परमाणु ऊर्जा शिक्षण संस्था

Atomic Energy Education Society

कार्यपत्रक/Worksheet (2025-26)

कक्षा/Class: VIII विषय/Subject: Science माह/Month: April

दिया गया पाठ्यक्रम/Portion covered: Theme1: Diversity in the Living World

विद्यार्थी का नाम/Name of the student: _____

अनुक्रमांक/Roll No.____ कक्षा/अनुभाग Class /Sec.: ___ दिनांक/Date: _____

General Instructions:

• This question paper comprises of two parts- Section A and Section B. There are 24 questions and all questions are compulsory.

• Section A: Question No 1 to 10 are multiple choice type questions (MCQ) carrying one mark each; 4 Assertion and Reason type and 1 Case based type questions.

• Section B: i) Question No 16 to 20 are Short Answer Type-I (SA-I) questions carrying 2 marks each. ii) Question No 21 to 24 are Short Answer Type-II (SA-II) questions carrying 3 marks each.

Q. No.	Questions	Marks

Section – A

Choose the correct answer from the given options. **(1x10 = 10M)**

1. Which is an example of a shrub? 1

a) Spinach b) Mango tree c) Tomato plant d) Lemon

2. Parallel venation is not found in 1

a) sugarcane b) peepal c) maize d) wheat

3. Which one of the following is a function of leaves? 1

a) Photosynthesis b) Transpiration c) Both (a) and (b) d) Support fruits

4. Leaf venation and type of root is correctly paired in 1

a) parallel venation, fibrous roots b) parallel venation, taproot c) no relation exists in leaf venation and type of roots d) reticulate venation, fibrous roots

5. Following are some features of plants 1

(i) They lose a lot of water through transpiration.

(ii) Their leaves are always broad and flat.

(iii) They lose very little water through transpiration.

(iv) Their roots grow very deep into the soil.

Which of the combination of above features are typical of desert plants?
a) (i) and (ii) b) (ii) and (iv) c) (ii) and (iii) d) (iii) and (iv)

6. Which of the following are characteristics of living beings? 1
(i) Respiration (ii) Reproduction (iii) Adaptation (iv) Excretion

Choose the correct answer from the options below:
a) (i), (ii) and (iv) only b) (i) and (ii) only c) (ii) and (iv) only d) (i), (ii), (iii) and (iv)

7. Which of the following combination of features would you observe in grass? 1
a) Parallel venation and fibrous root
b) Parallel venation and tap root
c) Reticulate venation and fibrous root
d) Reticulate venation and tap root

8. Which of the following is a characteristic of monocot plants? 1
a) Two cotyledons in the seed
b) Parallel leaf venation
c) Tap root system
d) Branched root system

9. Which of the following is an example of a dicot plant? 1
(a) Wheat (b) Maize (c) Bean (d) Grass

10. What is biodiversity? 1
(a) The number of stars in the sky.
(b) The variety of life on Earth.
(c) The size of the Earth.
(d) The number of continents.

For question numbers 11 to 14, Two statements are given, one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from codes (a), (b), (c) and (d) as given below.

a) Both assertion and reason are true, and reason is the correct explanation of the assertion
b) Both assertion and reason are true, but reason is not the correct explanation of assertion.
c) Assertion is true, and reason is false
d) Assertion is false, but reason is true

11. **Assertion(A):** The Earth's environment supports a wide variety of life forms, from microscopic bacteria to large mammals.
Reason (R): This diversity is a result of different species adapting to various habitats and ecological niches. 1

12. **Assertion(A):** Biodiversity is important for the health and stability of ecosystems.
Reason(R): A wide variety of species helps to maintain ecological balance and resilience to environmental changes. 1

13. **Assertion(A):** Leaves of different plants exhibit a wide variety of shapes, sizes, and arrangements.
Reason(R): This diversity is an adaptation to various environmental conditions and plant functions. 1

14. **Assertion (A):** Tap root system is seen in dicots.
Reason(R): Fibrous root system anchors the plant firmly into the ground. 1

15. **Case Based Question: Read the following passage and answer the following question given.**

A great variety of plants and animals exist on earth. They are essential for the well-being and survival of mankind. To preserve biodiversity, to prevent extinction of endangered species, and to maintain ecological balance in nature, wildlife and forests should be conserved. Habitat is a place in environment where an organism lives. Today, a major threat to survival of these organisms is deforestation. We know that deforestation means clearing of forests and using that land for other purposes. Trees in the forest are cut for many purposes. Some natural causes of deforestation are forest fires and severe droughts. The answer to deforestation is reforestation. Reforestation is restocking of the destroyed forests by planting new trees. The planted trees should generally be of the same species which were found in that forest. We should plant at least as many trees as we cut. Reforestation can take place naturally also.

i) A place in environment where an organism lives is __
(a) Home
(b) Resort
(c) Habitat
(d) Reservoir

ii) Wildlife and forests should be conserved:
(a) To preserve biodiversity.
(b) To prevent extinction of endangered species.
(c) Maintain ecological balance in nature.
(d) All of the above.

iii) Deforestation takes place by:
(a) Human activities
(b) By natural calamities
(c) Both a and b
(d) None of these

iv) Restocking of the destroyed forests by planting new trees is called:
(a) Deforestation
(b) Afforestation
(c) Reforestation
(d) None of these

Section - B

Short Answer Type Questions (Type-I): (2 x 5 = 10)

16. What is biodiversity? 2

17. Give one characteristic that differentiates dicots from monocots. 2

18. What is a taproot system? 2

19. What are herbs? 2

20. What is the importance of conserving biodiversity? 2

Short Answer Type Questions (Type-II): (3x4=12M)

21. Complete the table. 3

Sl. No.	Name of the Plant	Type of leaf venation	Type of roots
1	Mango		
2	Mustard		
3	Wheat		

22. What are climbers and creepers? Give some examples. 3

23. Some desert plants have very small leaves whereas some others have only spines. How does this benefit the plants? 3

24. How are animals grouped based on their features? 3

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कार्यपत्रक / Worksheet (2025-26)

कक्षा /Class: VIII विषय /Subject: Science माह/ Month: April '25 अंक/Marks: 40
दिया गया पाठ्यक्रम/Portion covered: Bridge Programme – 2. Water

विद्यार्थी का नाम/Name of the student: _____

अनुक्रमांक /Roll No._____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Multiple Choice Questions (10*1)

1.Which of the following is the largest source of water?
(a) Sea (b) Ocean (c) Pond (d) Lake

2. Which is not a part of water cycle?
(a) Cloud formation (b) Rain (c) Drinking by animals (d) Sun

3. The process of conversion of water into vapours is called
(a) transpiration (b) evaporation (c) condensation (d) none of these

4. The process by which plants lose water is
(a) photosynthesis (b) translocation (c) transpiration (d) transportation

5. The amount of water recommended by the UN for drinking, washing, cooking and maintaining proper hygiene is
(a) 50 litres per person per day (b) 60 litres per person per day

(c) 70 litres per person per day (d) 80 litres per person per day

6. Boiling point of water is
(a) 100°C (b) 99°C (c) 101°C (d) 102°C

7. The water which had escaped from the earth as vapour returns to the earth in the form of
(a) precipitation (b) evaporation (c) infiltration (d) condensation

8. In how many states of matter does water exist?
(a) One (b) Two (c) Three (d) Four

9. Drought causes water
(a) profitability (b) scarcity (c) both (a) and (b) (d) none of these

10. The colour of potable water is
(a) colourless (b) milky (c) pink-coloured (d) red-coloured

Two statements are given for questions 11 to 14: Assertion (A) and Reason (R). Select the correct answer to these questions from the codes (a), (b), (c), and (d) as given below:

(a) Assertion (A) and Reason (R) both are correct statements and reason is the correct explanation for assertion.
(b) Assertion (A) and Reason (R) both are correct statements and reason is not the correct explanation for assertion.
(c) Assertion (A) is a correct statement but the Reason (R) is a wrong statement.
(d) Assertion (A) is a wrong statement but the Reason (R) is a correct statement. (4*1)

11. Assertion (A): Clothes dry faster on a rainy day.
Reason (R): High humidity during a rainy day, slows down the rate of evaporation.

12. Assertion (A): Water vapour is lighter than air, which causes it to rise.
Reason (R): Condensation is the process of converting vapor into a liquid state.

13. Assertion (A): The water cycle is the natural circulation of water between the surface of the earth and the atmosphere.
Reason (R): Water tends to change its state on heating or cooling.

14. Assertion (A): The use of earthen pots is a traditional method of keeping water cool.
Reason (R): Earthen pots allow water to seep out and cause cooling through the process of evaporation

Short Answer type questions (5*2)

15. What do you mean by potable water?

16. Can we use the water in the oceans and seas for drinking and other purposes? Why?

17. What is the importance of water cycle?

18. What is fog? How is it formed?

19. What is precipitation? Does precipitation in atmosphere always result in rain?

20. What is transpiration and write the factors affecting it?

Short Answer type questions (4*3)

21. What is water pollution and write its causes?

22. What are the advantages of water harvesting?

23. What are the different ways by which water vapour is put into the atmosphere?

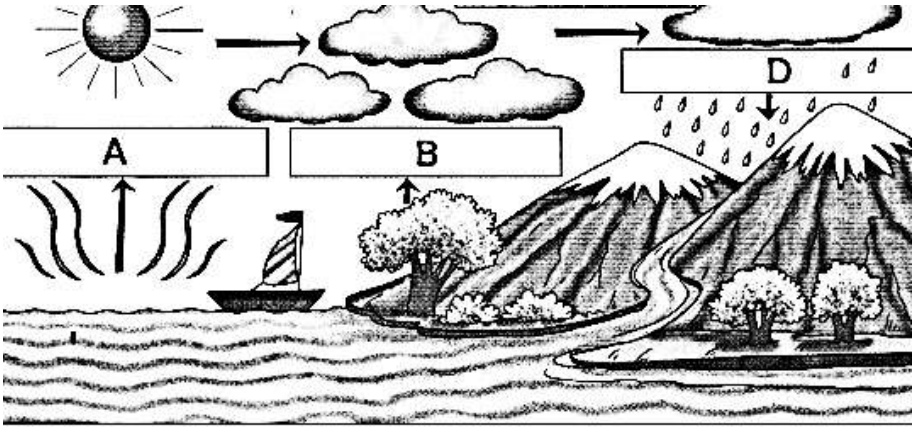
24. How will you show the presence of water vapour in the air?

The following question is case-based. Read the case carefully and answer the questions that follow.(4*1)

Water, nature's precious treasure, is a vital component of our ecosystem. As the global population grows, the demand for potable water increases, putting pressure on this finite resource. In India, the water cycle plays a crucial role in replenishing water sources, with the rainy season bringing much-needed relief ' to the country's agricultural lands and inhabitants. The monsoon season, which typically lasts from June to September, is a display of the water cycle's power, as it brings

life-giving water to the region, rejuvenating the environment and supporting the country's rich biodiversity. But, with increasing urbanization and industrialization, the demand for portable water is skyrocketing, highlighting the need for sustainable management and conservation of this precious resource to ensure its availability for future generations.

i)Predict the phenomena that are shown in the figure.



ii) How do the above phenomena help to maintain most of the life and ecosystems on the planet?

iii) Write all the terms related to 'A', 'B' and 'D' marked in the figure.

iv) How is condensation significant in the process of bringing evaporated water back to the Earth's surface?

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कक्षा /Class: VIII **विषय /Subject: Science** **माह/ Month: April** **अंक/Marks: 40**

माह/ Month: April दिया गया पाठ्यक्रम/Portion covered: Bridge Programme – 3. Food

विद्यार्थी का नाम/Name of the student: _____

अनुक्रमांक /Roll No._____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

MULTIPLE CHOICE QUESTIONS (1 MARK)

1.What does “food miles” refer to?
a) Distance travelled by food from producer to consumer
b) Nutritional value of food
c) Number of meals consumed in a day
d) Amount of food waste

2.Which one of the following food items does not provide dietary fibre?
a) Whole grains
b) Whole pulses
c) Fruits and vegetables
d) Milk

3.Which of the following millets is known as Bajra in India?
a) Pearl Millet
b) Finger Millet
c) Sorghum
d) Foxtail Millet

4.Which vitamin deficiency causes scurvy?
a) Vitamin E
b) Vitamin D
c) Vitamin C
d) Vitamin A

5.What is the primary function of carbohydrates in our body?
a) To provide energy

b) To build muscles
c) To protect against diseases
d) To help in digestion

6. Read the food items given below.
(i) Wheat
(ii) Ghee
(iii) Egg
(iv) Spinach
Which of the above food items are “energy giving foods”?
(a) (i) and (iv)
(b) (ii) and (iv)
(c) (i) and (ii)
(d) (iii) and (iv)

7.What role do vitamins play in the body?
a) Provide energy
b) Build muscles
c) Protect against diseases
d) None of the above

8. What is the term for a group of small-grained, drought-resistant cereals?
a) Wheat
b) Rice
c) Millets
d) Barley

9.Read the following statements about diseases:
(i) They are caused by germs.
(ii) They are caused due to a lack of nutrients in our diet.
(iii) They can be passed on to another person through contact.
(iv) They can be prevented by taking a balanced diet.
Which pair of statements best describes a deficiency disease?
(a) (ii) and (iv)
(b) (ii) and (iii)
(c) (i) and (ii)
(d) (i) and (iii)

10. Which of the following things are required for germination of seed?
a) Water

b) Correct temperature
c) Good quality of soil
d) All of these

ASSERTION AND REASON QUESTIONS (1 MARK)

11. Assertion (A): Roughage and water are rich in essential nutrients.
Reason (R): A balanced diet must contain roughage and water.
(a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.
(c) Assertion is true and Reason is false.
(d) Assertion is false and Reason is true.

12. Assertion (A): The gland present in our neck enlarges to cause goitre.
Reason (R): Deficiency of iodine causes goitre.
(a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.
(c) Assertion is true and Reason is false.
(d) Assertion is false and Reason is true.

13. Assertion (A): Sources of carbohydrates and fats are known as energy-giving foods.
Reason (R): Carbohydrates and fats help in the growth and repair of our body.
(a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.
(c) Assertion is true and Reason is false.
(d) Assertion is false and Reason is true.

14. Assertion (A): Foods containing proteins are called body building foods.
Reason (R): Paneer is a plant source of protein.
(a) Both Assertion and Reason are true and Reason is the correct explanation of Assertion.
(b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.
(c) Assertion is true and Reason is false.
(d) Assertion is false and Reason is true.

SHORT ANSWER TYPE QUESTIONS - I (2 marks)

15. People who eat seafood do not suffer from Goitre. Explain.
16. Why should a meal have different food items?
17.Why water is considered an important component of our diet?
18. What is roughage? What is the main function of roughage?
19. Write two symptoms of scurvy.

SHORT ANSWER TYPE QUESTIONS - II (3 marks)

20. What is a balanced diet? Write the components of balanced diet.

21.What are some ways to reduce food miles? What are its benefits?

22.Read the following items of food listed below. Classify those foods into carbohydrate-rich, protein-rich and fat-rich food.

rice, egg, beans, butter , fish,bread.

23.Why are millets considered a healthy food choice?

CASE BASED QUESTIONS (4 marks)

24. Rohan was having difficulty in seeing things in dim light. The doctor tested his eyesight and prescribed a particular vitamin supplement. He also advised him to include a few food items in his diet.

(a) Which deficiency disease is he suffering from?

(b) Which vitamin is lacking in his diet?

(c) Give two food items that he should include in his diet.

(d)Why is it important to include vitamins in our diet?

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Atomic Energy Education Society
कार्यपत्रक / Worksheet (2025-26)

कक्षा /Class: VIII विषय/Subject: Science माह/Month: April-May 2025 ____ अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: Bridge Programme – 4. Natural Resources

द्रिद्यार्थी का नाम/Name of the student: _____

अनुक्रमोंक /Roll No._____कक्षा/अनुभाग Class /Sec.:_____द्रिनोंक /Date: _____

I. Choose the correct answer: (10 x 1=10)

1. From which natural resources do we get solar energy?
   a) Soil c) Water
   b) Sun d) Air
2. Which of the following is a renewable resource?
   a) Coal c) Wind energy
   b) Petroleum d) Natural gas
3. The process of converting waste materials into reusable material is known as:
   a) Recycling c) Pollution
   b) Deforestation d) Over-exploitation
4. Which of the following resources is obtained from the Earth's crust?
   a) Soil c) Water
   b) Coal d) Air
5. Dark coloured soils are considered most fertile as they contain
   a) Gravel and sand c) Clay and humus
   b) Sand and earthworms d) Humus and gravel
6. _____ is the old rain water harvesting structure made by cement masonry or limestone.
   a) kunds c) johad
   b) tanka d) none of these
7. World water day is observed on
   a) 21st March c) 23rd March
   b) 22nd March d) 24th March
8. Biomass is an example of _____ resources.
   a) Renewable c) both a and b
   b) Non- renewable d) None of these
9. _____ is the key Indian agricultural sustainable practices.
   a) Crop rotation c) Both a and b
   b) Bench terracing d) none of these

10. Which of the following is a depletable sources _____

a) Coal
b) Petroleum
c) Natural gas
d) All of these

II. Choose the correct answer from options given below for the statements. (4x1=4)

(a) Both A and R are true, but R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true

11. Assertion (A): Soil erosion does not affect the fertility of soil.
Reason (R): Humus present in the soil is eroded along with soil

12. Assertion (A): Fossil fuels are renewable and non-conventional sources of energy.
Reason (R): The underground reserves of coal and petroleum are depleting fast. People should look at other non-conventional sources of energy like solar energy, tidal energy, etc. for their use.

13. Assertion (A): A depletion of non-renewable resources is a major concern for sustainable development.
Reason(R): Non-renewable resources such as fossil fuels are finite and its extraction and use cause environmental degradation and climate change.

14. Assertion (A): Irrigation has also changed the cropping pattern.
Reason (R): Crops are now sown according to the amount and availability of water.

III. Read the following passage and answer the question carefully. (4x1=4)

A solar oven or cooker is a system that cooks food by trapping the sunlight. A typical solar oven can be prepared in-house. It consists of aluminium foil as reflectors, a cardboard box as cooking chamber, a transparent plastic foil allows sunlight to enter and black paper sheet at the bottom of cardboard.

15. A transparent plastic foil is used to allow sunlight and also for_____.

a) providing clear view
b) protecting the oven
c) preventing heat from escaping
d) all of these

16. Solar oven or cooker is a system that works on the basis of _____.

a) hydro energy
b) wind energy
c) solar energy
d) geothermal energy

17. The usage of black paper sheet is for _____.
a) ensuring the protection
b) ensuring heat absorption
c) ensuring release of heat
d) none of these

18. Among the following the limitation of solar oven or cooker is _____.
a) weather dependent
b) cooking time
c) temperature control
d) all of these

IV. Short answer type questions -I **(5x2=10)**

19. What is meant by natural resources?
20. Why it is important to conserve non-renewable resources?
21. Name the technique of rainwater harvesting.
22. What are the ways to produce electricity?
23. List out any two most effective method of conserving soil.

V. Short answer type questions- II **(4x3=12)**

24. List three items that can be recycled and describe how they are recycled?
25. Describe the sustainable agricultural practices.
26. Why is it very essential to use resources more efficiently and reduce their wastage?
Explain any three reasons.
27. Look around your House and School, list any three ways to reduce wastage of water.

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कक्षा /Class:_8 विषय /Subject: Science माह/ Month: April अंक/Marks: 40

दिया गया पाठ्यक्रम/Portion covered: Theme 6: Heat and Air

विद्यार्थी का नाम/Name of the student: _____

अनुक्रमांक /Roll No._____ कक्षा/अनुभाग Class /Sec.:_____ दिनांक /Date: _____

Section A

Choose the correct answer from the given options. (1*10 = 10)

1. Which method of heat transfer takes place mainly in solids?
a) Convection b) Radiation c) Conduction d) Evaporation

2. What happens to air when it is heated?
a) It contracts and becomes heavier b) It expands and becomes heavier
c) It expands and becomes lighter d) It turns into a liquid

3.Why does hot air rise above cold air?
a) Hot air is heavier than cold air b) Hot air is less dense than cold air c) Cold air pushes hot air up d) Hot air reflects sunlight

4.Which of the following best demonstrates rising warm air?
a) A frozen lake in winter b) A balloon shrinking in a fridge c) Smoke rising from a candle
d) A metal rod getting hot

5.When air expands on heating, its particles:
a) Come closer together b) Move slower c) Move farther apart d) Stop moving

6.Which process in the water cycle involves plants releasing water vapor into the air?
a) Condensation b) Transpiration c) Precipitation d) Infiltration

7.What causes clouds to form in the atmosphere?
a) Evaporation b) Precipitation c) Condensation d) Sublimation

8.Which of the following is an example of precipitation?
a) Water vapor forming clouds b) Rain falling from the sky c) Ocean water heating up

d) Water moving underground

9.Evaporation is the process by which:
a) Water turns into ice b) Water vapor cools to form clouds c) Liquid water changes into water vapor d) Rainwater flows into rivers

10.What is the correct order of the main processes in the water cycle?
a) Condensation → Evaporation → Precipitation
b) Precipitation → Transpiration → Evaporation
c) Evaporation → Condensation → Precipitation
d) Transpiration → Precipitation → Condensation

For question numbers 11 to 14, two statements are given, one labelled Assertion(A) and the other labelled Reason(R). Choose the correct option from the codes (A), (B), (C) and (D) as given below (1*4= 4M)

Options:
(A) Both A and R are true, and R is the correct explanation of A.
(B) Both A and R are true, but R is not the correct explanation of A.
(C) A is true, but R is false.
(D) A is false, but R is true.

11. Assertion(A): A balloon filled with air expands when placed in hot water.
Reason (R): Heating causes air molecules to gain energy and move farther apart, increasing the volume of the air.

12. Assertion (A): A glass bottle filled with air may crack when heated strongly.
Reason (R): Air expands on heating, exerting pressure on the walls of the bottle.

13. Assertion (A): Hot air rises in a room.
Reason (R): Hot air expands, becomes less dense, and is pushed up by denser, cooler air.

14. Assertion (A): A metal cap on a glass bottle becomes tighter when heated.
Reason (R): Air inside the bottle expands on heating, pushing the cap outward.

Case-Based Question: Read the following passage and answer the following questions give15. On a sunny afternoon, Arun sat near the window doing his homework. A candle was burning nearby on the table. Suddenly, a small piece of paper lying beside the candle began to flutter and slowly rise upward. Curious, Aryan observed the smoke from the candle rising straight up into the air. He noticed that even the hot air above the flame felt different from the rest of the room.

(1*4=4M)

1. Why did the piece of paper above the candle begin to rise?
2. What causes the smoke from the candle to move upward?
3. What does this observation tell us about the nature of hot air?
4. Give one real-life example where rising hot air is used purposefully.

Section -B

Short Answer Type Questions (Type -1): (2*5 = 10M)

16. What is evaporation, and where does it occur in the water cycle?
17. Why does hot air rise?
18. What is the role of a kink in a clinical thermometer?
19. Why do we prefer wearing light-colored clothes in summer?
20. Why does a balloon expand when heated?

Short Answer Type Questions (Type -2): (3*4 = 12M)

21. Describe an experiment to show that air expands on heating.
22. How does the water cycle help maintain the balance of water on Earth?
23. What role do plants play in the water cycle?
24. What is condensation, and how does it contribute to the water cycle?

कुल मुद्रित पृष्ठों की सोंख्या/Total No.of printed pages:__

परमाणु ऊर्जा शिक्षणसंस्था
Atomic Energy Education Society
कार्यपत्रक / Worksheet (2025-26)

कक्षा/Class:_____ शिषर् /Subject: _____ माह/ Month:_____अंक/Marks:40
माह/ Month: _____दिया गया पाठ्यक्रम/ Portion covered: Metals And Non Metals
विद्यार्थी का नाम/Name of the student: _____
अनु क्रमांक /Roll No._____कक्षा/अनुभाग Class /Sec.:_____दिनांक /Date: _____

Section –A Multiple Choice Questions (10 Marks)

1. Which of the following metal is most malleable?

a) Iron b) Copper c) Gold d) Aluminium

2. A non-metal that conducts electricity is----------

a) Sulphur b) Phosphorus c) Graphite d) Bromine

3. Which of the following metal reacts vigorously with cold water?

a) Iron b) Copper c)Potassium d) Zinc

4. Rusting of iron occurs in the presence of----------

a) Hydrogen and sunlight b) Carbondioxide and water

c) Oxygen and water d) Nitrogen and water

5.Which one of the following is not a physical property?

a) Malleability b) Ductility c) Elecrolysis of water d) Sonorous nature

6 .Which one of the following shows metallic luster but is a non-metal?

a) Sulphur b) Iodine c) Carbon d) Phosphorus.

7. The most abundant metal in the earth crust is……..

a) Aluminium. b) carbon c) Magnesium. d) Iron

8. The liquid non- metal is _____.

a) Iron b) Copper c) Aluminium d) Bromine

9. Which of the following metal is stored under kerosene?

a) Zinc b) Potassium c) Magnesium d) Aluminium

10 . Electrical conductivity is highest in which of the following metals …….

a) Iron b)Mercury c) Silver d) Lead

Section B: Assertion and Reason (4 Marks)

Choose:

a) Both A and R are true, and R is the correct explanation of A

b) Both A and R are true, but R is not the correct explanation of A

c) A is true, but R is false

d) A is false, but R is true

11. Assertion(A): Aluminium is highly ductile.
    Reason (R) : Ductility is the ability to be drawn into thin wires.

12. Assertion(A) : Magnesium reacts with steam to form hydrogen gas.
    Reason (R) : Magnesium reacts with cold water rapidly.

13. Assertion(A) : Iron rusts faster in saline water.
    Reason (R) : Salt increases the conductivity of water,speeding up rusting.

14. Assertion(A) : Sodium is a soft metal and can be cut with a knife.
    Reason(R) : Sodium has a low melting point.

Section C: Very Short Answers (10 Marks)

15. Why are metals sonorous?

16. What happens when iron nails are placed in copper sulphate solution?

17. How does the physical state of sodium help in identifying it as a metal?

18. Why is magnesium ribbon cleaned before burning in air?

19. why carbon is not used to extract sodium from its compounds? Give reasons .

Section D: Short Answers (12 Marks)

20. How does the reaction of metals with oxygen differ among magnesium,iron,and copper?

21. Write a short note on the thermal and electrical conductivity of metals with examples.

22. How does malleability help in the usage of metals for construction? Give two examples.

23. Write a short activity to show that iron rusts in the presence of air and moisture.

Section E: Case-Based Question (4 Marks)

24 . Read the passage and answer the following questions:

Case: A student placed a clean magnesium ribbon in a test tube and heated it. A white powder was formed.The ash (Magnesium oxide) obtained was dissolved in warm water. When the solution was tested with moist red litmus paper, it turned blue.

24a) Name the white powder formed in the above reaction.

24 b) Which property of magnesium is shown when it reacts with oxygen?

24c) Write a balanced chemical equation for the reaction.

24 d) Why does red litmus paper turn blue?