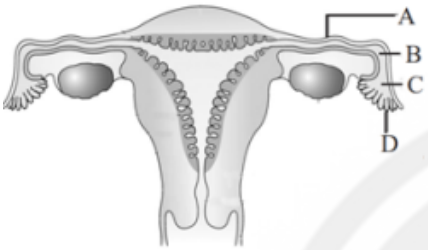
ULTIMATE KCET CRASH COURSE 2026

ZOOLOGY

HUMAN REPRODUCTION

DPP: 1

Q1 The given figure shows the diagrammatic sectional view of female reproductive system with few structures marked as A, B, C and D. Select the option which shows the **correct** identification of the structure with its characteristics.



(A) A : Infudibulum, funnel shaped structure surrounded by finger like projection.

(B) B : Ampulla, wider part of oviduct where fertilisation occurs.

(C) C : Isthmus, it has a narrow lumen and joins with uterus

(D) D : Fimbriae, it collects ovum before ovulation.

Q2 Match the **List-I** with **List-II**.

	List-I		**List-II**
(A)	Gametogenesis	(I)	Delivery of the baby.
(B)	Insemination	(II)	Release of secondary oocyte from ovary
(C)	Parturition	(III)	Formation of gametes.
(D)	Ovulation	(IV)	Transfer of sperms into female genital tract.

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

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

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

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

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

Q3 The amniotic fluid serves to:

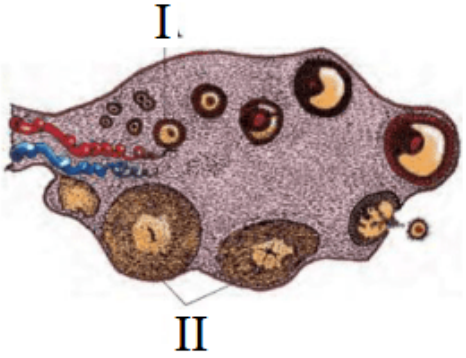
(A) Nourish the developing embryo

(B) Protect the developing embryo from mechanical shocks

(C) Exchange nutrients and waste with the mother's blood

(D) Facilitate gas exchange with the external environment

Q4 Below given diagram shows a section of human ovary. Select the **correct** option for labelled part.



(A) I - Primary follicle, II - Corpus luteum
(B) I - Tertiary follicle, II-Primary follicle
(C) I-Tertiary follicle, II-Corpus albicans
(D) I-Secondary oocyte, II-Primary follicle

Q5 Which one of the following is not the function of placenta?
(A) Facilitates removal of carbon dioxide and waste material from embryo
(B) Secretes oxytocin during parturition
(C) Facilitates supply of oxygen and nutrients to embryo
(D) Secretes estrogen

Q6 Assertion : Colostrum produced in first 2-3 days of parturition is rich in nutrients.
Reason : Placenta induces the signals for expulsion of the fully developed foetus
(A) Assertion and reason both are correct statements and reason is correct explanation for assertion.
(B) Assertion and reason both are correct statements but reason is not correct explanation for assertion.
(C) Assertion is correct statement but reason is wrong statement.
(D) Assertion is wrong statement but reason is correct statement.

Q7 What is the female counterpart of prostate gland
in the male
(A) Bartholin's gland
(B) Uterus
(C) Clitoris
(D) None of the above

Q8 Which of the following events is not associated with ovulation in human female ?
(A) Release of secondary oocyte
(B) LH surge
(C) Decrease in estradiol
(D) Full development of Graafian follicle

Q9 Which of the following is incorrect about the luteal phase of the menstrual cycle?
(A) It is primarily regulated by progesterone.
(B) If fertilization does not occur, corpus luteum degenerates into corpus albicans.
(C) FSH and LH levels are at their peak during this phase.
(D) Endometrial lining thickens to prepare for implantation.

Q10 Increased production of cortisol, thyroxine, prolactin in maternal blood is essential for;
(A) metabolic changes in foetus
(B) supporting the growth of mother
(C) maintenance of pregnancy
(D) exchange of material between mother and foetus

Q11 Which accessory genital gland occurs only in mammalian male?
(A) Prostate gland
(B) Perineal gland
(C) Cowper's gland
(D) Bartholin gland

Q12 Choose the correct option regarding male accessory glands ?
(A) Seminal vesicle - one
(B) Prostate gland - one pair
(C) Bulbourethral gland - one pair
(D) Bartholin gland - one pair

Q13 At which stage the egg is liberated from the ovary?
(A) Primary oocyte stage
(B) Secondary oocyte stage
(C) tertiary oocyte stage
(D) Mature ovum stage

Q14 The main function of the fimbriae of the fallopian tube in females is to:
(A) Release ovum from Graafian follicle
(B) Make necessary changes in endometrium for implantation
(C) Help in development of corpus luteum
(D) Help in collection of ovum after ovulation
(E) Help in development of ovary

Q15 Which of the following layers of the ovum prevents polyspermy?
(A) Corona radiata
(B) Zona pellucida
(C) Vitelline membrane
(D) Perivitelline space

Q16 Sertoli cells are found in
(A) ovaries and secrete progesterone
(B) adrenal cortex and secrete adrenaline
(C) seminiferous tubules and provide nutrition to germ cells
(D) pancreas and secrete cholecystokinin

Q17 The hormone responsible for milk ejection during lactation is:
(A) Progesterone (B) Prolactin
(C) Oxytocin (D) Estrogen

Q18 Statement I: After implantation, finger-like projections appear on the trophoblast called chorionic villi which are surrounded by the uterine tissue and maternal blood.
Statement II: The chorionic villi and uterine tissue become interdigitated with each other and jointly form a structural and functional unit between developing embryo (foetus) and maternal body called placenta.
(A) Statement I and statement II both are correct
(B) Statement I is correct but statement II is incorrect
(C) Statement I is incorrect but statement II is correct
(D) Statement I and statement II both are incorrect

Q19 What is the process of release of sperms from Sertoli cells called?
(A) Spermiation
(B) Spermatogenesis
(C) Spermiogenesis
(D) Meiosis

Q20 Which of these is not an important component of initiation of parturition in humans?
(A) Release of oxytocin
(B) Release of prolactin
(C) Increase in estrogen and progesterone ratio
(D) Synthesis of prostaglandins

Q21 Primary oocyte surrounded by a layer of granulosa cells is called
(A) secondary follicle
(B) ootid
(C) primary follicle
(D) tertiary follicle

Q22 _____hormone is responsible for spermiogenesis
(A) LH (B) FSH
(C) Testosterone (D) androgen

Q23 Which set is similar?
(A) Corpus luteum Graafian follicles
(B) Sebum Sweat
(C) Bundle of His Pace maker
(D) Vitamin B_7 Niacin

Q24 The primary female sex organs are located
(A) one on each side of upper abdomen
(B) One on each side of lower abdomen
(C) One on each side of lower abdomen
(D) At a time only one side of lower abdomen

Q25 Which one is a primary sex organ?
(A) Testis (B) Scrotum
(C) Prostate (D) Penis

Q26 Sperm come in contact with _____membrane of ovum
(A) Nucleus
(B) Vegetal pole
(C) Zona pellucida
(D) None of the above

Q27 Which of the following is the **correct** sequence for the formation of spermatozoa?
(A) Spermatogonia spermatid spermatocytes spermatozoa
(B) Spermatids spermatogonia secondary spermatocyte spermatozoa
(C) Spermatids spermatogonia primary spermatocytes secondary spermatocytes
(D) Spermatogonia primary spermatocytes secondary spermatocytes spermatids spermatozoa

Q28 Correct sequence of hormone secretion from beginning of menstruation is
(A) FSH, progesterone, estrogen
(B) FSH, estrogen, progesterone
(C) Estrogen, FSH, progesterone
(D) Estrogen, progesterone, FSH

Q29 In human females, meiosisII is not completed until
(A) uterine implantation
(B) birth
(C) puberty
(D) fertilisation

Q30 Withdrawal of which of the following hormones is the immediate cause of menstruation?
(A) FSH (B) FSH-RH
(C) Progesterone (D) Estrogen

Answer Key

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

Hints & Solutions

Note: scan the QR code to watch video solution

Q1 Text Solution:

B : Ampulla, wider part of oviduct where fertilization occurs.

Video Solution:

Q2 Text Solution:

Gametogenesis	Formation of gametes.
Inseminati on	Transfer of sperms into female genital tract.
Parturition	Delivery of the baby.
Ovulation	Release of secondary oocyte from ovary.

Video Solution:

Q3 Text Solution:

Protect the developing embryo from mechanical shocks

Video Solution:

Q4 Text Solution:

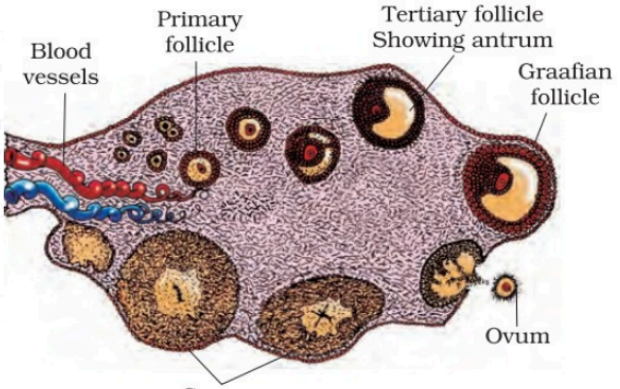


Fig: Diagrammatic section view of ovary

For I is Primary follicle and for II is Corpus luteum.

Video Solution:

Q5 Text Solution:

Parturition is induced by a complex neuroendocrine mechanism. The signals for parturition originate from the fully developed foetus and the placenta which induce mild uterine contractions called foetal ejection reflex. This triggers release of oxytocin from the maternal pituitary.

Oxytocin acts on the uterine muscle and causes stronger uterine contractions, which in turn stimulates further secretion of oxytocin. The stimulatory reflex between the uterine contraction and oxytocin secretion continues resulting in stronger and stronger contractions. This lead to expulsion of the baby out of the uterus through the birth canal.

Video Solution:

Q6 Text Solution:

Colostrum produced in first 2-3 days of parturition is rich in nutrients which will help the developing baby. Placenta alone do not induces the signals for expulsion of the fully developed foetus. Both placenta and developing fetus induces signals for parturition. Hence assertion is correct but reason is incorrect

Video Solution:

Q7 Text Solution:

None of the above

Women have glandular tissue below the bladder and surrounding the urethra that appears to be

homologous to the male prostate. This tissue (also called "female prostate" or Skene's glands)

appears to the source of a viscous, white secretion, which exits from the urethra upon sexual stimulation in some women.

Video Solution:

Q8 Text Solution:

In human females, ovulation is the release of secondary oocyte from the ovary at about 14 th day of the menstrual cycle. Both LH and FSH attain a peak level during this period. Rapid secretion of LH induces rupturing of fully developed Graafian follicle and thereby release of ovum. LH surge is actually responsible for ovulation.

Video Solution:

Q9 Text Solution:

FSH and LH levels are at their peak during this phase.

Video Solution:

Q10 Text Solution:

During pregnancy the levels of other hormones like estrogens, progestogens, cortisol, prolactin, thyroxine, etc., are increased severalfolds in the maternal blood. Increased production of these hormones is essential for supporting the foetal growth, metabolic changes in the mother and maintenance of pregnancy.

Video Solution:

Q11 Text Solution:

Prostate gland

Video Solution:

Q12 Text Solution:

One pair of Bulbourethral gland is present in human males.

Video Solution:

Q13 Text Solution:

The Graafian follicle now ruptures to release the secondary oocyte (ovum) from the ovary by the process called ovulation.

Video Solution:

Q14 Text Solution:

The fimbriae is the fringe like structure located at the end of the fallopian tube. Its main function is to capture the egg released from the ovary after ovulation and draw it into the fallopian tube.

Video Solution:

Q15 **Text Solution:**
Zona pellucida

Video Solution:

Q16 **Text Solution:**
Sertoli cells are found in the walls of seminiferous tubules of the testes. They anchor and provide nutrition to the developing germ cells especially the spermatids.

Video Solution:

Q17 **Text Solution:**
Oxytocin

Video Solution:

Q18 **Text Solution:**
After implantation, finger-like projections appear on the trophoblast called chorionic villi which are surrounded by the uterine tissue and maternal blood. The chorionic villi and uterine tissue become interdigitated with each other and jointly form a structural and functional unit between developing embryo (foetus) and maternal body called placenta.

Video Solution:

Q19 **Text Solution:**
Spermiation refers to the release of sperms from Sertoli cells. Spermatogenesis is the process of the production of sperms from spermatogonia. Spermiogenesis is the process of conversion of spermatids to mature sperms.

Video Solution:

Q20 Text Solution:

Process of parturition is induced by both nervous system and hormones secreted by the endocrine glands of the mother. The signals for child birth (parturition) originate from the fully developed foetus and placenta which induce mild uterine contractions called foetal ejection reflex. This causes quick release of oxytocin from the maternal posterior lobe of pituitary gland which induces labour pains.

Prostoglandins, progesterone and estrogen also play a role. Prolactin is the hormone which induces lactation and has no role in parturition.

Video Solution:

Q21 Text Solution:

Each primary oocyte then gets surrounded by a layer of granulosa cells and is called the primary follicle.

Video Solution:

Q22 Text Solution:

FSH hormone is responsible for spermiogenesis and LH, testosterone cause spermatogenesis

Video Solution:

Q23 Text Solution:

After ovulation many of the follicular cells remain in the collapsed Graafian follicle on the surface of the ovary. The antrum (cavity) of the collapsed follicle fills with a partially clotted fluid. The follicular cells enlarge and fill with a yellow pigment, lutein. Such a follicle is called a corpus Luteum

Video Solution:

Q24 Text Solution:

One on each side of lower abdomen

Ovaries are the primary female sex organs that produce the female gametes (ovum) and several steroid hormones (ovarian hormones). Ovaries are located one on each side of the lower abdomen and remain attached to the pelvic wall and uterus by ovarian ligaments.

Video Solution:

Q25 **Text Solution:**

Testis

Video Solution:

Q26 **Text Solution:**

Sperm come in contact with the zona pellucida of ovum. This cause acrosomal reaction and prevent additional sperm entry

Video Solution:

Q27 **Text Solution:**

The correct sequence for the formation of spermatozoa in males is:

Spermatogonia primary spermatocytes secondary spermatocytes spermatid spermatozoa

Video Solution:

Q28 **Text Solution:**

FSH (Follicle stimulating hormone) causes the production of follicles, which will produce estrogen. The follicles which after releasing ovum will produce progesterone. Hence answer is FSH, Estrogen, Progesterone.

Video Solution:

Q29 **Text Solution:**

In human beings, ovum is released from the ovary in the secondary oocyte stage. The maturation of secondary oocyte is completed in the mother's oviduct (Fallopian tube) usually after the sperm has entered the secondary oocyte for fertilisation. Entry of the sperm restarts the cell cycle breaking down MPF (M-phase promoting factor) and turning on APC (Anaphase promoting complex). Completion of meiosis II converts the secondary oocyte into a fertilised ovum (egg) or zygote (and also a second polar body).

Video Solution:

Q30 Text Solution:

Progesterone hormone which is secreted by the corpus luteum in the ovaries is responsible to stop ovulation (during pregnancy) and fixes the foetus to the uterine wall, facilitates placenta formation and controls the foetus development in uterus. If this hormone is withdrawn then fixation of foetus to uterine wall will not take place, formation of placenta will also not take place, ovulation starts from the ovaries and hence in human female menstruation starts.

Video Solution: