*** Choose The Right Answer From The Given Options.** [10]

1. Which one is not hard to touch?

   (A) ice (B) wax (C) water (D) stone

   Ans. : (C) water

2. Which pair is state of the same matter?

   (A) green grass-plastic grass (B) ice-water

   (C) wax-stone (D) mountain-stone

   Ans. : (B) ice-water

3. In which case water seep through?

   (A) utensil (B) plastic (C) sand (D) human body

   Ans. : (C) sand

4. In which case water does not form vapours?

   (A) covered earthen pot (B) covered plastic bottle

   (C) sweat on our body (D) wet clothes kept in sunlight

   Ans. : (B) covered plastic bottle

5. The process taking place at room temperature is

   (A) water → vapours (B) water → steam (C) water → ice (D) vapours → liquid

   Ans.: (A) water → vapours

6. Which of the following can be converted into liquid form?

   (A) stone (B) wax (C) wood (D) glass

   Ans. : (B) wax

7. Choose an example of condensation'.

   (A) disappearance of water from puddles in the ground

   (B) deposition of water droplets over outside surface of glass tumbler

   (C) smell of yummy food from kitchen

   (D) rubbing of sanitizer with hands

   Ans. : (B) deposition of water droplets over outside surface of glass tumbler

8. Which of the following does not exhibit spreading properly?

   (A) oxygen (B) carbon dioxide (C) water vapour (D) wood

   Ans. : (D) wood

9. Which one will have highest rate of evaporation?

   (A) water in a plate kept in shade

(B) water in plate kept in sunlight

(C) water in plate kept on a rainy day

(D) water in a small cap of bottle

Ans. : (B) water in plate kept in sunlight

10. Which process represent condensation?

(A) water from oceans to clouds

(B) falling of rain

(C) water from lakes to clouds

(D) water from river to clouds

Ans. : (B) falling of rain

*** Fill In The Blanks With Correct Alternative.** [15]

11. _____ is needed for drinking, bathing, washing our clothes and many more functions.

Ans. : Water

12. Large part of the earth is covered by _____

Ans. : ocean and seas

13. The water in the oceans is very _____ in taste.

Ans. : salty

14. Ice, water and _____ are the three states of same material.

Ans. : steam

15. Water vapours get continuously added to atmosphere due to evaporation and _____

Ans. : transpiration

16. The process of conversion of vapours into liquid is known as _____

Ans. : condensation

17. Falling of _____ is called precipitation.

Ans. : water drops

18. If water during precipitation remains liquid till it reaches the surface of earth we have _____

Ans. : rains

19. Precipitation in frozen form is called _____

Ans. : hail/snow

20. Water drops present on gfass during winter morning is called _____

Ans. : dew

21. _____ carry the water which mainly serves the purpose of drinking.

Ans. : Rivers

22. Nearly all the trains in winters run late because of a natural phenomenon known as _____

Ans. : fog

23. _____ is the basis of life.

Ans. : Water

24. Most of the water that human beings use come from _____

Ans. : rivers

25. Oceans act as a _____ for large number of plants and animals.

Ans. : habitat

*** State Whether The Sentences Are True Or False.[1 Marks Each]** **[10]**

26. Water is needed in producing almost all materials and goods that we use in our everyday life.

Ans. : True

27. Oceans are the major sources of sweet water.

Ans. : False

28. Water from wet roads, rooftops and other places disappears some time after the rains.

Ans. : True

29. The process of condensation is opposite to evaporation.

Ans. : True

30. Clouds are the mixture of opaque gases.

Ans. : False

31. Condensation near the surface of earth, results in jog.

Ans. : True

32. Vapourisation takes place only in presence of sunlight.

Ans. : False

33. Cloudy formation occurs only at higher temperatures.

Ans. : False

34. Rains feed almost all other sources of water.

Ans. : True

35. We should take bath by as much water as we can.

Ans. : False

*** Answer The Following Questions In One Sentence.[1 Marks Each]** **[33]**

36. After rain water puddles appear in the playground. After some time these disappear. Where does the water go?

Ans. : Water gets absorbed by the soil on the playground. It also evaporates.

37. After washing the utensils, water remains on the surface of utensils. After sometime it dries. Where does the water disappear?

Ans. : Water from the surface of utensils evaporates with time.

38. Do you heat the pan to observe evaporation?

Ans. : No. Evaporation takes place at room temperature also.

39. Give three examples of evaporation.

Ans. : (1) Drying of wet clothes
(2) Drying of mopped floor
(3) Drying of sweat from our body.

40. Where does hand sanitizer disappear as you rub it in your hands.

Ans. : It disappears due to evaporation because on rubbing hands heat is produced.

41. While making dosa, we sprinkle some water on the hot pan. Soon it disappears. Where does it go?

Ans. : It converts into steam.

42. Take a tumbler with cold water. Keep it for some time. What do you observe?

Ans. : Some water droplets appear on the outer surface which become bigger with time due to condensation.

43. Suggest possible reasons explaining'the appearance of water droplets on the outer surface of the glass tumbler containing lemonade.

Ans. : Water does not come out from the glass tumbler. Water in the air deposits on the outer surface of the glass tumbler. This is due to condensation.

44. Give another example of condensation similar to water droplets on the outside tumbler containing cold water.

Ans. : Appearance of dew drops on the plants in the morning.

45. Name a substance that can be observed in three different states.

Ans. : Water

46. How do you get three states of water?

Ans. : Take some ice. Heat it. It melts and gets converted into water. On further heating water gets converted into its gaseous state, i.e., vapours.

47. State some examples where three states are exhibited.

Ans. : Wax, oil and ghee.

48. Give example of four gases which spread if left-open.

Ans. : Smell of yummy food from cooking, oxygen, carbon dioxide and LPG (Liquefied petroleum gas). Oxygen and carbon dioxide do not smell and are not noticeable.

49. What is melting?

Ans. : The process of conversion of a solid into liquid is called melting.

50. What is freezing?

Ans. : The process of conversion of liquid into solid state is called freezing.

51. How can you change ice to liquid state and then to vapour?

Ans. : By supplying heat slowly and continuously we can change ice to liquid ~ water and then to vapour.

52. How do you change water to ice?

Ans. : By placing water in a cold environment such as freezer.

53. Name two examples other than water where you observe liquid to solid change and vice versa.

Ans. : Wax and coconut oil.

54. What is atmospheric water generator (AWG)?

Ans. : This machine collects water from humid air and gives drinking water through the process of condensation.

55. In which case evaporation is faster-water in a bottle or water on a plate?

Ans. : The water on a plate will evaporate faster as its area exposed to air is larger.

56. Why do wet clothes placed on a clothes line get dry after some time? Explain.

Ans. : Wet clothes placed on a clothes line get dry after some time because water present in wet clothes is converted into water vapour due to evaporation and leaves them dry.

57. Water kept in sunlight gets heat from sun and is evaporated. But how does water kept under the shade of a tree also get evaporated? Explain.

Ans. : Air around us gets heated from sunlight. This warm air provides heat for evaporation of water kept in the shade.

58. How do the areas covered with concrete affect the availability of ground water?

Ans. : Areas covered with concrete reduce the seepage of rain water into the ground and this reduces the availability of ground water.

59. Why is there a need for conserving water? Give two reasons.

Ans. : The two reasons for the need for conserving water are:
(1) Increasing population needs more water.

(2) Availability of water is decreasing day-by-day.

60. Name the process which helps to bring evaporated water back to the earth's surface.

Ans. : Condensation.

61. Name the natural processes leading to water cycle.

Ans. : Evaporation and condensation.

62. Reflect on what you did really well in this activity.

Ans. : We increased the exposed area in the case of water in the plate. Water in the bottle had lesser exposed area. It was found that water evaporates faster as the exposed area increases.

63. What did I do well? Was I able to label all the parts of the water cycle? Which parts of the water cycle were unclear to me?

Ans. : We could label some parts of water cycle. It was difficult to distinguish between lake and river water. Also labelling ground water is difficult.

64. We see green coloured plastic grass at many places these days. Space around natural grass feels cooler than space around the plastic grass. Can you find out why?

Ans. : Space around natural grass feels cooler because it absorbs moisture from air.

65. Give examples of liquids other than water, which evaporate.

Ans. : Milk, oil, whisky, eye drops, sanitizer.

66. Fans move air around, creating a cooling sensation. It might seem strange to use a fan to dry wet clothes since fans usually make things cooler, not warmer. Normally, when water evaporates, it requires heat, not cold air. What do you think about this?

Ans. : Fans move the air faster around clothes and help these to dry faster because water evaporates faster.

67. Usually, when sludge is removed from drains, it is left in heaps next to the drain for 3-4 days. Afterward, it is transported to a garden or a field where it can be used as manure. This approach reduces transportation cost of the sludge and enhances the safety of individuals handling it. Reflect upon it and explain how.

Ans. : Water (moisture) from the sludge evaporates with time making it handling and transportation easier.

68. How is water present in the solid state'in nature?

Ans. : Ice, snow and frost are the solid state of water present in nature.

*** Answer The Following Questions In Short.[2 Marks Each]** **[10]**

69. Which of the two- water in earthen pot or water in stainless steel pot will give cold water after being left for some time? Illustrate with another example.

Ans. : Water in the earthen pot will be cold. It is because water from the surface of the earthen pot evaporates and imparts a cooling effect on water. On the other hand, water in stainless steel will not give cold water.
Another Example: We cool the surface of the roof or floor by sprinkling water over it. Surahi is also used for similar purpose.

70. How does condensation help to form clouds? What causes rain?

Ans. : When air moves higher above the earth's surface, it becomes cooler and cooler. At certain heights, the cooled vapour turns into droplets. When these droplets surrounded the dust particles, it forms clouds. When these cloudy droplets join together, it starts rain because drops are quite heavy and start falling.

71. What is water cycle?

Ans. : The water from the ocean and Earth's surface evaporates into the atmosphere as vapour. In due course of time it forms heavy clouds of water and dust droplets due to condensation. This then falls as rain, hail or snow, ultimately flowing to the oceans. This cycle of water is called water cycle.

72. Observe the activities in your house for a day. Identify the activities that involve evaporation. How does understanding the process of evaporation help us in our daily activities?

Ans. : We perform various activities where process of evaporation help us.
(i) We dry our clothes on a sunny and windy environment.
(ii) We can smell the food being cooked even without entering the kitchen.
(iii) Washed utensils dry up after some time.

73. Reflect on the statement "Water is our responsibility before it is our right." Share your thoughts.

Ans. : Only a small portion of water available on earth is fit for use by plants, animals and humAnswer:Most of the water is available in the oceans which we cannot use directly. We need water for drinking and many other activities. With increasing population the availability of safe water is decreasing. Though it is our right to get water'for our existence but at the same time it is our responsibility to keep water bodies free from pollution.

*** Answer The Following Questions In Brief.** **[6]**

74. Compare the properties of ice, liquid water and water vapour.

Ans. : The shape and volume of ice does not change when shifted from one container to another. In case of water, shape depends on the container but volume remains the same. In case of water vapour, both shape and volume change. It

occupies all available space.

Property	lee (solid state)	Water (liquid state)	Water vapour(gaseous state)
1. Ability to flow	No	Yes	Yes
2. Ability to spread	No	Yes	Yes

75. The seat of a two-wheeler parked on a sunny day has become very hot. How can you cool it down?

Ans. : To cool down the hot seat of a two-wheeler parked on a sunny day, we can:
→ Cover it with a wet cloth: Place a damp cloth or towel over the seat. The water will absorb heat as it evaporates, cooling the seat.
→ Sprinkle water on it: Lightly sprinkle water directly on the seat. The evaporating water will help to lower the temperature.
→ Use a sunshade or cover: If available, use a sunshade or seat cover to protect the seat from direct sunlight, which will help keep it cooler.
→ Park in the shade: If possible, move the two-wheeler to a shaded area to reduce the seat's exposure to direct sunlight.

*** Match the following.** [10]

Column A	Column B
76. Water cycle	A. Conversion of water into steam
77. Ocean	B. Water loss by plants
78. Evaporation	C. Conversion of water vapours into water
79. Transpiration	D. The major source of water
80. Condensation	E. Interconversion of water in various forms

Ans. :

Column A	Column B
1. Water cycle	E. Interconversion of water in various forms
2. Ocean	D. The major source of water
3. Evaporation	A. Conversion of water into steam
4. Transpiration	B. Water loss by plants
5. Condensation	C. Conversion of water vapours into water

81.

Column A	Column B
Q.1. Precipitation	A. Ice, water and steam

Q.2. Rain	B. Formed during winters due to cooling of atmospheric moistures
Q.3. Dew	C. Usually results in rain
Q.4. Fog	D. Feeds nearly all other water sources
Q.5. Three states of water	E. Suspended water droplets in atmosphere

Ans. :

Column A	Column B
1. Precipitation	C. Usually results in rain
2. Rain	D. Feeds nearly all other water sources
3. Dew	B. Formed during winters due to cooling of atmospheric moistures
4. Fog	E. Suspended water droplets in atmosphere
5. Three states of water	A. Ice, water and steam

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