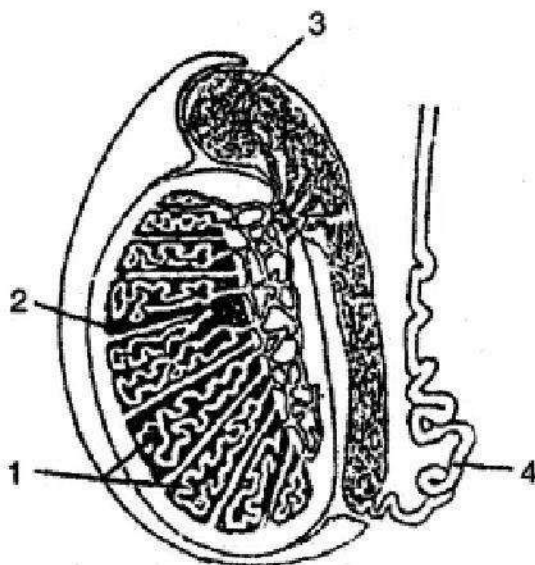


Reproductive system and Human Population

Diagram Based Questions

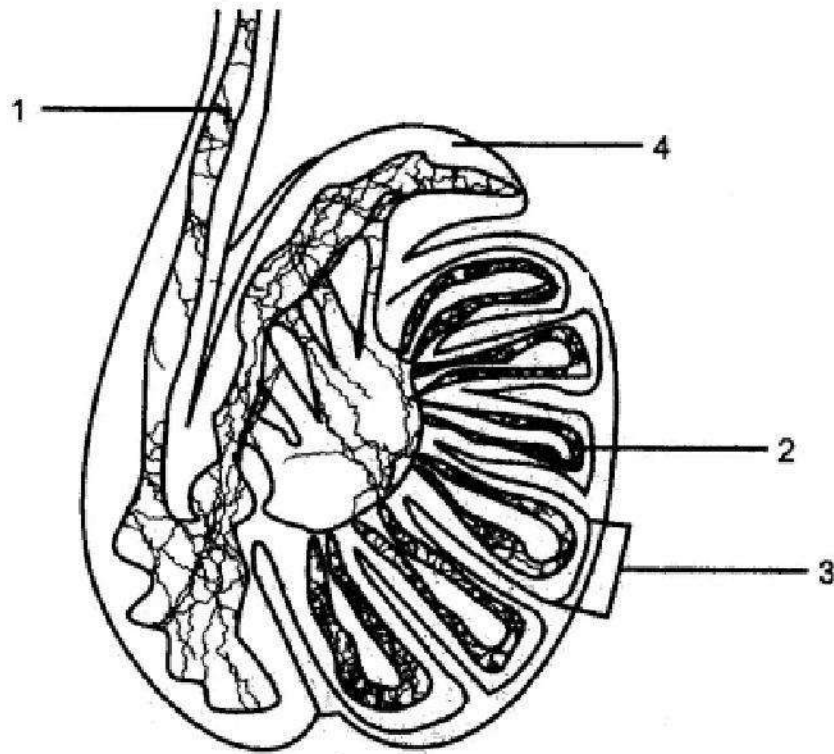
Question 1: Given below is a diagram of the lateral section of a testis of a man. Study the same and answer the questions that follow:



- (i) Label the parts numbered I to 4 of the diagram.
- (ii) State the functions of the parts labeled 1 and 3.
- (iii) What is the significance of the testes being located in the scrotal sac outside the abdomen?
- (vi) What is the role played by the inguinal canal?
- (v) What is semen?

Answer: (i) 1. Seminiferous tubules 2. Testicular lobule 3. Epididymis 4. Vas deferens
(ii) 1. **Seminiferous tubules:** sperm production, nourishment and protection of sperm.
3. **Epididymis:** stores sperm, contributes to seminal fluid.
(iii) Scrotal sac acts as thermo regulator. The temperature in scrotal sac remains 2-3°C lower than the body temperature which is suitable for maturation of sperm.
(iv) Through inguinal canal sperm duct is connected and so passes the sperm to urinary bladder.
(v) Semen is a mixture of mature sperm and secretions of various accessory glands. It is a milky fluid.

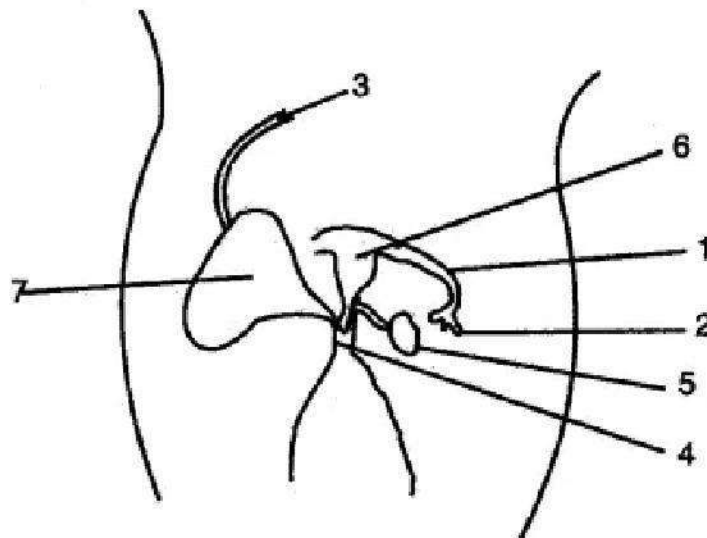
Question 2: The diagram shown below is the lateral section of testis of man. Study it carefully and answer the questions that follow:



- (i) Label the part I to 4 of the diagram.
 (ii) State the functions of the parts labeled 1 and 2.

Answer: (i) (1) Sperm Duct (2) Seminiferous Tubule (3) Lobes of Testis (4) Epididymis.
 (ii) The function of Sperm Duct: It carries sperms from testis to urethra.
 The function of Seminiferous tubule: Here sperms are produced.

Question 3: The below diagram represents the sectional view of the female reproductive organs of a mammal.

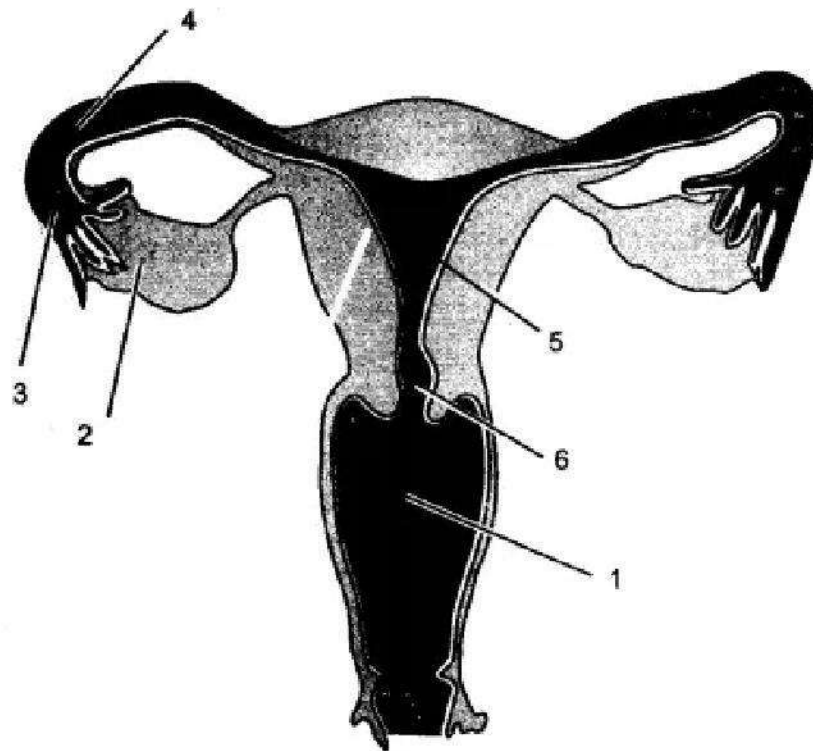


- (i) Label the parts numbered 1 to 7.
 (ii) What are the main functions of the parts labeled 2, 5, 6?

Answer:

- (i) (1) Fallopian tube
- (2) Fimbriated funnel
- (3) Ureter
- (4) Vagina
- (5) Ovary
- (6) Uterus
- (7) Urinary bladder
- (ii) 2—Funnel. It collects ovum by its ciliary movement.
- 5—Ovary. It produces ovum.
- 6—Uterus. It lodges and nourishes ovum.

Question 4: Given below is a diagram of the female reproductive system of a human being :



- (i) Name the parts numbered 1 to 6.
- (ii) Normally after how many days does an ovary release an egg ?
- (iii) Where are the sperms released during coitus ?
- (iv) What do the sperms do after being released ?
- (v) What is the function of the organ numbered 5?
- (vi) How many days does it normally take from the fertilization of the egg up to the birth of the baby ?

Answer:

- (i) 1. Vagina
- 2. Right ovary

3. Ovarian funnel
4. Oviduct
5. Uterus
6. Cervix.

(ii) Normally the ovary releases one egg every 28 days by the rupture of the Graffian follicle.

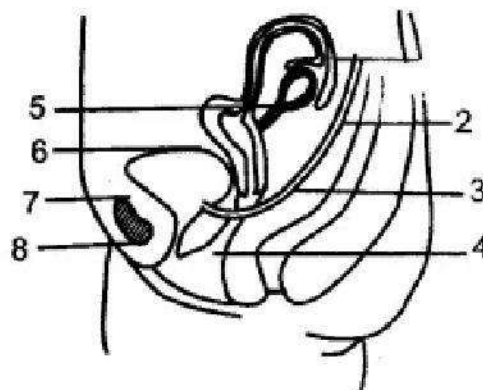
(iii) The sperms are released by the penis in the vagina near the cervix.

(iv) The sperms swim up the vagina to enter through the cervix into the uterus and up into the oviduct where it meets the ovum.

(v) The function of the uterus is for protection and nourishment of the embryo during the period of gestation.

(vi) The period of gestation is 266-280 days after which the foetus is expelled.

Question 5: The below diagram represents the vertical view of the human female reproductive system.



- (i) Label the parts indicated by the guidelines 1 to 8.
- (ii) How does the uterus prepare for the reception of a zygote ?
- (iii) What happens to the uterus if fertilization takes place ?
- (iv) What happens to the uterus if fertilization has failed to take place?

Answer:

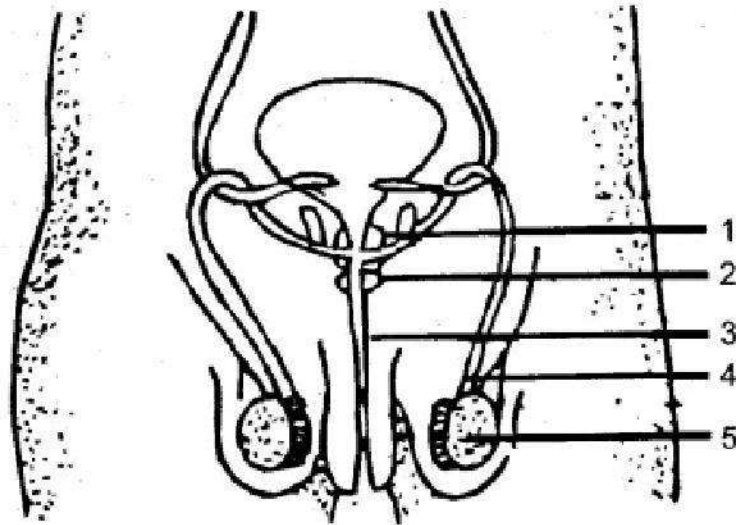
- (i) 1. Oviduct
2. Funnel of oviduct
3. Ureter
4. Vagina
5. Ovary
6. Uterus
7. Bladder
8. Urethra

(ii) The endometrium lining and glands of uterine wall grow to prepare the uterus for the reception of a zygote.

(iii) If fertilization takes place, the embryo is implanted in the uterus. The uterus wall develops a placenta which attaches the embryo to the uterus and the uterine wall expands to accommodate the growing embryo.

(iv) If fertilization fails to take place, menstruation takes place during which endometrium of the uterus is cast off. The capillaries and cells of this layer rupture and disappear.

Question 6: Given below is the outline of the male reproductive system:

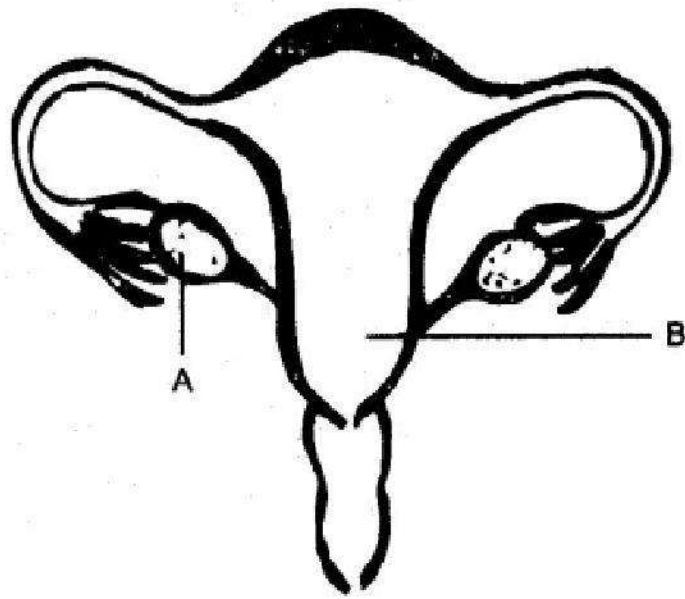


- (i) Name the parts labeled 1 to 5.
- (ii) State the functions of the parts labeled 1 and 4.
- (iii) Name the cells of part 5 that produce testosterone.
- (iv) Why is the structure 5 present outside the body in the scrotal sacs ?
- (v) What is semen?

Answer:

- (i) 1. Prostate gland.
2. Cowper's gland.
3. Urethra.
4. Sperm duct.
5. Testis.
- (ii) 1. Prostate gland: it secretes an alkaline matter which neutralizes the acidity of urethra.
4. Sperm duct: It carries sperms from epididymis to the urethra.
- (iii) Cells of Leydig.
- (iv) Testis are located in the scrotal sacs so that they can maintain a low temperature than the body cavity. This low temperature is necessary for the maturation of sperms.
- (v) Semen is the mixture of sperm and secretions of the seminal vesicles, prostate gland and cowper's gland.

Question 7: Study the diagram given below and then answer the questions that follow:



- (i) Name the part labeled A. Name any two hormones produced by the part labeled A.
- (ii) What happens to the part labeled B.
 - (1) if fertilization takes place?
 - (2) If fertilization does not take place?
- (iii) Where do fertilization occur?
- (iv) Draw a neat diagram of the human sperm as seen under high magnification and label the following parts.
 - (1) Acrosome
 - (2) Mitochondria

Answer: (i) A is ovary—Hormones are oestrogen and progesterone.

(ii) (1) If fertilization takes place, after about 7 days of fertilization the embryo reaches the uterus.

(2) If there is no fertilization uterine lining is shed off with blood flow.

(iii) Fallopian tube.

(iv)

