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Part - I

Instructions :

- Answer the first section on this paper itself. Each question carries two marks.
- The first question in the second section is compulsory and carries sixteen marks.

01. A disease **not** transmitted by a virus is?
(1) Tuberculosis (2) AIDS (3) Ebola (4) Corona
02. The elements in Copper Sulphate are,
(1) Copper, Nitrogen, Oxygen (2) Sulphur, Copper, Megnesium
(3) Oxygen, Sulphur, Copper (4) Phosphorus, Copper, Sulphur
03. An example for a plant adapted to absorb water vapor from the atmosphere is,
(1) Anthurium (2) Orchid (3) Kirala (4) Beduru
04. The metal that conducts electricity and found in liquid form is,
(1) Sodium (2) Calcium (3) Copper (4) Mercury
05. An example for a sound that does **not** occur naturally is,
(1) The sound of sea waves (2) The sound of tree shaking
(3) The sound of temple bells (4) The sound of lightning
06. Which of the following is **not** an example for an excretory product of the human body,
(1) Urea (2) Feces (3) Urine (4) Carbon dioxide
07. Some characteristics of matter are listed below.
 - A. Has a fixed volume
 - B. Has not a definite shape
 - C. Can be compressed easilyAccording to the above list which answer contains the characteristics of a gas?
(1) A, B only (2) B, C only (3) A, C only (4) A, B and C
08. Which effect of electric current do we get by using immersion heater?
(1) Magnetic effect (2) Light effect (3) Chemical effect (4) Heating effect
09. The discontinuous nature of matter was first stated by,
(1) Dimocritus (2) Aristotle (3) Aristarchus (4) Lucretius

10. Permanent magnets are **not** used in,
(1) Electric bell (2) Compass (3) Electric motor (4) Speaker

11. A plant which stores food in its aerial stem is,
(1) Banana (2) Potato (3) Kithul (4) Carrot

12. Some statements made about the density of a particular substance are given below.
A. Density is a fixed value for pure substances.
B. Density is the mass of a unit volume of a given substance.
C. It is **not** a unique property to a particular substance.
The correct statements are,
(1) Only A (2) Only B (3) Only C (4) Only A and B

13. The two main organs of the human central nervous system are,
(1) Only brain and spinal cord
(2) Only cerebrum and peripheral nervous system
(3) Only cerebrum and cerebellum
(4) Only spinal nerves

14. Choose the answer that contains only Matters,
(1) Dust, Sound, Water (2) Dust, Air, Water
(3) Water, Heat, Air (4) Water, Dust, Light

15. Choose a Pure solution ?
(1) Kola Keda (2) Salt Solution (3) Copper Sulphate Solution (4) Mercury

16. What is the boiling point of water when another substance dissolved in it?
(1) Greater than or less than 100°C . (2) Exactly 100°C .
(3) Less than 100°C . (4) Greater than 100°C .

17. A type of microorganism used in the bakery industry is,
(1) Algae (2) Bacteria (3) Virus (4) Fungi

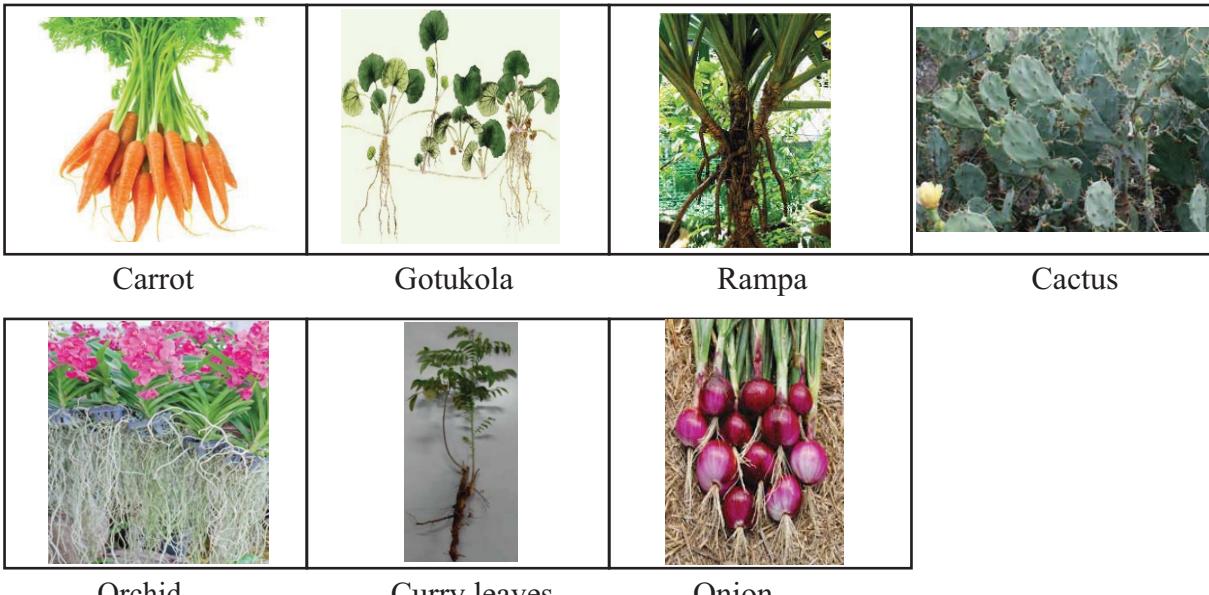
18. Which animal group the Leech belongs to?
(1) Mollusca (2) Cnidaria (3) Arthropoda (4) Annelida

19. A plant which has thin leaves to minimize transpiration is,
(1) Cactus (2) Kasa (3) Navahandi (4) Oleander

20. A chemical change occurs during,
(1) Melting of Ice (2) Condensation of water vapourises
(3) Burning firewood (4) Melting of solid wax

- Use separate papers to answer this part.
- The first question is compulsory
- Answer 4 other questions

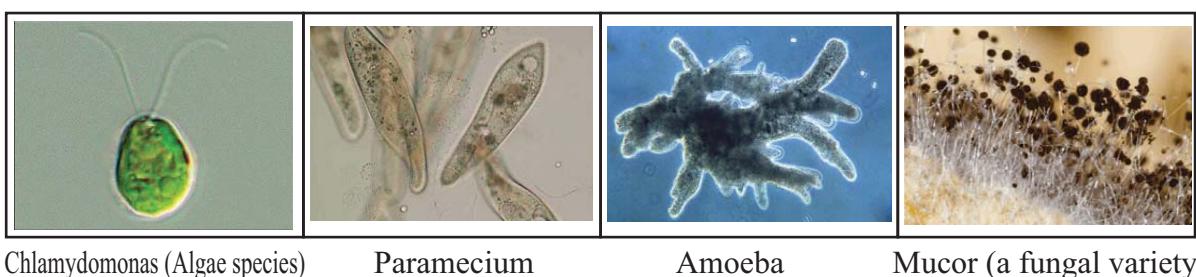
01. (A) Plants found in the environment are diverse in terms of various characteristics. Answer following questions using the plant parts given below.



Select and write the name of plants having the following characteristics from the above images.

- What is the photosynthetic stem plant out of the above plants? (01 marks)
- What are the specific type of roots in 'Rampa' plant? (01 marks)
- Name another plant that has the same root type and is not in the above images. (01 marks)
- Onion is an underground stem. Write two functions of underground stems? (02 marks)
- Which plant has a propagating function among Curry leaves, Orchid and 'Gotukola'? (01 marks)

(B) Answer the questions based on the diagrams given below.



- Name the microorganism which causing infectious diseases? (01 marks)
- Name all the protozoans given in the above diagrams. (02 marks)
- What group of microorganisms *Chlamydomonas* belong to? (01 marks)
- What is the name given to the action of *Mucor* on bread? (01 marks)

(C) The characteristics of several groups of animals found in the environment are shown below.

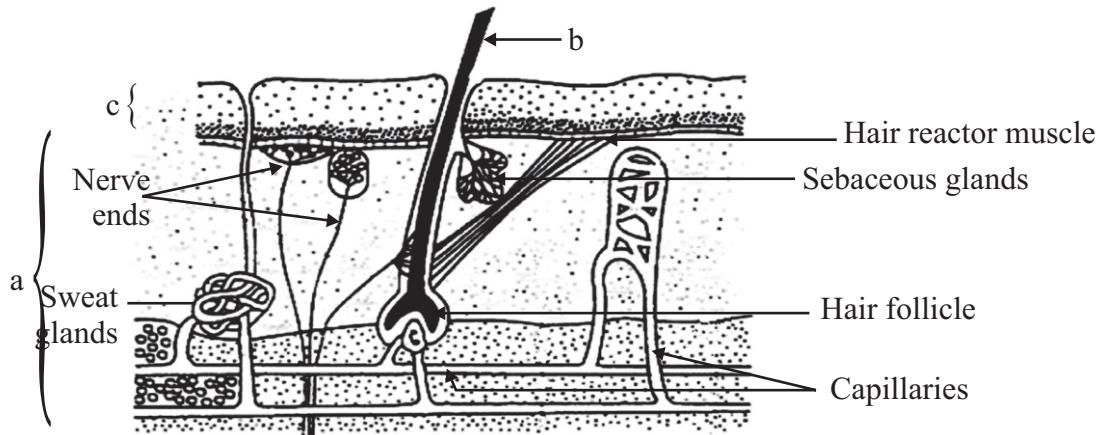
- ★ Have a radially symmetrical body.
- ★ Possess a muscular foot.
- ★ Possess a dry skin with scales.
- ★ The body is covered with scales.
- ★ Possess an external ear with ear lobe.
- ★ Respiration is carried out by lungs, mouth or through wet skin.

Answer below questions using the above characteristics.

- (i) Which group of animals have a radially symmetrical body? (01 marks)
- (ii) Write two other characteristics of the animal group who possess an external ear lobes? (02 marks)
- (iii) Name a characteristic from the above list, which belongs to the animal group that exhibits metamorphosis? (01 marks)
- (iv) Write an example for animal who possess a muscular foot? (01 marks)

(Total marks = 16)

02. (A) The skin is considered as the largest organ in the human body. A diagram of it is shown below.



Structure of the human skin

- (i) Name the parts given as a, b and c. (03 marks)
- (ii) Write two other functions of the skin apart from its function as an organ of excretion. (02 marks)
- (iii) Write one strategy that can be followed to maintain a healthy skin? (01 mark)
- (iv) Name two other excretory organs in human body apart from the skin? (02 marks)

(B) Write down the importance / function of the following parts in human nervous system.

- (i) Cerebellum. (01 marks)
- (ii) Meninges (01 marks)
- (iii) Cerebrospinal fluid (01 marks)

(Total marks 11)

03. Magnets are used in various ways in everyday life. Some metals are attracted to magnets, while some are not attracted.

(i) Classify the following materials as magnetic or non - magnetic.

Iron, Gold, Aluminum, Chromium, Steel, Copper $(\frac{1}{2} \times 6 = 3 \text{ marks})$

(ii) What is the common name given to the materials which attract towards magnets? (01 marks)

(iii) What is the name of an area that the magnetic power is spread around a magnet? (01 marks)

(iv) Draw the arrangement of iron filings when it is placed between like poles. (03 marks)

(v) What are the two ways of constructing permanent magnets? (02 marks)

(vi) Give one reason for losing the magnetic power of a permanent magnet? (01 marks)

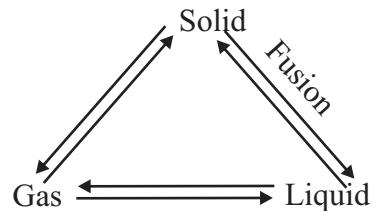
(Total marks 11)

04. (A) Answer the following questions based on the chart presented below regarding the changes in matter.

(i) Change of state during the process of heating

Iodine crystals can be named as?

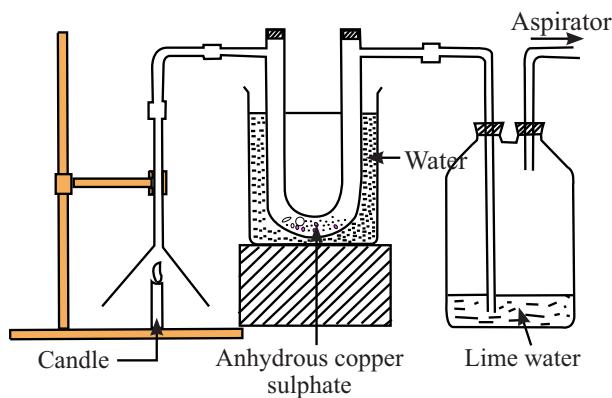
(01 marks)



(ii) Transition of a substance from the liquid state to solid state is named as? (01 marks)

(iii) Conversion of a substance from gaseous state to liquid state is named as? (01 marks)

(B) The diagram below shows a set - up of an activity to identify products formed during the combustion of fuels.



(i) What are the two elements expected to identify from this activity? (02 marks)

(ii) Write two expected observations of the above activity. (02 marks)

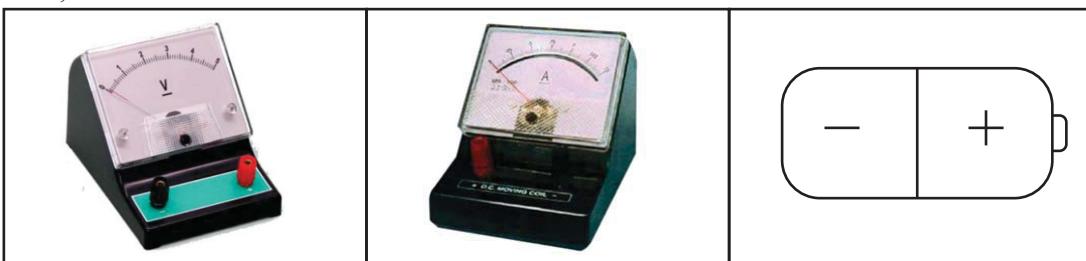
(iii) Fuels are substances used to generate heat energy and light energy by combustion.

(a) How many ways fuel can be divided into? (01 marks)

(b) What are those ways? (03 marks)

(Total marks 11)

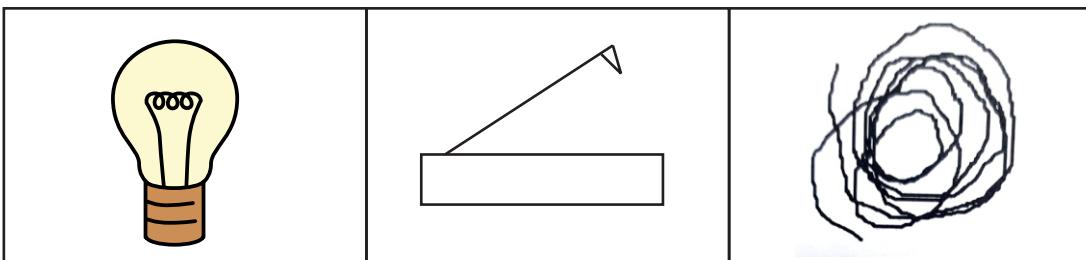
05. Equipment and materials required to test electrical conductivity, which is a physical property of matter, are listed below.



Voltmeter

Ammeter

A dry cell



Bulb

Switch

Wires

- Draw the symbols used in circuit diagrams for the above devices and materials. (03 marks)
- Draw a circuit diagram using symbols to find the current flowing through the bulb and its potential difference. (03 marks)
- Name the two ways of connecting an ammeter and voltmeter to the above circuit. (02 marks)
- Separate the materials provided below into conductors and insulators using the circuit drawn above.

An iron nail, a piece of dry wood, a carbon stick, a plastic ruler (02 marks)

- Write down another effect that occurs when the circuit is operating except the light effect. (01 marks)

(Total marks 11)

06. The diagram below shows a Xylophone you created in the laboratory. Answer the below questions using it.

- Name two materials you used to make this instrument? (02 marks)
- What is vibrating to produce sound here? (01 mark)
- Explain how the frequency is changed in this instrument? (02 marks)
- Write down the difference between a musical tone and a noise. (02 marks)
- What is Musical therapy? (01 mark)
- Write down two diseases that can be cured by using music therapy. (02 marks)
- What is the human hearing range of frequency? (01 marks)

(Total marks 11)



Part - I

01. (1) 02. (3) 03. (2) 04. (4) 05. (3) 06. (2) 07. (2) 08. (4) 09. (1) 10. (1)
 11. (3) 12. (4) 13. (1) 14. (2) 15. (4) 16. (1) 17. (4) 18. (4) 19. (2) 20. (3)

(2 x 20 = 40 marks)

Part - II

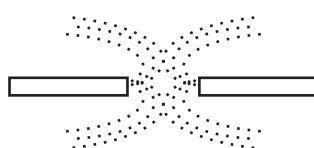
01. (A) (i) Cactus (01 mark)
 (ii) Stilt roots (01 mark)
 (iii) Vetakeyya / Thalai (01 mark)
 (iv) Perennation, Producing new plants, Food storage (02 marks)
 (v) Curry leaves (01 mark)
 (B) (i) Amoeba (01 mark)
 (ii) Paramecium, Amoeba (02 marks)
 (iii) Algae species (01 mark)
 (iv) Fermentation (01 mark)
 (C) (i) Cnidaria (01 mark)
 (ii) Any two features of mammals (02 marks)
 (iii) Using mouth, lungs or wet skin for respiration. (01 mark)
 (iv) For any suitable answer (01 mark)

(Total marks 16)

02. (A) (i) a) Dermis b) Hair stem c) Epidermis (03 marks)
 (ii) For any correct answer (02 marks)
 (iii) For any correct answer (01 mark)
 (iv) Lung and kidneys (02 marks)
 (B) (i) Coordination of body balance (01 marks)
 (ii) Protecting Brain and Spinal cord (01 mark)
 (iii) Absorb shocks (01 mark)

(Total marks 11)

03. (i) Attract - Iron, Steel, Chromium
 Non attract - Gold, Aluminum, Copper (½ × 6 = 03 marks)
 (ii) Magnetic materials (01 mark) (iii) Magnetic field (01 mark)
 (iv) For the correct answer (03 marks)



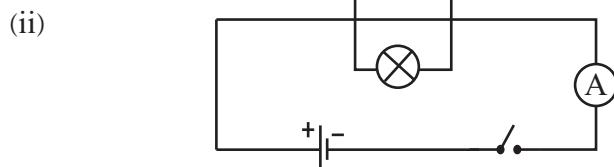
(v) Electrical Method, Contact method (02 marks)
 (vi) For any correct answer (01 marks)

04. (a) (i) Sublimation (01 marks)
 (ii) Freezing (01 marks)
 (iii) Condensation (01 marks)
 (B) (i) C and H (02 marks)
 (ii) If there is Hydrogen, anhydrous copper sulphate turns blue.
 If there is Carbon, Lime water turns milky. (02 marks)
 (iii) a. 3 (01 marks)
 b. Solid fuels, liquid fuels, gaseous fuels (03 marks)

(Total marks 11)

05. (i)

$(\frac{1}{2} \times 6 = 03$ marks)



(03 marks)

(iii) Ammeter - series - Voltmeter - Parallel

(02 marks)

(iv)

Electrical conductors	Insulators
Iron nail	Dry timber
Carbon stick	Plastic ruler

$(\frac{1}{2} \times 4 = 02$ marks)

(v) Heating effect

(01 marks)

(Total marks 11)

06. (i) Plates or any other material

(02 marks)

(ii) By vibrating plates

(01 marks)

(iii) The frequency is highest in shortest plate and it is lowest in the longest plate. (02 marks)

(iv) Rhythmical sounds which are pleasant to ears are musical tones and sounds which are unpleasant to our ears are called noises. (02 marks)

(v) The treatment given using musical therapy. (01 marks)

(vi) Heart failures, mental depression (01 marks)

(vii) 20Hz - 20000Hz (02 marks)

(Total marks 11)