



BIOLOGY

BOOKS - X BOARD PREVIOUS YEAR PAPER ENGLISH

X Boards

Section A

1. Name the sensory receptors found in the nose and on the tongue.

 [Watch Video Solution](#)

2. (a) Name the part of brain which controls
(i) voluntary action, (ii) involuntary action.

(b) What is the significance of the peripheral nervous system?

Name the components of this nervous system and distinguish between the origin of the two.

 [Watch Video Solution](#)

3. Write two examples each of sexually transmitted diseases caused by (i) virus, (ii) bacteria. Explain how the transmission of such diseases be prevented?

 [Watch Video Solution](#)

4. "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it." Justify this statement with the help of a flow chart showing determination of sex of a newborn.

 [Watch Video Solution](#)

5. Draw the diagram of sectional view of human heart and on it name and label the following parts:

- (a) The chamber of the heart that pumps out deoxygenated blood.
- (b) The blood vessel that carries away oxygenated blood from the heart.
- (c) The blood vessel that receives deoxygenated blood from the lower part of our body.

 [Watch Video Solution](#)

6. Write two points of difference between asexual and sexual types of reproduction. Describe why variations are observed in the offspring formed by sexual reproduction.

 [Watch Video Solution](#)

7. State the importance of chromosomal difference between sperms and eggs of humans.

 [Watch Video Solution](#)

8. Name three different glands associated with the digestive system in humans. Also name their secretions.

 [Watch Video Solution](#)

9. (a) Name the hormone which is secreted when growing plants detect light. Mention its site of secretion in a plant.

(b) Explain why do plants appear to bend towards light?

 [Watch Video Solution](#)

10. Explain with the help of suitable examples why certain traits cannot be passed on to the next generation? What are such traits called?

 [Watch Video Solution](#)

11. (a) Draw a diagram of human alimentary canal and label the following parts:

(i) largest gland.

(ii) gland that secretes digestive enzymes and hormone.

(iii) Part where HCl is produced.

(iv) part where digested food is absorbed.

(b) What are villi? Explain their function in the digestive system.

 [View Text Solution](#)

12. Define pollination. Explain the different types of pollination. List two agents of pollination. How does suitable pollination lead to fertilization?

 [Watch Video Solution](#)

13. Why is Government of India imposing a ban on the use of polythene bags? Suggest two alternatives to these bags and explain how this ban is likely to improve the environment.

 [Watch Video Solution](#)

14. Give reasons for the following:

(a) Arteries are thick walled.

(b) Blood goes only once through the heart in fishes.

(c) Plants have low energy needs.

15. Assertion (A) : Amphibians have evolved from fishes .

Reason (R) : Archaeopteryx is a fossil linking fishes and amphibians.

- A. If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
- B. If both Assertion and Reason are true ,but the Reason is not the correct explanation of the Assertion.
- C. If Assertion is true, but Reason is false
- D. If both Assertion and Reason are false.

Answer: C

16. Draw the human respiratory system and label the following parts:

(a) Trachea

(b) Alveoli

(c) Respiratory bronchioles

(d) Larynx.

Describe in brief the role of lungs in the exchange of gases.



Watch Video Solution

17. (a) Give one example each of the unisexual and a bisexual flower.

(b) Mention the changes a flower undergoes after fertilization.

(c) How does the amount of DNA remain constant though each new generation which is a combination of DNA copies of two individuals?



Watch Video Solution

18. Name the respective part of human female reproductive system:

(i) that produces eggs.

(ii) where fusion of egg and sperm take place, and

(iii) where zygote implanted.

(b) Describe in brief what happen to the zygote after it gets implanted.



Watch Video Solution

19. What is gene ?



Watch Video Solution

20. What is the main difference between sperms and eggs of humans ? Write the importance of this difference.

 [Watch Video Solution](#)

21. Define the following :

(a) Reflex action (b) Synapse (c) Phototropism.

 [Watch Video Solution](#)

22. What do you mean by biomagnification of harmful chemicals ?

How does this phenomenon affect the human health ?

 [Watch Video Solution](#)

23. (a) Compare the length of small intestine in herbivore and carnivore animal.

(b) Mention any two structural modifications in small intestine which helps in absorption .

 [View Text Solution](#)

24. Name the two components of peripheral nervous system.

 [Watch Video Solution](#)

25. What is the function of ozone which is present in the upper level of the atmosphere?

 [Watch Video Solution](#)

26. What is sustainable management ? Why is reuse considered better in comparison to recycle ?

 [Watch Video Solution](#)

27. State the kind of chemical reactions in the following examples :

(i) Digestion of food in stomach

(ii) Combustion of coal in air

(iii) Heating of limestone.



View Text Solution

28. What is solar cell panel ? Write some of its applications ?



Watch Video Solution

29. What is DNA copying ? State its importance.



Watch Video Solution

30. With the help of a labelled diagram, explain why the sun appears reddish at the sunrise and the sunset.



Watch Video Solution

31. (a) Write three main functions of the nervous system.

(b) In the absence of muscle cells, how do plant cells show movement ?



Watch Video Solution

32. How many pairs of chromosomes are present in human beings ?

Out of these how many are sex chromosomes ? How many types of sex chromosomes are found in human beings ? "The sex of a new born child is a matter of chance and none of the parents may be newborn to justify this statement.

 [Watch Video Solution](#)

33. Mention the purpose of blacking the interior of a solar cooker.

 [Watch Video Solution](#)

34. Name the gland and the hormone secreted by the gland, which are associated with the following problems:

(i) a girl has grown extremely tall.

(ii) a women has a swollen neck.

 [Watch Video Solution](#)

35. Explain how water and minerals are transported in plants?

 [Watch Video Solution](#)

36. Explain how the movement of leaves of a sensitive plant is different from movement of shoots towards light ?

 [Watch Video Solution](#)

37. Write any three characteristics of a good fuel.

 [Watch Video Solution](#)

38. List six specific characteristics of sexual reproduction.

 [Watch Video Solution](#)

39. List four points of significance of reproductive health in a society. Name any two areas related to reproductive health which have improved over the past 50 years in our country.

 [Watch Video Solution](#)

40. Define photosynthesis.

 [Watch Video Solution](#)

41. List two natural ecosystems.

 [Watch Video Solution](#)

42. Name the plant hormones responsible for the following functions:

(i) Growth of the stem (ii) Promotes cell division

(iii) Wilting of leaves (iv) Inhibits growth

 [Watch Video Solution](#)

43. Differentiate between the following with suitable examples :

(i) mineral and ore

(ii) corrosion and rancidity

(iii) malleability and ductility

 [Watch Video Solution](#)

44. Name the system which facilitates communication between central nervous system and the other parts of the body. Mention

two types of nerves it consists of along with their organs of origin.

 [Watch Video Solution](#)

45. How do organisms , whether reproduced asexually or sexually maintain a constant chromosome number through several generations ? Explain with the help of suitable example.

 [View Text Solution](#)

46. Suggest three contraceptive methods to control the size of human population which is essential for the health and prosperity of a country. State the basic principle involved in each.

 [Watch Video Solution](#)

47. (a) Explain how the separation of oxygenated and deoxygenated blood is useful in humans ?

(b) Why is double circulation of blood necessary in humans ?

 [View Text Solution](#)

48. What is meant by speciation ? List four factors that could lead to speciation . Which of these cannot be a major factor in the speciation of a self-pollinating plant species. Give reason to justify your answer.

 [Watch Video Solution](#)

49. STATEMENT-1 : One molar solution is always more concentration than one molal solution.

and

STATEMENT-2 : amount of solvent in 1 M and 1 m aqueous solution is not equal.

 [Watch Video Solution](#)

50. "What was Chipko Andolan"? How did this Andolan ultimately benefit the local people and the environment ?

 [Watch Video Solution](#)

51. (i) Name two waste products which are stored in old xylem in plants.

(ii) Name the process by which plants get rid of excess water. Name the pores through which this process takes place.

 [Watch Video Solution](#)

52. State the function of receptors in our body. Think of any three situations where receptors in the body do not work properly. Mention the problems which are likely to arise.

 [Watch Video Solution](#)

53. State the principle of working of ocean thermal conversion plant. Explain how the plant works ? Write one essential condition for it to operate properly.

 [View Text Solution](#)

54. Define reproduction. How does it help in providing stability to the population of species ?

 [Watch Video Solution](#)

55. Explain the term "Regeneration" as used in relation to reproduction of organisms. Describe briefly how regeneration is carried out in multicellular organisms like Hydra.



Watch Video Solution

56. (a) Define reflex action. State its significance.

(b) How do plants respond to external stimuli ?



Watch Video Solution

57. What is an ecosystem ?



Watch Video Solution

58. What is sustainable management ? Why is reuse considered better in comparison to recycle ?

 [View Text Solution](#)

59. State the basic requirement for sexual reproduction ? Write the importance of such reproduction in nature.

 [Watch Video Solution](#)

60. Explain with the help of an example each how the following provide evidences in favour of evolution :

(a) Homologous organs

(b) Analogous organs

(c) Fossils

 [Watch Video Solution](#)

61. Describe double circulation in human beings.

(a) Why is it necessary ?

(b) How are arteries different from veins ?

 [Watch Video Solution](#)

62. Give the construction, working, advantage and disadvantages of a solar cooker.

 [View Text Solution](#)

63. (a) Name the organ that produces sperms as well as secretes a hormone in human males. Name the hormone it secretes and write its functions.

(b) Name the parts of the human female reproductive system where

fertilization occurs.

(c) Explain how the developing embryo gets nourishment inside the mother's body.

 [Watch Video Solution](#)

64. In the following food chain, 100 J of energy is available to the lion. How much energy was available to the producer?

Plants → Deer → Lion

 [Watch Video Solution](#)

65. State two advantages of conserving: (i) forests and (ii) wild life.

 [Watch Video Solution](#)

66. Explain the nutrition process in Amoeba.



[Watch Video Solution](#)

67. Draw a labelled diagram of human heart.



[Watch Video Solution](#)

68. What is reflex arc? Draw a labelled diagram to show reflex arc on touching a very hot object.



[Watch Video Solution](#)

69. List three techniques that have been developed to prevent pregnancy. Which one of these techniques is not meant for males? How does the use of these techniques have a direct impact on the health and prosperity of a family?



[Watch Video Solution](#)

70. (a) Draw the structure of Neuron and explain its function.

(b) How does Phototropism occur in Plants?



View Text Solution

71. (a) Write the functions of each of the following parts in a human female reproductive system:

(i) Ovary (ii) Uterus (iii) Fallopain tube

(b) Write the structure and functions of placenta in a human female.



Watch Video Solution

72. A Mendelian experiment consisted of breeding pea plants bearing violet flowers with pea plants bearing white flowers. What

will be the results in F_1 progeny ?

 [Watch Video Solution](#)

73. Write the energy conversion that place in a hydropower plant.

 [Watch Video Solution](#)

74. (a) Name one gustatory receptor and one olfactory receptor present in human beings.

(b) Write a and b in the given flow chart of neuron through which information travels as an electrical impulse.

Dendrite → a → b → End point of Neuron

 [Watch Video Solution](#)

75. Name the hormones secreted by the following endocrine glands and specify one function of each :

(a) Thyroid , (b) Pituitary , (c) Pancreas

 [Watch Video Solution](#)

76. Write one main difference between asexual and sexual mode of reproduction. Which species is likely to have comparatively better chances of survival - the one reproducing asexually or the one reproducing sexually ? Give reason to justify your answer.

 [Watch Video Solution](#)

77. Students in a school listened to the news read in the morning assembly that the mountain of garbage in Delhi, suddenly exploded and various vehicles got buried under it. Several people were also

injured and there was traffic jam all around. In the brain storming session the teacher also discussed this issue and asked the students to find out a solution to the problem of garbage. Finally they arrived at two main points - one is self management of the garbage we produce and the second is to generate less garbage at individual level.

(a) Suggest to measures to manage the garbage we produce.

(b) As an individual, what can we do to generate the least garbage ?

Give two points.



[Watch Video Solution](#)

78. (a) Mention any two components of blood.

(b) Trace the movement of oxygenated blood in the body.

(c) Write the function of valves present in between atria and ventricles.

(d) Write one structural difference between the composition of artery and veins.



[Watch Video Solution](#)

79. (a) Define excretion.

(b) Name the basic filtration unit present in the kidney.

(c) Draw excretory system in human beings and label the following organs excretory system which perform following functions:

(i) form urine.

(ii) is a long tube which collects urine from kidney.

(iii) Store urine until it is passed out.



[View Text Solution](#)

80. (a) Write the function of following parts in human female reproductive system :

(i) Ovary , (ii) Oviduct , (iii) Uterus

(b) Describe in brief the structure and function of placenta .



[Watch Video Solution](#)

81. List the steps of preparation of temporary mount of a leaf peel to observe stomata.



[Watch Video Solution](#)

82. A student is viewing under a microscope a permanent slide showing various stages of asexual reproduction by budding in yeast. Draw diagrams of what he observes. (In proper sequence)



[Watch Video Solution](#)

83. Mendel took tall pea plants and short pea plants and produced F_1 progeny through cross fertilisation. What did Mendel observe in the F_1 progeny ?

 [Watch Video Solution](#)

84. Name two constituents of biogas.

 [Watch Video Solution](#)

85. Different parts of brain are associated with specific functions. Name the part of human brain which perform the following functions:

(a) Sensation of feeling full (b) Vomiting

(c) Picking up a pencil (d) Riding a bicycle

 [Watch Video Solution](#)

86. What is geotropism ? Draw a labelled diagram of a potted plant showing positive geotropism and negative geotropism .



Watch Video Solution

87. What are acquired traits? What are these traits generally not inherited over generations ? Explain.



Watch Video Solution

88. While teaching the chapter " Our Environment " the teacher stressed upon the harmful effects of burning of fossil fuels, plastic, paper etc. The students noticed the extensive use of plastic and polythen in daily life, which can be avoided and the surroundings can be kept clean. they decided to make their school " plastic and

polythene" free and motivated each other for its minimum use.

(a) Why should the use of polythene and plastic be reduced in daily life ?

(b) In what ways would the students have avoided the use of plastic and polythene in their school ?

(c) How would the students have motivated each other for the success of their decision ?



[Watch Video Solution](#)

89. What is " Sustainable management of natural Resources " ?

What is it necessary ? Which one out of reuse and recycle, would you practice in your daily life and why ?



[View Text Solution](#)

90. (a) Write the reaction that occurs when glucose breaks down anaerobically in yeast.

(b) Write the mechanism by which fishes breath in water.

(c) Name the balloon like structures present in lungs. List its two functions.

(d) Name the respiratory pigment and write its role in human beings.



[Watch Video Solution](#)

91. Name the process and explain the type of nutrition found in green plants. List the raw materials required for this process. Given chemical equation of the mentioned process.

(b) Write three events that occurs during this process.



[Watch Video Solution](#)

92. What is variation ? How is variation created in a population ?

How does the creation of variation in a species promotes its survival ?

(ii) Explain how, offspring and parents of organisms reproducing sexually have the same number of chromosomes.

 [Watch Video Solution](#)

Section B

1. Why is epidermal peel generally taken from lower surface of the leaf?

 [Watch Video Solution](#)

2. Name two types of fissions. Name two living beings of each type which reproduce by these methods of fission.



[Watch Video Solution](#)

3. Name the process of asexual reproduction shown by yeast. What type of living being is yeast? What is its commercial importance?



[Watch Video Solution](#)

4. What do you observe on seeing the slides showing reproduction in amoeba? What is the name given to this method of reproduction in Amoeba?



[Watch Video Solution](#)

5. Why do raisins absorb water when soaked in water? Explain the phenomenon.



[Watch Video Solution](#)

6. Draw a labelled diagram of a stomatal apparatus with open stomatal pore.

 [Watch Video Solution](#)

7. Name the type of asexual reproduction in which two individuals are formed from a single parent and the parental identity is lost.

Draw the initial and the final stages of this type reproduction. State the event with which this reproduction starts.

 [Watch Video Solution](#)

8. Draw a labelled diagram of a stomatal apparatus with open stomatal pore.

 [Watch Video Solution](#)

9. Draw a labelled diagram to show that particular stage of binary fission in amoeba in which its nucleus elongates and divides into two and a constriction appears in its cell membrane .

 [View Text Solution](#)

10. Identify the observed various parts of temporary mount of well stained leaf peel, when focused under the high power of a microscope.

 [Watch Video Solution](#)

11. Why is epidermal peel generally taken from lower surface of the leaf ?

 [Watch Video Solution](#)

12. Name the type of asexual reproduction in which two individuals are formed from a single parent and the parental identity is lost.

Draw the initial and the final stages of this type reproduction. State the event with which this reproduction starts.

 [Watch Video Solution](#)

13. What are the precautions taken to prepare a temporary mount of a leaf peel to show its stomata?

 [Watch Video Solution](#)

14. Draw in sequence (showing the four stages), the process of binary fission in Amoeba.

 [Watch Video Solution](#)

15. Draw a labelled diagram of the experimental set up for the study of liberation of carbon dioxide gas during respiration.

 [Watch Video Solution](#)

16. Draw diagrams showing reproduction in yeast in proper sequence.

 [Watch Video Solution](#)

Set I Section A

1. Why is biogas considered an excellent fuel?

 [Watch Video Solution](#)

Set I Section B

1. Write two different ways in which glucose is oxidized to provide energy in human body.

Write the products formed in each case.



[Watch Video Solution](#)

Set I Section C

1. Write three types of blood vessels. Give one important feature of each.



[Watch Video Solution](#)

2. What are plant hormones? Name the plant hormones responsible for the following:

(i) Growth of stem

(ii) Promotion of cell division

(iii) Inhibition of growth

(iv) Elongation of cells

 [Watch Video Solution](#)

3. Name the plant Mendel used for his experiment. What type of progeny was obtained by Mendel in F_1 and F_2 generations when he crossed the tall and short plants? Write the ratio he obtained in F_2 generation plants.

 [Watch Video Solution](#)

4. List two differences between acquired traits and inherited traits by giving an example of each.

 [Watch Video Solution](#)

5. How can we help in reducing the problem of waste disposal?

Suggest any three

methods.

 [Watch Video Solution](#)

6. Define an ecosystem. Draw a block diagram to show the flow of energy in an ecosystem.

 [Watch Video Solution](#)

Set II Section A

1. Write the name of the main constituent of biogas. Also state its percentage.

 [Watch Video Solution](#)

Set II Section B

1. How is oxygen and carbon dioxide transported in human beings?

 [Watch Video Solution](#)

2. Write the structure of eye lens and state the role of ciliary muscles in the human eye.

 [Watch Video Solution](#)

Set Ii Section C

1. What is feedback mechanism of hormonal regulation? Take the example of insulin to explain this phenomenon.

 [Watch Video Solution](#)

Set Iii Section B

1. List two different functions performed by pancreas in our body.

 [Watch Video Solution](#)

Set I Section C

1. What are fossils? Describe briefly two methods of determining the age of fossils.

 [Watch Video Solution](#)

2. (a) Natural water bodies are not regularly cleaned whereas an aquarium needs regular cleaning. Why ?

(b) What are decomposers? What will be the consequence if the decomposers are completely eradicated from an ecosystem? Give justification in support of your answer.

 [View Text Solution](#)

3. How is ozone formed in the upper atmosphere? State its importance. What is responsible for its depletion ? Write one harmful effect of ozone depletion.

 [Watch Video Solution](#)

4. Write the function of the following in the human alimentary canal:

(i) Saliva (ii) HCl in stomach

(iii) Bile juice (iv) Villi

 [Watch Video Solution](#)

5. Write one function each of the following enzymes:

(i) Pepsin (ii) Lipase .

 [Watch Video Solution](#)

6. (a) Plants do not have any nervous system but yet, if we touch a sensitive plant, some observable changes take place in its leaves.

Explain how could this plant respond to the external stimuli and how it is communicated.

(b) Name the hormone that needs to be administered to

(i) increase the height of a dwarf plant.

(ii) cause rapid cell division in fruits and seeds.

 [Watch Video Solution](#)

7. What is biodiversity? Why are forests considered as "biodiversity hot spots"? List two factors responsible for causing deforestation.

 [Watch Video Solution](#)

Set I Section D

1. Define vegetative propagation. List its two methods.

 [Watch Video Solution](#)

2. Explain the process of budding in Hydra with the help of labelled diagram.

 [Watch Video Solution](#)

3. List two visible traits of garden pea that Mendel considered in his experiments. How do Mendel's experiments show that traits may be dominant of recessive?

 [Watch Video Solution](#)

Set I Section E

1. In the experimental set-up to show that "the germinating seeds give out the carbon dioxide." Answer the following question:

(i) Why do we keep the conical flask airtight?

(ii) Name the substance kept in the small test tube inside the conical flask. Write its role.

(iii) Why does water rise in the delivery tube?

 [Watch Video Solution](#)

Set II Section A

1. Name the component of sunlight which facilitates drying of wheat after harvesting.

 [Watch Video Solution](#)

Set II Section D

1. (a) If we cross pure - bred tall (dominant) pea plants with pure - bred dwarf (recessive) pea plant we get pea plants of F_1 generation. If we now self- cross the pea plants of F_1 generation, then we obtain pea plants of F_2 generation.

(i) What do the plants of F_1 generation look like ?

(ii) What is the ratio of tall plants dwarf plants in F_2 generation ?

(iii) State the type of plants not found in F_1 generation but appeared in F_2 generation, mentioning the reason for the same.

(b) What are homologous structures ? Give an example. Is it necessary that homologous structures always have common ancestors ?



[View Text Solution](#)

1. List three roles of forests in conserving the environment . How do the forests get depleted ? State two consequences of deforestation on the environment .

 [Watch Video Solution](#)

2. Draw a diagram of human excretory system and label the following :

(i) Urinary bladder

(ii) Left kidney

(iii) Left ureter

 [Watch Video Solution](#)

1. Define pollination. Explain the different types of pollination. List two agents of pollination. How does suitable pollination lead to fertilization?

 [Watch Video Solution](#)

Set Iii Section C

1. (a) What a photosynthesis ?

(b) Write a chemical equation to show the process of photosynthesis in plants.

(c) Explain the mechanism of photosynthesis

 [Watch Video Solution](#)

Set I Section D

1. With the help of a flow diagram, how would you establish that in human beings the sex of a newborn is purely a matter of chance and none of the parents may be considered responsible for a particular sex of a newborn child.

 [Watch Video Solution](#)

Set Iii Section D

1. List in tabular form two differences between acquired traits and inherited traits

 [Watch Video Solution](#)

2. Give an example of body characteristics used to determine how close two species are in terms of evolution and explain it .



Watch Video Solution