



# BIOLOGY

## BOOKS - SRIJAN BIOLOGY (ENGLISH)

### SPECIMEN QUESTION PAPER

#### Questions

1. Which of the following steps in transcription is catalysed by RNA polymerase?

A. Initiation

B. Elongation

C. Termination

D. All of these

**Answer: D**



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**2. In a DNA strand the nucleotides are linked together by**

A. glycosidic bonds

B. phosphodiester bonds

C. peptide bonds

D. hydrogen bonds

**Answer: B**



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**3.** If the sequence of nitrogen bases of the coding strand of DNA in a transcription unit is:

5' - ATGAATG-3', the sequence of bases in its RNA transcript would be

A. 5'- AUG AAUG-3'

B. 5'- UACUU AC-3'

C. 5'-CAUUCAU-3'

D. 5'-GUAAGUA-3'

**Answer: B**



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4. In *E. coli* the lac operon gets switched on when

A. lactose is present and it binds to the repressor

B. repressor binds to operator

C. RNA polymerase binds to the operator

D. lactose is present and it binds to RNA polymerase

**Answer: A**



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5. The amino acid attaches to the tRNA at its

A. 5'-end

B. 3'-end

C. anticodon site

D. DHU loop

**Answer: B**

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6. Which of the following provides the most satisfactory evidence in the favour of the organic evolution?

A. Fossils

B. Neoteny

C. Connecting links

D. None of above

**Answer: A**



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7. Which era is dubbed as the age of prokaryotic microbes?

A. Phanerozoic

B. Proterozoic

C. Precambrian

D. Archeozoic

**Answer: B**



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8. The presence of gill slits in the embryos of all vertebrates supports the theory of:

- A. Recapitulation
- B. Organic evolution
- C. Metamorphosis
- D. Biogenesis

**Answer: A**



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9. In Miller's experiment, the gaseous mixture in the flask contained:

A. Methane, ammonia, carbon dioxide and helium

B. Carbon dioxide, hydrogen, water vapour and ammonia

C. Ammonia, methane, hydrogen and water vapour

D. Hydrogen, ammonia and methane and helium

**Answer: C**



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**10. Neo-Darwinism is:**

- A. Natural selection theory
- B. Modern mutation theory
- C. Modern synthetic theory

## D. Population theory

**Answer: C**



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**11.** Trichoderma, free living fungi, present in root ecosystem are useful as:

A. Biofertilizer

B. Biopesticides

C. Methanogens

## D. Vector for genetic engineering

**Answer: B**



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**12.** During spermatogenesis, the second maturation division results in the formation of:

A. 8 haploid spermatids

B. 2 diploid spermatids

C. 4 haploid spermatids

D. 4 haploid spermatids

**Answer: C**



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**13.** What is the effect of high pH on sperm?

A. High activity leading to early death

B. Sluggish, longer life

C. High activity, longer life

D. No effect

**Answer: C**



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**14.** If temperature is reduced to  $0^{\circ} C$ , what will happen to spermatozoa?

A. All will die

B. No change

C. Shedding of tail

## D. Temporary inactivation

**Answer: D**



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**15.** Select the incorrect statement about gametes:

A. Sperm begin developing before puberty

B. Sperm do not develop successfully at

$37^{\circ}C$



C. Sperm are made in the seminiferous tubules

D. Sperm are capable of movement

**Answer: A**



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**16.** In industries, citric acid is obtained from which of the following the microbe?

A. *Aspergillus niger*

B. Clostridium botulinum

C. Saccharomyces cerevisiae

D. Trichoderma polysporum

**Answer: A**



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**17. Statins are used as:**

A. Clot busters

B. Clearing of fruit juices

C. Blood cholesterol lowering agents

D. Meat tenderisers

**Answer: C**



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**18.** Biological name of the common yeast used in baking industry is:

A. *Saccharomyces cerevisiae*

B. *Clostridium butylicum*

C. *Trichoderma polysporum*

D. *Propionibacterium shermanii*

**Answer: A**



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**19.** Which of the following microbes is used in the production of Swiss cheese?

A. *Aspergillus niger*

B. *Mucor*

C. *Monascus purpureus*

D. *Penicillium notatum*

**Answer:**



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**20.** Which of the following can be used as biofertilizer?

A. *Anabaena*

B. *Nostoc*

C. Oscillatoria

D. All of these

**Answer: D**



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**21. The abbreviation 'HIV' stands for:**

A. Human immune virus

B. Hepatitis virus

C. Human Immunodeficiency virus

D. Highly infectious virus

**Answer: C**



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**22.** The abbreviation snRNA stands for:

- A. Small nuclear RNA
- B. Small nucleus and RNA
- C. Small nucleolar RNA
- D. Sub-nuclear RNA

**Answer: A**



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**23.** The fact that DNA is the genetic material was proved by:

- A. Meselson and Stahl
- B. Sutton and Boveri
- C. Watson and Crick
- D. Hershey and Chase



**Answer: D**



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**24.** The term biodiversity was coined by:

A. Wilson

B. R. Mishra

C. Rio de Janeiro

D. Oparin

**Answer:**



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25. Bt cotton is a/an \_\_\_\_ resistant variety of cotton.

A. insecticide

B. pest

C. insect

D. disease

**Answer: C**



26. Bt cotton has been produced by transferring genes of \_\_\_\_\_ into the cotton plant.

- A. Escherichia coli
- B. Pseudomonas putida
- C. Bacillus tumorigenes
- D. Bacillus thuringiensis

**Answer: D**



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27. The enzyme pectinase is obtained from:

A. *Bacillus aureus*

B. *Bacillus cereus*

C. *Trichoderma*

D. *Claviceps*

**Answer: B**



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28. The enzyme \_\_\_\_\_ is used to remove the turbidity and clear the fruit juices:

A. Zymase

B. Pectinase

C. Amylase

D. Papain

**Answer: B**



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29. Secondary sewage treatment is mainly a \_\_\_\_\_ process:

A. chemical

B. biological

C. mechanical

D. physical

**Answer: B**



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30. Corpus luteum has \_\_\_\_\_ function:

A. Reproductive

B. Endocrine

C. Excretory

D. All of these

**Answer: B**



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31. The hormone (A), released by (B) helps in the release of milk from the mammary glands.

A. Oxytocin, placenta

B. Prolactin, posterior pituitary

C. Prolactin, ovary

D. Oxytocin, posterior pituitary

**Answer: B**



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32. If the mother is homozygous for blood group B, and the father is heterozygous for blood group A, their offspring will be of \_\_\_\_ and \_\_ blood groups:

A. A,B

B. O,B

C. B,AB

D. A,AB

**Answer: B**



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33. The vermiform appendix is \_\_\_\_\_ organ in humans.

- A. A homologous
- B. An analogous
- C. A vestigial
- D. An over-specialised

**Answer: C**



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34. The sperm of *Drosophila* contains \_\_\_\_ number of chromosomes:

A. 4

B. 46

C. 23

D. 8

**Answer: D**



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**35.** Which of the following is not correct regarding vasectomy?

A. It is irreversible

B. It causes loss of secondary sexual characters in males

C. It leads to absence of sperm in the semen

D. This process involves bilateral cutting and ligating of the sperm ducts

**Answer: B**



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**36.** Which of the following statements is correct?

A. Down's syndrome is caused due to trisomy of 22nd chromosome

B. Haemophilia is an autosomal recessive disorder

C. The life on the Earth appeared about 3.5 million years ago

D. In angiosperms, the endosperm is triploid

**Answer: D**



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**37.** Which of the following is odd one out with reference to evolution?

|   |                        |   |                          |      |                             |
|---|------------------------|---|--------------------------|------|-----------------------------|
| A | Leydig cells           | p | Extra embryonic mesoderm | i.   | ABP                         |
| B | Primordial germ cell   | q | Interstitial space       | ii.  | Upto puberty no development |
| C | Spermatogonia          | r | Germ cell of testis      | iii. | During embryonic life       |
| D | Sertoli cell of testis | s | Nurse cell               | iv.  | Testosterone                |

A. A-q-iv, B-p-iii, C-r-ii, D-s-i

B. A-s-iv, B-p-iii, C-q-ii, D-r-i

C. A-q-i,B-r-ii,C-s-iii,D-p-iv

D. A-q-iv,B-r-ii,C-p-i,D-s-iii

**Answer: A**



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38. Match Column-I with Column-II and select the correct option from the choices given below :

|     | Column – I (Microbe)            | Column – II (Product) |
|-----|---------------------------------|-----------------------|
| (a) | <i>Saccharomyces cerevisiae</i> | Ethanol               |
| (b) | <i>Monascus purpureus</i>       | Lipase                |
| (c) | <i>Clostridium</i>              | Statins               |
| (d) | <i>Penicillium</i>              | Butyric acid          |

A. A-3,B-1,C-2,D-4

B. A-1,B-4,C-3,D-2

C. A-2,B-1,C-4,D-3

D. A-4,B-3,C-2,D-1



**Answer: A**



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**39.** Which of the following is odd one out with reference to evolution ?

- A. Flippers of whale
- B. Wings of pigeon
- C. Forelimbs of rabbit
- D. Wings of butterfly

**Answer: C**



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**40.** Which of the following is odd one out with reference to geological time scale?

A. Proterozoic

B. Mesozoic

C. Jurassic

D. Coenozoic

**Answer: C**



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**41.** Assertion: All the plants belonging to a single clone are phenotypically identical.

Reason: All the plants within a clone are derived from vegetative cells through mitosis and have the same genetic constitution.

A. Both assertion and reason are true, and reason is the correct explanation of

assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: A**



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**42.** Assertion: Autosomal disease is transferred from father to both son and daughter.

Reason: Autosomes are transferred only from father to son.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of

assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: C**



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**43.** Assertion: Tropical latitudes have greater biological diversity temperate latitudes.

Reason: Tropical regions remain relatively undisturbed for millions of years.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: A**



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**44.** Assertion: Methane component of greenhouse gases contributing to global warming is about 20%.

Reason: Introduction of multi-point fuel injection increase methane production engines in automobiles has decreased methane content in the exhausts.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.



B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: A**



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**45.** Assertion: Mendel conducted his experiments on *Pisum sativum*.

Reason: *Pisum sativum* belongs to the family Solanaceae.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

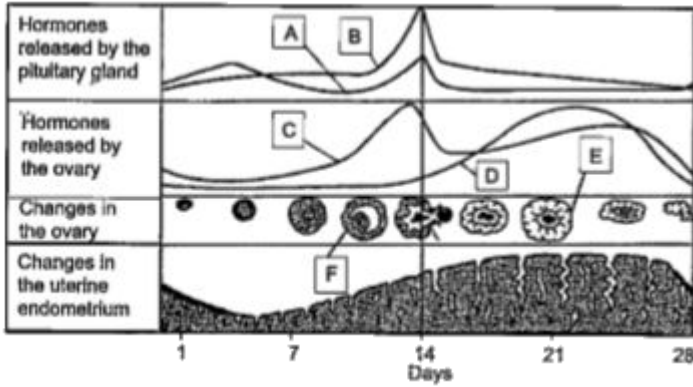
D. Both assertion and reason are false.

**Answer: C**



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**46.** Study the diagram given below and answer the questions that follow:



The alphabet 'A' represents \_\_\_\_\_ hormone.

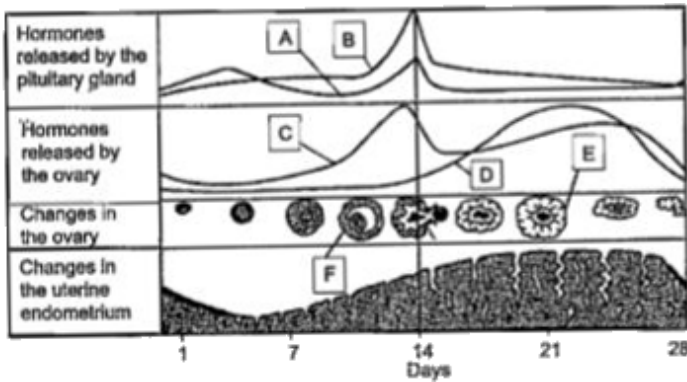
- A. Oestrogen
- B. Progesterone
- C. FSH
- D. LH

**Answer: C**



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47. Study the diagram given below and answer the questions that follow:



The alphabet 'D' represents \_\_\_\_\_ hormone.

A. Progesterone

B. Oestrogen

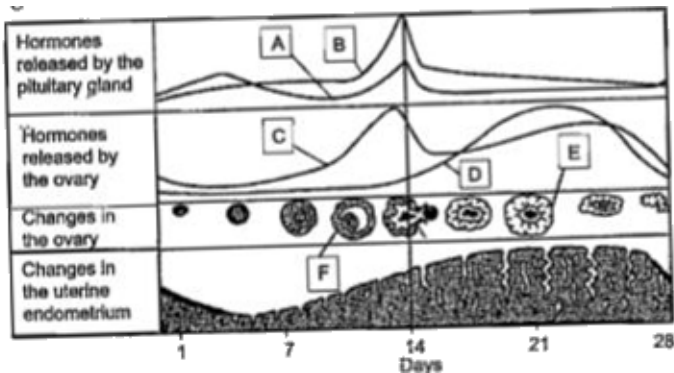
C. LH

D. FSH

Answer: A

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48. Study the diagram given below and answer the questions that follow:



The structure marked 'E' is \_\_\_\_\_

A. Corpus luteum

B. Secondary follicle

C. Graafian follicle

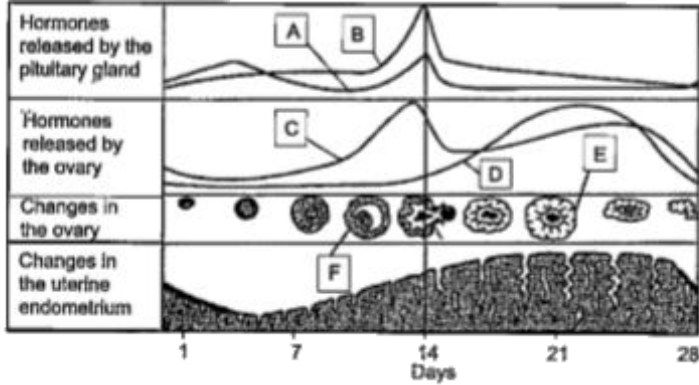
D. Corpus albicans

**Answer: A**



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**49.** Study the diagram given below and answer the questions that follow:



Ovulation occurs on day \_\_\_\_\_ of a typical menstrual cycle.

A. 12

B. 14

C. 22

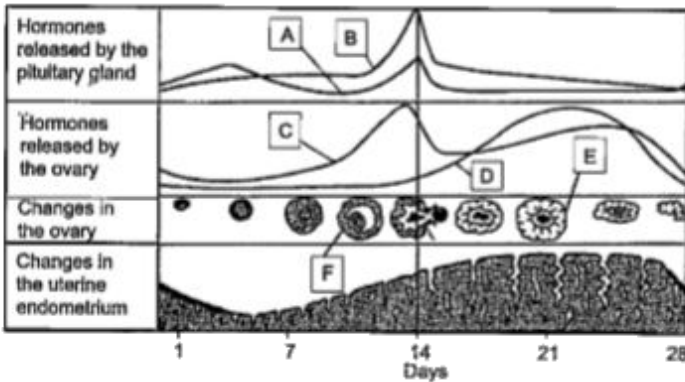
D. 28

**Answer: B**





50. Study the diagram given below and answer the questions that follow:



Menstrual cycle operates in \_\_\_\_\_

A. All vertebrates

B. All mammals

C. Only primates

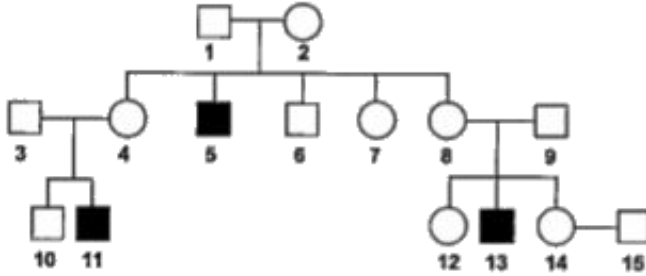
D. Only apes

**Answer: C**



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**51.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:

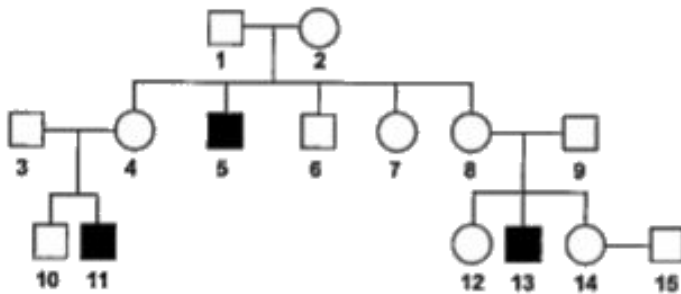


Identify the correct statement with respect to member '4':

- A. He is a carrier male
- B. She is a carrier female
- C. He is haemophilic
- D. She is a homozygous female

**Answer: B**

52. The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



The possible genotype of member '5' is:

A.  $X^H X^H$

B.  $X^H Y$

C.  $X^hY$

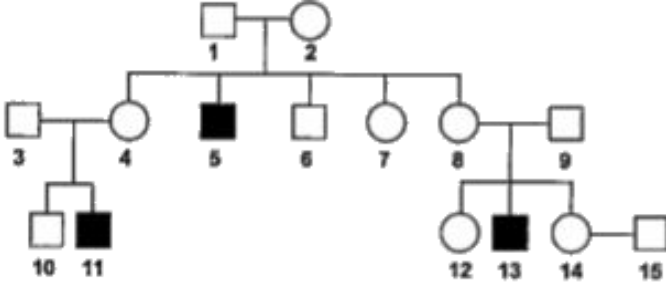
D. None of these

**Answer: B**



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**53.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



The possible genotype(s) of member '6' is/are:

A.  $X^H X^H$ ,  $X^H X^h$

B.  $X^H Y$

C.  $X^h X^h$

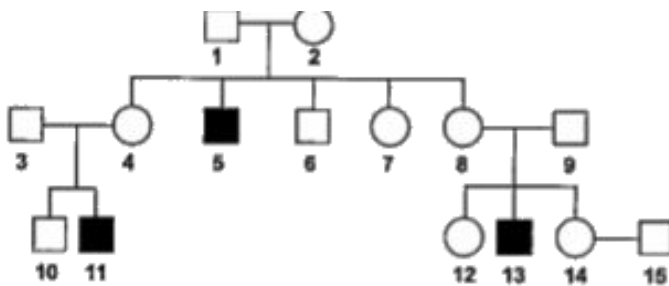
D. None of these

**Answer: D**



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54. The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



Haemophilia is a/an \_\_\_\_\_ trait

- A. Dominant
- B. Autosomal
- C. X-linked

D. Y-linked

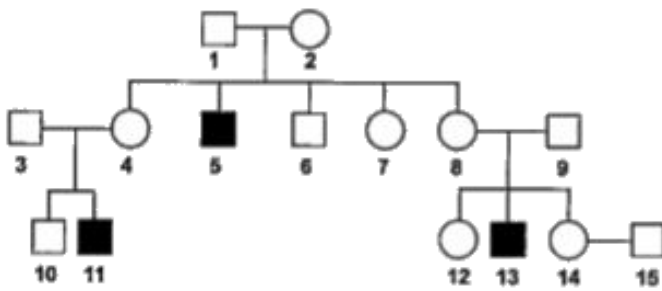
**Answer: C**



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**55.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:





Assuming that member '14' is heterozygous for haemophilia, the probability of the son of this couple to be haemophilic is:

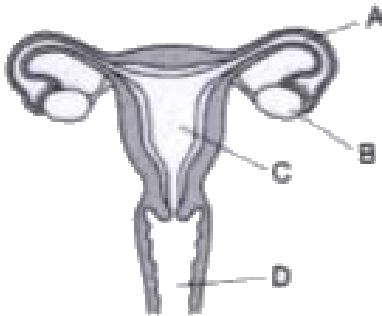
- A. 25 %
- B. 50 %
- C. 75 %
- D. 100 %

**Answer: A**



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56. The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The place where fertilisation takes place is:

A. A

B. B

C. C

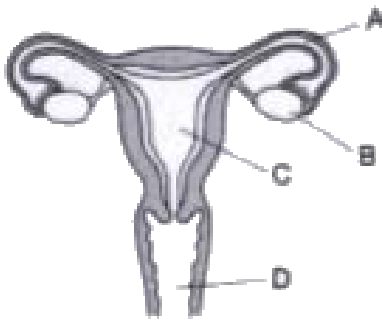
D. D

**Answer: A**



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**57.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The place where the embryo is implanted:

A. A

B. B

C. C

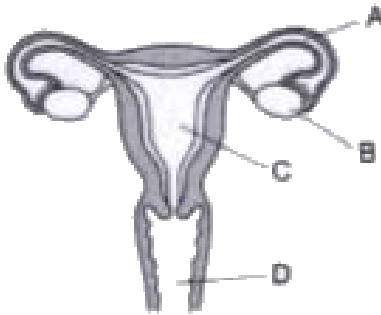
D. D

**Answer: C**



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**58.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The ovum is released by:

A. A

B. B

C. C

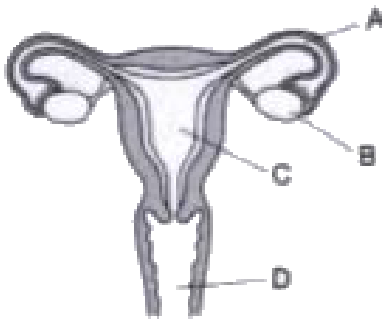
D. D

**Answer: B**



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**59.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The hormone testosterone is released by:

A. A

B. B

C. C

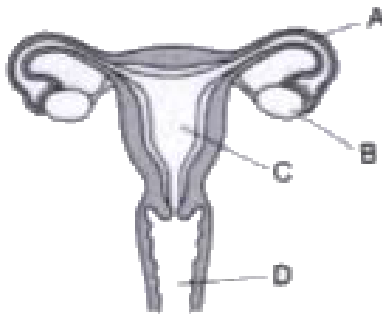
D. D

**Answer: B**



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**60.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The \_\_\_\_\_ layer of the organ 'C' undergoes a cyclic change every month:

A. Outermost



B. Innermost

C. Middle

D. Both (b) and (c)

**Answer: B**



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**61.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive

feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

The virus used in this process was:

- A. Baculovirus
- B. Tobacco mosaic virus
- C. Bacteriophage
- D. All of these

**Answer: A**



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**62.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

In scientific terms, this method of pest control is an example of:

- A. Bioremediation
- B. Chemical control
- C. Biological control
- D. All of these

**Answer: C**



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**63.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

The advantage of this process is that it helps in:

- A. Controlling pollution
- B. Evolution of new chemicals
- C. Improving the quality of cotton
- D. None of these

**Answer: C**



**View Text Solution**

**64.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major

pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

The virus used in this process can also be used to control some mosquito-borne diseases like:

A. Malaria

B. Filaria

C. Dengue

D. None of these

**Answer: C**



**View Text Solution**

**65.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant



against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

From the statements given below, select the correct statement with respect to this process:

A. The viruses are specific to insect host species

B. The viruses are not specific to individual insect host species

C. The same virus can be used to control  
corn-borer also

D. The insect host never develops  
resistance against the virus

**Answer: A**



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**66.** Read the passage given below, and answer  
the questions that follow:

Some students wanted to investigate the

pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

Select the statement which correctly predicts the phenotype of the plants of  $F_1$  generation.

- A. All the plants will bear red flowers
- B. All the plants will bear white flowers
- C. 50% plants will bear red flowers and 50% will bear white flowers
- D. 100% plants will bear pink flowers.

**Answer: D**



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**67.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These

seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

If the plants of  $F_1$ -generation are allowed to self-pollinate, then in  $F_2$ -generation.

A. All of the resulting plants will have pink flowers.

B. 75% plants will have red flowers and the remaining 25% plants will have white flowers.

C. 25% plants will have red flowers, 25% plants will have pink flowers and 25% will have white flowers.

D. 25% plants will have red flowers and the remaining 75% plants will have white flowers.

**Answer:**



**View Text Solution**

**68.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These



seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

The genotypic ratio of the plants of  $F_2$ -generation will be:

A. 1 : 2 : 3

B. 9 : 3 : 3 : 1

C. 1 : 2 : 1

D. 3 : 1

**Answer: C**



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**69.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-

pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

This type of inheritance can be described as:

- A. Polygenic inheritance
- B. Incomplete dominance
- C. Co-dominance
- D. Pleiotropism

**Answer: B**



**View Text Solution**

**70.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as

Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

The biological name of snapdragon is:

- A. *Antirrhinum majus*
- B. *Pisum sativum*
- C. *Lathyrus odoratus*

## D. *Rhizobium leguminosarum*

**Answer: A**



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**71.** Which of the following steps in transcription is catalysed by RNA polymerase?

A. Initiation

B. Elongation

C. Termination

D. All of these

**Answer: D**



**View Text Solution**

**72.** In a DNA strand the nucleotides are linked together by

A. glycosidic bonds

B. phosphodiester bonds

C. peptide bonds

D. hydrogen bonds

**Answer: B**



**View Text Solution**

**73.** If the sequence of nitrogen bases of the coding strand of DNA in a transcription unit is: 5' - ATGAATG-3', the sequence of bases in its RNA transcript would be

A. 5'- AUG AAUG-3'



B. 5'- UACUU AC-3'

C. 5'-CAUUCAU-3'

D. 5'-GUAAGUA-3'

**Answer: B**



**View Text Solution**

**74.** In E. coli the lac operon gets switched on when

- A. lactose is present and it binds to the repressor
- B. repressor binds to operator
- C. RNA polymerase binds to the operator
- D. lactose is present and it binds to RNA polymerase

**Answer: A**



**View Text Solution**

75. The amino acid attaches to the tRNA at its

A. 5'-end

B. 3'-end

C. anticodon site

D. DHU loop

**Answer: B**



**View Text Solution**

76. Which of the following provides the most satisfactory evidence in the favour of the organic evolution?

A. Fossils

B. Neoteny

C. Connecting links

D. None of above

**Answer: A**



**View Text Solution**

77. Which era is dubbed as the age of prokaryotic microbes?

A. Phanerozoic

B. Proterozoic

C. Precambrian

D. Archeozoic

**Answer: B**



**View Text Solution**

78. The presence of gill slits in the embryos of all vertebrates supports the theory of:

- A. Recapitulation
- B. Organic evolution
- C. Metamorphosis
- D. Biogenesis

**Answer: A**



**View Text Solution**

**79.** In Miller's experiment, the gaseous mixture in the flask contained:

A. Methane, ammonia, carbon dioxide and helium

B. Carbon dioxide, hydrogen, water vapour and ammonia

C. Ammonia, methane, hydrogen and water vapour

D. Hydrogen, ammonia and methane and helium

**Answer: C**



**View Text Solution**

**80. Neo-Darwinism is:**

- A. Natural selection theory
- B. Modern mutation theory
- C. Modern synthetic theory



## D. Population theory

**Answer: C**



**View Text Solution**

**81.** Trichoderma, free living fungi, present in root ecosystem are useful as:

A. Biofertilizer

B. Biopesticides

C. Methanogens

## D. Vector for genetic engineering

**Answer: B**



**View Text Solution**

**82.** During spermatogenesis, the second maturation division results in the formation of:

A. 8 haploid spermatids

B. 2 diploid spermatids

C. 4 haploid spermatids

D. 4 haploid spermatids

**Answer: C**



**View Text Solution**

**83.** What is the effect of high pH on sperm?

A. High activity leading to early death

B. Sluggish, longer life

C. High activity, longer life

D. No effect

**Answer: C**



**View Text Solution**

**84.** If temperature is reduced to  $0^{\circ} C$ , what will happen to spermatozoa?

A. All will die

B. No change

C. Shedding of tail

## D. Temporary inactivation

**Answer: D**



**View Text Solution**

**85.** Select the incorrect statement about gametes:

A. Sperm begin developing before puberty

B. Sperm do not develop successfully at

$37^{\circ}C$

C. Sperm are made in the seminiferous tubules

D. Sperm are capable of movement

**Answer: A**



**View Text Solution**

**86.** In industries, citric acid is obtained from which of the following the microbe?

A. *Aspergillus niger*

B. Clostridium botulinum

C. Saccharomyces cerevisiae

D. Trichoderma polysporum

**Answer: A**



**View Text Solution**

**87. Statins are used as:**

A. Clot busters

B. Clearing of fruit juices

C. Blood cholesterol lowering agents

D. Meat tenderisers

**Answer: C**



**View Text Solution**

**88.** Biological name of the common yeast used in baking industry is:

A. *Saccharomyces cerevisiae*

B. *Clostridium butylicum*



C. *Trichoderma polysporum*

D. *Propionibacterium shermanii*

**Answer: A**



**View Text Solution**

**89.** Which of the following microbes is used in the production of Swiss cheese?

A. *Aspergillus niger*

B. *Mucor*

C. *Monascus purpureus*

D. *Penicillium notatum*

**Answer:**



**View Text Solution**

**90.** Which of the following can be used as biofertilizer?

A. *Anabaena*

B. *Nostoc*

C. Oscillatoria

D. All of these

**Answer: D**



**View Text Solution**

**91.** The abbreviation 'HIV' stands for:

A. Human immune virus

B. Hepatitis virus

C. Human Immunodeficiency virus

D. Highly infectious virus

**Answer: C**



**View Text Solution**

**92.** The abbreviation snRNA stands for:

- A. Small nuclear RNA
- B. Small nucleus and RNA
- C. Small nucleolar RNA
- D. Sub-nuclear RNA

**Answer: A**



**View Text Solution**

**93.** The fact that DNA is the genetic material was proved by:

- A. Meselson and Stahl
- B. Sutton and Boveri
- C. Watson and Crick
- D. Hershey and Chase

**Answer: D**



**View Text Solution**

**94.** The term biodiversity was coined by:

A. Wilson

B. R. Mishra

C. Rio de Janeiro

D. Oparin

**Answer:**



[View Text Solution](#)

95. Bt cotton is a/an \_\_\_\_ resistant variety of cotton.

A. insecticide

B. pest

C. insect

D. disease

**Answer: C**



96. Bt cotton has been produced by transferring genes of \_\_\_\_\_ into the cotton plant.

- A. Escherichia coli
- B. Pseudomonas putida
- C. Bacillus tumorigenes
- D. Bacillus thuringiensis

**Answer: D**





[View Text Solution](#)

97. The enzyme pectinase is obtained from:

A. *Bacillus aureus*

B. *Bacillus cereus*

C. *Trichoderma*

D. *Claviceps*

**Answer: B**



[View Text Solution](#)

98. The enzyme \_\_\_\_\_ is used to remove the turbidity and clear the fruit juices:

A. Zymase

B. Pectinase

C. Amylase

D. Papain

**Answer: B**



**View Text Solution**

99. Secondary sewage treatment is mainly a \_\_\_\_\_ process:

A. chemical

B. biological

C. mechanical

D. physical

**Answer: B**



**View Text Solution**

100. Corpus luteum has \_\_\_\_\_ function:

A. Reproductive

B. Endocrine

C. Excretory

D. All of these

**Answer: B**



**View Text Solution**

**101.** The hormone (A), released by (B) helps in the release of milk from the mammary glands.

A. Oxytocin, placenta

B. Prolactin, posterior pituitary

C. Prolactin, ovary

D. Oxytocin, posterior pituitary

**Answer: B**



**View Text Solution**

**102.** If the mother is homozygous for blood group B, and the father is heterozygous for blood group A, their offspring will be of \_\_\_\_ and \_\_ blood groups:

A. A,B

B. O,B

C. B,AB

D. A,AB

**Answer: B**



**View Text Solution**

**103.** The vermiform appendix is \_\_\_\_\_ organ in humans.

- A. A homologous
- B. An analogous
- C. A vestigial
- D. An over-specialised

**Answer: C**



**View Text Solution**

**104.** The sperm of *Drosophila* contains \_\_\_\_ number of chromosomes:

A. 4

B. 46

C. 23

D. 8

**Answer: D**



**View Text Solution**



**105.** Which of the following is not correct regarding vasectomy?

A. It is irreversible

B. It causes loss of secondary sexual characters in males

C. It leads to absence of sperm in the semen

D. This process involves bilateral cutting and ligating of the sperm ducts

**Answer: B**



**View Text Solution**

**106.** Which of the following statements is correct?

A. Down's syndrome is caused due to trisomy of 22nd chromosome

B. Haemophilia is an autosomal recessive disorder

C. The life on the Earth appeared about 3.5 million years ago

D. In angiosperms, the endosperm is triploid

**Answer: D**



**View Text Solution**

**107.** Which of the following is odd one out with reference to evolution ?

- A. Flippers of whale
- B. Wings of pigeon
- C. Forelimbs of rabbit
- D. Wings of butterfly

**Answer: C**



**View Text Solution**

**108.** Which of the following is odd one out with reference to geological time scale?

A. Proterozoic

B. Mesozoic

C. Jurassic

D. Coenozoic

**Answer: C**



**View Text Solution**

**109.** Assertion: All the plants belonging to a single clone are phenotypically identical.

Reason: All the plants within a clone are

derived from vegetative cells through mitosis and have the same genetic constitution.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: A**



**View Text Solution**

**110.** Assertion: Autosomal disease is transferred from father to both son and daughter.

Reason: Autosomes are transferred only from father to son.

A. Both assertion and reason are true, and reason is the correct explanation of

assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: C**



**View Text Solution**



**111.** Assertion: Tropical latitudes have greater biological diversity temperate latitudes.

Reason: Tropical regions remain relatively undisturbed for millions of years.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: A**



[View Text Solution](#)

**112.** Assertion: Methane component of greenhouse gases contributing to global warming is about 20%.

Reason: Introduction of multi-point fuel injection increase methane production

engines in automobiles has decreased methane content in the exhausts.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

D. Both assertion and reason are false.

**Answer: A**



**View Text Solution**

**113.** Assertion: Mendel conducted his experiments on *Pisum sativum*.

Reason: *Pisum sativum* belongs to the family Solanaceae.

A. Both assertion and reason are true, and reason is the correct explanation of assertion.

B. Both assertion and reason are true, but reason is not the correct explanation of assertion.

C. Assertion is true, but reason is false.

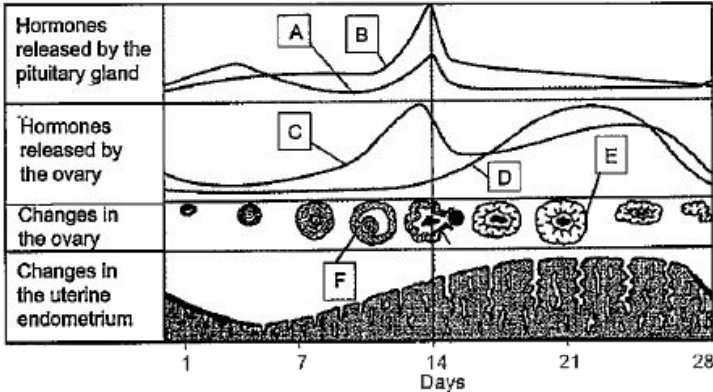
D. Both assertion and reason are false.

**Answer: C**



**View Text Solution**

114. Study the diagram given below and answer the questions that follow:



The alphabet 'A' represents \_\_\_\_\_ hormone.

A. Oestrogen

B. Progesterone

C. FSH

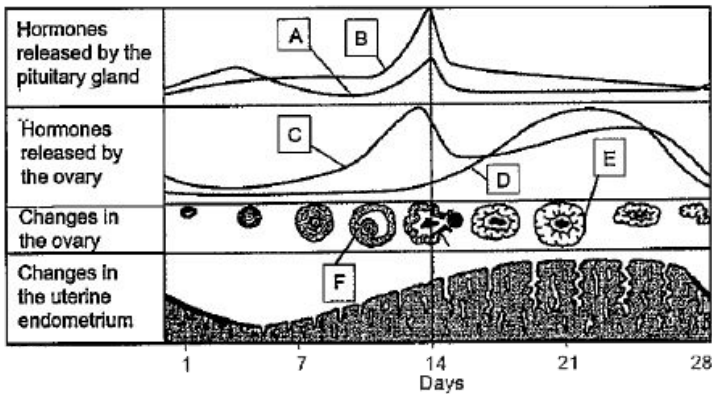
D. LH

Answer: C



View Text Solution

115. Study the diagram given below and answer the questions that follow:



The alphabet 'D' represents \_\_\_\_\_ hormone.

A. Progesterone

B. Oestrogen

C. LH

D. FSH

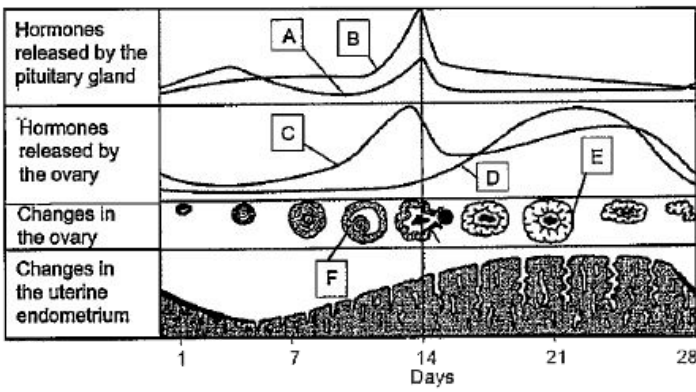
**Answer: A**



**View Text Solution**

**116.** Study the diagram given below and answer the questions that follow:





The structure marked 'E' is \_\_\_\_\_

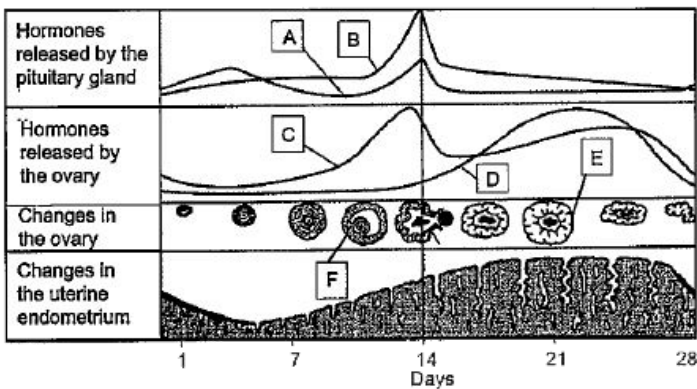
- A. Corpus luteum
- B. Secondary follicle
- C. Graafian follicle
- D. Corpus albicans

**Answer: A**



**View Text Solution**

117. Study the diagram given below and answer the questions that follow:



Ovulation occurs on day \_\_\_\_\_ of a typical menstrual cycle.

A. 12

B. 14

C. 22

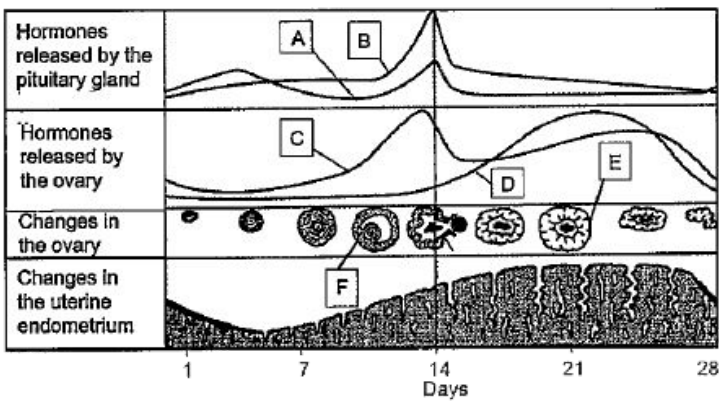
D. 28

**Answer: B**



**View Text Solution**

**118.** Study the diagram given below and answer the questions that follow:

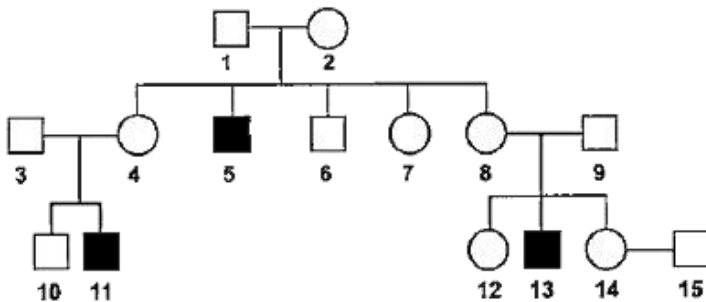


Menstrual cycle operates in \_\_\_\_\_

- A. All vertebrates
- B. All mammals
- C. Only primates
- D. Only apes

**Answer: C**

**119.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



Identify the correct statement with respect to member '4':

A. He is a carrier male

B. She is a carrier female

C. He is haemophilic

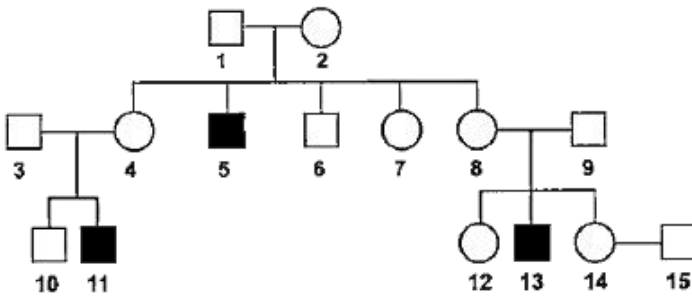
D. She is a homozygous female

**Answer: B**



**View Text Solution**

**120.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



The possible genotype of member '5' is:

A.  $X^H X^H$

B.  $X^H Y$

C.  $X^h Y$

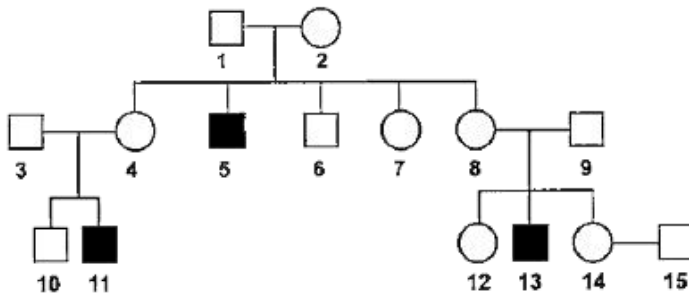
D. None of these

**Answer: B**



**View Text Solution**

**121.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



The possible genotype(s) of member '6' is/are:

A.  $X^H X^H$ ,  $X^H X^h$

B.  $X^H Y$



C.  $X^h X^h$

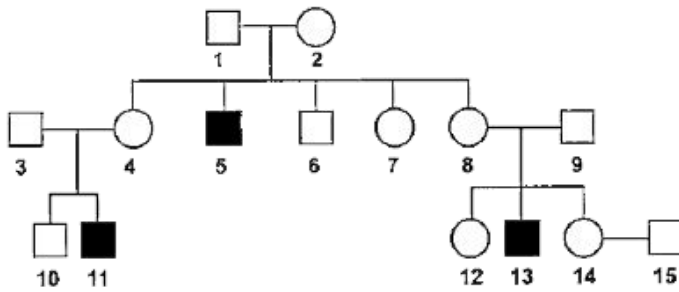
D. None of these

**Answer: D**



**View Text Solution**

**122.** The pedigree chart given below represents the pattern of inheritance of haemophilia in a family. Study it carefully and answer the following questions:



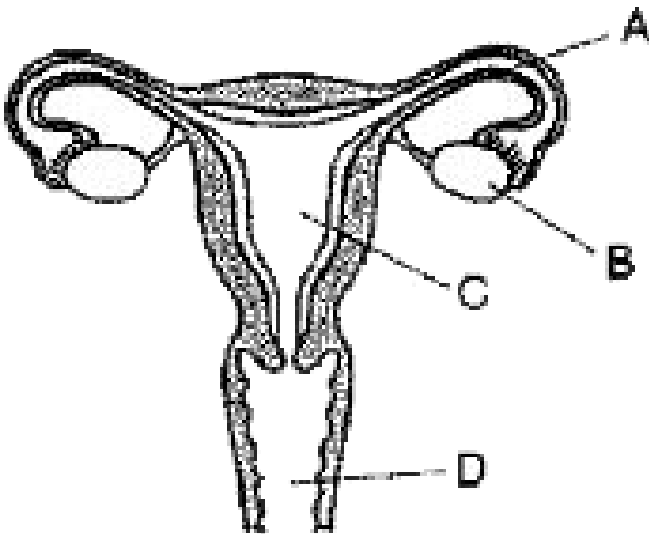
Haemophilia is a/an \_\_\_\_\_ trait

- A. Dominant
- B. Autosomal
- C. X-linked
- D. Y-linked

**Answer: C**

 [View Text Solution](#)

**123.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The place where fertilisation takes place is:

A. A

B. B

C. C

D. D

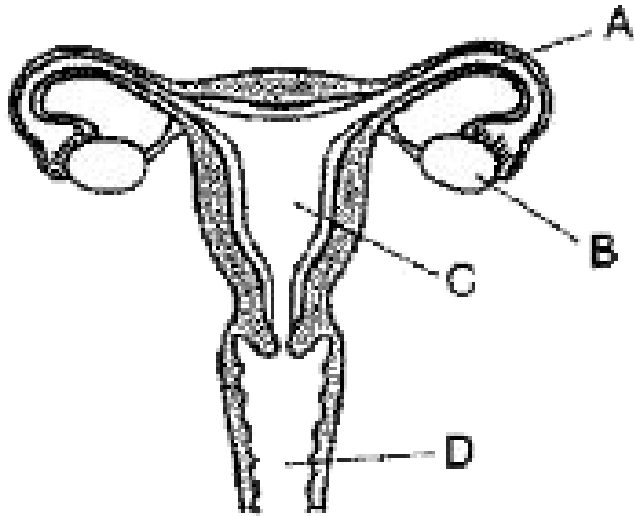
**Answer: A**



**View Text Solution**

**124.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that

follow:



The place where the embryo is implanted:

A. A

B. B

C. C

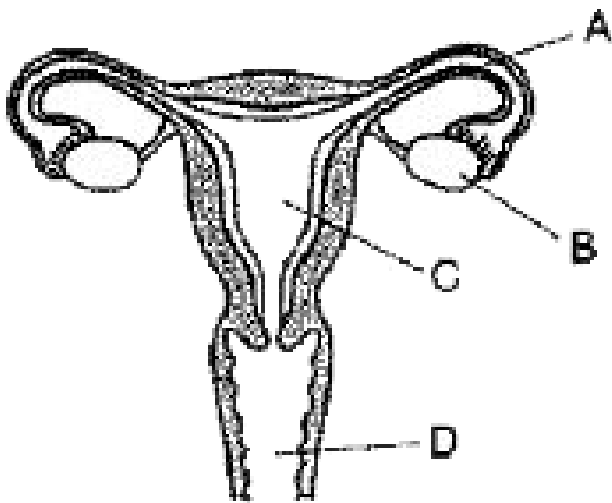
D. D

**Answer: C**



**View Text Solution**

**125.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The ovum is released by:

A. A

B. B

C. C

D. D

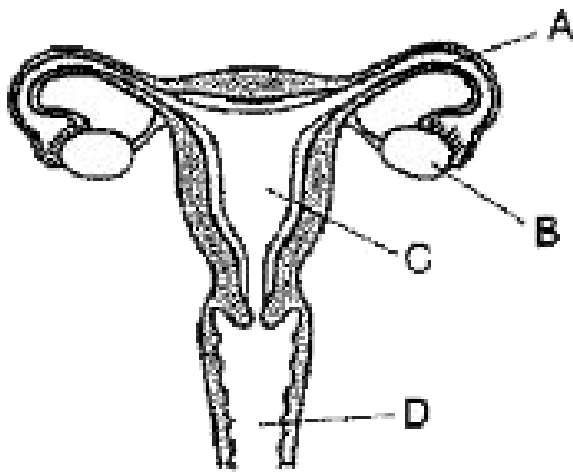
**Answer: B**



**View Text Solution**

**126.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:





The hormone testosterone is released by:

A. A

B. B

C. C

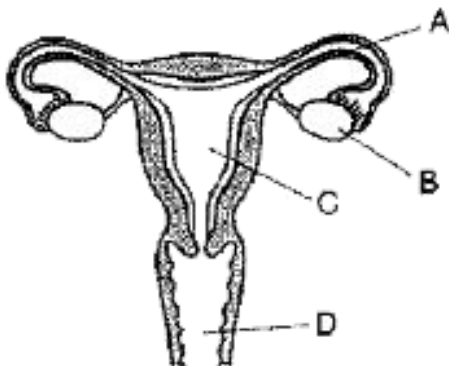
D. D

**Answer: B**



**View Text Solution**

**127.** The diagram of the organs of female reproductive system is given below. Study it carefully and answer the questions that follow:



The \_\_\_\_\_ layer of the organ 'C' undergoes a cyclic change every month:

- A. Outermost
- B. Innermost
- C. Middle
- D. Both (b) and (c)

**Answer: B**



**View Text Solution**

**128.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

The virus used in this process was:

A. Baculovirus

B. Tobacco mosaic virus

C. Bacteriophage

D. All of these

**Answer: A**



**View Text Solution**

**129.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive

feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

In scientific terms, this method of pest control is an example of:

- A. Bioremediation
- B. Chemical control
- C. Biological control
- D. All of these

**Answer: C**



**View Text Solution**

**130.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which

selectively infects and kills the bollworm.

The advantage of this process is that it helps  
in:

- A. Controlling pollution
- B. Evolution of new chemicals
- C. Improving the quality of cotton
- D. None of these

**Answer: C**



**View Text Solution**



**131.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

The virus used in this process can also be used to control some mosquito-borne diseases like:

A. Malaria

B. Filaria

C. Dengue

D. None of these

**Answer: C**



**View Text Solution**

**132.** Read the passage given below, and answer the questions that follow:

The cotton bollworm is considered a major pest, all over the world. Due to its destructive

feeding nature and continuous consumption of the same chemicals, it evolved resistant against many insecticides. To overcome this problem, scientists introduced a virus which selectively infects and kills the bollworm.

From the statements given below, select the correct statement with respect to this process:

A. The viruses are specific to insect host species

B. The viruses are not specific to individual insect host species

C. The same virus can be used to control corn-borer also

D. The insect host never develops resistance against the virus

**Answer: A**



**View Text Solution**

**133.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These

seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

Select the statement which correctly predicts the phenotype of the plants of  $F_1$  generation.

- A. All the plants will bear red flowers
- B. All the plants will bear white flowers
- C. 50% plants will bear red flowers and 50% will bear white flowers
- D. 100% plants will bear pink flowers.

**Answer: D**



**View Text Solution**

**134.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as

Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

If the plants of  $F_1$ -generation are allowed to self-pollinate, then in  $F_2$ -generation.

A. All of the resulting plants will have pink flowers.



B. 75% plants will have red flowers and the remaining 25% plants will have white flowers.

C. 25% plants will have red flowers, 25% plants will have pink flowers and 25% will have white flowers.

D. 25% plants will have red flowers and the remaining 75% plants will have white flowers.

**Answer:**



[View Text Solution](#)

**135.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-

pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

The genotypic ratio of the plants of  $F_2$ -generation will be:

A. 1 : 2 : 3

B. 9 : 3 : 3 : 1

C. 1 : 2 : 1

D. 3: 1

**Answer: C**



**View Text Solution**

**136.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in snapdragon. They selected some plants which were homozygous for red flowers and some

other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

This type of inheritance can be described as:

A. Polygenic inheritance

B. Incomplete dominance

C. Co-dominance

D. Pleiotropism

**Answer: B**



**View Text Solution**

**137.** Read the passage given below, and answer the questions that follow:

Some students wanted to investigate the pattern of inheritance of flower colour in

snapdragon. They selected some plants which were homozygous for red flowers and some other plants which were homozygous for white flowers. These plants were labelled as Parental Plants ( $P_1$ ). These plants (red-flowered and white flowered), were cross-pollinated. The seeds obtained from these plants were planted in a separate field. These seeds germinated to produce the plants which were labelled as the plants of  $F_1$ -generation.

Based on the above experiment, answer the following questions:

The biological name of snapdragon is:

A. *Antirrhinum majus*

B. *Pisum sativum*

C. *Lathyrus odoratus*

D. *Rhizobium leguminosarum*

**Answer: A**



**View Text Solution**