

1. Sensations and Responses**UNIT TEST**

1. Select the correct answer.

The part that receives impulses from adjacent neuron.

(A) Dendron (B) Axon (C) Synaptic knob (D) Dendrite

2. Find the odd one. Write the common feature of others.

Cerebrum, Cerebellum, Axonite, Medulla oblongata

3. Select the correct pairs.

(a) Medulla oblongata - Controls involuntary actions.

(b) Cerebrum - Relay station of impulses.

(c) Cerebellum - Maintains equilibrium of the body.

(d) Thalamus - Evokes sensations.

4. The symptoms of a disease that affecting the nervous system are given below.

Loss of body balance, irregular movement of muscles, shivering the body, profuse salivation.

(a) Identify the disease.

(b) What is the cause of this disease?

5. Select the statements related to myelin sheath from the statements given below.

(a) Protect the axon from external shocks.

(b) Coordinates muscular activities

(c) Plays a major role in the maintenance of homeostasis.

(d) Accelerate impulses.

6. Redraw the figure, identify and label the parts based on the statements given below.

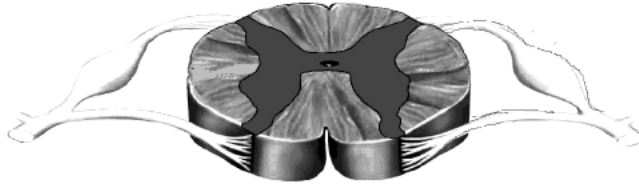


(a) The part that secretes neurotransmitter.

(b) The part that carries impulses from the cell body to outside.

OR

Observe the figure and answer the questions given below.



- (a) Identify the figure.
- (b) What are the functions of the part indicated above?

2. Windows of Knowledge**UNIT TEST**

1. Choose the correct statement related to yellow spot from the following.

- (a) Here there is no vision.
- (b) Photoreceptors are absent.
- (c) Optic nerve starts from here.
- (d) This is the point of maximum visual clarity.

2. Correct mistakes, if any, in the underlined part of the following statements.

- (a) The prolonged deficiency of vitamin A results in Glaucoma.
- (b) Ommatidia are the cluster of photoreceptors present in the eye of housefly.
- (c) Substances responsible for taste dissolve in mucus, stimulate the chemoreceptors.

3. Select the correct pairs from the following

- (a) Organ of Corti - Cochlea
- (b) Impulses of hearing - Vestibular nerve
- (c) Photopsin - Cone cells
- (d) Night blindness - Defect of cone cells

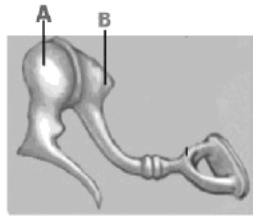
4. Make suitable pairs by using the words given in the box.

Planaria, Jacobson's organ, Lateral line, Eye spot, Shark, Ommatidia, Snake, Housefly
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5. Different steps involved in the process of sensing of taste is given below. Arrange them in sequentially.

- (a) Generate impulses.
- (b) We experience taste.
- (c) Substances responsible for taste dissolve in saliva.
- (d) Impulses reach the brain through the respective nerves.
- (e) Stimulate the chemoreceptors.

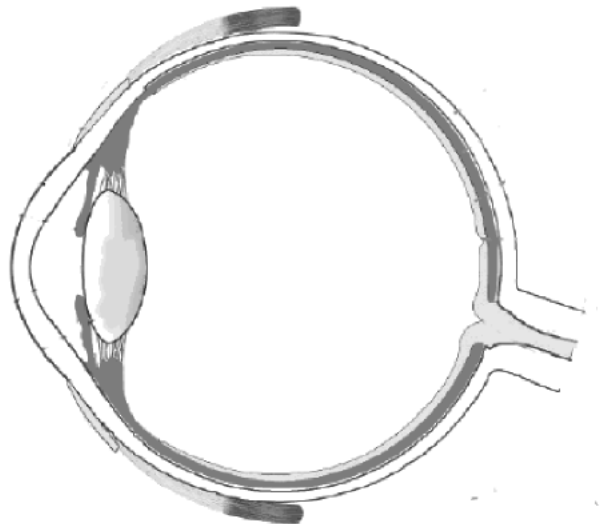
6. Observe the diagram and answer the following questions.



- (a) Identify the diagram
- (b) Name the parts labelled as A, B.
- (c) Name the smallest bone in our body.

OR

Redraw the figure, identify and label the parts based on the statements given below.



- (a) The inner layer which has photoreceptors.
- (b) The size of this aperture increases and decreases depending on the intensity of light.

3. Chemical Messages for Homeostasis

UNIT TEST

1. Find the odd one. Write the common feature of others.

Bombykol, Cytokinin, Auxin, Abscisic acid

2. Select the correct answer.

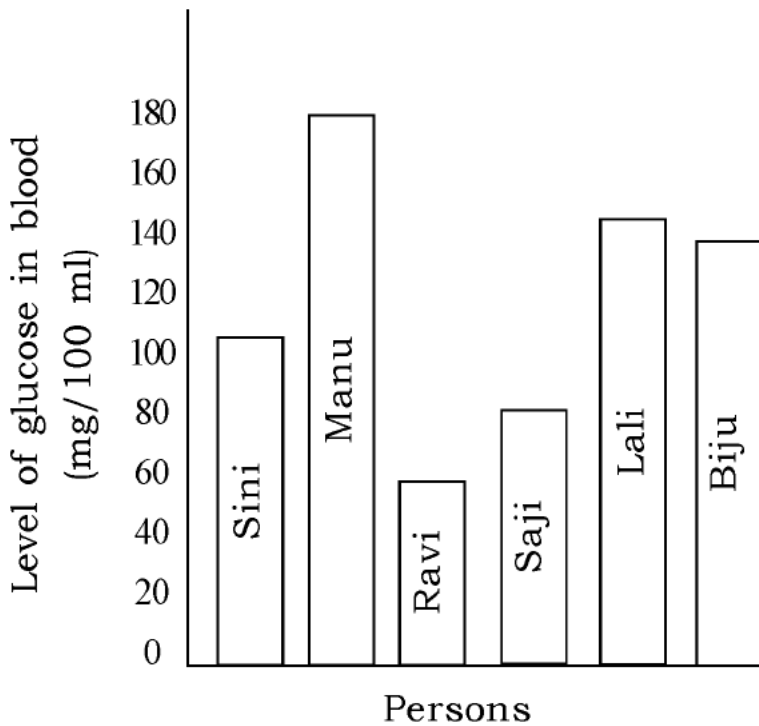
The hormone produced by the gland known as 'Biological Clock'.

(A) Thymosin (B) Oxytocin (C) Cortisol (D) Melatonin

3. Identify the word pair relationship and fill the missing word. Mention the relation between the pairs.

Aldosterone : Adrenal gland :: Oxytocin :

4. Observe the graph and answer the questions given below.



(a) Name the persons who are diabetic.

(b) What is the reason for increase in the level of glucose in blood?

5. Select the correct pairs.

(a) Musk deer - Civetone

(b) Female silk worm moth - Bombykol

(c) Musk deer - Muscone

(d) Civet cat - Bombykol

6. Select suitable terms from the box related to the statements given below.

Insulin, Cortisol, Adrenaline, Thymosin, Glucagon, Calcitonin,
Testosterone, Progesterone

- (a) The hormone acts along with the sympathetic nervous system during emergency.
- (b) The hormone that helps in the implantation of embryo in the uterus.
- (c) The hormone that converts the glycogen stored in the liver to glucose.

OR

Arrange columns B and C in accordance with the data of column A.

A	B	C
(i) Vasopressin	(a) Thyroid	(1) Promotes the growth of the body.
(ii) Somatotropin	(b) Pineal	(2) Increases energy production.
(iii) Thyroxine	(c) Hypothalamus	(3) Maintains blood pressure.
	(d) Pituitary	(4) Helps in the reabsorption of water in the kidney.

4. Keeping Diseases Away**UNIT TEST**

1. The pathogen that cause the Malaria
(A) Bacteria (B) Virus (C) Protozoa (D) Fungus
2. Identify the word pair relationship and fill the blanks.
Bacteria : Blight disease in paddy
..... : Bunchy top of banana
3. Identify the diseases that mentioned in each of the following statements.
 - a) Red blood cells bend like sickle and the oxygen carrying capacity of red blood cells decreases.
 - b) A condition in which excess blood is lost even through minor wounds.
4. Analyse the following statement and answer the questions.
"Surgery, chemotherapy, radiation therapy etc., are extensively used in the treatment of this disease."
 - a) Which disease is mentioned in this statement?
 - b) What is the reason for this disease?
5. Make suitable pairs from those given in the box.
(Hint : Tuberculosis - Fatigue, persistent cough)

<ul style="list-style-type: none">• Rat fever • Inflammation in the lymph glands of the throat• Tuberculosis • Diphtheria • Muscle pain, redness in eyes• Fatigue, persistent cough

6. Select the viral diseases from the following.
(i) Mosaic disease in peas and tapioca (ii) Foot and mouth disease
(iii) Rat fever (iv) Tuberculosis (v) Nipah (vi) Hepatitis (vii) Ring-worm
(viii) Chikungunya (ix) Anthrax (x) Dengue fever

OR

Analyse the following statement and answer the questions.

"AIDS does not spread by touch, shaking hands, or through insects like mosquitoes, houseflies."

- a) Name the virus that cause AIDS.
- b) How the virus that cause AIDS infect the body?
- c) What are the ways by which AIDS spread?

5. Soldiers of Defense

UNIT TEST

1. The equipment used to get three-dimensional visuals of internal organs.

- (A) Electro Cardio Gram (B) Electro Encephalo Gram
 (C) Ultra Sound Scanner (D) MRI Scanner

2. Which of the following statements are incorrect related with blood group B+.

- a) It contain antigen B.
 b) It does not contain Rh factor.
 c) It contain antibody a.
 d) The person with this blood group can receive blood from person with A blood group.

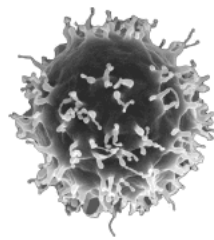
3. Identify the word pair relationship and fill the blanks.

Eye: Lysozyme in tear :: Nose :

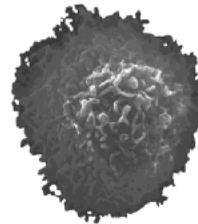
4. "Regular use of antibiotics is not good for health"

- a) Do you agree with this statement?
 b) What are Antibiotics? Mention any one of its side effects.

5. Observe the figures and answer the following



(i)



(ii)

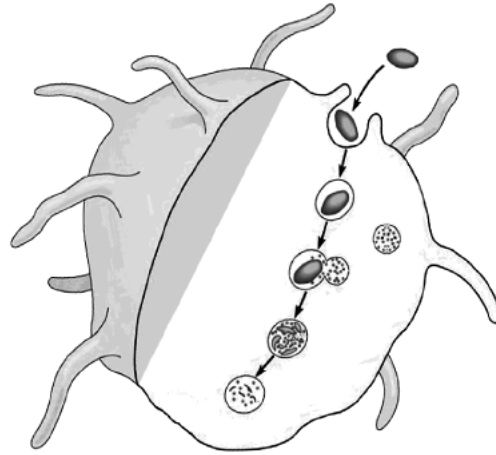
- a) Identify the defense cells represented by (i) and (ii)
 b) Give any one of the function of each cell.

6. Analyse the following statement and answer the following questions.

Any one of the components from alive or dead or neutralised germs, neutralised toxins or cellular parts of the pathogens will be the component of each vaccine.

- a) What are Vaccines?

- b) Who started immunization for the first time?
 - c) Name the disease which is prevented by O.P.V. Vaccine.
6. Observe the figure and answer the following questions.



- a) Which defence process is mentioned in the figure?
- b) Write down the stages involved in this defense process.

6. Unravelling Genetic Mysteries
UNIT TEST

1. Find the odd one. Write the common feature of others.

Adenine, Guanine, Uracil, Cytosine

2. Select the correct answer.

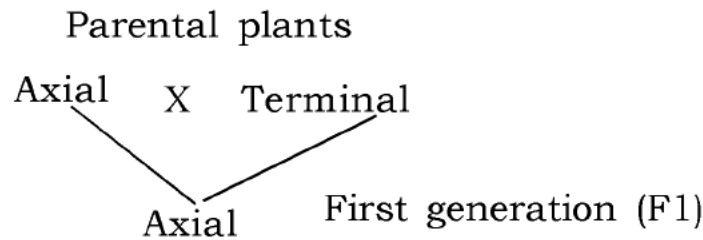
The genetic makeup of male.

(A) 44 + XX (B) 44 + XY (C) 22 + XX (D) 22 + Y

3. Identify the word pair relationship and fill the missing word. Mention the relation between the pairs.

DNA : Deoxyribose sugar :: RNA :

4. Observe the illustration of the hybridization experiment conducted by Mendel and answer the questions given below.



(a) Name the dominant and recessive traits.

(b) What are the traits obtained in the second generation as a result of self pollination of the first generation plants? In which ratio?

5. Select the correct statements related to DNA from the statements given below.

(a) Has four kinds of nitrogen bases, namely adenine, uracil, guanine and cytosine.

(b) Two stranded.

(c) Contains deoxyribose sugar.

(d) Contains ribose sugar.

6. Observe the illustration and answer the questions given below.

7. Genetics of the Future

UNIT TEST

1. Identify the word pair relationship and fill the blanks.

To cut genes : Restriction endonuclease

For joining the genes :

2. The method of treatment in which the genes that are responsible for diseases are removed and normal functional genes are inserted in their place.

- (A) Gene therapy
- (B) DNA Finger printing
- (C) DNA Profiling
- (D) Genome

3. Select correct statements from the following.

- a) Gene therapy, Genetically modified animals and crops, Forensic test are the scope of Genetic engineering.
- b) Functional genes are called Junk genes.
- c) Interferon is the medicine given to relieve pain.
- d) The complete genetic material present in an organism is called its genome.

4. Complete the table using suitable words from the box.

DNA profiling, Lamarck , Alec Jeffreys, Gene mapping, Insulin, Bio weapons

- i) The technology helped to identify the location of a gene in the DNA.(i).....
- ii) Scientist Paved the way for DNA finger printing.(ii).....
- iii) The technology of testing the arrangement of nucleotides.(iii).....
- iv) Misuse of Genetic engineering.(iv).....

5. Answer the following statements.

- a) Give the name of the technology of controlling traits of organisms by bringing about desirable changes in the genetic constitution of organisms?

BIOLOGY

b) part of bacteria is used as a vector to transfer genes from one cell to another cell.

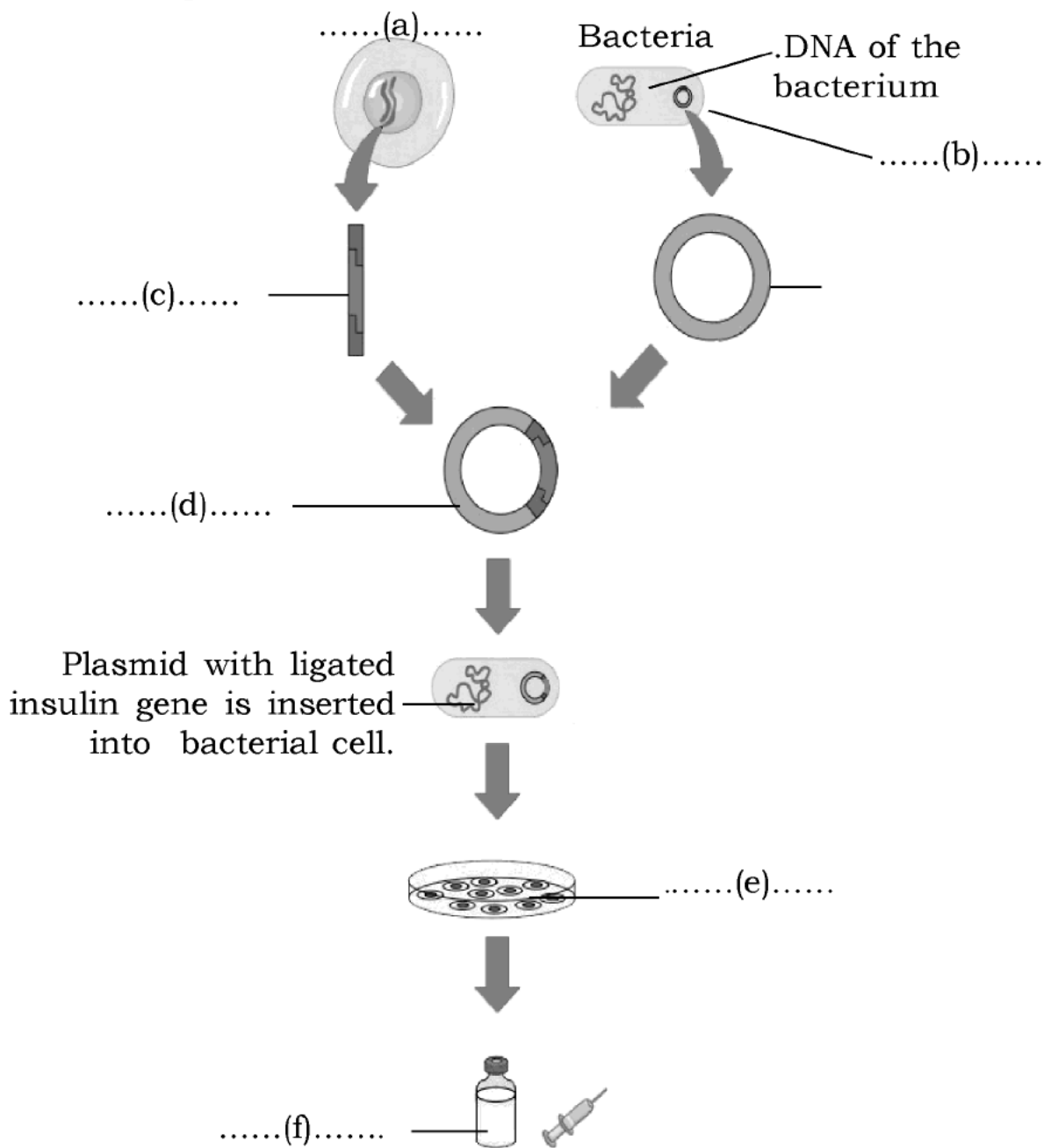
6. Analyse the following statement and answer the following questions.

"This technology help to identify persons when come back after long periods of missing ."

a) Identify the technology?

b) What are the other uses of this technology?

The illustration shows the steps of production of Insulin is given below. Complete the illustration.



8. The Paths Traversed by Life
UNIT TEST

1. Find the odd one. Write the common feature of others.

Man, Monkey, Gibbon, Oranguttan

2. Select the correct answer.

The most primitive member of the human race.

- (A) Homo sapiens
- (B) Homo erectus
- (C) Australopithecus afarensis
- (D) Ardipithecus ramidus

3. Identify the word pair relationship and fill the blanks.

Hugo deVries : Mutation Theory :: Charles Darwin :

4. Select the correct pairs.

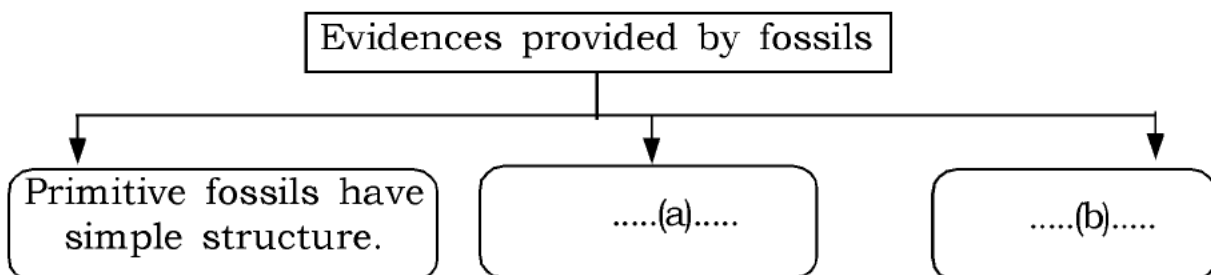
- (a) 3800 Millions of years ago - Origin of life on earth
- (b) 3500 Millions of years ago - Origin of eukaryotes
- (c) 1000 Millions of years ago - Origin of multicellular organisms
- (d) 1500 Millions of years ago - Origin of prokaryotes

5. Select suitable terms from the box related to the statements given below.

A.I. Oparin, Charles Darwin, Harold Urey, Lamarck, J.B.S.Haldane, Hugo deVries, Stanley Miller

- (a) The acquired characters accumulate through generations and lead to the formation of new species.
- (b) Proponents of chemical evolution theory.

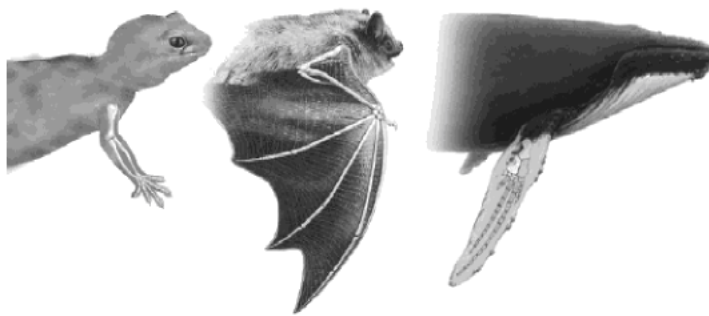
6. Observe the illustration and answer the questions given below.



- (a) Complete the illustration.
- (b) What are fossils?

OR

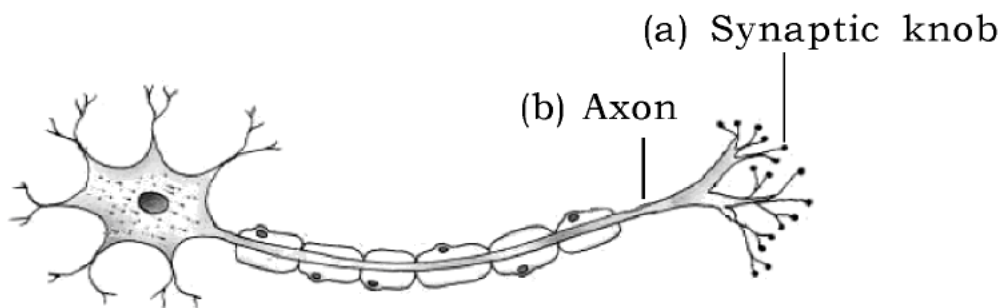
Observe the illustration and answer the questions given below.



- (a) In which name the organs are known as?
- (b) What are the peculiarities of the internal structure of forelimbs of these organisms?
- (c) What is the inference made from the anatomical resemblances of these organisms?

Scoring indicators**1. Sensations and Responses**

1. (D) Dendrite
2. Axonite, others are parts of brain
3. a, c
4. (a) Parkinsons (b) Destruction of specialised ganglions in the brain. Production of dopamine, a neurotransmitter in the brain gets reduced.
5. a, d
- 6.

**OR**

(a) Spinal Cord

(b) Impulses from different parts of the body are transmitted to and from the brain through the spinal cord. It also coordinates the repeated movements during walking, running etc.

2. Windows of Knowledge

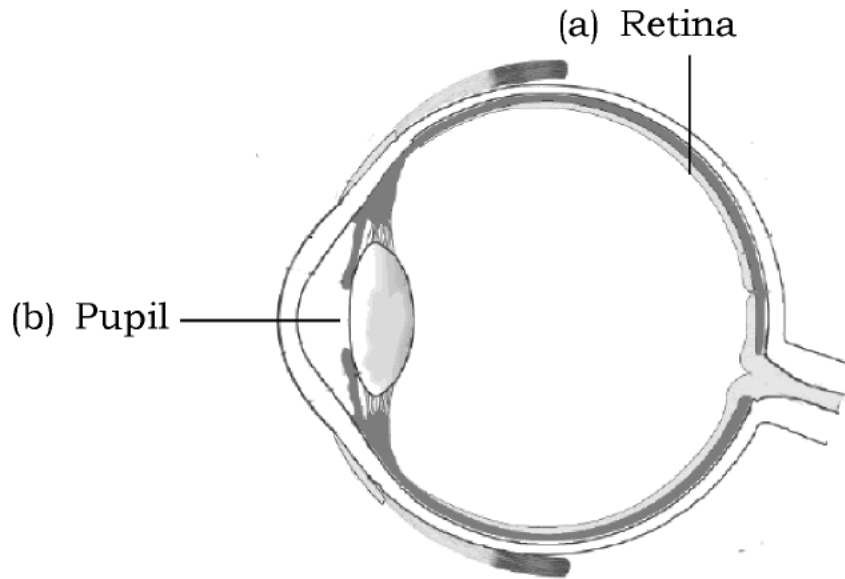
Answer key

1. (d) This is the point of maximum visual clarity.
2. (a) The prolonged deficiency of vitamin A results in Xerophthalmia.
(c) Substances responsible for taste dissolve in saliva, stimulate the chemoreceptors.
3. (a) Organ of Corti - Cochlea
(c) Photopsin - Cone cells
4. Snake - Jacobson's organ
Planaria - Eyespot
Housefly - Ommatidia
Shark - Lateral line
5. (c) Substances responsible for taste dissolve in saliva.

BIOLOGY

- (e) Stimulate the chemoreceptors.
 - (a) Generate impulses.
 - (d) Impulses reach the brain through the respective nerves.
 - (b) We experience taste.
6. (a) Ear ossicles
(b) A - Malleus B - Incus
(c) Stapes

OR



3. Chemical Messages for Homeostasis

1. Bombykol, others are plant hormones.
2. (D) Melatonin
3. Hypothalamus, hormones and their glands
4. (a) Manu, Lali, Biju
(b) Decreased production of insulin due to the destruction of beta cells or the inability of cells to utilize the insulin produced, raises the level of glucose in blood.
5. b,c
6. (a) Adrenaline
(b) Progesterone
(c) Glucagon

OR

- (i) - c- 4, (ii) - d -1, (iii) - a -2

4. Keeping Diseases Away

1. (C) Protozoa
2. Virus
3. a) Sickle cell anaemia.
b) Heamophilia
4. a) Cancer
b) The normal cells get transformed into cancerous cells, when control system of cell division fails. This may due to Environmental factors, Smoking, radiations, virus, hereditary factors etc.
5. Rat fever - Muscle pain, redness in eyes
Diphtheria- Inflammation in the lymph glands of the throat.
6. (i) Mosaic disease in peas and tapioca (ii) Foot and mouth disease (v) Nipah (vi) Hepatitis (viii) Chikungunya (x) Dengue fever

OR

- a) HIV(Human Immuno deficiency Virus)
- b) HIV enters the body and multiplies using the genetic mechanism of lymphocytes. Hence the number of lymphocytes decreases considerably and reduces the immunity of the body.
- c) Through sexual contact with HIV infected person/From HIV infected mother to the foetus/ By sharing needles and syringes contaminated with HIV components/ Through the reception of blood and organs contaminated with HIV.

5. Soldiers of Defense

1. (D) M R I scanner
2. b) It does not contain Rh factor.
d) The person with this blood group can receive blood from person with A group.
3. Mucus
4. a) Yes .
b) Medicines that are extracted from microorganisms like bacteria, fungi, etc. and used to destroy bacteria are called antibiotics.
Regular use develops immunity in pathogens against antibiotics./ destroys useful bacteria in the body./reduces some of the vitamins in the body.

BIOLOGY

5. a) i) B-Lymphocytes ii) T -Lymphocytes

b) B-Lymphocytes -Destroy the bacteria by disintegrating their cell membrane/ Neutralise the toxin of the antigens./ Destroy the pathogens by stimulating other white blood cells.

T -Lymphocytes Stimulate other defense cells of the body/ Destroy the cells affected by virus/ Destroy cancer cells.

6. a) Vaccines are the substances used for artificial immunization.

b) Edward Jenner

c) Polio

OR

a) Phagocytosis

b) i) Phagocytes reach near the pathogen.

ii) Engulfs pathogen in the membrane sac.

iii) Lysosome combines with membrane sac.

iv) The pathogens are degenerated and destroyed by the enzymes in lysosome.

6. Unravelling Genetic Mysteries

1. Uracil, other nitrogen bases are seen in both RNA and DNA.

2. (B) 44 + XY

3. Ribose sugar, nucleic acid and the sugar contained in it.

4. (a) Dominant trait - Axial, recessive trait - Terminal

(b) Axial and terminal in the ratio 3:1.

5. b, c

6.(a) Nucleotide/Cytosine Nucleotide

(b) (i) Sugar molecule (ii) Phosphate

OR

(a) Tall plant, Round seed

(b) ttrr

(c) TtRr

7. Genetics of the Future

1. Ligase

2. A) Gene therapy

PARIHARABODHANAM Class 10 ►►

3. a) Gene therapy, Genetically modified animals and crops, Forensic test are the scope of Genetic engineering.

d) The complete genetic material present in an organism is called its genome.

4. (i) Gene mapping (ii) Alec Jeffreys (iii) DNA profiling (iv) Bioweapons

5. a) Genetic engineering b) Vectors

6. a) DNA finger printing

b) To find out hereditary characteristics / to identify real parents in cases of parental dispute and to identify persons / found after long periods of missing due to natural calamities or wars/ to find real culprit from among the suspected persons.

OR

(a) Human cell (b) Circular DNA of the bacterium(Plasmid). (c) Cutting of insulin gene. (d) Joining insulin gene with plasmid. (e) Bacteria that multiply in the culture medium produce inactive insulin.(f) Active insulin is produced from this.

8. The Paths Traversed by Life

1. Monkey, others are the members of the group Hominoidea.

2. (D) Ardipithecus ramidus

3. Theory of Natural Selection

4. (a) 3800 Millions of years ago - Origin of life on earth

(c) 1000 Millions of years ago - Origin of multicellular organisms

5. (a) Lamarck (b) A.I. Oparin, J.B.S.Haldane

6. (a) a - Recently formed fossils have complex structure. (b) Certain fossils are connecting links between different species.

OR

(a) Homologous organs

(b) These forelimbs are made up of blood vessels, nerves, muscles and bones.

(c) Anatomical resemblances justify the inference that all organisms evolved from a common ancestor.

ASSESSMENT TOOL - Set 1

BIOLOGY

Time : 1½ hour

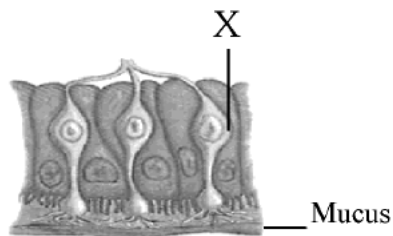
Maximum Score : 40

General Instructions

- The first 15 minutes is cool - off time. You may use this time to read the question and plan your answer.
- Answer on the basis of instructions in each part.
- Consider score and time while answering.

Answer **any five questions** from 1 to 6. Each question carries 1 score. (5 × 1 = 5 score)

- Select the correct answer.
The point of maximum visual clarity.
(A) Blind spot (B) Optic nerve (C) Conjunctiva (D) Yellow spot
- Select the correct statement related to Medulla oblongata.
 - Coordinates muscular activities and maintains equilibrium of the body.
 - Controls involuntary actions like heart beat, breathing etc.
 - Controls voluntary movements.
 - Plays a major role in the maintenance of homeostasis.
 - Acts as relay station of impulses to and from the cerebrum.
- Identify the word pair relationship and fill the missing word. Mention the relation between the pairs.
Viral diseases : Interferons :: Pain :
- What is panspermia hypothesis?
- Observe the figure and answer the questions given below.

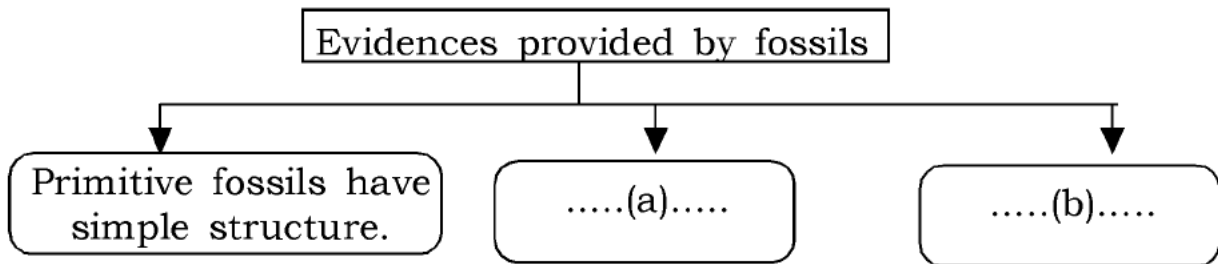


- Identify the part indicated as X.

6. Which are the correctly arranged pairs of nitrogen bases in DNA.
- (A) Adenine - Uracil
 - (B) Guanine - Cytosine
 - (C) Thymine - Adenine
 - (D) Cytosine - Thymine

Answer **any Six questions** from 7 to 13. Each question carries 2 score. (6 × 2 = 12 score)

7. Complete the illustration.



8. Arrange the following statements suitably in the table given below.

- (a) Stimulate other defense cells of the body.
- (b) Destroy the bacteria by disintegrating their cell membrane.
- (c) Neutralise the toxin of the antigens.
- (d) Destroy cancer cells.

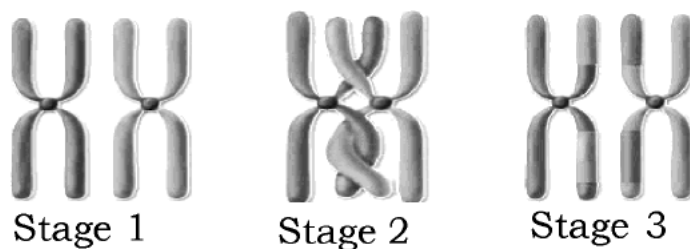
B - Lymphocytes	T - Lymphocytes

9. The symptoms of a disease that affect the nervous system is given below.

Loss of memory, inability to recognize friends and relatives,
inability to do routine works.

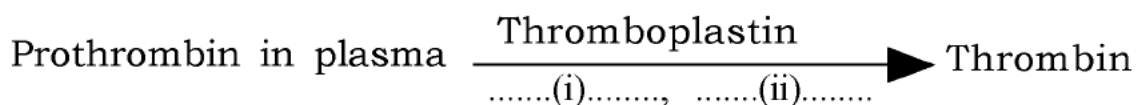
- (a) Identify the disease.
 - (b) What is the cause of this disease?
10. The chemical messages of pheromones help honey bees and termites to live in colonies.
- (a) What are pheromones?
 - (b) What are the other functions of pheromones?

11. Observe the illustration and answer the questions given below.



- (a) Identify the process.
- (b) What is the role of this process in causing variations?

12. A stage in blood clotting is given below.



- (a) How is thromboplastin is formed?
- (b) Complete (i),(ii) in the illustration.

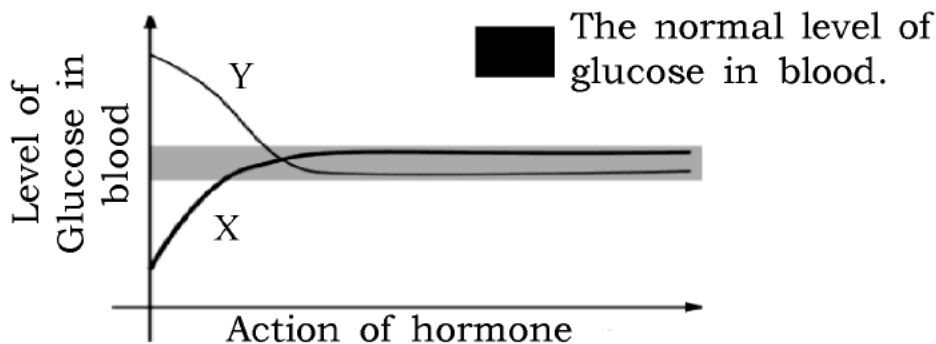
13. Observe the figure and answer the questions given below.



- (a) Identify the photoreceptor.
- (b) How do this photoreceptor helps to enable vision?

Answer **any five questions** from 14 to 20. Each question carries 3 score. (5 × 3 = 15 score)

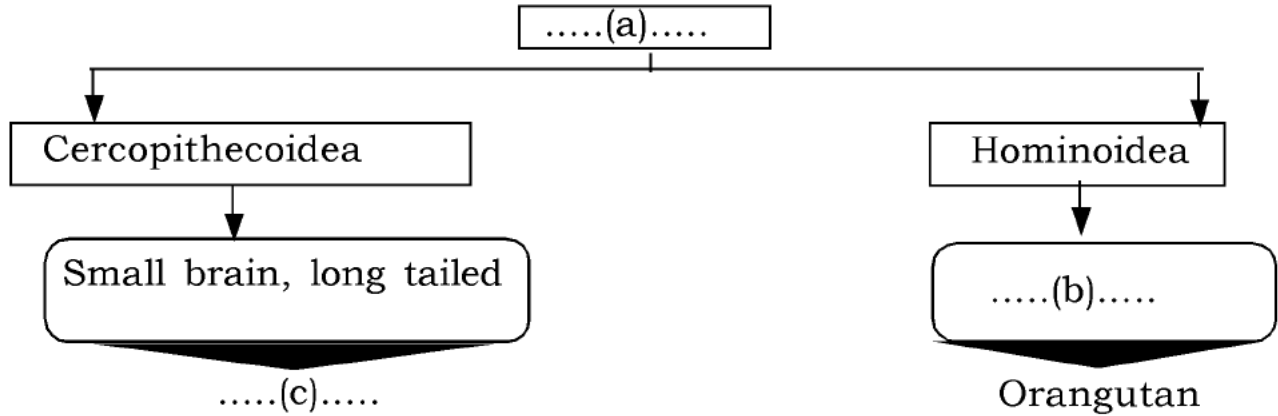
14. Observe the graph and answer the questions given below.



- (a) What is the normal level of glucose in blood?
- (b) Name the hormone that helping the person indicated as X, to regulate the blood glucose level to normal.

(c) What are the actions of the hormone that helping the person indicated as Y, to regulate the blood glucose level to normal?

15. Complete the illustration.



16. A stage in the production of insulin through genetic engineering is given below.

Plasmid with ligated insulin gene is inserted into bacterial cell.

(a) How are insulin producing bacteria created?

(b) Write the stages after the given stage.

17. Complete the flowchart related to hearing.

Pinna →(a)..... → Tympanum →(b).... →(c)..... →

Cochlea →(d)..... → Impulse →(e).... →(f).... →

Sense of hearing

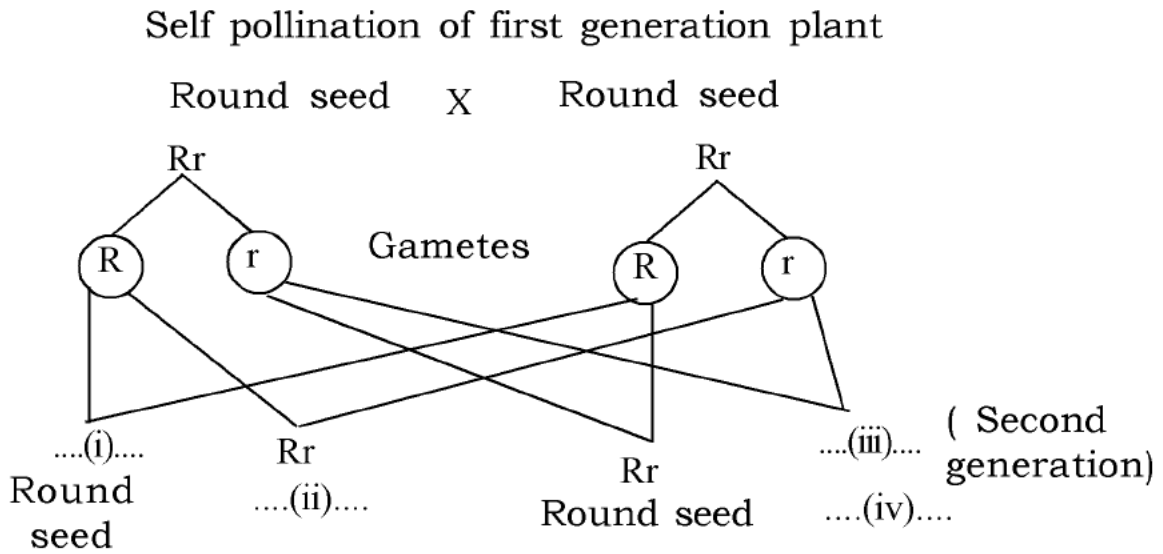
18. Write the reason for the following diseases.

(A) Acromegaly (B) Diabetes insipidus (C) Dwarfism

19. Arrange columns B and C in accordance with the data of column A.

A	B	C
(i) Malaria	(a) Bacteria	(1) Appearance of reddish scaly rashes that cause itching.
(ii) Athletes' foot	(b) Protozoa	(2) Severe fever, headache, muscle pain, redness in eyes
(iii) Rat fever	(c) Fungus	(3) Loss of body weight, fatigue, persistent cough
	(d) Virus	(4) High fever with shivering and profuse sweating

20. The hybridization experiment conducted by Mendel on the basis of two contrasting traits of the shape of seed in pea plant is illustrated here. Observe the illustration and answer the questions given below.

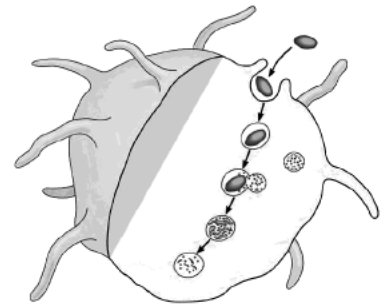


- (a) Complete the illustration.
- (b) What are the inferences formulated by Mendel from this experiment?

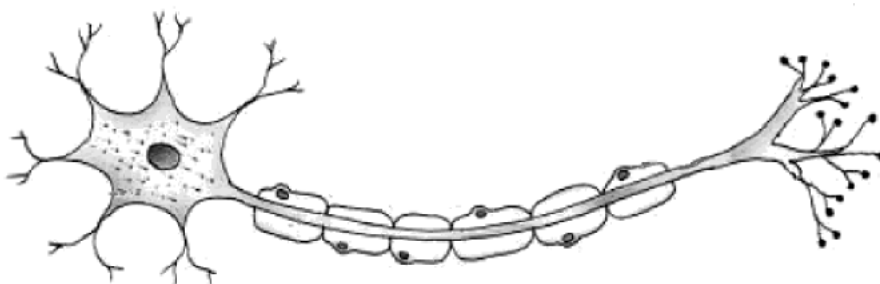
Answer **any two questions** from 21 to 23. Each question carries 4 score. (2 × 4 = 8 score)

21. Observe the figure and answer the questions given below.

- (a) Identify the defense activity.
- (b) Name the white blood cells that participate in this defense activity.
- (c) Write the stages of this defense activity in the correct order.



22. Redraw the figure, identify and label the parts based on the indicators given below.



- (a) The part that secretes neurotransmitter.
- (b) The part that carries impulses from the cell body to outside.
- (c) The part that receives impulses from adjacent neuron.

23. The symptoms of a disease is given below.

Loss of body weight, fatigue, persistent cough

- (a) Identify the disease.
- (b) Name the pathogen.
- (c) Name the organs/body parts affected by this disease.
- (d) How this pathogen is transmitted?

ASSESSMENT TOOL - Set 2

BIOLOGY

Time : 1½ hour

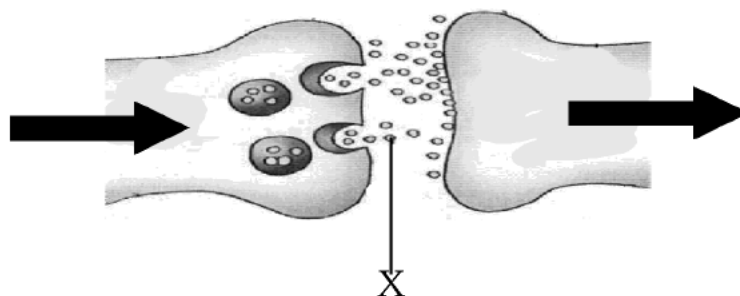
Maximum Score : 40

General Instructions

- The first 15 minutes is cool - off time. You may use this time to read the question and plan your answer.
- Answer on the basis of instructions in each part.
- Consider score and time while answering.

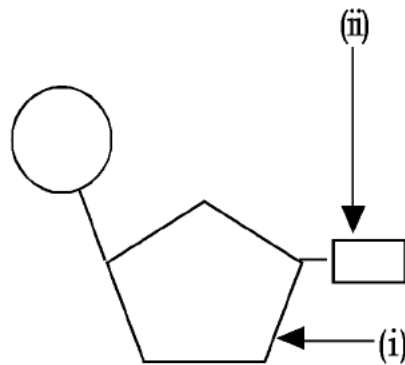
Answer **any five questions** from 1 to 6. Each question carries 1 score. (5 × 1 = 5 score)

1. Observe the picture and answer the following questions



- a) Identify the picture.
 - b) Write down the common name of chemical substance that indicated as 'X'.
2. Analyse the word pair relationship and fill the blanks. Write the word pair relationship.
Planaria : Eye spot :: Housefly :
 3. Choose the correct answer.
The hormones which are produced from the ovary are.
 - a) Testosterone, Estrogen
 - b) Progesterone, Testosterone
 - c) Estrogen, Progesterone
 - d) Testosterone, Estrogen
 4. Select the correct pair.
 - a) Bacteria – Bud rot of coconut
 - b) Bacteria – Wilt disease in brinjal
 - c) Virus – Quick wilt in pepper
 - d) Fungus – Blight disease in paddy

5. Identify the parts indicated as (i) and (ii) in the illustration.



6. Make correction if any, in the underlined portion of the statement given below.

Thick chin and large teeth, had the ability to stand erect, are the features of Ardipithecus ramidus.

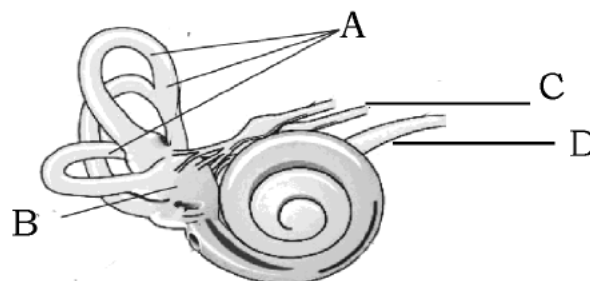
Answer **any Six questions** from 7 to 13. Each question carries 2 score. (6 × 2 = 12 score)

7. Arrange the following statements suitably in the table given below.

- The pupil in the eye dilates.
- Production of saliva increases.
- Heart beat becomes normal.
- Peristalsis in the intestine slows down.

Sympathetic System	Parasympathetic System

8. Observe the picture and answer the following questions.



- (a) Identify the parts indicated as A and B.
- (b) Mention the functions of the parts indicated as C and D.

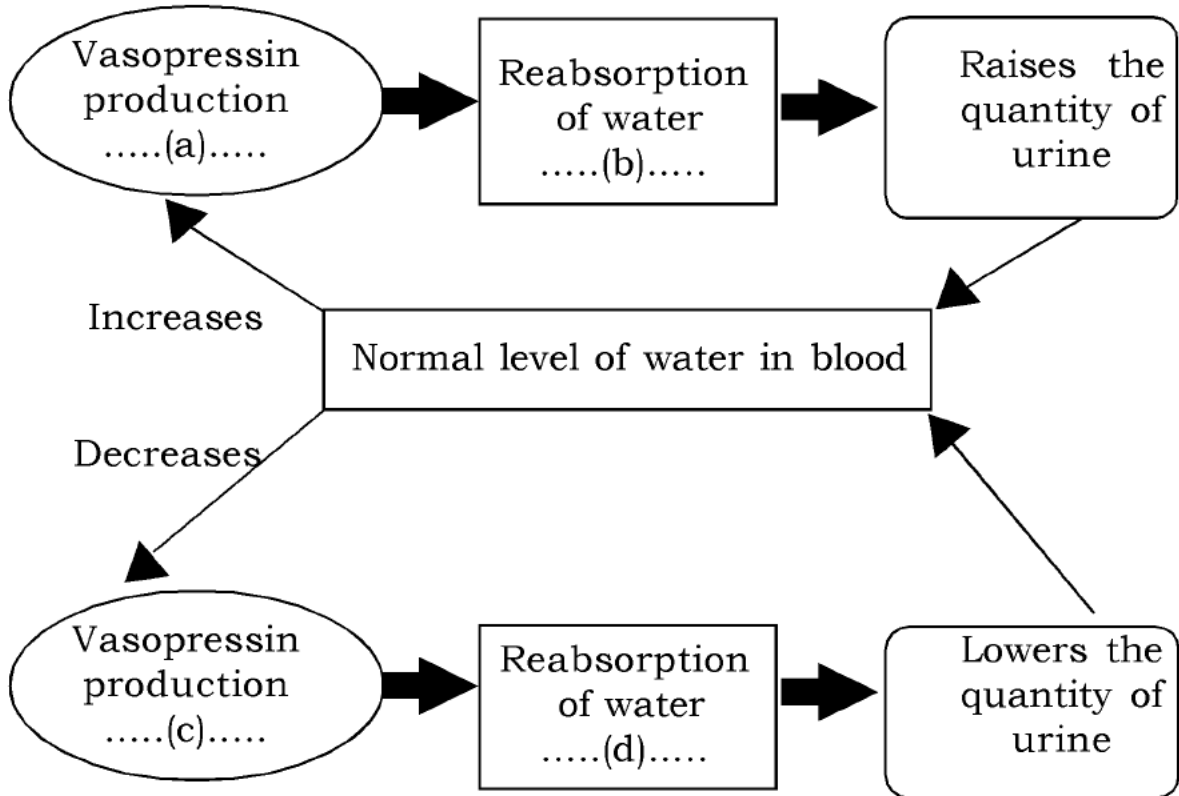
BIOLOGY

9. Complete the table using suitable terms that are given in the box.

Plant hormones	Function
Auxin	(i)
(ii)	Stimulates break down of stored food to facilitate germination,
Cytokinins	(iii)
(iv)	Ripening of leaves and fruits

Cell differentiation, Promoting the growth of terminal bud, Ethylene, Gibberellins, Dormancy of embryo, Abscisic acid

10. Complete the following illustration.

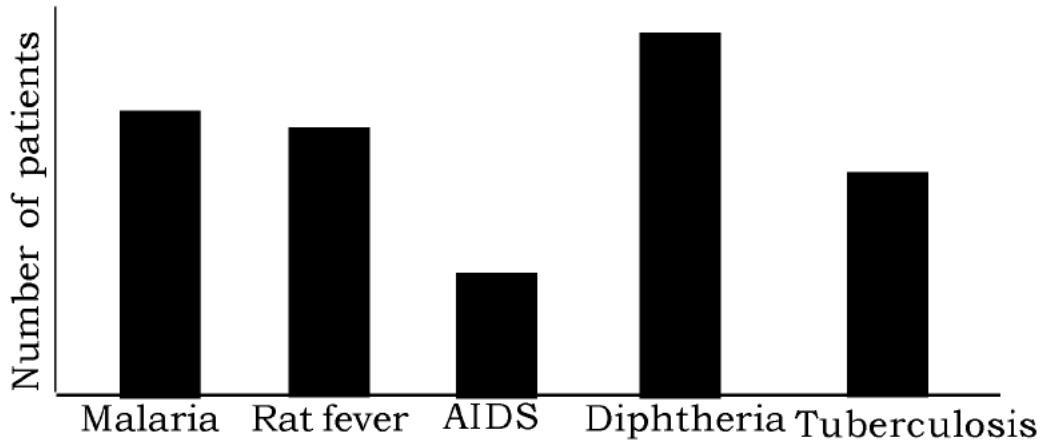


11. “Vaccines can prevent the attack of pathogens in advance before getting infection”.

Analyse the statement and answer the following questions.

- (a) What is the role of vaccines in preventing the diseases?
- (b) Name any two vaccines.

15. Analyse the graph and answer the following questions.



- Which is the mostly affected disease? Name the pathogen that cause this disease.
 - Which is the least affected disease? How this disease is spread?
 - Name the disease spread through mosquito. Write down its symptoms.
16. A statement in a seminar related with cancer is mentioned below. Analyse the statement and answer the following questions.

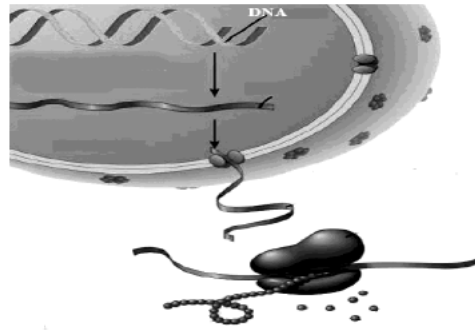
“The normal cells get transformed into cancerous cells and spread to other body parts.”

- How the normal cells are transformed in to cancerous cells?
 - What are the different treatment methods of cancer?
 - What are the factors that causes the cancer?
17. Make suitable pairs by using the words given in the box.

C.T. Scanner, To get three-dimensional visuals of internal organs, Electro Cardio Gram, To get three-dimensional visuals of internal organs with the help of computer and using X-rays, To record electric waves in the heart muscle, M R I Scanner.

18. "Antibiotics are effective in preventing the bacterial diseases "
- Do you agree with this opinion?
 - What are antibiotics?
 - Give three side effects of antibiotics.

19. Analyse the illustration and answer the following questions.



- (a) Mention the process illustrated above.
- (b) Write down the stages involved in this process sequentially.
20. Some statements related with the theory of evolution is given below. Analyse the statements and answer the following questions.
- (i) Accumulation of variations inherited through generations leads to origin of new species.
 - (ii) Those with favourable variations survive by Natural selection.
 - (iii) Organism that over produce undergo struggle for existence.
 - (iv) Favourable variations are transferred to the next generation.
- (a) Name the theory of evolution. Who proposed this theory?
- (b) Arrange the above statements of the theory of evolution in their correct order.

Answer **any two questions** from 21 to 23. Each question carries 4 score. (2 × 4 = 8 score)

21. Complete the table using the suitable words that are given in the box.

● Cerebrum ● Fissures and grooves are present ● Helps in maintain the homeostasis ● Cerebellum ● The largest part of the brain ● Medulla oblongata ● Coordinate muscular activities ● Hypothalamus ● Evokes sensations ● Control the heart beat ● Seen below the cerebrum and located near the cerebellum ● Situated just below the thalamus.

BIOLOGY

Parts of brain	Feature	Function

22. “This technology helps to find out the real culprits even from their parts of skin, blood and hair”.
- (a) Which technology is mentioned above?
 - (b) Who invented this technology?
 - (c) What is the basis of this technology?
 - (d) What are the other uses of this technology?
22. Redraw the figure, identify and label the parts based on the indicators given below.



- (a) The fluid that provide oxygen and nourishment to the tissues of the eye.
- (b) The projected transparent anterior part of the sclera.
- (c) The layer which has photoreceptors.