

CHAPTER - 1 HEREDITY & EVOLUTION**LCHOOSE THE CORRECT ANSWER**

(16 X 1 = 16)

1. Mendel observed 7 pairs of contrasting characters in *Pisum sativum*. Which one of the following is not a part of that?
i) Tall and dwarf ii) Yellow and green seed colour iii) Terminal and axial flower iv) Smooth and rough stem
2. Primitive man evolved in _____. i) Africa ii) America iii) Australia iv) India
3. Which of the following is inheritable? i) an altered gene in sperm ii) an altered gene in liver cells iii) an altered gene in skin cells iv) an altered gene in udder cells
4. The theory of Natural Selection was proposed by _____.
i) Charles Darwin ii) Hugo de Vries iii) Gregor Johann Mendel iv) Jean Baptise Lamarck
5. Somatic gene therapy causes _____.
i) changes in sperm ii) changes in progeny iii) changes in body cell iv) changes in ovum
6. In a pea plant, the yellow colour of the seed dominates over the green colour. The genetic make up of the green colour of the seed can be shown as _____. i) GG ii) Gg iii) Yy iv) yy
7. Some people can roll their tongue and this is a genetically controlled auto-somal dominant character. [Roller = RR / Rr; Non-roller = rr] A child who can roll the tongue has one brother who is a non-roller and two sisters who are rollers. If both the parents are rollers, the genotypes of their parents would be _____.
i) RR x RR ii) Rr x Rr iii) RR x rr iv) rr x rr
8. Hydra, a multi-cellular invertebrate of phylum cnidaria (coelenterata) can give rise to new offspring by various methods. Choose the method by which the offspring are produced with significant variations.
i) budding ii) regeneration iii) sexual reproduction iv) asexual reproduction
9. The following are the events in the formation of the first cloned animal – the sheep Dolly.
a) Removal of haploid nucleus from the ovum. b) Implantation of ovum with diploid nucleus into the surrogate mother.
c) Collection of udder cell from the sheep. d) Injection of diploid nucleus of udder cell into the enucleated ovum.
e) Development of a young clone.
The correct sequential order of these events is _____. i) abcde ii) cabed iii) cadbe iv) edcba
10. The following are statements about stem cells:
a) There are unspecialised / undifferentiated cells. b) They can be transformed into any type of body cell.
c) They can multiply rapidly to form a large number of similar types of cells. d) They cannot transform into cardiac cells or nerve cells. e) They are obtained from reproductive progeny only. The correct statements are _____:
i) a,b,c only ii) c,d,e only iii) a,c,e only iv) b,c,e only
11. In persons suffering from insulin-dependent diabetes, the cells of pancreas are degenerated.
i) Alpha ii) Beta iii) Gamma iv) Delta
12. Identical twins are born as a result of fertilization between _____.
i) two eggs and two sperms ii) two eggs and one sperm iii) one egg and one sperm iv) one egg and two sperms
13. Identify the incorrect statement about identical twins.
i) developed from a single zygote ii) always of the same sex iii) look alike in many aspects iv) differ in their blood groups
14. The correct statement about Neanderthal man is:
i) the first human like hominid ii) started agriculture iii) ate meat and walked erectly iv) buried the dead
15. The inheritance of characteristics through generation is called "heredity". In Mendel's *Pisum sativum* plant, the genetic material present is _____. i) DNA ii) RNA iii) Protein iv) Cytoplasm
16. The Genotypic ratio of the monohybrid ratio is _____. i) 1:3:1 ii) 3:1 iii) 1:2:1 iv) 2:1
- II. WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS.** (17 X 2 = 34)
17. The inheritable characters vary in different species and within the same species. Name the variation in the following cases.
i) The dentition in the rabbit and the elephant are not the same. This is called as _____ variation.
ii) The eye colour among the human beings are varied as blue, black, brown, green, etc. This is called as _____ variation.
18. Sexually reproducing organisms produce offspring with marked, significant and visible variation. Asexually reproducing offspring show minor variations. i) Do you agree with the above statements?
ii) Among the following organisms point out the asexually reproducing organism. (Cockroach, Euglena, Earthworm and Bird)
19. Fill in the blanks by choosing a suitable one from the list given. (allele, variation, speciation, gene, allelomorphs)
i) _____ are the factors which form the physical basis of inheritance.
ii) _____ are the expressions of contrasting pair of alleles. iii) _____ is the alternate forms of the same gene.
20. A change that affects the body cell is not inherited. However, a change in the gamete is inherited. The effects of radiation at Hiroshima have been affecting generations. Analyze the above statements and give your interpretation.
21. What are variations? Mention their types.
22. What do you mean by phenotype and genotype of an individual? Explain.
23. What are monoclonal antibodies? Mention its use.
24. What is a clone? In what way is the cloning technique useful in the field of veterinary science?
25. In dogs, the barking trait is dominant over the silent trait. Using Punnett Square, work out the possible puppies born to two barking parents with genotype (Rr).
26. In Dr. Ian Wilmut's cloning experiment, did the new born 'Dolly' resemble the udder cell donor Dorset white sheep or the surrogate mother sheep? Give reasons.
27. The excessive use of pesticides has only resulted in the occurrence of more resistant varieties of pests rather than their complete eradication. How can you link this with Darwin's theory of Natural Selection and Evolution?
28. i) Why did Wilmut select the udder cell? ii) Define the terms haploid and diploid.
29. Match the following by identifying the pair : (medicines, fuel, microbes, metabolism, organic acids)
i) vaccine ii) natural gas iii) citric acid iv) monoclonal antibodies v) vitamins
30. Name the different species of mankind in chronological order from primitive to modern man.
31. Find out who I am?
i) I am an enzyme and I cut DNA at specific sites. ii) I am the paste enzyme that joins segments of DNA.
32. State whether **true or false**. Correct the statements that are false.
i) Heredity give the organisms an individuality of their own.
ii) Lamarck postulated the use and disuse theory.
33. Mention the two principles of theory of Natural Selection.

ST.PAUL'S MATRICULATION HIGHER SECONDARY SCHOOL, BLOCK-4, NEYVELI.**X Std****UNIT TEST – 2****MARKS: 50****SCIENCE II Chapter 2 – IMMUNE SYSTEM****TIME: 1 Hr 15 Mints****(5 X 1 = 5)****I.CHOOSE THE CORRECT ANSWER****1.** Pick out a case of healthy state of an individual.

- i) Mr. X does his duty and spends time joyfully.
- ii) Mr. Y takes insulin injection every day.
- iii) Mrs. Z is very depressed.
- iv) Mr. K is recovering from an infectious disease.

2. One of the means of indirect transmission of a disease is _____.

- i) using fomites ii) sneezing iii) coughing iv) through placenta

3. Assertion (A) Expulsion of excess unused glucose in the blood through urine is observed in a diabetic mellitus person.

Reason (R) : insulin is not produced in sufficient quantity by pancreas.

- i) Both 'A' and 'R' are true but 'R' doesn't explain 'A'.
- ii) Both 'A' and 'R' are true and 'R' explains 'A'.
- iii) Only 'A' is true but 'R' is false.
- iv) A is false but 'R' is true.

4. An example of protozoan infecting our intestine is _____

- i) Plasmodium vivax ii) Trypanosoma gambiense iii) Entamoeba histolytica iv) Taenia solium

5. A child eats food rich in carbohydrates and avoids protein in its diet. Which type of nutritional deficiency will affect that child?

- i) Diabetes ii) Kwashiorkor iii) Nyctalopia iv) Down syndrome

II. WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS.**(15 X 2 = 30)****6.** A list of disorders is given below. Pick out the odd one out and give reasons.

(Thalassemia, haemophilia, night blindness, albinism, sickle cell anaemia)

7. What are the symptoms of common cold? i) _____ ii) _____**8.** Differentiate between the diseases-night blindness and colour blindness.**9.** After observing dark patches with itching sensation on the skin of a student in a school hostel, the warden advises his roommates not to share towels, clothes and combs among themselves. Name the disease the student is suffering from and name the causative organisms.**10.** Study the following statements and state whether they are **true** or **false**.

- i) Colour blindness is a genetic disorder, whereas night blindness is a nutritional disorder.
- ii) Pernicious anaemia is a nutritional deficiency disease, whereas sickle cell anaemia is a genetic disease / disorder.
- iii) Administering TT injection to an injured child is related to passive artificial immunity, whereas giving BCG vaccine is active artificial immunity.
- iv) Malaria is a bacterial disease, whereas ring worm is a viral disease.

11. Ramya is suffering from bleeding gums and loosening teeth. On diagnosis, it was found to have been caused by vitamin deficiency. Tell Ramya the vitamin that is lacking in her food and the name of deficiency disease she is suffering from. (A) Vitamins (B) Deficiency diseases (C) Symptoms are given.

Match B and C with A:

<i>A</i>	<i>B</i>	<i>C</i>
<i>Vitamins</i>	<i>Deficiency diseases</i>	<i>Symptoms</i>
<i>Vitamin A</i>	<i>Nyctalopia</i>	<i>Night Blindness</i>
<i>Vitamin B₁</i>	<i>Scurvy</i>	<i>Nervous disorder</i>
<i>Vitamin C</i>	<i>Rickets</i>	<i>Bleeding gums</i>
<i>Vitamin D</i>	<i>Haemorrhage</i>	<i>Defective calcification of bones</i>
<i>Vitamin K</i>	<i>Beri-beri</i>	<i>Profuse loss of blood</i>

12. A health worker advises the people in a locality not to have tattooing done using common needles and to insist the barber to change the shaving razors/ blades in the salon. Name the dreadful disease, the spreading of which, can be prevented by following these measures. Also mention other preventive measures that can be taken with regard to this disease.

13. Match the following:

List I (Disease)	List II (Symptoms)
A. Amoebiasis	I) Chills and high fever recurring for 3 to 4 days
B. Tuberculosis	II) Patches on skin and nails with itching sensation
C. Ringworm	III) Abdominal pain with blood and mucus in stools
D. Malaria	IV) Persistent cough and loss of body weight

14. List out the diseases based on their mode of transmission (water borne, air borne, sexual contact)

- i) cholera ii) typhoid iii) tuberculosis iv) leprosy v) syphilis vi) gonorrhoea vii) pneumonia
viii) common cold ix) amoebic dysentery x) AIDS

15. Name the causative organisms responsible for ring worm in humans? Mention the symptoms of the infection.

16. Pick out the odd ones:

- i) AIDS : Retro virus, lymphocytes, BCG, ELISA
ii) Bacterial disease : Rabies, cholera, common cold, influenza
iii) DPT vaccine : Diphtheria, tuberculosis, pertussis, tetanus
iv) Infective stage of Plasmodium in humans : Sporozoites, merozoites, trophozoites, gametocytes.
v) Mental dimension: brightness of skin, normal metabolism, no black rings around eyes, knows his capacity.

17. Say whether each of the following diseases is a metabolic disorder, a genetic disorder or a nutritional deficiency disease.

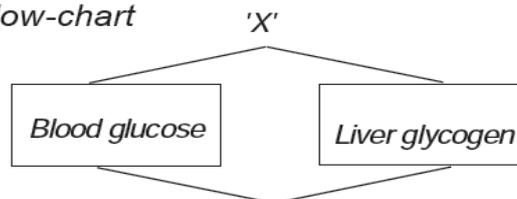
- i) thalassemia ii) beriberi iii) diabetes mellitus iv) bubble boy syndrome v) scurvy vi) marasmus
vii) obesity viii) Alzheimer's disease ix) nyctalopia x) haemophilia

18. Find the correct statement (True / False) :

- i) Tuberculosis is caused by Mycobacterium tuberculosis bacteria.
ii) Typhoid is caused by Trichophyton fungi.
iii) Malaria is caused by Plasmodium vivax.
iv) Influenza is caused by Entamoeba histolytica protozoan.

19. Name two diseases that are transmitted by houseflies. Mention their causative pathogens.

20. Observe the following flow-chart



Mention the metabolic disorder 'X' and the causative factor from the options given below:

Disorder	Factors
a) Diabetes insipidus	Deficiency of ADH hormone
b) Diabetes mellitus	Deficiency of insulin hormone
c) Coronary heart disease	Blockage of arteries supplying blood to heart muscles
d) Renal failure	Failure of nephrons to filter the blood

II. WRITE DETAIL ANSWER FOR THE FOLLOWING QUESTIONS. (3 X 5 = 15)

21. Kala has delivered a baby, i) Suggest the immunization schedule for the baby, in the first six months.

ii) What are the diseases that can be cured as per the schedule?

22. What is immunity? Write a note on the various types of immunity.

23. 15th October is observed as 'Handwashing Day'

i) Tell your friend the effects of hand washing.

ii) How frequently do you wash your hands everyday and when?

ST.PAUL'S MATRICULATION HIGHER SECONDARY SCHOOL, BLOCK-4, NEYVELI.**X Std SCIENCE II****UNIT TEST – 3****MARKS: 50****Chapter 3 – STRUCTURE AND FUNCTIONS OF HUMAN BODY****TIME: 1 Hr 15 Mints****I.CHOOSE THE CORRECT ANSWER****(5 X 1 = 5)**

1. Normal blood glucose level in 1dl of blood is _____.
i) 80-100 mg/dl ii) 80-120 mg/dl iii) 80-150 mg/dl iv) 70-120 mg/dl
2. The "T" lymphocytes are differentiated to resist infection in the _____.
i) parathyroid gland ii) lymph gland iii) thymus gland iv) adrenal gland
3. Neurotransmitters are released at the synapse by _____.
i) Tips of Dendrites ii) Synaptic Knobs iii) Organelles of Cyton iv) Myelin sheath of Axon
4. The hormone administered by doctors to a pregnant woman to help in childbirth during the time of natural delivery is _____.
i) Oestrogen ii) Progesterone iii) Insulin iv) Relaxin
5. Blinking when a beam of light is suddenly focussed on the eyes and sudden withdrawal of hand upon touching a hot body are some of the examples of reflex actions. Which part of the central nervous system acts as the centre these actions?
i) Forebrain ii) Spinal cord iii) Hindbrain iv) Synapse

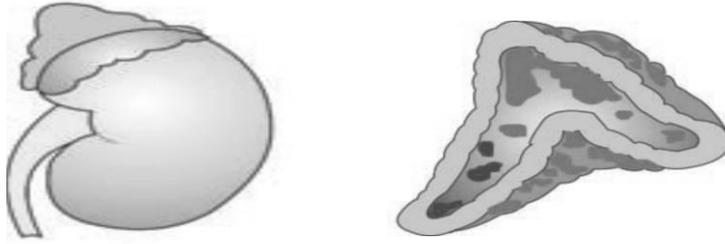
II. WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS.**(15 X 2 = 30)**

6. Name the two systems which help in the control and co-ordination of metabolic activities. Write any one difference between them.
7. Differentiate medullated neurons from non-medullated neurons. Where are they found in the nervous system?
8. What is corpora quadrigemina? Name the functions associated with it.
9. Which hormone(s) is/are called i) Personality hormone ii) fight, flight and fright hormones.
10. Name the male and female sex hormones. List out their functions.
11. The diagram is of the human brain. Shade the areas marked A and B in the parts of the brain, corresponding with the function.
A. Seat of smell B. Seat of vision

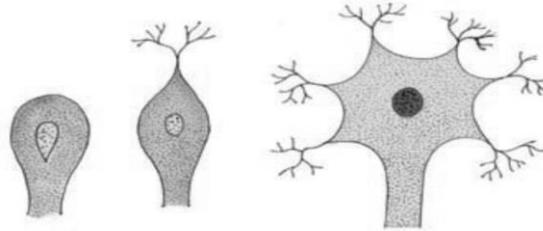


12. On the basis of the function performed, pick out the right statements.
i) Pituitary gland secretes hormones and enzymes.
ii) Thyroid gland secretes thyroxine and insulin.
iii) Leydig cells produce testosterone hormone.
iv) Pancreas produces enzymes and hormones.
13. Correct the statements, if they are wrong.
i) Alpha cells produce insulin and beta cells produce glucagon.
ii) Cortisone suppresses the immune response.
iii) Thymus gland is a lymphoid mass.
iv) Ovary produces eggs and androgen.
14. Here are a few statements about the endocrine system in man. State whether each of them is true or false. If the statement is false write the correct statement.
i) Endocrine system controls and co-ordinates the physical process of growth, reproduction and sustenance of life.
ii) Endocrine glands are duct bearing glands which secrete chemical substances called hormones.
iii) The pancreas is a dual gland. iv) Malfunctioning of the thymus gland causes goitre.
15. Copy the diagram and label the parts with the help of the clues given:

i) It is otherwise called supra renal gland. ii) It secretes two hormones, namely aldosterone and cortisone.



16. Copy and identify the types of neurons given below:



17. A person was riding a two-wheeler without wearing a helmet. He met with an accident and sustained a head injury. He was dead before he was shifted to the hospital and it was found that his death was due to breathlessness and heart failure. Which part of his brain might have been damaged? Justify your answer.

18. Match the following:

List I	List II
A. Vasopressin	I. Resist infection
B. Insulin	II. Diabetes insipidus
C. Oxytocin	III. Diabetes mellitus
D. Thymosin	IV. contraction and relaxation of uterus

19. Which gland is called the 'dual gland'? Why?

20. A 16 year old boy was brought to a doctor with a complaint of non-masculine features (lack of moustache / beard / gruff voice / broadening of shoulders etc). After keen examination, the doctor found that it was a hormonal disorder and the endocrine glands responsible were not functioning properly. Mention the glands and the hormone lacking in the boy.

II. WRITE DETAIL ANSWER FOR THE FOLLOWING QUESTIONS. (3 X 5 = 15)

21. Describe the structure of a neuron with the help of a neat, labelled diagram,

22. Name the endocrine glands and their location in the human body. Describe any two of them in detail.

23. Observe the diagram of the human brain and identify the areas mentioned:

- i) The area responsible for consciousness, intelligence, memory, imagination and reasoning.
- ii) The area responsible for regulation and co-ordination of group movements of voluntary muscles.
- iii) The area responsible for sleeping and respiration.
- iv) The area responsible for reflexes involved in the regulation of heart beat, blood vessel contraction, breathing etc.



ST.PAUL'S MATRICULATION HIGHER SECONDARY SCHOOL, BLOCK-4, NEYVELI.**X Std SCIENCE II****UNIT TEST – 4****MARKS: 50****Chapter 4 –REPRODUCTION IN PLANTS****TIME: 1 Hr 15 Mints****I.CHOOSE THE CORRECT ANSWER****(5 X 1 = 5)****1. Which of the following statement is true?**

- i) Thin-walled non-mobile spores are called zoospores.
- ii) A motile asexual spore produced by some algae, bacteria and fungi are Akinetes.
- iii) Uninucleate, non-motile, asexual spores produced by fungus are called conidia.
- iv) Thick-walled vegetative cells produced by algae during adverse conditions are called aplanospores.

2. If a water soaked seed is pressed, a small drop of water comes out through the _____.

- i) stomata ii) lenticel iii) micropyle iv) radicle

3. The mango fruit is called a stone fruit because it has _____.

- i) skinny epicarp ii) stony mesocarp iii) fleshy endocarp iv) hard endocarp

4. Anemophily occurs in _____ .

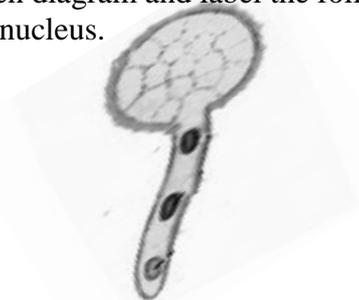
- i) Vallisneria ii) Grass iii) Coconut iv) Datura

5. Which of the following is correctly matched?

- i) False fruit – mango ii) Multiple fruit – apple iii) Aggregate fruit – polyalthia iv) Caryopsis – banana

II. WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS.**(15 X 2 = 30)****6. Write any two differences between asexual and sexual modes of reproduction.****7. Define fertilization.****8. Name the events (i) & (ii) and mention the nature of the nuclear structures formed at the end in the following cases:****(i) male gamete (n) + egg (n) = Zygote (2n)****(ii) male gamete (n) + secondary nucleus (2n) = Endosperm nucleus (3n).****9. What are monocotyledons and dicotyledons? Give examples.****10. Give any two examples for each of the following cases where dispersal of fruits and seeds take place :****(i) by birds (through excreta) (ii) by human beings****11. The methods of reproduction and the organisms are given below. Match the type of reproduction with the suitable organism.**

<i>Fission</i>	<i>Spirogyra</i>	<i>Yeast</i>
<i>Budding</i>	<i>Protozoans</i>	<i>Flatworms</i>
<i>Fragmentation</i>	<i>Bryophyllum</i>	<i>Bacteria</i>

12. i) Composite fruits are formed by all the flowers of _____,**ii) _____ fruit is developed from a single flower with a multicarpellary apocarpous superior ovary.****13. Draw the given diagram and label the following parts:****i) Exine ii) Tube nucleus.****14. Match the following with respect to dispersal of fruits / seeds:**

<i>a) Autochory</i>	<i>I) Lotus</i>
<i>b) Anemochory</i>	<i>II) Xanthium</i>
<i>c) Hydrochory</i>	<i>III) Tridax</i>
<i>d) Zoochory</i>	<i>IV) Balsam</i>

15. Use words from the given list to complete the following paragraph. (The words may be used once / more than once / not at all).

(seed, fruit, pollination, dispersal, germination, fertilization, flower, reproduction)

Ramu went to the field along with his father. He sowed mustard seeds in the soil. After a few days he observed the process of _____. The seeds grew into plants and produced _____. On maturity, these flowers produced pollen grains that were transferred to the stigma by _____. The male gametes fused with the female gametes during the process of _____.

16. Coconut seeds are dispersed by Hydrochory (dispersal by water). Mention the part of the fruit whose modification helps in this mechanism.

17. What is double fertilization?

18. What is triple fusion?

19. Differentiate dehiscent fruits and indehiscent fruits with suitable examples.

20. Name the agents of pollination in the following cases:

i) Bright coloured flowers with scent and nectar glands.

ii) No colour / scent / nectar but pollen grains are dry, light weight and powdery. Stigma is feathery.

Also mention the plants in cases (i) & (ii).

II. WRITE DETAIL ANSWER FOR THE FOLLOWING QUESTIONS.

(3 X 5 = 15)

21. Write the two events involved in the sexual reproduction of a flowering plant.

i) Discuss the first event and write the types.

ii) Mention the advantages and the disadvantages of that event.

22. i) Fruit is the product of fertilization. Is there any fruit which is formed without the act of fertilization?

ii) Represent the classification of fruits in a diagrammatic sketch.

23. Given below is a list of dry fruits. Assign the fruits to their relevant types.

(Cotton, Tridax, Paddy, Castor, Coriander, Beans, Peas, Calotropis, Mirabilis, Cashew, Acacia, Lady's finger)

i) Achene ii) Caryopsis iii) Cypsela iv) Nut v) Cremocarp vi) Lomentum vii) Regma viii) Loculicidal capsule ix) Septicidal capsule x) Follicle xi) Legume

ST.PAUL'S MATRICULATION HIGHER SECONDARY SCHOOL, BLOCK-4, NEYVELI.**X Std SCIENCE II****UNIT TEST – 5****MARKS: 50****Chapter 7 – CONSERVATION OF ENVIRONMENT****TIME: 1 Hr 15 Mints****I.CHOOSE THE CORRECT ANSWER****(5 X 1 = 5)**

1. The _____ form decomposers in the pond ecosystem.

i) plants ii) bacteria iii) frogs iv) phytoplanktons

2. Water is an essential commodity for survival. What can we do to help increase water resources?

i) deforestation ii) reducing the use of vehicles iii) the burning of the wastage iv) afforestation

3. The tiger and the lion are carnivores. Likewise the elephant and the bison are _____.

4. Compressed Natural Gas (CNG) is considered a better fuel than coal/ petroleum, because _____.

5. Which of the following is not a fossil fuel?

i) copper ii) natural gas iii) petroleum iv) coal

II. WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS.**(15 X 2 = 30)**

6. Classify the following into producers, consumers, decomposers.

i) butterfly ii). grass hopper iii) calottes iv) snakes v). shoe flower vi) nitrobacteria

7. Living organisms adapt themselves according to their habitat.

Match the following:-

a.	fish	wings
b.	camel	hind limbs with web
c.	frog	fins
d.	birds	hard skin

8. Fill in the blanks

i) Animals give out _____ through respiration.

ii) In the presence of sunlight, plants prepare _____.

9. Bacteria and fungi are responsible for the decay of dead plants and animals. Decaying matter is recycled to grow plants. What do we call this?

10. Fill in the blanks with suitable answers from those given in the brackets.

(harmful, heavy metals, carbon dioxide, sulphur particles)

Generation of waste products which contain Mercury, Uranium, Thorium, Arsenic, and other _____ are _____ to human health and environment. _____ present in the coal will cause acid rain and the release of _____, a green house gas, causes climate change and global warming.

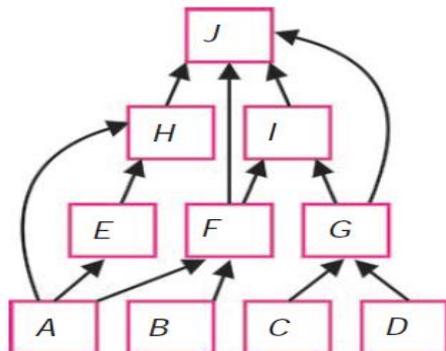
11. Depict a food chain by placing the following organisms in the correct trophic levels:

(snake, grass, eagle, frog, grasshopper)

12. Show an aquatic food chain using the following organisms.

(Small fish, Phytoplanktons, Kingfisher, Zooplanktons)

13. Observe the following food web:

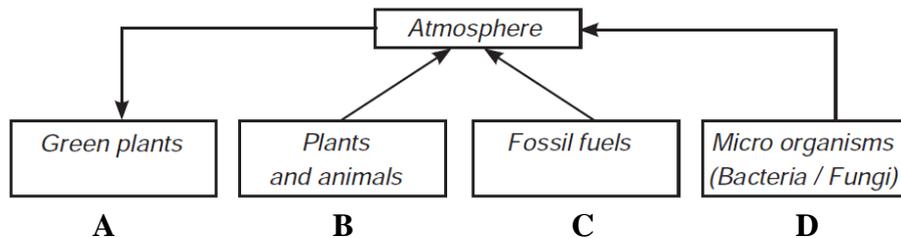


(i) Find out the wrong statement:

a) 'A' is a producer b) 'F' is a herbivore c) 'H' is an omnivore d) 'I' is a climax carnivore

(ii) Find out how many food chains are present in the above food web.

14. Observe the following Bio-geo chemical cycle.



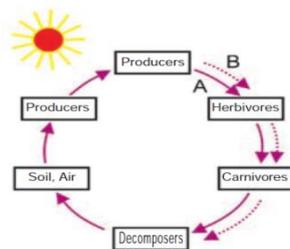
- i) Mention the nutrient in the given cycle.
- ii) Write the activities from 'A' to 'D'.

15. Study the food chain below, correct it and convert it into a pyramid of energy.

Mulberry → Sparrow → Caterpillar → Kite

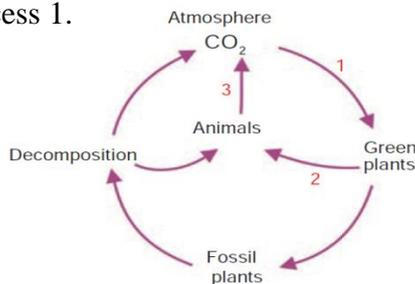
16. Study the illustration and answer the questions:

- i) Which line (A or B) represents the flow of energy? Why do you say so? ii) Give an example of a decomposer.



17. i) Name the processes noted as No. 1 and 3.

ii) Define process 1.



18. Match the following.

- | | |
|--------------------|--------------------|
| a) Black Gold | i) Bio-Plastic |
| b) Green Chemistry | ii) sewage |
| c) Green house gas | iii) Petroleum |
| d) Water pollution | iv) Global warming |

19. Assertion (A) : Coal and petroleum are called fossil fuels.

Reason (R) : Fossil fuels are formed from the remains of dead organisms after millions of years.

- i) Both 'A' and 'R' are true and 'R' explains 'A'.
- ii) Both 'A' and 'R' are true and but 'R' doesn't explain 'A'
- iii) Only 'A' is true but 'R' is false.
- iv) 'A' is false but 'R' is true.

20. Classify the following substances – wood, paper, plastic and grass and give reason your classification.

II. WRITE DETAIL ANSWER FOR THE FOLLOWING QUESTIONS. (3 X 5 = 15)

21. In your locality people are affected due to water scarcity. What measures will you take to deal with the problem of water scarcity?

22. We are surrounded by smoke. Is this situation good for our health. Give reason.

23. List out the harmful effects of burning coal.

ST.PAUL'S MATRICULATION HIGHER SECONDARY SCHOOL, BLOCK-4, NEYVELL.

X Std

UNIT TEST – 6

MARKS: 50

SCIENCE II

TIME: 2 Periods

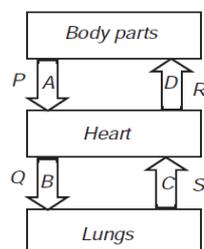
CHAPTERS – 5 - A Representative Study of Mammals & 6 - Life ProcessesI.CHOOSE THE CORRECT ANSWER

(16 X 1 = 16)

- Carnivorous animals use these teeth to tear flesh.
i) incisors ii) canines iii) premolars iv) molars
- The Henle's loop of nephron is mainly responsible for reabsorption of water in the kidney. Which of the following has a long loop of Henle in its nephrons to conserve water?
i) polar bear ii) camel iii) frog iv) whale
- Which blood cells of mammals are concerned with immunity?
i) Young Erythrocytes ii) Leucocytes iii) Thrombocytes iv) Matured Erythrocytes
- Forelimbs of mammals have a common basic structure or pattern, but are different in their usage/ function in different animals. They can be called _____ .
i) Homologous organs ii) Analogous organs iii) Vestigial organs iv) Rudimentary organs
- Normal body temperature of man is _____ .
i) 98.4 – 98.6oF ii) 96.6 – 96.8oF iii) 94.4 – 98.6oF iv) 98.4 – 99.6oF
- Mitral valve is found between _____ .
i) Right auricle and right ventricle ii) Left auricle and left ventricle
iii) Right ventricle and pulmonary artery iv) Left ventricle and aorta
- One of the following groups contains a non-mammalian animal. Pick up the group.
i) dolphin, walrus, porcupine, rabbit, bat ii) elephant, pig, horse, donkey, monkey
iii) antelope, deer, cow, buffalo, black buck iv) dog, cat, crocodile, lion, tiger
- Based on relationship, fill up:
Whale: Flippers:
Bat : _____
- In monotropa the special type of root which absorbs nourishment is the _____
i) Haustoria ii) Mycorrhizal root iii) Clinging root iv) Adventitious root
- The product obtained in the anaerobic respiration of yeast is _____
i) Lactic acid ii) Pyruvic acid iii) Ethanol iv) Acetic acid
- The roots of a coconut tree are seen growing far from the plant. Such a kind of movement of root for want of water is _____ .
i) Phototropism ii) Geotropism iii) Chemotropism iv) Hydrotropism
- The xylem in the plants is responsible for _____ .
i) transport of water ii) transport of food iii) transport of amino acids iv) transport of oxygen
- The autotrophic nutrition requires
i) CO₂ and water ii) chlorophyll iii) sunlight iv) all the above
- Leaf pores / stomata help in _____ .
i) intake of CO₂ during photosynthesis ii) release of O₂ during photosynthesis
iii) release of water vapour during transpiration iv) All of these
- The special root-like structure of plant parasites in cuscuta and viscum are called _____ .
i) Rhizoids ii) Haustoria iii) Hyphae iv) Stolons
- Pick out the odd one : The parts of the alimentary canal are
i) pharynx ii) mouth iii) buccal cavity iv) pancreas

II. WRITE SHORT ANSWER FOR THE FOLLOWING QUESTIONS. (17 X 2 = 34)

- Mention any four adaptations seen in the camel so that it can live successfully in deserts.
- Mention the various valves and their location in the human heart.
- Write any four differences between arteries and veins in mammals.
- Which blood cells are without nuclei? What is the advantage of this condition?
- Observe the following flow-chart depicting blood-circulation in mammals.



Pick out the correct blood vessels A,B,C,D from the following:

i) Pulmonary veins ii) Venacava iii) Pulmonary artery iv) Aorta

Among the P,Q,R and S samples, identify the correct match from the following

a) P & Q = Oxygenated and R& S = Deoxygenated b) P & Q = Deoxygenated and R& S = oxygenated

c) All are Oxygenated d) All are Deoxygenated

22. The Master chemists of our body are the kidneys. Justify.

23. Draw and label the L.S of kidney.

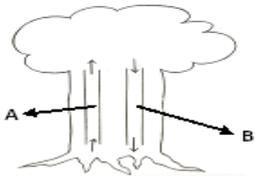
24. Draw and label the Nephron.

25. Mention the adaptations found in Whale.

26. Fill up the empty boxes with suitable answers with respect to the important excretory organ and their excretory products.

Excretory organ	Disposed as	Excretory products
Kidneys	Urine	-----
-----	Exhaled / Expired air	Carbondioxide and water-vapour
Skin	-----	Excess water and salt

27. Name the types of vascular tissues in the plant stem which are labelled A and B.



i) Name A and B

ii) What materials are transported through A?

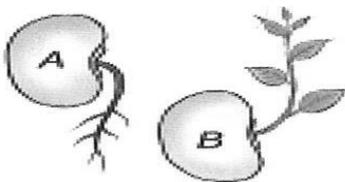
iii) What materials are transported through B?

iv) How do the materials in A move upwards to the leaves?

28. Match the methods of nutrition of special organs with suitable examples:

Autotrophs	Mycorrhiza	Cuscutta
Parasites	Chlorophyll	Monotropa
Saprophytes	Haustoria	Hibiscus

29. Observe the diagram



i) Mention the type of movements shown in figure A and B.

ii) How does this movement differ from the movement of mimosa?

30. Differentiate aerobic respiration from anaerobic respiration. Mention the event that is common to both.

31. What is the length of the alimentary canal in human beings? List out the parts of the gastro-intestinal tract in the correct sequential order based on the passage of food.

32. What is respiration? Give a balanced equation for aerobic respiration.

33. Describe the various methods of excretion in animals.

ST.PAUL'S MATRICULATION HIGHER SECONDARY SCHOOL, BLOCK-4, NEYVELL.

X Std

UNIT TEST - 7

MARKS: 50

SCIENCE II

TIME: 2 Periods

(Chapters 5 & 6 One Mark and Two Marks) (Chapters 2 & 7 – Detail)

SECTION – I (10 X 1 = 10)I. ANSWER ALL THE 15 QUESTIONSII. CHOOSE THE CORRECT ANSWER FROM THE ALTERNATIVES GIVEN IN THE BRACKETS.

- Which is a non-renewable resource?
i) Bio-gas ii) Bio-Diesel iii) Natural gas iv) Green Diesel
- Sensitive whiskers are found in _____.
i) Dogs ii) Elephant iii) Deer iv) Bat
- The outer covering of kidney is _____.
i) Meninges ii) Pericardium iii) Capsule iv) Pleura
- Cuon alpinus* is the zoological name of
i) Chen Nai ii) Asiatic wild dog iii) Dholes iv) All the above
- In monotropa the special type of root which absorbs nourishment is the _____.
i) Haustoria ii) Mycorrhizal root iii) Clinging root iv) Adventitious root
- _____ is the chief component of natural gas.
i) ethane ii) methane iii) propane iv) butane
- The complete oxidation of one molecule of glucose in aerobic respiration produces ____ ATP molecules.
i) 28 ii) 32 iii) 38 iv) 39
- In annelids, excreta are removed by the special kidneys called _____.
i) Nephron ii) Nephridia iii) Excretory Tubes iv) Contractile vacuole
- The sedimented and floating materials are removed by this treatment process.
i) primary treatment ii) secondary treatment iii) tertiary treatment iv) peripheral treatment
- Assertion (A) : Mammalian heart is called myogenic heart.
Reason (R) : Heartbeat is regulated by a specialized muscle bundle (pacemaker) in mammals.
i) Both 'A' and 'R' are true and 'R' explains 'A'. ii) Both 'A' and 'R' are true but 'R' doesn't explain 'A'.
iii) 'A' is true but 'R' is false. iv) A is false but 'R' is true.

SECTION – II (15 X 2 = 30)I. ANSWER FOR ANY TWENTY QUESTIONS.

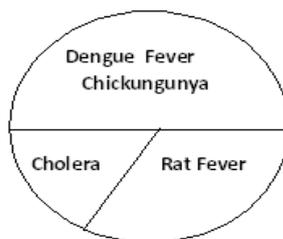
- Mention the two unique characteristics of mammals.
- Match the following:

Water borne diseases	Water related diseases	Water based diseases
Typhoid	Dengue	Scabies
Malaria	Amoebiasis	Cholera
Filariasis	Lice	Trachoma

- Name the three important blood proteins seen in plasma. Add a note on their functions.
- Fill up the empty boxes with suitable answers with respect to the valves of a mammalian heart.

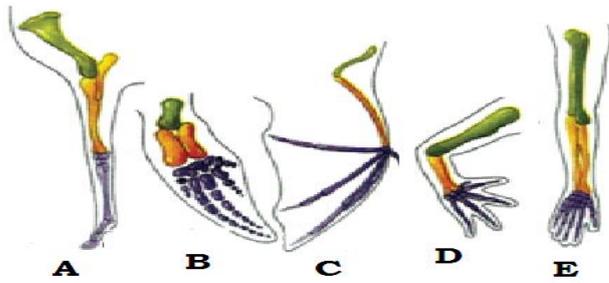
Valve(s)	Location	Function
-----	At the right auricular ventricular aperture	Regulates the flow of blood from right auricle to right ventricle
Aortic valve	At the base of Aorta	-----

- Draw and label the Nephron.
- The pie diagram represents a survey result of infectious diseases in a village during 2008 – 2009. Analyse it and answer the following:



- Which diseases affect the majority of the population?
 - How are these diseases transmitted?
 - Mention any three measures that can control the other two diseases.
- The Master chemists of our body are the kidneys. Justify.

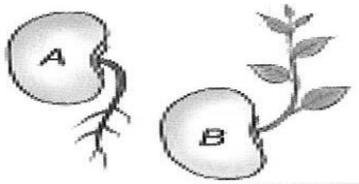
18. Identify the forelimb of animals A, B, C, D, and E.



19. Find the odd one out:

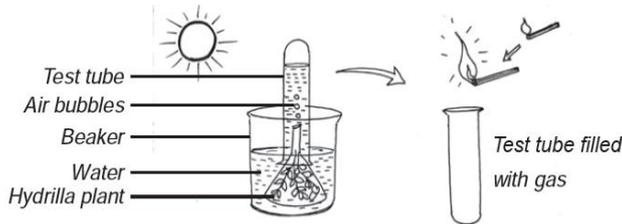
- i) bio-alcohol, green diesel, bio-ethers, petroleum
 ii) cholera, typhoid, scabies, dysentery

20. Observe the diagram



- i) Mention the type of movements shown in figure A and B.
 ii) How does this movement differ from the movement of mimosa?

21. Observe the following experiment:



- i) Name the phenomenon it depicts and the gas that is released.
 a) Respiration, CO_2 b) Photosynthesis, O_2 c) Transpiration, H_2O d) Excretion, N_2
 ii) What is photosynthesis? Write a balanced equation for this bio-chemical reaction.
22. What is the length of the alimentary canal in human beings? List out the parts of the gastro-intestinal tract in the correct sequential order based on the passage of food.
23. Wind power is generated from uneven heating of the earth's surface by the sun and the hot core.
 i) Which country is called the country of winds?
 ii) Which country leads the world in harnessing wind energy?

24. Match the following

- | | |
|------------------|---------------------|
| i. Haemodialysis | a. Sieve Tube |
| ii. Phloem | b. Insects |
| iii. Ganglia | c. Fishes |
| iv. Ammonotelic | d. No re-absorption |

25. A non-renewable resource is a natural resource, if it is replaced by natural process at a rate equal to or faster than its rate of consumption by humans.

Read this statement and say whether it is correct or incorrect. If it is incorrect, give the correct statement.

SECTION – III (2 X 5 = 10)

ANSWER ANY TWO QUESTIONS BY CHOOSING ONE QUESTION FROM EACH PART.
II.EACH QUESTION CARRIES FIVE MARKS. DRAW DIAGRAM WHEREVER NECESSARY.

PART - I

26. Kala has delivered a baby,

- i) Suggest the immunization schedule for the baby, in the first six months.
 ii) What are the diseases that can be cured as per the schedule?
27. List out the various diseases caused due to nutritional deficiency. Add a note on their symptoms.

PART - II

28. List out the harmful effects of burning coal.

29. In your locality people are affected due to water scarcity. What measures will you take to deal with the problem of water scarcity?