answer:

- (c) corona radiata

Question 4.

Which one of the following events is correctly matched with the time period in a normal menstrual cycle ?

- (a) Release of egg : 5 th day
- (b) Endometrium regenerates : 5 – 10 days
- (c) Endometrium secretes nutrients for implantation: 11 – 18 days
- (d) Rise in progesterone level : 1 – 15 days

Answer:

- (b) Endometrium regenerates : 5 – 10 days

Question 5.

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

- (a) Corpus luteum will disintegrate.
- (b) Progesterone secretion rapidly declines.
- (c) Estrogen secretion increases.
- (d) Primary follicle starts developing.

Answer:

- (c) Estrogen secretion increases.

Question 6.

A human female reaches menopause around the age of

- (a) 50 years
- (b) 15 years
- (c) 70 years
- (d) 25 years.

Answer:

- (a) 50 years

Question 7.

A reaction of granules content which harden the zona pellucida and ensures sure block to polyspermy is

- (a) acrosomal reaction
- (b) cortical reaction
- (c) acrosin reaction
- (d) bindin reaction.

Answer:

- (b) cortical reaction

Question 8.

Which part of the sperm plays an important role in penetrating the egg membrane ?

- (a) Allosome
- (b) Tail
- (c) Autosome
- (d) Acrosome

Answer:

- (d) Acrosome

Question 9.

In oocyte secondary maturation occurs in

- (a) ovary
- (b) abdominal cavity
- (c) Fallopian tube
- (d) uterus.

Answer:

- (c) Fallopian tube

Question 10.

Besides activating the egg another role of a sperm is to carry to egg

- (a) RNA
- (b) mitochondria
- (c) DNA
- (d) ribosomes.

Answer:

- (c) DNA

Question 11.

Preparation of sperm before penetration of ovum is

- (a) spermiation
- (b) cortical reaction

- (c) spermiogenesis
- (d) capacitation.

Answer:

- (a) spermiation

Question 12

Spermiation is the process of the release of sperms from

- (a) seminiferous
- (b) vas deferens
- (c) epididymis
- (d) prostate gland

Answer:

- (a) seminiferous

Question 13.

Mature Graafian follicle is generally present in the ovary of a healthy human female around

- (a) 5-8 day of menstrual cycle
- (b) 11-17 day of menstrual cycle
- (c) 18-23 day of menstrual cycle
- (d) 24-28 day of menstrual cycle.

Answer:

- (b) 11-17 day of menstrual cycle

Question 14.

Acrosomal reaction of the sperm occurs due to

- (a) its contact with zona pellucida of the ova
- (b) reactions within the uterine environment of the female
- (c) reactions within the epididymal environment of the male
- (d) androgens produced in the uterus.

Answer:

- (a) its contact with zona pellucida of the ova

Question 15.

Which one of the following is not a male accessory gland ?

- (a) Seminal vesicle
- (b) Ampulla
- (c) Prostate
- (d) Bulbourethral gland

Answer:

- (b) Ampulla

Question 16.

Which among the following has 23 chromosomes ?

- (a) Spermatogonia
- (b) Zygote
- (c) Secondary oocyte
- (d) Oogonia

Answer:

- (c) Secondary oocyte

Question 17.

Which of the following hormones is not secreted by human placenta ?

- (a) hCG
- (b) Estrogens
- (c) Progesterone
- (d) LH

Answer:

- (d) LH

Question 18.

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

- (a) epididymis
- (b) ejaculatory duct
- (c) efferent ductule
- (d) ureter

Answer:

- (b) ejaculatory duct

Question 19.

Urethral meatus refers to the

- (a) urinogenital duct
- (b) opening of vas deferens into urethra
- (c) external opening of the urinogenital duct
- (d) muscles surrounding the urinogenital duct.

Answer:

- (c) external opening of the urinogenital duct

Question 20.

Morula is a developmental stage

- (a) between the zygote and blastocyst
- (b) between the blastocyst and gastrula
- (c) after the implantation
- (d) between implantation and parturition.

Answer:

- (a) between the zygote and blastocyst

Question 21.

The membranous cover of the ovum at ovulation is

- (a) corona radiata
- (b) zona radiata
- (c) zona pellucida
- (d) chorion.

Answer:

- (a) corona radiata

Question 22.

Identify the odd one from the following

- (a) Labia minora
- (b) Fimbriae
- (c) Infundibulum

(d) Isthmus

Answer:

(a) Labia minora

Question 23.

Temperature of the scrotum which is necessary for the functioning of testis is always \_\_\_\_\_ around below body temperature.

(a) 2°C

(b) 4°C

(c) 6°C

(d) 8°C

Answer:

(a) 2°C

Question 24.

Which of the following is correct about mammalian testes ?

(a) Graafian follicles, Sertoli cells, Leydig's cells

(b) Graafian follicles, Sertoli cells, Seminiferous tubules

(c) Sertoli cells, Seminiferous tubules, Leydig's cells

(d) Graafian follicle, Leydig's cells, Seminiferous tubule

Answer:

(c) Sertoli cells, Seminiferous tubules, Leydig's cells

Question 25.

The nutritive cells found in seminiferous tubules are

(a) Leydig's cells

(b) atretic follicular cells

(c) Sertoli cells

(d) chromaffin cells.

Answer:

(c) Sertoli cells

Question 26.

Sertoli cells are regulated by the pituitary hormone known as

(a) LH

(b) FSH

(c) GH

(d) prolactin.

Answer:

(b) FSH

Question 27.

The head of the epididymis at the head of the testis is called

(a) cauda epididymis

(b) vas deferens

(c) caput epididymis

(d) gubernaculum.

Answer:

(c) caput epididymis

Question 28.

Seminal plasma in humans is rich in

- (a) fructose and calcium but has no enzymes
- (b) glucose and certain enzymes but has no calcium
- (c) fructose and certain enzymes but poor in calcium
- (d) fructose, calcium and certain enzymes.

Answer:

- (d) fructose, calcium and certain enzymes.

Question 29.

Prostate glands are located below

- (a) gubernaculum
- (b) seminal vesicles
- (c) epididymis
- (d) bulbourethral glands

Answer:

- (b) seminal vesicles

Question 30.

The function of the secretion of prostate gland is to

- (a) inhibit sperm activity
- (b) attract sperms
- (c) stimulate sperm activity
- (d) none of these.

Answer:

- (c) stimulate sperm activity

Question 31.

Lower narrow end of uterus is called

- (a) urethra
- (b) cervix
- (c) clitoris
- (d) vulva.

Answer:

- (b) cervix

Question 32.

Bartholin's glands are situated

- (a) on the either side of vagina in humans
- (b) on either side of vas deferens in humans
- (c) on either side of penis in humans
- (d) on either side of Fallopian tube in humans.

Answer:

- (a) on the either side of vagina in humans

Question 33.

In human adult females oxytocin

- (a) stimulates pituitary to secrete vasopressin
- (b) causes strong uterine contractions during parturition
- (c) is secreted by anterior pituitary

(d) stimulates growth of mammary glands.

Answer:

(b) causes strong uterine contractions during parturition

Question 34.

The third stage of parturition is called "after-birth". In this stage

(a) excessive bleeding occurs

(b) fetus is born and cervix and vagina contraction to normal condition happens

(c) fetus is born and contraction of uterine wall prevents excessive bleeding

(d) placenta is expelled out.

Answer:

(d) placenta is expelled out.

Question 35.

After birth, colostrum is released from mammary glands which is rich in

(a) fat and low in proteins

(b) proteins and low in fat

(c) proteins, antibodies and low in fat

(d) proteins, fat and low in antibodies.

Answer:

(c) proteins, antibodies and low in fat

Question 36.

Spot the odd one out from the following structures with reference to the male reproductive system.

(a) Rete testis

(b) Epididymis

(c) Vasa efferentia

(d) Isthmus

Answer:

(d) Isthmus

Question 37.

Seminal plasma, the fluid part of semen, is contributed by

(i) seminal vesicle

(ii) prostate

(iii) urethra

(iv) bulbourethral gland

(a) (i) and (ii)

(b) (i), (ii) and (iv)

(c) (ii), (iii) and (iv)

(d) (i) and (iv)

Answer:

(b) (i), (ii) and (iv)

Question 38.

In humans, at the end of the first meiotic division, the male germ cells differentiate into the

(a) spermatids

(b) spermatogonia

- (c) primary spermatocytes
  - (d) secondary spermatocytes.
- Answer:
- (d) secondary spermatocytes.

Question 39.

How many sperms are formed from a secondary spermatocyte ?

- (a) 4
- (b) 8
- (c) 2
- (d) 1

Answer:

- (c) 2

Question 40.

How many sperms are formed from 4 primary spermatocytes ?

- (a) 4
- (b) 1
- (c) 16
- (d) 32

Answer:

- (c) 16

Question 41.

In spermatogenesis, reduction division of chromosome occurs during conversion of

- (a) spermatogonia to primary spermatocytes
- (b) primary spermatocytes to secondary spermatocytes
- (c) secondary spermatocytes to spermatids
- (d) spermatids to sperms.

Answer:

- (b) primary spermatocytes to secondary spermatocytes

Question 42.

Which of the following groups of cells in the male gonad, represent haploid cells ?

- (a) Spermatogonial cells
- (b) Germinal epithelial cells
- (c) Secondary spermatocytes
- (d) Primary spermatocytes

Answer:

- (c) Secondary spermatocytes

Question 43.

The process of release of spermatozoa from Sertoli cells into cavity of the seminiferous tubules is called

- (a) spermiogenesis
- (b) spermatogenesis
- (c) spermatocytogenesis
- (d) spermiation.

Answer:

- (d) spermiation.

Question 44.

The principal tail piece of human sperm shows the microtubular arrangement of

- (a) 7 + 2
- (b) 9 + 2
- (c) 11 + 2
- (d) 13 + 2

Answer:

- (c) 11 + 2

Question 45.

Acrosome is a type of

- (a) lysosome
- (b) flagellum
- (c) ribosome
- (d) basal body.

Answer:

- (a) lysosome

Question 46.

Which of the following contains the actual genetic part of a sperm ?

- (a) Whole of it
- (b) Tail
- (c) Middle piece
- (d) Head

Answer:

- (d) Head

Question 47.

The sperms undergo physiological maturation, acquiring increased motility and fertilising capacity in

- (a) seminiferous tubules
- (b) vasa efferentia
- (c) epididymis
- (d) vagina.

Answer:

- (c) epididymis

Question 48.

At what stage of life is oogenesis initiated in a human female ?

- (a) At puberty
- (b) During menarch
- (c) During menopause
- (d) During embryonic development

Answer:

- (d) During embryonic development

Question 49.

1st polar body is formed at which stage of oogenesis ?

- (a) 1st meiosis
- (b) 2nd mitosis

- (c) 1st mitosis
- (d) Differentiation

Answer:

- (a) 1st meiosis

Question 50.

Which one is released from the ovary ?

- (a) Primary oocyte
- (b) Secondary oocyte
- (c) Graafian follicle
- (d) Oogonium

Answer:

- (b) Secondary oocyte

Question 51.

During oogenesis, each diploid cell produces

- (a) four functional eggs
- (b) two functional eggs and two polar bodies
- (c) one functional egg and three polar bodies
- (d) four functional polar bodies.

Answer:

- (c) one functional egg and three polar bodies

Question 52.

In oogenesis haploid egg is fertilised by sperm at which stage ?

- (a) Primary oocyte
- (b) Secondary oocyte
- (c) Oogonium
- (d) Ovum

Answer:

- (b) Secondary oocyte

Question 53.

Layers of an ovum from outside to inside is

- (a) corona radiata, zona pellucida and vitelline membrane
- (b) zona pellucida, corona radiata and vitelline membrane
- (c) vitelline membrane, zona pellucida and corona radiata
- (d) zona pellucida, vitelline membrane and corona radiata.

Answer:

- (a) corona radiata, zona pellucida and vitelline membrane

Question 54.

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

- (a) Stroma
- (b) Germinal epithelium
- (c) Vitelline membrane
- (d) Graafian follicle

Answer:

- (d) Graafian follicle

Question 55.

The sex of the fetus will be decided at

- (a) fertilisation by male gamete
- (b) implantation
- (c) fertilisation by female gamete
- (d) the start of cleavage.

Answer:

- (a) fertilisation by male gamete

Question 56.

What is true about cleavage in the fertilised egg in humans ?

- (a) It starts while the egg is in Fallopian tube.
- (b) It starts when the egg reaches uterus.
- (c) It is meroblastic
- (d) It is identical to the normal mitosis.

Answer:

- (a) It starts while the egg is in Fallopian tube.

Question 57.

Cleavage differs from mitosis in lacking

- (a) synthetic phase
- (b) growth phase
- (c) both (a) and (b)
- (d) none of these.

Answer:

- (b) growth phase

Question 58.

The solid mass of 8-16 cells formed from zygote after successive mitotic divisions is called

- (a) blastula
- (b) gastrula
- (c) morula
- (d) none of these.

Answer:

- (c) morula

Question 59.

Implantation takes place after \_\_\_\_\_ of fertilisation.

- (a) 5 days
- (b) 6 days
- (c) 7 days
- (d) 8 days

Answer:

- (c) 7 days

Question 60.

Structure connecting the fetus to placenta is

- (a) umbilical cord
- (b) amnion
- (c) yolk sac

(d) chorion.

Answer:

(a) umbilical cord

Question 61.

Which of the following hormones is not a secretory product of human placenta ?

(a) Human chorionic gonadotropin

(b) Prolactin

(c) Estrogen

(d) Progesterone

Answer:

(b) Prolactin

Question 62.

Urine test during pregnancy determines the presence of

(a) human chorionic gonadotropin hormone

(b) estrogen

(c) progesterone

(d) luteinising hormone.

Answer:

(a) human chorionic gonadotropin hormone

Question 63.

In the event of pregnancy, the corpus luteum persists under the influence of

(a) LH

(b) FSH

(c) chorionic gonadotropin

(d) progesterone.

Answer:

(c) chorionic gonadotropin

Question 64.

During the development of embryo, which of the following occurs first?

(a) Differentiation of organ

(b) Differentiation of tissue

(c) Differentiation of organ system

(d) Differentiation of cells

Answer:

(d) Differentiation of cells

Question 65.

The structures derived from ectoderm are

(i) pituitary gland

(ii) cornea

(iii) kidneys

(iv) notochord

(a) (i) and (iii)

(b) (ii) and (iii)

(c) (i) and (ii)

(d) (ii) and (iv).

Answer:

(c) (i) and (ii)

Question 66.

Gastrula is the embryonic stage in which

- (a) cleavage occurs
- (b) blastocoel form
- (c) germinal layers form
- (d) villi form.

Answer:

(c) germinal layers form

Question 67.

In the development of the human body, the ectoderm is responsible for the formation of

- (a) lens of the eye
- (b) nervous system
- (c) sweat glands
- (d) all of these.

Answer:

(d) all of these.

Question 68.

The first movements of the fetus and appearance of hair on its head are usually observed during which month of pregnancy ?

- (a) Fourth month
- (b) Fifth month
- (c) Sixth month
- (d) Third month

Answer:

(b) Fifth month

Question 69.

The early stage human embryo distinctly possesses

- (a) gills
- (b) gill slits
- (c) external ear (pinna)
- (d) eyebrows.

Answer:

(b) gill slits

Question 70.

Delivery of developed fetus is scientifically called

- (a) parturition
- (b) oviposition
- (c) abortion
- (d) ovulation.

Answer:

(a) parturition