



केन्द्रीय विद्यालय संगठन
KENDRIYA VIDYALAYA SANGATHAN

आंचलिक शिक्षा एवं प्रशिक्षण संस्थान, मैसूर
**ZONAL INSTITUTE OF EDUCATION AND TRAINING,
MYSURU**

**Competency Based Assessment in Science: Design of test items
(31.07.2024 -02.08.2024)**

**CLASS- VI
SCIENCE**





DIRECTOR'S MESSAGE.....

It is with profound delight and utmost pride that we present the Competency Based Assessment question bank for **CLASS VI** which was prepared by TGT(Science) of the feeder regions during the 03–day workshop on **“Competency Based Assessment in Science: Design of test items”** It’s my firm belief that access to quality education should know no boundaries, transcending social and economic constraints. Our collective vision is to empower all students and teachers with the tools for success and intellectual growth.

With their steadfast dedication, the TGT(Science) from the feeder Regions namely Bangalore, Chennai, Ernakulam and Hyderabad have invested their knowledge and expertise in preparation of the CBA test items.

It is with pleasure that I place on record my commendation for the commitment and dedication of the team of TGT(Science) from the four Regions, Shri. Manoj Kumar Paliwal, Principal KV No.1 Madurai, Chennai Region & Associate Course Director, the Resource persons Ms Seema Saraswat, TGT(Science) KV Vijaypura and Ms Neeta Wage TGT(Science) KV Hebbal and Mr. Dinesh Kumar, Training Associate (Physics) from ZIET Mysore who has been the Coordinator of this assignment.

Wishing you all the very best in your academic journey!

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CURIOSITY

CHAPTER :1. THE WONDERFUL WORLD OF SCIENCE		
S. NO.	QUESTION	POINT VALUE
SECTION- A MCQ		
1.	Which of the following is not a part of water cycle? a. Evaporation b. Condensation c. Photosynthesis d. Precipitation	1
2.	What do plants primarily use to make their food? a. Soil b. Water c. Sunlight d. Air	1
3.	What is science? a. A type of art b. A way to study the natural world c. A form of entertainment d. A language	1
4.	What is the primary purpose of the roots of a plant? a.To absorb water and nutrients. b.To produce food through photosynthesis. c.To attract insects d.To support the plant's structure	1
5	Which process involves making observations and forming a hypothesis? a. Experimentation b. Engineering c. Scientific Method d. Artistry	1
6	In which part of the plant is known as kitchen of the plant? a. Roots b. Stem c. Flowers d. Leaves	1
7	What happens during condensation in the water cycle? a. Water turns into vapour b. Water vapour turns into liquid c. Liquid water turns into ice d. Ice turns into water	1
8	What is the primary source of energy for plants? a. Water b. Soil c. Sunlight d. Air	1

9	Which of the following processes involves the changing of water into water vapour? a. Condensation b. Evaporation c. Precipitation d. Collection	1
10	Which of these is a property of liquids? a.They have a fixed shape b.They take the shape of their container c. They are always transparent d. They cannot flow	1
ASSERTION AND REASON (1MARK)		
Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:		
(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion		
(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion		
(c) Assertion is true but the Reason is false		
(d) The statement of the Assertion is false but the Reason is true.		
11	Assertion: All living things need air to survive. Reason: Air provides oxygen, which is essential for respiration in most living organisms.	1
12	Assertion: Water is a good solvent. Reason: Water can dissolve a wide variety of substances. Both assertion and reasoning are correct, and the reasoning is the correct explanation for the assertion.	1
13	Assertion: The earth orbits around the sun Reason: The sun’s gravitational pull keeps the earth in its orbit.	1
14	Assertion: Plants use sunlight to make food. Reason: Sunlight provides the energy needed for photosynthesis in plants.	1
15	Assertion: The moon has its own light. Reason: The moon is made of shiny material that reflects sunlight.	1
SECTION B (2 Marks)		
16	What are the factors affecting seed germination?	2
17	Why observation is important in a scientific method?	2
SECTION C (3 Marks)		
18	Imagine you are designing a small garden. You want to include both plants and animals. How would you ensure that the plants and animals can live together in harmony? Consider their needs for food, water and shelter.	3
19	Describe how the process of evaporation and condensation contributes to the water cycle. How do these processes ensure that water is continuously recycled in nature?	3
CCT CASE BASED STUDY/SOURCE BASED		
20	The earth orbits around the sun due to the gravitational pull of the sun. This gravitational force keeps the earth in a stable path around the sun and	4

	affects the earth's climate and seasons. (i) What causes day and night on Earth? (ii) What force keeps the Earth in a stable orbit around the sun? (iii) What causes the Earth to experience different seasons?	
21	Plants are essential for life on earth. They produce oxygen and glucose through a process called photosynthesis. During photosynthesis, plants use sunlight to convert carbon dioxide and water into glucose and oxygen. (i)What essential gas do plants produce during photosynthesis that is vital for human and animal life? (ii)What energy-rich molecule do plants produce during photosynthesis? (iii) Define the process of photosynthesis?	4
22	The six steps of the scientific method include: i) asking a question about something you observe, ii) doing background research to learn what is already known about the topic, iii) constructing a hypothesis, iv) experimenting to test the hypothesis, v) analyzing the data from the experiment and vi) drawing conclusions, (i)What is the first step the student should take in the scientific method? (ii)What step is the student performing when she states her belief about sunlight and plant growth? (iii)What step is she performing when she measures and records the plant growth?	4
LONG ANSWER QUESTIONS		
23	What are the steps involved in a scientific method of problem solving. Explain.	5
24	Solve the following problem by scientific method. An electrician trying to find why a light bulb is not working.	5
25	Solve the following problem by scientific method. A bicycle repair person trying to find out why a tyre is flat-from where did the air leak out?	5


CHAPTER :1. THE WONDERFUL WORLD OF SCIENCE

Sl. No.	ANSWER KEY	Point value
SECTION A (MCQ)		
1	c	1
2	c	1
3	b	1
4	a	1
5	c	1
6	d	1
7	b	1
8	c	1
9	c	1
10	b	1
ASSERTION AND REASON		

	(1 mark)	
11	a	1
12	a	1
13	a	1
14	a	1
15	d	1
	Section B (2 marks)	
16	The water that falls to the ground collects in rivers, lakes, and oceans, or it seeps into the soil. The sun heats this water again, causing evaporation to happen all over again, which keeps the cycle going.	2
17	Water, temperature, light, proper soil	2
	SECTION C (3 marks)	
18	Select plants that are native to your area. They're better adapted to the local climate and attract local wildlife. Include a variety of plants (flowers, shrubs, trees) to provide food and shelter for different animals. Choose plants that produce nectar and pollen to attract pollinators like bees and butterflies. fruit-bearing plants (like berry bushes) and seed-producing plants for birds and small mammals. Add a small pond or birdbath to provide drinking water for animals.	3
19	The water that falls to the ground collects in rivers, lakes, and oceans, or it seeps into the soil. The sun heats this water again, causing evaporation to happen all over again, which keeps the cycle going.	3
	CCT Questions	
20	(i)The rotation of the Earth on its axis (ii)The gravitational pull of the sun (iii)The tilt of the Earth's axis and its orbit around the sun.	1+1+2
21	(i)oxygen (ii) glucose (iii) The process by which green plants and some other organisms use sunlight to synthesize nutrients from carbon dioxide and water. Photosynthesis in plants generally involves the green pigment chlorophyll and generates oxygen as a by-product.	1+1+2
22	(i) Asking a question about something she observes (ii)Constructing a hypothesis (iii) Analyzing the data from the experiment,or Recording.	1+1+2
	LONG ANSWER TYPE (5 Marks)	
23	1. Observation: Observe something that find interesting or we do not understand. Questioning: Think of a question about it. Hypothesis: Guess a possible answer to that question. Experiments: Test the guess through experiments or more	5



	<p>observations.</p> <p>Analysing: Analyse the results to see if it actually answered the question.</p>	
24	<p>2. Observation: The electrician observes that the light bulb is not turning on when the switch is pressed. Question: Why is the bulb not working? Hypothesis: The electrician forms possible hypothesis for why the bulb is not working:</p> <ul style="list-style-type: none"> • The bulb is burnt out. • The bulb is not screwed in properly. • The switch is faulty. • There is a problem with the wiring. <p>Experiment</p> <p>Check the bulb:</p> <p>Replace the bulb with a new one to see if it lights up.</p> <p>Inspect the socket:</p> <p>Look for any visible damage or loose connections.</p> <p>Test the switch:</p> <p>check if the switch is functioning properly.</p> <p>Check the electrical supply:</p> <p>Verify that other lights or outlets are working in the same circuit.</p> <p>Analysis</p> <p>If replacing the bulb works, the original bulb was burnt out. If the new bulb doesn't light up but other lights work, there might be a problem with the socket or switch. If other lights also don't work, check the circuit breaker for any tripped switches.</p> <p>Conclusion</p> <p>Based on the results: If the new bulb lights up, the original bulb was faulty.</p> <p>If not, further investigate the socket and switch. If those are fine, the issue might be with the electrical supply.</p>	5
25	<p>Observation</p> <p>The tire is completely flat, and the bicycle can't be ridden.</p>	5



Question Where did the air leak out from?

Hypothesis

1. The tire might have a puncture.
2. The valve might be damaged or not sealing properly.
3. The rim may have a problem, such as being bent or damaged.
4. There could be a slow leak in the tire.

Experiment

Visual Inspection:

Check the entire surface of the tire for visible punctures or foreign objects like nails or glass.

Check the Valve:

- Listen for hissing sounds near the valve when pressing down.
- Try to push air into the valve; if air escapes, the valve may be faulty.

Submerge in Water:

Submerge the tire in a tub of water (if possible) to look for bubbling, which would indicate where the air is escaping.

Feel for Air:

Run your hand along the tire's surface to feel for any escaping

Analysis

If a puncture or foreign object is found, that's likely the source of the leak.

If air escapes from the valve, it might need to be replaced or resealed.

If bubbles appear in the submerged tire, the location of the bubbles indicates the leak's position.

Conclusion

Based on the findings:

Repair or replace the tire if a puncture is found.

Fix or replace the valve if that's the source of the leak.

If no issues are found, consider the possibility of a slow leak and monitor the tire pressure over time.



CHAPTER:2. DIVERSITY IN THE LIVING WORLD

S. NO.	QUESTION	POINT VALUE
	MCQ (1 mark)	
1	Which type of the plant is known for its ability to survive in very dry conditions? a. Aquatic plants b. Cactus c. Algae d. Rose	1
2	Which of the following is not a green plant? a. Cactus b. Rose c. Mushroom d. Hibiscus	1
3	What is the main characteristic of flowering plants? a. They have seeds but no flowers. b. They produce flowers and seeds. c. They have only leaves. d. They do not have roots.	1
4	Which type of plant has a woody stem and can grow to be very tall? a. Herb b. Shrub c. Tree d. Creeper	1
5	Why might an increase in herbivore populations affect plant communities in an area? a. It would decrease the number of predators b. It would reduce the competition among plant species c. It would lead to overgrazing and reduced plant growth d. It would improve soil fertility	1
6	If you are designing a habitat for lion in a zoo, what kind of environment should you provide to match its natural habitat? a. A densely forested area with grass and few trees b. A dry, open area with grass and few trees c. A wetland area with lots of mud d. A cold, snowy environment	1
7	You are observing a frog in a pond. Which of the following behaviours would indicate that it is an amphibian? a. It only stays in the water and does not leave b. It alternates between swimming in the pond and basking on rocks near the water c. It primarily lives I burrow underground d. It flies from tree to tree	1

8	Which plant type usually grows along the ground a. Herb b. Creeper c. Tree d. Shrub	1
9	Which of the following animals is an example of an omnivore? a. Cow b. Lion c. Bear d. Eagle	1
10	Which organ helps the fish to breathe in water? a. gills b. tail c. bone d. fins	1

ASSERTION AND REASON (1 mark)

Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

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- (b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion**
- (c) Assertion is true but the Reason is false**
- (d) The statement of the Assertion is false but the Reason is true.**



(a) Hibiscus leaf with reticulate venation



(b) Banana leaf with parallel venation



(c) Grass leaf with parallel venation


11	Assertion: The pattern of veins in a leaf is called venation. Reason: Different types of venation help plants to transport water and nutrients efficiently.	1
12	Assertion: Venation refers to the arrangement of veins in a leaf. Reason: Venation patterns are important for the leaf's ability to perform photosynthesis. Which of the following option is correct?	1
13	Assertion: Parallel venation is common in monocot plants like grasses and lilies. Reason: In parallel venation, all the veins run parallel to each other from the base to the tip of the leaf.	1
14	Assertion: Reticulate venation is typically found in dicot plants. Reason: In reticulate venation, the veins form a network-like pattern across the leaf blade.	1
15	Assertion: In parallel venation, secondary veins are not present in a well-defined pattern. Reason: Parallel venation is characterised by veins that run parallel to	1



	each other without forming a network.	
SECTION – B (2 marks)		
16	If you are growing a plant with a fibrous root system in a container, what would you need to consider to ensure it grows well? How does the fibrous root system affect these considerations?	2
17	You are planting carrots in a garden. Why is it important for carrots to have a deep tap root system? How does this benefit to the plant and the harvest? Explain.	2
SECTION C (3 marks)		
18	You are creating a small herb garden at home. Choose two herbs that you would plant and explain how each one can be used.	3
19	Why are trees important in our environment, and how do they benefit people, animals and the environment?	3
CCT Questions		
20	<p>Amphibians are animals like frogs, toads and salamanders. They can live both in water and on land. Amphibians start their lives as larvae in water, where they have gills to breathe. As they grow, they change into adults that can live on land and breathe air. Amphibians have soft, moist skin that help them breathe, but this also means they can get sick easily if their environment is dirty. Many amphibians are facing problems because of pollution, habitat loss, and climate change. To help them, we need to keep their homes clean, protect their habitats, and learn more about their health.</p> <p>(i).Give two examples for amphibians (ii).How do they breathe in water? (iii).Why is it important for amphibians to have moist skin? How does this help them live indifferent environment?</p>	4
21	<p>The place where organisms live is called habitat. Habitat means a dwelling place (a home). The habitat provides food, water, air, shelter and other needs to organisms. Several kinds of plants and animals live in the same habitat. The plants and animals that live on land are said to live in terrestrial habitats. Some examples of terrestrial habitats are forests, grasslands, deserts, coastal and mountain regions.</p> <p>(i)Which of the following is an aquatic habitat? a) Lakes b) Forest c) Oceans d) Both (a) and (c)</p> <p>(ii)Habitat means a) Grassland b)Dwelling place c) Terrestrial habitat d) All of the above</p> <p>(iii)Write one difference between biotic and abiotic components of a habitat?</p>	4

22	Adaptation is the method by which organisms get well adjusted to the climate. Adaptation does not take place in a short time because the abiotic factors of a region also change very slowly. Those organisms which cannot adapt to these changes die, and only the adapted ones survive. Organisms adapt to different Abiotic factors in different ways. This results in a wide variety of organisms in different habitats (i) -----helps organisms to exist in extreme climates. (ii) Define the term Adaptation? (iii) write two adaptation of cactus to grow in extreme climatic conditions.	4
LONG ANSWER TYPE QUESTIONS (5 marks)		
23	Rahul visited his school garden with his science teacher. There he observed that plants are growing towards sunlight and he thought that why this happens. Explain.	5
24	If you plant a rose bush, what basic steps would you follow to plant it and help it grow? In which group you will include this plant. Why?	5
25	A newly planted tree is not growing well. What factors should you check to ensure the tree's healthy development? What can you do for making it grow better?	5
Sl. No.	ANSWER KEY LESSON :2. Diversity in the living world	Point value
SECTION A (MCQ)		
1	b	1
2	c	1
3	b	1
4	c	1
5	c	1
6	a	1
7	b	1
8	b	1
9	d	1
10	a	1
ASSERTION AND REASON(1 Mark)		
11	a	1
12	b	1
13	a	1
14	a	1
15	a	1
SECTION B (2 marks)		
16	Select a container that is appropriately sized for the plant's root system. The container should be large enough to accommodate the fibrous roots and allow for growth. Ensure it has adequate depth and width.	2
17	It stores nutrients and carbohydrates. A well - developed tap root ensures that the carrot reaches its full size and length, making it suitable	2

	for harvesting.	
SECTION C (3 marks)		
18	Coriander leaves used for cooking. Mint leaves used for flavour to dishes.	3
19	Temperature, light, water. Can improve the quality of seed, soil.	3
CCT Questions		1
20	(i)Frog, Toad (ii)Amphibians start their lives as larvae in water, where they have gills to breathe (iii)Their skin has to stay wet in order for them to absorb oxygen so they secrete mucous to keep their skin moist.	1+1+2
21	(i)d Both (a) and (c) (ii)b Dwelling place (iii)Biotic components are all living organisms within an ecosystem. Abiotic components are non-living components of an ecosystem that influence living organisms.	1+1+2
22	(i)Adaptation (ii) Adaptation is the method by which organisms get well adjusted to the climate (iii) Leaves are reduced to spines to reduce water loss through transpiration. Wide and deep roots absorb rainwater on the surface and reach the underground deep water. Sunken stomata to reduce water loss.	1+1+2
LONG ANSWER TYPE QUESTIONS (5 Marks)		
23	Plants need sunlight to grow and to do photosynthesis. They can do photosynthesis in the presence of sunlight only. So for getting sunlight they are growing towards sunlight.	5
24	Select a spot getting sunlight. Improve soil quality by adding compost or well-rotted manure. select a rose variety suited to your climate and garden conditions. Dig a hole and loosen the soil. Place the plant and water it.	5
25	Mulching is one of the most beneficial practices a homeowner can use for better tree health. Mulches are applied to the soil surface to maintain moisture and improve soil conditions.	5



CHAPTER:3. MINDFUL EATING: A PATH TO A HEALTHY BODY

S No	QUESTION	POINT VALUE
	SECTION- A (MULTIPLE CHOICE QUESTIONS)	
1	Which one of the following is not a source of fat a) Nuts b) walnuts c) Rice d) Butter	1
2	Test used to identify the presence of carbohydrates in food is called a) Sulphur test. b) Iodine test. c) Oxygen test. d) Rice test	1
3	Identify the correct statement from the following a) Junk food is healthy b) People across India eat same kind of food c) Carbohydrates and fats provide energy. d) Culinary practices are same throughout the timeline.	1
4	Deficiency of vitamin A causes the following disease a) Loss of vision. b) Rickets. c) Scurvy. d) Anaemia	1
5	Which one of the following diseases is caused due to mineral deficiency a) Beri-Beri. b) Goitre. c)Malaria. d) Scurvy	1
6	Which of the following statements is not correct a) Choice of food vary according to cultivation of crops, climate, taste preference, culture and tradition of the region b) Balance diet provides all nutrients in equal quantities c) we should never waste food. d) Deficiency of one or more nutrients in our diet for long period leads to deficiency diseases.	1
7	Swollen neck is a symptom for which of the following disease a) Scurvy. b) Anaemia. c) Goitre. d) Beri-Beri	1
8	During protein test, if protein is present in the food sample it will change into the following colour. a) Blue. b) blue-black. c) violet. d) purple	1

9.	Which one of the following statements is not true a) Vitamin A helps body to fight diseases b) Calcium keeps bones and teeth healthy c) Iron is an important component of the blood d) Deficiency of vitamin D cause Rickets	1
10	Which one of the following is a source of fat a) Rice. b) wheat c) Ghee. d) Soyabean	1
11	Assertion: carbohydrates give energy to the body Reason: All starches are carbohydrates	1
12	Assertion: we obtain minerals from plants and animals only. Reason, Minerals help in maintaining various bodily functions	1
13.	Assertion: Millets are good source of vitamins, minerals like iron and calcium and dietary fibre as well. Reason: Millets are called Nutri-cereals.	1
14	Assertion: Deficiency of one or more nutrients in our diet causes deficiency diseases Reason: Deficiency diseases can be prevented by taking balanced diet	1
15	Assertion: Swelling of neck is a symptom of goitre Reason: Consumption of Iodised salt causes Goitre.	1
16	Name an ingredient which is obtained from neither plants nor animals?	1
17	Name a mineral and a vitamin which keeps bones and teeth healthy	1
18	List the major nutrients present in the food.	2
19	Pick the odd one out and give reason Soyabean, peas, beans and wheat	2 (1+1)
20	A person has soft and bent bones. a) identify the deficiency disease from which he is suffering b) Mention the nutrient that he may be lacking in his diet. c) List the food which helps in building strong bones. (Any two)	3 (1+1+1)

21	<p>Sitha was suffering from Bleeding gums. Doctor suggested her to include citrus fruits like lemon and orange in her diet</p> <p>a) Name the deficiency diseases from which she is suffering from?</p> <p>b) which food component may be lacking in her diet?</p> <p>c) mention the function of the nutrient that she is lacking in her diet.</p>	<p>3</p> <p>(1+1+1)</p>
22	<p>Ritu brought roasted peanuts as snacks to the school. Karthik argued that peanuts do not contain any protein in them.</p> <p>a) suggest a way to Ritu to prove the presence of protein in peanuts</p> <p>b) what happens if you are not including Proteins in your diet for a longer period of time?</p> <p>c) Mention sources of protein (any two)</p>	<p>4</p> <p>(1+2+1)</p>
23	<p>Raju is fond of chips, burger and French fries, he ate only these food for one whole day. Next day he was constipated and fell ill</p> <p>a) Suggest the nutrient which prevents constipation.</p> <p>b) what do you understand by balanced diet. Explain it.</p> <p>c) What are the consequences of eating Junk food</p>	<p>4</p> <p>(1+2+1)</p>
24	<p>Vimal was participating in the basketball competition. In the break, he seems to have lost all his energy. His game's coach advised him to drink glucose.</p> <p>a) Do you agree with coach's advice? yes/no, give reason for your answer.</p> <p>b) Why did the coach advise him to drink glucose not protein shake?</p> <p>c) list other sources of food that provide energy (any one)</p>	<p>4</p> <p>(2+1+1)</p>
25	<p>a) Explain the presence of protein in the paneer with the help of an experiment.</p> <p>b) Design an experiment to test the presence of fats in food.</p>	<p>5</p> <p>(3+2)</p>

26

a) The following table contains ingredients needed to make besan Ladoo. Identify the major nutrients present in it and complete the table

5

S No	Ingredients	Major nutrient
1	Wheat flour	
2	Ghee	
3	Nuts	
4	Seeds	

(2+3)

b) how do you show the presence of starch in rice? Explain it with the help of an activity.

27

Observe the picture and answer the questions accordingly

5

DID YOU KNOW ?



CHIPS
PER 100g
239 CALORIES
30g CARBS
12g FAT
2g PROTEIN



SOYA CHUNKS
PER 100g
345 CALORIES
33g CARBS
5g FAT
52g PROTEIN

(1+2+2)

I) classify the above-mentioned food into health and unhealthy food items from the picture

II) Which food item would you choose and why?

III) Explain the importance of eating healthy food (any two).

CHAPTER:3. MINDFUL EATING: A PATH TO A HEALTHY BODY

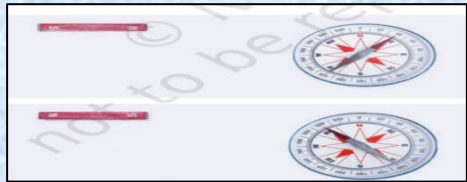
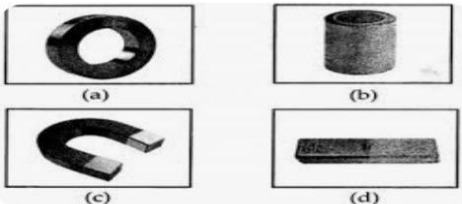
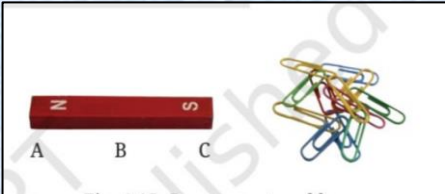

S. No	ANSWER KEY	MARKS
SECTION A (MULTIPLE CHOICE QUESTIONS)		
1	c	1
2	b	1
3	c	1
4	a	1
5	b	1
6	b	1
7	c	1
8	c	1
9	a	1
10	c	1
ASSERTION AND REASONING (1 MARK)		
11	c	1
12	d	1
13	a	1
14	a	1
15	c	1
16	Salt	1
17	Calcium, Vitamin D	0.5 + 0.5
SECTION – B (2 MARKS)		
18	Carbohydrates, Proteins, Fats, Vitamins, Minerals, Water, Dietary fibre (Roughage).	2
19	Wheat. Is a source of carbohydrates Soyabean, peas, and beans are Protein sources	1+ 1
SECTION – C (3 MARKS)		
20	a) Rickets b) Vitamin D c) Any two sources	1+ 1+ 1




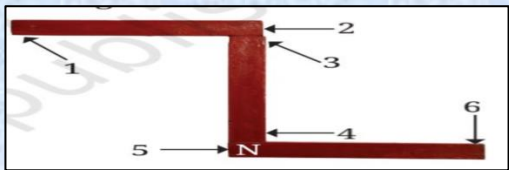

21	<p>a) Scurvy b) Vitamin C c) Helps to fight diseases</p>	1+ 1+ 1
C C T SOURCES BASED/CASE BASED		
22	<p>a) Performing protein test b) Weak muscles, decolorization of hair, stunted growth, or any other effects c) any two</p>	1+ 2+ 1
23	<p>a) Roughage b) A Diet contains all nutrients in required amount. c) any one consequence</p>	1+ 2+ 1
24	<p>a) Yes, Glucose provides immediate energy b) To continue the game, he needs more energy. Energy is given by glucose (carbohydrate). Protein doesn't give energy c) Fruits, cereals or any one</p>	1+1, 1+ 1
LONG ANSWER TYPE (5 MARKS)		
25	<p>a) i) Take a small quantity of paneer, mash it and put it in test-tube ii) add 10 drops water, 2 drops of copper sulphate solution and 10 drops caustic soda and leave it for few minutes iii) violet colour indicates the presence of proteins in the paneer. b) i) Place the Food sample between the folds of filter paper and rub it lightly. ii) Translucent spots on the filter paper confirms the presence of fats.</p>	3+2
26	<p>a) 1. Carbohydrate 2. Fat 3. Fat 4. Fat b) i) iodine test can be performed. ii) add few of iodine solution to mashed rice in a test-tube. iii) If starch is present in rice, it will turn blue-black colour</p>	2+3
27	<p>a) Chips - Unhealthy food, Soya Chunks - Healthy food b) Soya Chunks as it is healthy. c) any two</p>	1+2+2

CHAPTER:4. EXPLORING MAGNETS

S.NO	QUESTION	POINT VALUE
1	Unlike poles of two magnet _____ each other a) attract b) repel c) both a and b d) neither a nor b	1
2	A magnet always has _____ poles a) single. b) two c) three d) four	1
3	Which of the following is correct?? a) a magnet can have only single pole b) a compass needle comes to rest along east - west direction c) a magnet repels a non-magnetic material d) a magnet attracts magnetic materials	1
4	The needle of magnetic compass rests along direction a) North-East b) North-south c) any direction d) East-west	1
5	When a bar magnet is rolled in iron filings the greater number of filings attract at a) south pole only b) north pole only c) south and north poles d) in the middle of the magnet	1
6	Which of the following statements is not correct a) a magnet can be broken into pieces to obtain a single pole b) a magnet can attract magnetic materials c) similar poles of magnets repel each other d) a freely suspended magnet aligns in North south direction	1
7	Which of the following get attracted to a magnet a) plastic b) iron c) wood d) all the above	1
8	When a magnet is broken into two pieces then a) Separates into two single poles. b) Again, each piece has two poles c) It loses its magnetic property d) Each piece may have more than two poles	1
9	Which of the following is a magnetic material?? a) iron nail b) plastic brush c) wooden board d) paper plate	1
10	A material which attracts the magnet is a) magnet only b) magnetic material only c) Non magnetic material d) A magnet or magnetic material	1
ASSERTION AND REASON (1MARK)		
<p>Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:</p> <p>(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion</p> <p>(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion</p> <p>(c) Assertion is true but the Reason is false</p> <p>(d) The statement of the Assertion is false but the Reason is true.</p>		
11	<p>Assertion: A freely suspended magnet can be used as a compass</p> <p>Reason: A freely suspended magnet always rests in North-south direction</p>	1

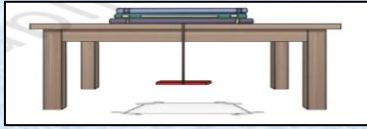
12	Assertion: A bar magnet has always two poles Reason: A magnet can have single pole	1
13	Assertion: An iron nail can repel magnetic material Reason: Iron nail is a magnetic material	1
14	Assertion: south pole repels south pole Reason: like poles repel each other	1
15	Assertion: when a bar magnet is placed in heap of pins, a greater number of pins will collect at poles Reason: The magnetic strength is more at poles	1
16	Karthik performed the following experiment in his science lab and noticed the changes. <div style="text-align: center;">  </div> <p>a) What is the force between north and north pole? b) What is force between south and north?</p>	2
17	Identify the types of magnets in the following picture <div style="text-align: center;">  </div>	2
18	<p>a) Suresh took a bar magnet and it is rolled in a heap of paper pins and which of the following observations are possibly correct, say yes or no.</p> <div style="text-align: center;">  </div> <p>i) Is the number of pins stick at A is less than B? Give reason ii) Is the number of pins stick at B is less when compared to A and C? Give reason</p> <p>b) what will be the effect of the wood on the compass needle in the following picture</p> <div style="text-align: center;">  </div>	3 (1+ 1+ 1)
19	Sandhya brought three identical bars A, B and C from the market out of which two are magnets and one magnetic material. She made the following observations. <p>a) A repels B for facing two ends and attracts on reversing one of the ends. b) B attracts C for both ends c) A attracts C for both ends</p> Which of these are magnets?	3



<p>20</p>	<p>a) If you are in the middle of the ocean at night and you have some magnets. How do you know the directions? b) Name any one application of magnets in medicine?</p> <p>c) Column I show the two magnetic poles and column II shows the nature of the force between them. Fill in the blanks accordingly.</p> <table border="1" data-bbox="287 403 1037 660"> <thead> <tr> <th>Column I</th> <th>Column II</th> </tr> </thead> <tbody> <tr> <td>N - N</td> <td>-----</td> </tr> <tr> <td>N - -----</td> <td>Attraction</td> </tr> <tr> <td>S - N</td> <td>-----</td> </tr> <tr> <td>----- - S</td> <td>Repulsion</td> </tr> </tbody> </table>	Column I	Column II	N - N	-----	N - -----	Attraction	S - N	-----	----- - S	Repulsion	<p>4</p>
Column I	Column II											
N - N	-----											
N - -----	Attraction											
S - N	-----											
----- - S	Repulsion											
<p>21</p>	<p>a) How can you pick a steel pin from a glass of water without your fingers becoming wet? b) Do the two cars hit each other or they move away?</p> <div data-bbox="383 840 989 996" style="text-align: center;">  <p>Fig. 4.14: Two matchbox-magnet cars with like poles of the magnets facing each other</p> </div> <p>c) i) You have two bar magnets, a small wooden piece and two soft iron pieces. Draw a sketch which shows to keep magnets safe?.</p>	<p>4</p>										
<p>22</p>	<p>Three magnets are given in the shape as shown. One of the polarities is given as north. Then identify the polarity N or S?</p> <p>a) polarity of 1,6 b) Polarity of 2,3 c) What is the force between poles i) 4 and 5 and ii) 5 and 6? Whether it is an attraction or repulsion analyses the reason for it?</p> <div data-bbox="414 1321 925 1489" style="text-align: center;">  </div>	<p>4 (1+ 1+ 2)</p>										
<p>23</p>	<p>a) Distinguish between magnetic materials and non-magnetic materials with an example? b) identify the magnetic materials from the following Picture</p> <div data-bbox="287 1668 1077 1814" style="text-align: center;">  </div>	<p>5</p>										
<p>24</p>	<p>a) Design an activity to convert a soft iron into a permanent magnet. b) Construct a compass needle with the following materials i) a bowl of water, ii) cork, iii) needle iv) a magnet c) Give two examples of common items where magnets are used.</p>	<p>5</p>										

25

a) The freely suspended magnet in the following diagram will come rest in which directions? Give reason



b) which device is used to know the directions?

c) How does magnet A moves from magnet B in the following diagram?? Explain possible Reasons.



5

S.NO	ANSWER KEY CHAPTER:4. EXPLORING MAGNET	POINT VALUE
SECTION -A (MCQ)		
1	a	1
2	b	1
3	d	1
4	b	1
5	c	1
6	a	1
7	b	1
8	b	1
9	a	1
10	d	1
ASSERTION AND REASON (1MARK)		
11	a	1
12	c	1
13	d	1
14	a	1
15	a	1
SECTION – B (2 MARKS)		
16	a) Repulsive force. b) Attractive force	2
17	a) Ring magnet. b) Cylindrical Magnet. c) U shaped or horseshoe magnet. d) Bar magnet	2 (0.5+ 0.5+ 0.5+ 0.5)
SECTION – C (3 MARKS)		
18	a) No, As A has more magnet strength than B b) Yes, As A and B have more magnet strength than B c) No deflection	3 (1+ 1+ 1)
19	a) A and B are magnets and C is magnetic material	3 (1+ 1+ 1)
C C T SOURCES BASED/CASE BASED		

20	a) Freely suspending magnet, we can know N-S direction. Then identify E-W directions b) To remove magnetic material accidentally fallen in the eye. c) i) Repulsion ii) S. iii) Attraction. IV) S	4 (1+ 1+ 0.5+0.5 +0.5.0. 5)
21	a) By using a Magnet b) Move away c) Correct diagram,	4 (1+ 1+ 2)
22	a) S, S b) N, S c) Attraction, Reason: unlike poles attract each other.	4 (1+1+1 +1)
LONG ANSWER TYPE (5 MARKS)		
23	a) Magnetic material- Definition and example Non magnetic material - Definition and example b) Iron nail, paper clip, key, sharpener, scissors, stapler, Headpins and magnet.	5 (1.5+ 1.5+ 2)
24	a) i) Take soft iron bar and using one pole of a magnet, rub the soft iron bar from one end to the other. ii) Repeat the process by lifting the magnet & bringing it back to its original position. iii) Rub the steel bar 7-8 times and it will start behaving as a magnet b) Magnetize a needle, pass the needle through the cork horizontally, float the cork in a glass bowl filled with water. c) any two examples.	5 (2+ 2+ 1)
25	a) North-south Reason: The south pole of this bar magnet is near the geographical north pole and north pole at the geographical south pole b) Compass c) towards A, Reason: Unlike poles attract each other.	5 (2+ 1+ 2)

CHAPTER : 5. MEASUREMENT OF LENGTH AND MOTION

S.NO	QUESTION	POINT VALUE
1	Which of the following units is used to measure length? a) Kilogram b) Meter c) Litre d) Second	1
2	Motion that repeats itself at regular intervals is called: a) Linear motion b) Circular motion c) Periodic motion d) Random motion	1
3	Which of the following does not describe motion? a) Walking b) Sleeping c) Running d) Swimming	1
4	1 kilometre is equal to how many meters? a) 100 meters b) 500 meters c) 1000 meters d) 1500 meters	1
5	Which of these is the smallest unit of length? a) Centimetre b) Millimetre c) Meter d) Kilometre	1
6	Which of the following is an example of periodic motion? a) A car driving on a road b) A ball rolling on the ground c) A pendulum swinging d) A bird flying	1
7	The thickness of a coin can best be measured using: a) A meter scale b) A ruler c) A vernier calliper d) A measuring tape	1
8	A car travels 100 kilometers in 2 hours. What is its average speed? a) 25 km/h b) 50 km/h c) 75 km/h d) 100 km/h	1
9	If a room is 5 meters wide, how many centimetres wide is it? a) 50 cm b) 500 cm c) 5000 cm d) 5 cm	1
10	An object moving in a circle is experiencing what type of motion? a) Linear motion b) Random motion c) Circular motion d) Periodic motion	1
	ASSERTION AND REASON (1MARK) Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion (b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion (c) Assertion is true but the Reason is false (d) The statement of the Assertion is false but the Reason is true.	
11	Assertion (A): A meter scale is the most suitable instrument to measure the length of a classroom. Reason (R): A meter scale has a maximum length of 1 meter and cannot measure lengths longer than this.	1
12	Assertion (A): A car traveling at a constant speed of 60 km/h is in uniform motion. Reason (R): Uniform motion means the object travels equal distances in equal intervals of time.	1
13	Assertion (A): The speed of an object is always measured in kilometers per hour. Reason (R): Speed is the distance travelled by an object in a given unit of time.	1

14	Assertion (A): A pendulum exhibits periodic motion. Reason (R): Periodic motion is when an object repeats its path after regular intervals of time.	1
15	Assertion (A): 1 kilometre is greater than 1 meter. Reason (R): 1 kilometre is equal to 1000 meters.	1
SECTION – B (2 MARKS)		
16	Explain the difference between uniform motion and non-uniform motion. Provide an example of each.	2
17	Why is it important to use standard units of measurement? Explain with an example of what could happen if non-standard units were used.	2
SECTION – C (3 MARKS)		
18	Describe the types of motion with examples.	3
19	A car travels a distance of 90 kilometres in 2 hours and then another 60 kilometers in 1 hour. Calculate the total distance covered and the average speed of the car for the entire journey.	3
CCT SOURCES BASED/CASE BASED		
20	A park is rectangular and has a length of 500 meters and a width of 200 meters. 1. What is the perimeter of the park? a) 1200 meters b) 1400 meters c) 1500 meters d) 1800 meters 2. What is the area of the park? a) 100,000 square meters b) 200,000 square meters c) 250,000 square meters d) 300,000 square meters 3. If Neha walks around the park 5 times, what total distance does she cover? a) 5 Km b) 6 Km c) 7 Km d) 8 Km	4
21	Neha and her friends went on a road trip. They drove 120 kilometers to reach their destination and took a break of 30 minutes. On their way back, they took a different route and covered 150 kilometers without any breaks. The total time for the trip was 5 hours. 1. What was the average speed of the trip including the break? a) 40 km/h b) 45 km/h c) 50 km/h d) 55 km/h 2. How much total distance did they cover in the entire trip? a) 220 km b) 250 km c) 270 km d) 300 km 3. If they reduced their speed by 10 km/h on the return trip, how long would the return trip take? a) 2 hours 45 minutes b) 3 hours c) 3 hours 15 minutes d) 3 hours 30 minutes	4
22	Rahul and his family took a train journey from Delhi to Jaipur. The distance between the two cities is 300 kilometers. The train travelled at a constant speed and took 4 hours to reach Jaipur. 1. What is the speed of the train in kilometers per hour? a) 50 km/h b) 60 km/h c) 70 km/h d) 75 km/h 2. If the train maintained the same speed and continued for another 2 hours, how much total distance would it cover? a) 400 km b) 450 km c) 500 km d) 550 km 3. If the train had to make two 15-minute stops during the journey, what would be the average speed of the train including the stops? a) 65 km/h b) 60 km/h c) 55 km/h d) 50 km/h	4
LONG ANSWER TYPE(5 MARKS)		

23	Describe the different tools used for measuring length, such as a ruler, measuring tape, meter scale, and vernier calliper. Explain the situations in which each tool is most appropriately used and any specific features that make them suitable for those tasks.	5
24	Define periodic motion and provide examples of objects that exhibit periodic motion. Discuss the characteristics of periodic motion and explain how the time period of a pendulum can be affected by different factors.	5
25	Explain the concept of speed and how it is calculated. Describe an experiment or activity you could perform to measure the speed of a moving object, such as a toy car. Include details about the setup, measurements you would take, and how you would calculate the speed.	5

CHAPTER : 5. MEASUREMENT OF LENGTH AND MOTION

S.NO	ANSWER KEY	POINT VALUE
SECTION -A (MCQ)		
1	b) Meter	1
2	c) Periodic motion	1
3	b) Sleeping	1
4	c) 1000 meters	1
5	b) Millimeter	1
6	c) A pendulum swinging	1
7	c) A vernier caliper	1
8	b) 50 km/h	1
9	b) 500 cm	1
10	c) Circular motion	1
ASSERTION AND REASON (1MARK)		
11	c) A is true, but R is false.	1
12	a) Both A and R are true, and R is the correct explanation of A.	1
13	d) A is false, but R is true.	1
14	a) Both A and R are true, and R is the correct explanation of A.	1
15	a) Both A and R are true, and R is the correct explanation of A.	1

SECTION – B (2 MARKS)

16	Uniform motion: Constant speed, e.g. a car moving at 60 km/h Non-uniform motion: Varying speed, e.g. a car accelerating	2
17	Standard units ensure consistency and accuracy. For example, using feet instead of meters can lead to confusion and errors in measurements.	2
SECTION – C(3 MARKS)		
18	Types of motion: Linear motion: Straight line, e.g. a train on a track Circular motion: Moving in a circle, e.g. a wheel Periodic motion: Repeats over time, e.g. a pendulum	3
19	Total distance = 90 km + 60 km = 150 km Average speed = Total distance / Total time = 150 km / 3 hours = 50 km/h	3
C C T SOURCES BASED/CASE BASED		
20	1. b) 1400 meters 2. a) 100,000 square meters 3. c) 7 Km	4
21	1. b) 54 km/h 2. c) 270 km 3. b) 3 hours	4
22	1. d) 75 km/h 2. b) 450 km 3. b) 60 km/h	4
LONG ANSWER TYPE(5 MARKS)		
23	Ruler (for short lengths), measuring tape (flexible tool for longer distances), meter scale (rigid, 1 meter tool for longer lengths), vernier caliper (for precise measurements for small dimensions)	5
24	Periodic motion: Repeats after a fixed time e.g. pendulum, Earth's rotation Characteristics: Regular intervals, predictable time period Factors affecting period: length of pendulum, mass	5
25	Speed = Distance / Time Experiment: Use a toy car, measure distance traveled in a fixed time, calculate speed accordingly.	5



CHAPTER:6. MATERIALS AROUND US

S.NO	QUESTION	VALUE POINTS
1	Which of the following is a natural material? a) Plastic b) glass c) Cotton d) Nylon	1
2	Which material is known for its hardness and is used in making cutting tools? a) Plastic b) Diamond c) Wood d) Rubber	1
3	Which of the following materials is transparent? a) Wood b) Glass c) Rubber d) Metal	1
4	What is the property of materials that allows them to be drawn into wires? a) Ductility b) Malleability c) Hardness d) Conductivity	1
5	Which of the following is a property of metals? a) They are flexible b) They are insulators c) They are good conductors of electricity d) They are brittle	1
6	Which of the following is not the unit of volume? a) litres b) m ³ c) millilitres d) kilograms	1
7	Which material is biodegradable? a) Plastic b) Glass c) Metal d) Paper	1
8	Which of the following is the highest value? a)500 ml b) 1 L c) 200 m ³ d) all are equal	1
9	Which of the following is insoluble in water? a) sugar b) lemon juice c) sand d) salt	1
10	Which material is known for its elasticity? a) Wood b) Rubber c) Glass d) Stone	1



ASSERTION AND REASON (1MARK)

Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion**
- (b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion**
- (c) Assertion is true but the Reason is false**
- (d) The statement of the Assertion is false but the Reason is true.**

11	Assertion (A): Plastic is harmful to the environment. Reason (R): Plastic is biodegradable.	1
12	Assertion (A): Metals are generally shiny. Reason (R): Metals have a property called lustre.	1
13	Assertion (A): Copper is used to make electrical wires. Reason (R): Copper is a poor conductor of electricity.	1
14	Assertion (A): Glass is transparent. Reason (R): Glass allows light to pass through it.	1
15	Assertion (A): Water is a good solvent. Reason (R): Water can dissolve many substances.	1
SECTION – B (2 MARKS)		
16	Name the states of matter. Give one example of each.	2
17	Define lustrous and non-lustrous materials.	2
SECTION – C(3 MARKS)		
18	Give 2-2 examples of transparent, translucent and opaque objects.	3
19	What is the full form of ORS? Mention it's importance. How can you make ORS?	3
CCT SOURCES BASED/CASE BASED		



20	<p>Priya is doing a science project where she needs to select materials to build a model house. She has cardboard, plastic sheets, aluminum foil, and wooden sticks.</p> <ol style="list-style-type: none">1. Which material should Priya use for the roof of her model house to ensure it is waterproof?2. Which material is the best choice for the walls of the model house to ensure they are sturdy?3. Explain why Priya should use aluminium foil for the windows of her model house and wooden sticks for the frame.	4
21	<p>Neha is learning about the properties of materials and decides to test the flexibility of different items: a metal spoon, a rubber band, and a wooden stick.</p> <ol style="list-style-type: none">1. Which item is the most flexible?2. Which item is the least flexible?3. Explain why the rubber band is flexible and the metal spoon is not, and how this property is useful for their respective functions.	4
22	<p>Mohan is sorting different kitchen materials. He has to categorize them as either transparent, translucent, or opaque.</p> <ol style="list-style-type: none">1. Which category does a glass window belong to?2. Which category does a frosted glass door belong to?3. Explain why a metal cooking pot is considered opaque and how its properties make it suitable for cooking.	4
LONG ANSWER TYPE(5 MARKS)		
23	<p>Discuss the importance of recycling materials. How does recycling benefit the environment and society? Provide examples of materials that are commonly recycled and the process involved.</p>	5
24	<p>Explain the physical properties used to differentiate between various materials. How do these properties help in identifying and utilizing these materials?</p>	5
25	<p>Describe the various types of materials around us and classify them into natural and man-made materials. Provide examples for each category and explain how they are used in daily life.</p>	5

CHAPTER- 6. MATERIALS AROUND US

S.NO	ANSWER KEY	POINT VALUE
SECTION -A (MCQ)		
1	c) Cotton	1
2	b) Diamond	1
3	b) Glass	1
4	a) Ductility	1
5	c) They are good conductors of electricity	1
6	d) kilograms	1
7	d) Paper	1
8	c) 200 m ³	1
9	c) sand	1
10	b) Rubber	1
ASSERTION AND REASON (1MARK)		
11	c) A is true, but R is false.	1
12	a) Both A and R are true, and R is the correct explanation of A.	1
13	c) A is true, but R is false.	1
14	a) Both A and R are true, and R is the correct explanation of A.	1
15	a) Both A and R are true, and R is the correct explanation of A.	1
SECTION – B (2 MARKS)		
16	Solid (e.g. Ice), Liquid (e.g. Water), Gas (e.g. Air)	2
17	Lustrous materials: Materials that shine or reflect light (e.g.metals) Non-lustrous materials: Materials that do not reflect light (e.g.wood)	2
SECTION – C(3 MARKS)		



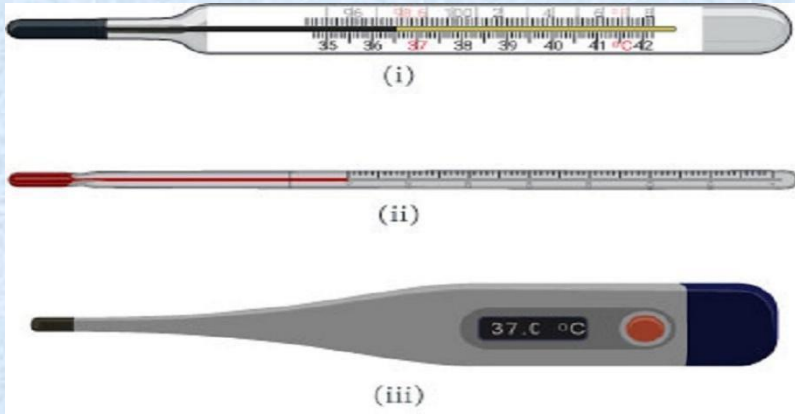
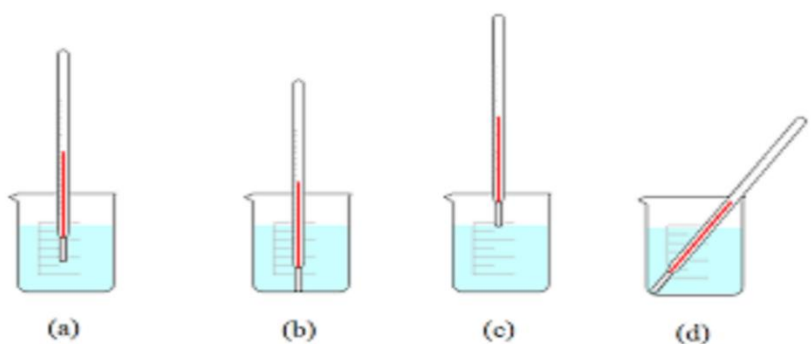
18	Transparent: Glass, Water Translucent: Frosted glass, Wax paper Opaque: Wood, Metal	3
19	ORS Full Form: Oral Rehydration Solution Importance: Used to prevent dehydration, especially during diarrhea. Preparation: Mix 1 liter of clean water with 6 teaspoons of sugar and half a teaspoon of salt.	3
C C T SOURCES BASED/CASE BASED		
20	1. Plastic sheets 2. cardboard 3. Aluminum foil reflects light and can create a shiny appearance for windows, wooden sticks provide a solid frame	4
21	1. Rubber band 2. Metal spoon 3. Rubber bands stretch easily due to their elasticity, while metal is rigid, making rubber bands suitable for tying things.	4
22	1. Transparent 2. Translucent 3. A metal cooking pot blocks light from passing through. It is suitable for cooking due to its ability to conduct heat well, durability, and resistance to high temperatures.	4
LONG ANSWER TYPE(5 MARKS)		
23	Importance of Recycling: Reduces waste, conserves resources, and saves energy Commonly recycled materials include paper, glass, and plastics. process: Collect, sort, clean, and reprocess materials to create new products.	5
24	Physical Properties include color, texture, density, and melting point. These help in identifying materials for specific uses (e.g. metals for strength)	5
25	Types of Materials: Natural: Wood, Cotton (used for furniture, clothing) Man-made: Plastic, Synthetic fibers (used for packaging, clothing)	5




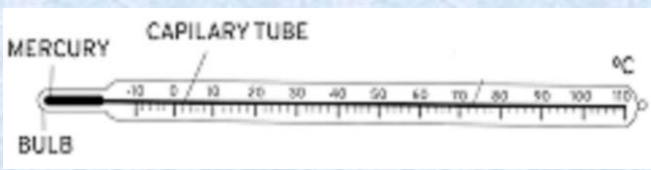
CHAPTER: 7. TEMPERATURE AND ITS MEASUREMENT

SNO.	Questions	POINT VALUE
1		1
	Which of the following devices is used for measurement of temperature of human body? (a) Stethoscope (b) Clinical thermometer (c) Laboratory thermometer (d) None of these	
2	The normal temperature of a healthy human being is close to. (a) 98.6 °C (b) 37.0 °C (c) 32.0 °C (d) 27.0 °C	1
3	Degree of hotness or coldness is called (a) temperature (b) power (c) heat (d) energy	1
4	Which of the following thermometer contains mercury? (a) Clinical thermometer (b) Laboratory thermometer (c) Both (a) and (b) (d) None of these	1
5	Sita and Ram measured their body temperature. Sita found Her's to be 98.6 °F and Ram recorded 37°C. Which of the following statement is true? (a) Sita has a higher body temperature than Ram. (b) Sita has a lower body temperature than Ram. (c) Both have normal body temperature. (d) Both are suffering from fever.	1



6	<p>A beggar wrapped himself with a few layers of newspaper on a cold winter night. This helped him to keep himself warm because</p> <p>(a) force between the layers of newspaper produces heat. (b) air trapped between the layers of newspaper is a bad conductor of heat. (c) newspaper is a good conductor of heat. (d) newspaper is at a higher temperature than the temperature of the surrounding.</p>	1
7	<p>A marble tile would feel cold as compared to a wooden tile on a winter morning, because the marble tile</p> <p>(a) is a better conductor of heat than the wooden tile. (b) is polished while wooden tile is not polished. (c) reflects more heat than wooden tile. (d) is a poor conductor of heat than the wooden tile.</p>	1
8	<p>Rahul has three thermometers as shown in following figure. He wants to measure the temperature of his body and that of boiling water. Which thermometer (s) should he choose?</p> <div style="text-align: center;">  </div> <p>(a) Thermometer (i) or (iii) for measuring body temperature and (ii) for measuring the temperature of boiling water. (b) Thermometer (i) for measuring temperature of both. (c) Thermometer (ii) for measuring temperature of both. (d) Thermometer (iii) for measuring temperature of both.</p>	1
9	<p>Four arrangements to measure temperature of ice in beaker with laboratory thermometer are shown in Figure (a, b, c and d). Which one of them shows the correct arrangement for accurate measurement of temperature?</p> <div style="text-align: center;">  </div>	1

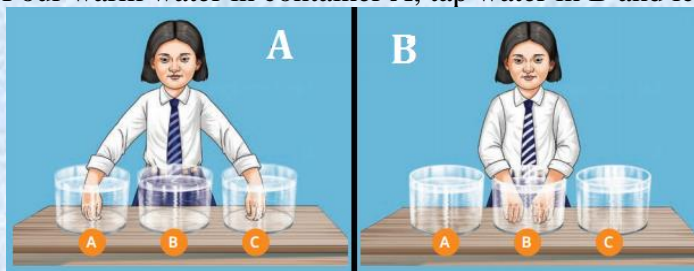


10	<p>In the following figures (a–d) shows a student reading a doctor’s thermometer. Which of the figure indicates the correct method of reading temperature?</p>  <p>(a) (b) (c) (d)</p>	1
11	<p>Assertion (A): A clinical thermometer has a scale in the range of 37° C to 45° C Reason (R): The normal temperature of human body is 37° C.</p>	1
12	<p>Assertion (A): Glass tumbler breaks in winter when hot water is water to it. Reason (R): When hot water is poured, the outer surface of glass expands.</p>	1
13	<p>Assertion (A): When metallic objects are touched in winter, they give a colder sensation as compared to wooden objects. Reason (R): Metals conduct heat faster than wood.</p>	1
14	<p>Assertion (A): Temperature is a measure of degree of hotness of our body. Reason (R): We use a clinical thermometer to measure the degree of hotness of our body.</p>	1
15	<p>Assertion (A): A clinical thermometer is used for measuring the temperature of boiling water or for measuring the temperature of ice. Reason (R): The temperatures of boiling water and ice are outside the range of a clinical thermometer.</p>	1
16	<p>Observe the following thermometer carefully and write the answer of the questions-</p>  <p>I. Name the thermometer. II. Mention the range of the thermometer.</p>	2

17

Take three large containers and label them A, B and C, as shown in the figure. Pour warm water in container A, tap water in B and ice-cold water in C

2



What will you feel if you

1. Dip your right hand in A and left hand in C and keep them there for 1–2 minutes.
2. Take out your hands from containers A and C, and place both hands simultaneously in B.

18

Geeta has not gone to school as she is ill. Her mother has kept a record of her body temperature for three days as shown in Table.

Body temperature record of Geeta

3

Day	7 am	10 am	1 pm	4 pm	7 pm	10 pm
Monday	38.1°C	37.7°C	38.0°C	38.0°C	40.0°C	39.8°C
Tuesday	38.8°C	39.0°C	38.4°C	38.2°C	38.0°C	38.2°C
Wednesday	37.8°C	37.6°C	37.4°C	37.2°C	37.0°C	37.0°C

- (i) What was Geeta's highest recorded temperature?
- (ii) On which day and at what time was Geeta's highest temperature recorded?
- (iii) On which day did Geeta's temperature return to normal?

19

Observe the following picture carefully and write the answer of given questions-

3



1. Whether the girl holding the thermometer properly?
2. What mistake is she doing?
3. Why is it advised not to do so as girl is doing in the picture?

Observe the following figure given below

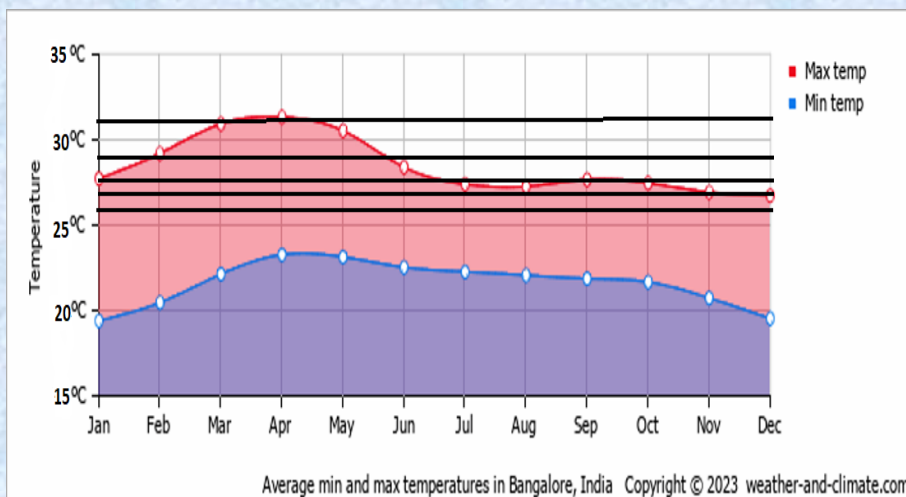
4



- I. Name the instrument shown in the above figure.
- II. What is use of above instrument?
- III. When did we use this instrument in our life?

Observe the following graph of temperature of last year of Bengaluru-

4

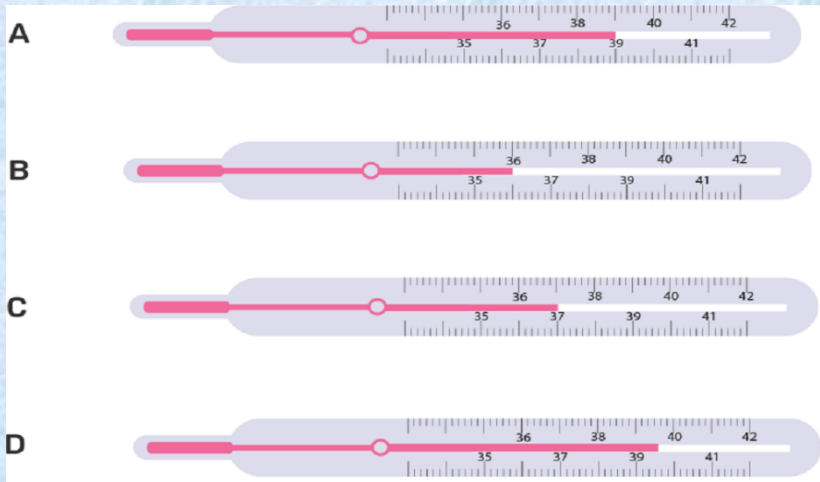


- I. In which month highest temperature is measured?
- II. In which month lowest temperature is measured?
- III. What is the average maximum temperature of Bengaluru throughout the year?

22

Given figures below (a–d) shows the readings on four different thermometers.

4



- I. Which thermometer measured the highest temperature?
- II. Which thermometer indicates the temperature of human body?
- III. Find out the temperature of human body in degree Fahrenheit.

23

The garden of your school is at risk due to unexpected frost. As the student of science, you must have to monitor and manage the temperature to protect the plants. Describe how you measure the temperature, interpret the data, and take action to save the garden.

5

24

How do temperature changes affect the state of matter?

- Describe the processes of melting, freezing, evaporation, and condensation.
- Provide real-life examples of each process.

5

25

Ram uses a digital thermometer to measure the body temperature of different individuals at various times of the day. He recorded and analysed the data to identify patterns and variations in body temperature.

- a. Will the temperature of all individual same?
- b. Write the factors that can influence body temperature.
- c. What is the normal body temperature of human in degree Celsius, degree Fahrenheit and kelvin.

5

CHAPTER: 7. TEMPERATURE AND ITS MEASUREMENT

SN	Answer	M
1	(b) Clinical thermometer	1
2	(b) 37.0 °C	1
3	(a) temperature	1
4	(c) Both (a) and (b)	1
5	(c) Both have normal body temperature.	1
6	(b) air trapped between the layers of newspaper is a bad conductor of heat.	1
7	(a) is a better conductor of heat than the wooden tile.	1



8	(a) Thermometer (i) or (iii) for measuring body temperature and (ii) for measuring the temperature of boiling water.	1
9	(a)	1
10	(a)	1
11	(d) A is false but R is true.	1
12	(c) A is true but R is false.	1
13	(a) Both A and R are true and R is the correct explanation of A.	1
14	(a) Both A and R are true and R is the correct explanation of A.	1
15	(c) A is true but R is false.	1
16	I. Laboratory Thermometer. II. -10 to 110°C.	2
17	1. Right hand will feel hotness of water and left hand will feel coldness 2. Moderate temperature	2
18	(i) 40.0°C (ii) Monday (iii) Wednesday	3
19	1. No 2. She is holding bulb side 3. because the temperature of one's body may affect the actual reading	3
20	I. Infrared Thermometer II. To measure temperature III. During corona time	4
21	I. April II. December III. 28°C	4
22	I. D II. C III. 98.6°F	4
23	Use room thermometer to measure and students may write their own interpretation.	5
24	Melting occurs when a solid absorbs heat and its temperature rises. When a liquid loses heat, its temperature drops until it reaches the freezing point. Evaporation occurs when a liquid absorbs heat and the temperature rises. Condensation is the process where a gas loses heat and its temperature decreases. Student may write their answer	5
25	a. No b. age, activity and time of day. c. 37°C, 98.6°F 310 K	5



CHAPTER: 8. A JOURNEY THROUGH STATE OF WATER

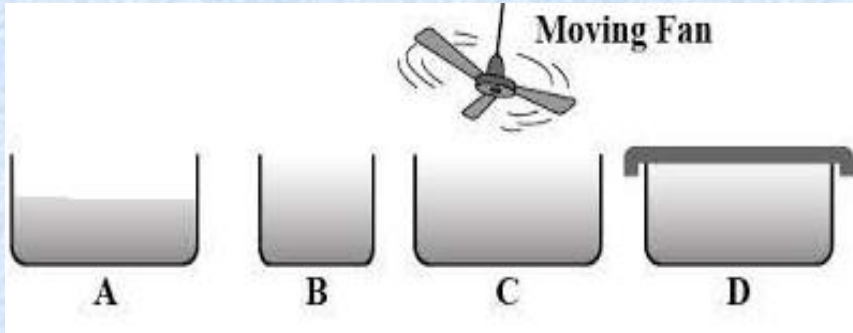
SNO.	Question	POINT VALUE
1	In which of the following case evaporation of water will be slowest? (a) A tray of water kept in sunlight. (b) A kettle of water kept on a burner. (c) A glass of water kept in a room. (d) A bucket of water kept on rooftop.	1
2	Clouds are (a) tiny drops of water floating in air. (b) mixture of dust and water vapour. (c) particles of water vapour. (d) rain drops in air.	1
3	During summer, water kept in an earthen pot becomes cool because of the phenomenon of (a) diffusion (b) transpiration (c) osmosis (d) evaporation	1
4	Which of the following best describes condensation? (a) The conversion of water into its vapour state. (b) The process of water changing from a liquid into gaseous state. (c) The formation of clouds from tiny water droplets. (d) The conversion of water vapour into its liquid state	1
5	Which condition out of the following will increase the evaporation of water? (a) Increase in temperature of water (b) Decrease in temperature of water (c) Less exposed surface area of water (d) Adding common salt to water	1
6	What do we call the water that falls from the sky as rain, snow, or hail? a) Evaporation b) Condensation c) Precipitation d) Infiltration	1

7	<p>What is the process called when water changes from a liquid to a gas?</p> <p>a) Condensation b) Evaporation c) Freezing d) Melting</p>	1
8	<p>Which part of the water cycle involves water vapor turning back into liquid water?</p> <p>a) Evaporation b) Condensation c) Precipitation d) Runoff</p>	1
9	<p>What happens to water when it freezes?</p> <p>a) It turns into steam b) It turns into ice c) It turns into gas d) It turns into a solid form of gas</p>	1
10	<p>Which of the following is a state of water?</p> <p>a) Solid b) Liquid c) Gas d) All of the above</p>	1
11	<p>Assertion (A): The water cycle helps in replenishing groundwater. Reason(R): Rainwater that falls into the ground is absorbed and replenishes groundwater supplies.</p>	1
12	<p>Assertion (A): Water expands when it freezes. Reason(R): Ice takes up more space than liquid water.</p>	1
13	<p>Assertion (A): Water can change from liquid to gas when heated. Reason(R): This process is called condensation.</p>	1
14	<p>Assertion (A): The water cycle involves processes like evaporation and condensation. Reason(R): The water cycle helps in recycling water in the environment</p>	1
15	<p>Assertion (A): The process of water turning into vapor is called evaporation. Reason(R): Evaporation happens when water is heated and changes from a liquid to a gas.</p>	1
16	<p>Name A, B, C and D in the following diagram showing change in its state</p>	2

17

Look at following figure and suggests in which of the vessels A, B, C or D the rate of evaporation will be the highest? Explain.

2



18

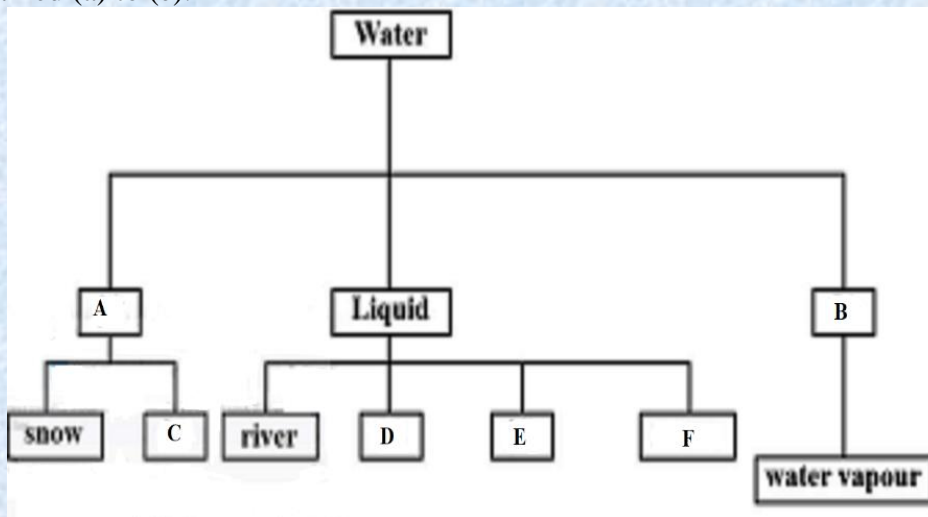
Explain the following-
 (a) Dogs generally hang out their tongue in summer.
 (b) Water droplets appear on the outer surface of a tumbler containing ice cold water.
 (c) Doctors advice to put strips of wet cloth on the forehead of a person having high fever.

3

19

Complete the following chart by writing appropriate words in the boxes marked (a) to (e).

3

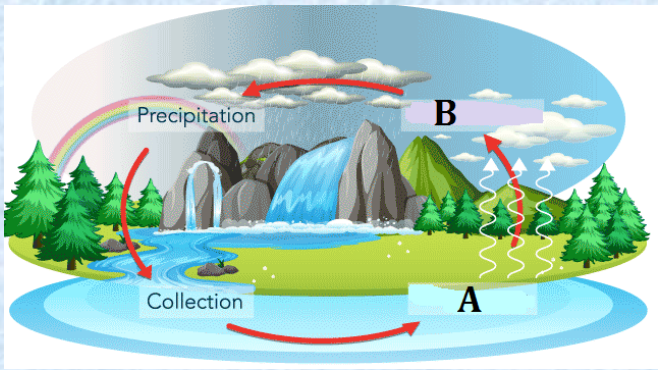



20

When you put an ice cube in you palm it melts into water and after heating the same water gets converted into water vapour. Compare this with the spreading behaviour of water.

4

Property	Ice (Solid state)	Water (Liquid state)	Water vapour (Gaseous state)
Shape			
Ability to flow			
Ability to spread			

21	<p>Observe the following figure and answer the questions-</p>  <p>(a) Name the phenomenon shown in the above figure. (b) What is another name of precipitation? (c) Explain the process A and B.</p>	4
22	<p>Rahul takes identical caps of two bottles named as A and B. He poured equal amount of water in each of the cap. Place one of the caps in sunlight and keep the other in shade as shown in figure. He observes the two caps of bottles after every 15 minutes.</p> <p>On the basis of above information write the answer of the following questions-</p>  <p>(a) In which cap the rate of evaporation will be more and why? (b) Name the factors which affect the rate of evaporation. (c) Rate of evaporation of water decreases with increase in humidity. Give the reason</p>	4
23	<p>Explain with the help of diagram how does sea water reaches a lake or pond.</p>	5

24	Rahul takes water in a small cap of a bottle (you may use sanitiser in place of water). He takes the same amount of water in a plate. The exposed area of water in the bottle cap and the plate are different. Keep both of them near each other. After 20 minutes he observes that the amount of water in a plate is less than cap. On the basis of above example explain the following (a) Why there is less amount of water in plate? (b) Rate of evaporation of water decreases with increase in humidity? (c) Why do people sprinkle water on the roof after a hot sunny day?	5
25	(a) Dissolve two spoons of common salt in half a cup of water. Now if you want to get the salt back, what will you do? (b) Why do wet clothes placed on a clothes line get dry after some time? Explain. (c) You are going to attend your best friend's birthday party at 8 pm and you want to wear your favourite shirt to a party, but at 7 pm you see that your shirt is still wet after a wash. What steps would you take to dry it faster?	5

CHAPTER: 8. A JOURNEY THROUGH STATE OF WATER

SNO.	ANSWER	POINT VALUE
1	(c) A glass of water kept in a room.	1
2	(b) mixture of dust and water vapour.	1
3	(d) evaporation	1
4	(d) The conversion of water vapour into its liquid state	1
5	(a) Increase in temperature of water	1
6	c) Precipitation	1
7	b) Evaporation	1
8	b) Condensation	1
9	b) It turns into ice	1
10	d) All of the above	1
11	(a) Both A and R are true and R is the correct explanation of A.	1
12	(c) A is true but R is false.	1
13	(c) A is true but R is false.	1
14	(a) Both A and R are true and R is the correct explanation of A.	1
15	(a) Both A and R are true and R is the correct explanation of A.	1
16	A-Melting, B-Evaporation, C- Condensation and D- Freezing	2
17	The rate of evaporation increases with an increase of surface area	2
18	(a)Evaporation makes his tongue cool. (b) because of condensation (c)Evaporation reduces temperature.	3

19	A) Solid B) Gas C) D) E) F)- any correct answer	3																
20	<table border="1"> <thead> <tr> <th>Property</th> <th>Ice (Solid state)</th> <th>Water (Liquid state)</th> <th>Water vapour (Gaseous state)</th> </tr> </thead> <tbody> <tr> <td>Shape</td> <td>fixed</td> <td>As per container</td> <td>Not fixed</td> </tr> <tr> <td>Ability to flow</td> <td>Not possible</td> <td>possible</td> <td>More than water</td> </tr> <tr> <td>Ability to spread</td> <td>Not possible</td> <td>possible</td> <td>More than water</td> </tr> </tbody> </table>	Property	Ice (Solid state)	Water (Liquid state)	Water vapour (Gaseous state)	Shape	fixed	As per container	Not fixed	Ability to flow	Not possible	possible	More than water	Ability to spread	Not possible	possible	More than water	4
Property	Ice (Solid state)	Water (Liquid state)	Water vapour (Gaseous state)															
Shape	fixed	As per container	Not fixed															
Ability to flow	Not possible	possible	More than water															
Ability to spread	Not possible	possible	More than water															
21	(a) Water Cycle (b) Raining (c) Explanation about Evaporation and Condensation	4																
22	(a) Water evaporates faster from the cap kept in sunlight compared to the cap kept in shade. (b) Sun light, speed of air, surface area, humidity (c) The amount of water in the air is already high (more humidity), water evaporates slowly.	4																
23	Correct diagram with explanation of evaporation, condensation	5																
24	(a) Because of surface area of plate is more (b) The amount of water in the air is already high (more humidity), water evaporates slowly. (c) Water will evaporate which causes cooling effect.	5																
25	(a) By the process of evaporation (b) Increase the surface area. (c) I will keep under high speed of fan, use of hair dryer, near the room heater etc.	5																



CHAPTER: 9. METHODS OF SEPARATION IN EVERYDAY LIFE

S. NO	QUESTION	POINT VALUE
	SECTION - A (MCQ)	
1	A mixture of ammonium chloride and sand is separated by (a) evaporation (b) decantation (c) sublimation (d) filtration	1
2	Butter is separated from milk by (a) sedimentation (b) filtration (c) churning (d) decantation	1
3	The process of conversion of water into its vapours is called (a) evaporation (b) condensation (c) guttation (d) transpiration	1
4	Filtration is a method to separate the components of a (a) solution (b) mixture of a liquid and an insoluble substance (c) both (a) and (b) (d) pure substance	1
5	Threshing is done by (a) beating (b) bullocks (c) machines (d) all of these	1
6	The property which forms the basis of sieving (a) difference in weight (b) difference in colour (c) difference in shape (d) difference in size	1

7	Which method is used to separate pebbles and stones from sand? (a) Handpicking (b) Winnowing (c) Sieving (d) Any of these	1
8	Sand from water is separated by (a) sieving (b) evaporation (c) filtration (d) sedimentation and decantation	1
9	The components of a solution (say sugar in water) can be separated by (a) filtration (b) evaporation (c) sedimentation (d) decantation	1
10	The process of conversion of water vapours into liquid is called (a) condensation (b) decantation (c) sedimentation (d) evaporation	1
<p>ASSERTION AND REASON (1MARK)</p> <p>Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:</p> <p>(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion</p> <p>(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion</p> <p>(c) Assertion is true but the Reason is false</p> <p>(d) The statement of the Assertion is false but the Reason is true.</p>		
11	Assertion: Chalk powder can be separated from water by filtration. Reason: Chalk powder is insoluble in water.	1
12	Assertion – evaporation can be used to separate a solid dissolved in a liquid. Reason- Evaporation is the process in which liquid gets converted into it's vapour.	1

13	<p>Assertion – for separation of heavier and lighter components of a mixture by wind or by blowing air.</p> <p>Reason – The process which is used to separate rain from stalks are known as winnowing.</p>	1
14	<p>Assertion- Separation of stones from rice is one of the separation method.</p> <p>Reason – The above separation method is handpicking method of separation.</p>	1
15	<p>Assertion – when the heavier component in a mix settles after water is added to it the process is called sedimentation.</p> <p>Reason – when the water along with the dust is removed the process called decantation.</p>	1
SECTION – B (2 MARKS)		
16	Name two materials that are used as filters.	2
17	What is the use of decantation?	2
SECTION – C(3 MARKS)		
18	Describe the method to obtain pure salt from rock salt.	3
19	How will you separate a mixture of oil and water?	3
CCT SOURCES BASED/CASE BASED		
20	<p>Separation Technique – By passing the mixture through a sieve, large particles are separated from small or finer particles. The sieve is made of wood and has a metal mesh at the bottom. When the sieve is shaken, the mixture is added from the top as the larger particles remain above and the finer particles collect below.</p> <p>(i)What happens to the larger particles in the mixture when it is passed through a sieve?</p> <p>(ii)When the sieve is shaken, where do the finer particles collect?</p> <p>(iii)What principle is the baker using to separate fine flour from coarser particles?</p>	4

21	<p>You are asked to add two spoons of solid salt to some liquid water taken in a beaker. On stirring it you find that whole of the salt has disappeared and only liquid can be seen in beaker.</p> <p>(i) After stirring the salt completely disappears and you can see only liquid in the beaker. The liquid in beaker is</p> <p>(a) water (b) solution (c) solute (d) solvent</p> <p>(ii) Which process can you use to get liquid water from the water vapours if you collect them in another container?</p> <p>(a) Sedimentation (b) Condensation (c) Evaporation (d) Filtration</p> <p>(iii) Since the grains are weakly attached to the stalk, they separate when the stalks are beaten on the ground. name the method used to separate the grains.</p>	4
22	<p>Sedimentation and decantation can be used to separate heavy solid particles. If the mixture is left undisturbed for an extended period of time, the solid particles settle to the bottom. They can then be separated from the liquid by decantation.</p> <p>(i) What process allows the sand to settle at the bottom of the container?</p> <p>(ii) What is this process of pouring off the clear liquid called?</p> <p>(iii) A mixture of soil and water is left undisturbed for a few hours. Later, the water is slowly poured out, leaving the soil at the bottom write two methods of separation used in this activity.</p>	4
LONG ANSWER TYPE(5 MARKS)		
23	What is the importance of centrifugation? How is it done?	5
24	<p>Name the property of the components used for separating the following mixtures:</p> <p>(I) salt and camphor (II) wheat and husk (III) Iron fillings and saw-dust (IV) coconut oil and water. (V) Rice and pebbles</p>	5
25	How will you Separate a mixture of common salt and chalk powder?	5



CHAPTER: 9. METHODS OF SEPARATION IN EVERYDAY LIFE

S.NO	ANSWERS	POINT VALUE
	SECTION - A (MCQ)	
1	(c) Ammonium chloride is separated by sublimation process.	1
2	(c) Butter is separated by churning.	1
3	(a) The conversion of water into vapours is called evaporation.	1
4	(b) Components of solution cannot be separated by this method.	1
5	(d.) All the three methods can be used for threshing.	1
6	(d) Sieving method is used for separating solid constituents of a mixture which differ in their size.	1
7	(c) Handpicking will require more time while winnowing is not fit at all.	1
8	(d) It can be done by evaporation and filtration also but sedimentation and decantation are easier ways.	1
9	(b) By evaporation, the volatile component is evaporated which is then condensed.	1
10	(a) Water vapours changing into liquid is called condensation.	1
	ASSERTION AND REASON (1MARK) Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion (b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion (c) Assertion is true but the Reason is false (d) The statement of the Assertion is false but the Reason is true.	
11	a	1

12	a	1
13	c	1
14	a	1
15	b	1
SECTION – B (2 MARKS)		
16	Cotton, ceramic, filter cloth, filter paper	2
17	Decantation is used to separate insoluble solids from liquids. Two immiscible liquids are also separated by this process.	2
SECTION – C(3 MARKS)		
18	First, the mixture is crushed and grinded. Water is then added and filtered. Pure salt is collected as filtrate which is heated for evaporation. Water evaporates off and pure salt is left.	3
19	Since oil is lighter than water, it will float on it. Two distinct layers form, and oil is slowly allowed to flow into another container, where it is separated from the water. This method to separate oil and water is called a separating funnel.	3
CCT SOURCES BASED/CASE BASED		
20	(i)The larger particles remain above the sieve. (ii)Below the sieve. (iii)The difference in the size of the solid particles	1+1+2
21	(1) b (2) b 3)The process of separating grains from the stalk by beating is known as threshing.	1+1+2
22	(i)Sedimentation (ii)Decantation. (iii)Sedimentation and decantation	4
LONG ANSWER TYPE(5 MARKS)		

23	<p>Centrifugation is the process of separating suspended particles from a liquid by rotating the liquid at a high speed.</p> <p>The mixture is taken in a closed bottle and rotated at a high speed. The heavy particles settle at the bottom while light particles remain behind. This method is also used to separate cream from milk. Cream collects at the centre and being lighter than milk, it floats at the top of the mixture.</p>	5
24	<p>Sublimation</p> <p>Winnowing</p> <p>Magnetic separation</p> <p>Separating funnel.</p> <p>Hand picking</p>	1x5
25	<p>We know that common salt is soluble in water while chalk is sparingly, soluble. So on the basis of different solubility, we can separate the common salt and chalk powder as follows:</p> <p>1. First, some water is mixed with the mixture of common salt and chalk powder, stir the solution well. Filter the solution by using filter paper. On filtering, chalk powder is obtained as a residue on the filter paper and salt solution is obtained.</p>	5



CHAPTER: 10.LIVING CREATURES: EXPLORING THEIR CHARACTERISTICS

S.NO	QUESTION	POINT VALUE
	SECTION - A (MCQ)	
1	A jelly-like substance is a cluster of eggs of a frog that is (a) larva (b) pupa (c) tadpole (d) spawn	1
2	Frogs lay eggs in the Land (b) water (c) both land and water (d) plant	1
3	Which of the following is not necessary for bean seed germination? (a) Water (b) Sunlight (c) Air (d) All of these	1
4	Silk is derived from (a) cocoon (b) pupa (c) egg (d) moth	1
5	Why do mosquito larvae and pupae repeatedly come to the water surface? (a) To escape from predators (b) To breathe air (c) To regulate their body temperature (d) To obtain food	1
6	In which part of the plants seed develop Root (b) stem (c)fruit (d) flower	1
7	Why are female mosquitoes a public health concern? (a) They are attracted to light. (b) They are bloodsucking insects that transmit diseases. (c) They are harmless to humans. (d) They only feed on plants.	1



	<p>ASSERTION AND REASON (1MARK)</p> <p>Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:</p> <p>(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion</p> <p>(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion</p> <p>(c) Assertion is true but the Reason is false</p> <p>(d) The statement of the Assertion is false but the Reason is true.</p>	
8	<p>Assertion (A): All living beings share the characteristic to show movement.</p> <p>Reason (R): Movement is one of the similarities between living beings and non-living things.</p>	1
9	<p>Assertion (A): Plants exhibit differential growth patterns of root and shoot when kept in a beaker containing water under the sunlight.</p> <p>Reason (R): The shoots of plants grow downwards and the roots of plants grow upwards.</p>	1
10	<p>Assertion (A): A seed is germinated if it turns into a sprout.</p> <p>Reason (R): Germination of seeds does not require water, air, and light.</p>	1
11	<p>Assertion (A): Stagnant water is mostly gathered in desert coolers, planted pots, and any open container.</p> <p>Reason (R): Bloodsucking female mosquitoes are transmitting diseases like malaria and dengue.</p>	1
12	<p>Assertion (A): The presence of light is not essential for the germination of seeds.</p> <p>Reason (R): Sunlight softens the seed coat and helps the tiny embryo to develop into a plant.</p>	1
	SECTION – B (2 MARKS)	
13	Write two examples of insectivorous plants	2
14	Write two essential characteristics of living beings.	2

SECTION – C (3 MARKS)

	SECTION – C (3 MARKS)	
15	What are the three essential conditions required for the germination of seed?	3
16	Why are spaces between soil particles relevant for seed germination and root growth?	3
	CCT SOURCES BASED/CASE BASED	
17	<p>The life cycle of a frog consists of the following stages: spawn, embryo, tadpole, froglet, and adult frog. It begins with eggs laid by the female frog in water, which hatch into tadpoles after 2-5 days. The tadpoles feed on algae and grow, developing gills for breathing underwater. After several weeks, they enter the metamorphosis stage, during which they develop lungs, lose their gills, and transform into young frogs.</p> <p>(i)What is the function of the tail in the tadpole of frogs?</p> <p>(ii)Complete the following sequence in accordance with the life cycle of a frog</p> <div style="text-align: center;"> <pre> graph LR A[Egg] --> B[] B --> C[] C --> D[Adult] </pre> </div> <p>(iii)Name the organ used by dolphins for the process of respiration</p>	4
18	<p>Changes in our surroundings that makes us respond to them, are called stimuli. All living beings respond to stimuli, including plants. Flowers of some plants bloom only at night. In some plants flowers close after sunset. In some plants like Mimosa, commonly known as ‘touch-me-not’, leaves close or fold when someone touches them. These are some examples of responses of plants towards changes in their surroundings.</p> <p>(i)What is your observation when you touches the leaves of mimosa or touch me not plant.</p> <p>(ii)Define stimuli.</p> <p>(iii)Explain the term respiration?</p>	4
	LONG ANSWER TYPE(5 MARKS)	

19	Plants have different growth directions: shoots grow up towards the sun, while roots grow down into the ground. Explain it briefly with a diagram	5
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CHAPTER: 10.LIVING CREATURES: EXPLORING THEIR CHARACTERISTICS

S.NO	ANSWERS	POINT VALUE
SECTION - A (MCQ)		
1	(d) spawn	1
2	(b) water	1
3	(b) Sunlight	1
4	(a) cocoon	1
5	(b) To breathe air	1
6	(c)fruit	1
7	(b) They are bloodsucking insects that transmit diseases.	1
8	(c) Assertion is true but the Reason is false	1
9	(c) Assertion is true but the Reason is false	1
10	(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion	1
11	(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion.	1
12	(c) Assertion is true but the Reason is false	1
SECTION – B (2 MARKS)		
13	Drosera - the Sundews. Dionaea muscipula - The Venus Flytrap	2
14	ability to respond to stimuli, ability to adapt to the environment, ability to move, and last but not least an ability to respire.	2
SECTION – C (3 MARKS)		


15	All seeds need water, oxygen, and proper temperature in order to germinate.	3
16	Larger pores allow air and water to move through the soil quickly, while small pores can hold reserves of air or water.	3
CCT SOURCES BASED/CASE BASED		
17	<p>(i) Movement in the water</p> <p>(ii) Blow holes or Nostrils</p> <p>(iii)</p> <div style="text-align: center;"> <pre> graph LR A[Egg] --> B[] B --> C[] C --> D[Adult] </pre> </div> <p>Tadpole, froglet</p>	1+1+2
18	<p>(i) closes or folds, when someone touches them.</p> <p>(ii) Changes in our surroundings that makes us respond to them, are called stimuli.</p> <p>(iii) Breathing is part of a process called respiration. In respiration, some of the oxygen of the air we breathe in, is used by the body. We breathe out carbon dioxide produced in this process.</p>	
LONG ANSWER TYPE(5 MARKS)		
19	<p>The shoot of the plant grows towards sunlight and this is called phototropism. The roots grow towards gravity or the earth and this is called geotropism.</p> <div style="text-align: center;"> </div>	5



CHAPTER - 11. NATURE'S TREASURES

S.NO	QUESTION	POINT VALUE
	SECTION - A (MCQ)	
1	Which of the following gas do we in breathing. a) Carbon dioxide b) nitrogen c) oxygen. d)none of these	1
2	Which is not a property of air? a) It occupies space. b)It is transparent c) It is a gas d)It is a compound	1
3	The main constituent of the air is a) Nitrogen b) Oxygen c)Corbon dioxide . d) Hydrogen	1
4	Wind is.... a)air round us b) air in motion c)rising hot air d) water	1
5	Full form of LPG is a) liquefied Petroleum gas b) liquid petrol gas c)light Petroleum gas d) None of above	1
6	Which of the following is a source of soft water. a) Sea water b) rainwater c) river water d)Well water	1
7	The ratio of hydrogen and oxygen in water is a)2:1 b) 1:2 c)1:1 d)2:5	1
8	The percentage of total drinking water available on Earth is a) o.3p b)15p c) 25p d) 45p	1
9	An example of fossil fuel is. a)Paper b)Wood c)plastic d)Coal	1

10	The process of collecting rainwater is called.. a) Rainwater collecting b) Rainwater recharging c) Rainwater arvesting d) Rainwater replenishing.	1
ASSERTION AND REASON (1MARK)		
<p>Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:</p> <p>(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion</p> <p>(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion</p> <p>(c) Assertion is true but the Reason is false</p> <p>(d) The statement of the Assertion is false but the Reason is true.</p>		
11	Assertion: All living organism require air for their survival. Reason: Air contain 21% of oxygen.	1
12	Assertion: Rain is main source of water. Reason: But rain water we are not use without filtration.	1
13	Assertion: Air contents Nitrogen ,Oxygen ,argan,carbon dioxide and other gases in small quantities. Reason: The argan gases play the main role of breathing.	1
14	Assertion: Natural gas is used for cooking and generating electricity. Reason: Natural gas is not cause pollution.	1
15	Assertion: Chipko movement started in the earlier 1970s in Uttarakhand Reason: Chipko movement was started to save crops.	1
SECTION – B (2 MARKS)		
16	What is soil?	2
17	Name the fuel which is used in jet aircraft engines	2



SECTION – C (3 MARKS)

	SECTION – C (3 MARKS)	
18	What is photosynthesis?	3
19	What is renewable or inexhaustible resources.	3
	CCT SOURCES BASED/CASE BASED	
20	Ritu told that air is surrounded by us, but we cannot see it and the air is mixture various gases like Nitrogen Oxygen carbon dioxide argan. i) Describe the composition of air. ii) what happens if oxygen is not present our air? iii) write the two major problem of air pollution?	4 1+1+2
21	Kavita saw this, water is essential for living beings and it's use for daily activities like drinking bathing cooking cleaning etc.Main source of water in our earth rain water it is colorless and testless. i) suggest the two benefits of rain water harvesting . ii)when we celebrate the water day. iii) write the name two source of water	4
22	One day morning,Ajji takes Bhoomi and Surya for a walk in the forest.they find a variety of herbs,shrubs and trees in the forest.Ajji explains, “Forests are large area with dense growth of various types of plants. i) write the name two herbs and shrubs. ii) when we celebrate the Van Mahotsav. iii) forest provide shelter and food for.....	4
	LONG ANSWER TYPE(5 MARKS)	
23	Explain the formation, composition, and importance of soil and rock s in the ecosystem.	5

24	Match the following ColumnA i) Moving air ii Saving water iii) Sun light iv) Oxygen v) Hand axes	ColumnB (a)Rock (b)Breath (c)Wind (d)Water harvesting (e)Source of energy	5
25	Discuss the significance of Van Mahotsav in promoting environmental awareness and conservation		5

CHAPTER - 11. NATURE'S TREASURES

S.N O	ANSWER KEY	Point Value
	SECTION -A (MCQ)	
1	c	1
2	d	1
3	a	1
4	c	1
5	a	1
6	d	1
7	a	1
8	a	1
9	d	1
10	c	1
	ASSERTION AND REASON (1MARK)	
11	a	1

12	a	1
13	c	1
14	b	1
15	c	1
SECTION – B (2 MARKS)		
16	Soil is made of of small pieces of Broken Rock and decaying plants.	2
17	Kerosene is used as fuel in jet aircraft engine.	2
SECTION – C(3 MARKS)		
18	‘The Process, by which green plants make their own food from carbon dioxide and water in the presence of Sunlight and green pigment (chlorophyll) is called photosynthesis.	3
19	These are the resources which can be renewed along with their over- use. For example ,forest and renewable.	3
C C T SOURCES BASED/CASE BASED		
20	i)Air is made up of mixture of gases... Nitrogen 78%, oxygen 21%, carbon dioxide 0.04%, argan 0.93% ii)If there was no oxygen in the air,life on earth would end. iii)Emphysema,asthma.	4 1+1+2
21	i)Improved water quality: rainwater harvesting can Help improve The quality of ground water. Reduced erosion: ii)March 22 iii)Groundwater,surfacewater.	4
22	i)Herbs:wheat and paddy Shurbs:Lemon and tulsi ii)1july to 7 july iii)Animals, bird and insects.	4
LONG ANSWER TYPE(5 MARKS)		
23	Soil: It is natural body comprised of solids (minerals and organic matter)liquid, and gases that occurs on the land surface. Rocks :A rock is a solid collection of minerals.	5

24	<ul style="list-style-type: none"> i)Wind ii) Water harvesting iii)Source of energy iv)Breath v)Rock 	5
25	<p>Introduction: Van Mahotsav, which translates to "Forest Festival," is a week-long festival celebrated in India every year in the first week of July. It was initiated in 1950 by K.M. Munshi, the then Union Minister for Agriculture and Food, to create enthusiasm among the masses for forest conservation and planting trees.</p> <p>Objective: The primary goal of Van Mahotsav is to spread awareness about the importance of trees in the environment, to combat deforestation, to prevent soil erosion, and to mitigate the effects of global warming. It also aims to encourage afforestation and reforestation.</p> <p>Activities and Celebrations: During Van Mahotsav, millions of saplings are planted across the country. Various activities such as tree-planting drives, seminars, educational tours, and cultural programs are organized to educate people about the benefits of trees and the need for afforestation. Schools, colleges, government institutions, and non-governmental organizations (NGOs) actively participate in these events.</p> <p>Importance: Trees play a crucial role in maintaining ecological balance. They produce oxygen, improve air quality, conserve water, preserve soil, and support wildlife. Van Mahotsav helps in restoring lost forests and maintaining the green cover of India. It also helps in instilling a sense of responsibility and environmental awareness among citizens, especially the youth.</p> <p>Conclusion: Van Mahotsav is more than just a festival; it is a movement aimed at promoting a greener and healthier environment. By participating in Van Mahotsav, we contribute to a better and sustainable future, ensuring that the benefits of trees are enjoyed by generations to come.</p>	5



CHAPTER:12.- BEYOND EARTH

S.NO	QUESTION	POINT VALUE
	SECTION - A (MCQ)	
1 is the scientific study of the universe. a)Astronomy b) Astrology. c) Science d)Cosmology	1
2	Which planet is called the stormy planet ? a) Mercury b)Jupiter c)Mars d)Venus	1
3	The sun is a)A star b)A celestial body c)The head of the solar system. d) all of these	1
4	The term 'blue planet' indicate presence of a)Land b) Water c)Oxygen d) CO ₂	1
5	The moon moves around the earth in about....day. a)21 b)23 c)27 d) 25	1
6	Ursa major is a a)star b) Constellation d) Seen only with telescope	1
7	Main source of energy on the earth. a)Sun b) earth. c)Mars d)Neptune	1
8	How many planet present in our solar system. a) 3 b)5 c) 8 d) 9	1
9	Movement of an object around the sun is called . a)Revolution. b)movement. c)Surrounded. d)Organisation	1
10	Which planet is called morning star or evening star. a)Venus b)Mars c)Jupiter. d)Mercury.	1



ASSERTION AND REASON (1MARK)

Question No. 11 to 15 consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:

(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion

(b) Assertion and the Reason are correct but the reason is not the correct explanation of Assertion

(c) Assertion is true but the Reason is false

(d) The statement of the Assertion is false but the Reason is true.

11	Assertion: The moon is a natural satellite of the earth . Reason: Moon is not a plant.	1
12	Assertion: Pole star is the most shining star in the night sky. Reason: The pole star appears to be stationary.	1
13	Assertion: Our solar system consists of eight planets revolving around the sun . Reason: Our solar system is very small in size	1
14	Assertion: There are many galaxies in the outer space beyond the milky way Galaxy. Reason: Our Scientist study the moon. India's first mission to the moon , Chandrayaan-1	1
15	Assertion: The Sun is not source of energy. Reason: The Sun is provide the energy all the planets	1
SECTION – B (2 MARKS)		
16	What is the name of Chandrayaan-3 mission's lander and the rover?	2
17	How much time does the earth take to complete one rotation and one revolution?	2
SECTION – C(3 MARKS)		
18	Why is our galaxy called Milky way ?	3


19	Give me three different between planet and star.	3
CCT SOURCES BASED/CASE BASED		
20	Uma told that his sister.A large protion of the Earth's surface is covered with water and thus ,it appears blue from the space. Due to this,the Earth is also called the blue planet. i) Earth is also called ii)Our earth present is between the two planets .write the planets name . iii)Write the all planets name in ordered ways.?	4 1+1+2
21	One day sheema saw this moon light is comeing but moon is not aries why .Her mother told that today is very cloudy weather. i)Do you know moon have its own light No.so how moon is sine very bright? ii)when is 'National moon day' celebrated in india? iii) A Dwarf planet.	4
22	Our solar system consists of 8 planets revolving around the Sun.It also consists of many other celestial bodies like asteroids,comets and meteors. i)How many planet in our solar system? ii) What is meant by the solar system? iii) What do planets in the solar system Orbit around?	4
LONG ANSWER TYPE(5 MARKS)		
23	Fill in the blanks i)..... is called the windy planet because of the continuous strong winds that blow on it . ii) The inner planets have a..... surface. iii)A larger group of stars and other celestial bodies is called a..... iv)A/An is made of ice, dust and Rocky material. v) A group of..... farming various pattern is called a.....	5 1+1+1+1 +1

24	Match the following	5												
	<table border="0"> <tr> <td>ColumnA</td> <td>ColumnB</td> </tr> <tr> <td>i) Biggest planet</td> <td>(a)Venus</td> </tr> <tr> <td>ii Coldest planet</td> <td>(b)Orion</td> </tr> <tr> <td>iii) Samallest planet</td> <td>(c)Uranus</td> </tr> <tr> <td>iv) Hottest planet</td> <td>(d)Mercury</td> </tr> <tr> <td>v) Constellation</td> <td>(e)Jupiter</td> </tr> </table>	ColumnA	ColumnB	i) Biggest planet	(a)Venus	ii Coldest planet	(b)Orion	iii) Samallest planet	(c)Uranus	iv) Hottest planet	(d)Mercury	v) Constellation	(e)Jupiter	1+1+1+1+1
ColumnA	ColumnB													
i) Biggest planet	(a)Venus													
ii Coldest planet	(b)Orion													
iii) Samallest planet	(c)Uranus													
iv) Hottest planet	(d)Mercury													
v) Constellation	(e)Jupiter													
25	You can see stars fading away at dawn and appearing at dusk. During the day we do not see the Stars. explain why?	5												

CHAPTER: 12. BEYOND EARTH.

S.N O	ANSWER KEY	Point Value
	SECTION -A (MCQ)	
1	a	1
2	b	1
3	d	1
4	b	1
5	c	1
6	b	1
7	a	1
8	c	1
9	a	1
10	a	1
	ASSERTION AND REASON (1MARK)	
11	c	1
12	a	1

13	c	1
14	a	1
15	d	1
SECTION – B (2 MARKS)		
16	Chandrayaan 3 mission's lander is named Vikram and rover pragyan.	2
17	The earth take to complete one rotation and one revolution in 24 hours is called a day	2
SECTION – C(3 MARKS)		
18	Our galaxy is called the Milky Way because it's appear as a milky banned of light is the sky when we see it in a really dark area.	3
19	Star: Stars twinkle in the sky. They have their own light. They are very big in size. Planet: Planets do not twinkle in the sky. They revolve around the sun . Planets are small as compared to stars.	3
C C T SOURCES BASED/CASE BASED		
20	i) Blue planet ii) Venus and Mars iii) Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.	4 1+1+2
21	i) the moon is visible because it reflects light from the Sun even through it does not reduce its own light. ii) 25 July iii) Pluto	4
22	i) 8 ii) The sun, 8 planets satellite and the some other celestial bodies known as asteroids and meteoroids from the solar system. iii) The planets orbit around the Sun.	4
LONG ANSWER TYPE(5 MARKS)		



23	i)Neptune ii)Rocky iii)Galaxy iv)Asteroid v)Stars, Constellation	5
24	i)Jupiter ii)Uranus iii)Mercury iv)Venus v)Orion	5
25	During the day ,the sun's bright light outshines the stars,making them invisible to our eyes. The atmosphere scatters the sunlight creating the blue sky and masking the faint light of the stars.	5