Section A: Physical Nature of Matter (1–10)

1. Which of the following is not matter?
   a) Air
   b) Water
   c) Sound
   d) Stone
   Answer: c) Sound

2. Matter is made up of:
   a) Waves
   b) Continuous blocks
   c) Particles
   d) Energy
   Answer: c) Particles

3. The intermixing of particles of two different types of matter is called:
   a) Sublimation
   b) Diffusion
   c) Condensation
   d) Boiling
   Answer: b) Diffusion

4. The smell of hot food reaches us faster than cold food due to:
   a) Conduction
   b) Convection
   c) Radiation
   d) Faster diffusion
   Answer: d) Faster diffusion

5. The smallest unit of matter is:
   a) Atom
   b) Molecule
   c) Particle
   d) Cell
   Answer: c) Particle

6. Which one has the most space between particles?
   a) Solid
   b) Liquid
   c) Gas
   d) Plasma
   Answer: c) Gas

7. Matter can be classified on the basis of:
   a) Shape and size
   b) Texture and mass
   c) Physical and chemical nature
   d) Odour and density
   Answer: c) Physical and chemical nature

8. The diffusion becomes faster when:
   a) Temperature is decreased
   b) Pressure is decreased
   c) Temperature is increased

d) Volume is increased
Answer: c) Temperature is increased

9. The particles of matter attract each other:
   a) Very weakly in solids
   b) More in gases than liquids
   c) With a force that varies in different states
   d) Only in liquids
   Answer: c) With a force that varies in different states

10. Which activity shows that matter is made up of particles?
    a) Cutting chalk
    b) Dissolving salt in water
    c) Heating water
    d) Melting wax
    Answer: b) Dissolving salt in water

Section B: States of Matter (11–30)

11. Solids have:
    a) No shape
    b) Fixed volume and shape
    c) No volume
    d) Fixed shape only
    Answer: b) Fixed volume and shape

12. Which of the following is not a characteristic of solids?
    a) Compressibility
    b) Rigidity
    c) Definite shape
    d) Definite volume
    Answer: a) Compressibility

13. Liquids:
    a) Are rigid
    b) Do not have fixed shape
    c) Cannot be compressed
    d) Do not flow
    Answer: b) Do not have fixed shape

14. Gases have:
    a) Definite shape
    b) Definite volume
    c) High compressibility
    d) Strong intermolecular force
    Answer: c) High compressibility

15. Which of the following can be compressed most easily?
    a) Solid
    b) Liquid
    c) Gas
    d) Plasma

Answer: c) Gas

Section B (continued): States of Matter (16–30)

16. Which of the following takes the shape of the container but has fixed volume?
    a) Solid
    b) Liquid
    c) Gas
    d) None
    Answer: b) Liquid

17. Which state of matter has the highest kinetic energy?
    a) Solid
    b) Liquid
    c) Gas
    d) Plasma
    Answer: c) Gas

18. Which is highly rigid?
    a) Water
    b) Oxygen
    c) Iron
    d) Alcohol
    Answer: c) Iron

19. Solids can diffuse into:
    a) Solids only
    b) Liquids only
    c) Gases only
    d) Liquids and gases
    Answer: d) Liquids and gases

20. Gases diffuse faster than liquids because:
    a) They are heavier
    b) They have more energy
    c) Their particles move faster
    d) Both b and c
    Answer: d) Both b and c

21. Why do gases exert pressure on the walls of the container?
    a) Due to their weight
    b) Due to random motion
    c) Due to low mass
    d) Due to diffusion
    Answer: b) Due to random motion

22. Which has the weakest force of attraction between particles?
    a) Ice
    b) Water
    c) Steam
    d) Mercury
    Answer: c) Steam

23. Which has a definite volume but no definite shape?
    a) Oxygen

b) Water
c) Iron
d) Carbon dioxide
Answer: b) Water

24. What happens when you try to compress a gas?
a) Volume increases
b) It melts
c) Pressure increases
d) Its shape changes
Answer: c) Pressure increases

25. Sponge can be compressed although it is solid because:
a) It has air in holes
b) It is not matter
c) It is liquid inside
d) None of these
Answer: a) It has air in holes

26. Which property of gases allows filling balloons from a gas cylinder?
a) High compressibility
b) Rigidity
c) Diffusion
d) High density
Answer: a) High compressibility

27. Liquids are called:
a) Rigid matter
b) Elastic matter
c) Fluids
d) Compressible solids
Answer: c) Fluids

28. Which of the following will diffuse fastest?
a) Sugar in water
b) Ink in water
c) Perfume in air
d) Oil in water
Answer: c) Perfume in air

29. The reason we can move our hand in air but not through wood is:
a) Gases are lighter
b) Solids have stronger attraction
c) Liquids are slippery
d) Solids are compressible
Answer: b) Solids have stronger attraction

30. Which is an example of all three states of matter existing naturally?
a) Alcohol
b) Water
c) Carbon dioxide
d) Ice cream
Answer: b) Water

Section C: Change of State (31–50)

31. Ice melts at:
    a) 0°C
    b) 100°C
    c) –273°C
    d) 273 K
    Answer: a) 0°C

32. The process of converting a solid to liquid is:
    a) Fusion
    b) Boiling
    c) Freezing
    d) Condensation
    Answer: a) Fusion

33. What is the melting point of ice in Kelvin?
    a) 0 K
    b) 100 K
    c) 273 K
    d) 373 K
    Answer: c) 273 K

34. During melting, temperature:
    a) Increases
    b) Decreases
    c) Remains constant
    d) Changes randomly
    Answer: c) Remains constant

35. Heat energy required to change 1 kg solid to liquid at melting point is:
    a) Latent heat of vaporisation
    b) Latent heat of fusion
    c) Heat of combustion
    d) Sensible heat
    Answer: b) Latent heat of fusion

36. Boiling of water is a:
    a) Surface phenomenon
    b) Bulk phenomenon
    c) Condensation process
    d) Sublimation process
    Answer: b) Bulk phenomenon

37. At boiling point, water converts into:
    a) Ice
    b) Steam
    c) Dew
    d) Liquid
    Answer: b) Steam

38. The boiling point of water in Kelvin is:
    a) 100 K
    b) 0 K
    c) 373 K
    d) 273 K

Answer: c) 373 K

39. The energy absorbed during change of state is called:
    a) Radiant heat
    b) Kinetic energy
    c) Latent heat
    d) Specific heat
    Answer: c) Latent heat

40. The temperature of water and steam is the same but steam has more energy due to:
    a) High pressure
    b) Latent heat of vaporisation
    c) Evaporation
    d) Condensation
    Answer: b) Latent heat of vaporisation
41. Which of the following is not a characteristic of particles of matter?
    a) They have spaces between them
    b) They are in continuous motion
    c) They do not attract each other
    d) They are very small
    Answer: c) They do not attract each other

42. Which state of matter is most compressible?
    a) Solid
    b) Liquid
    c) Gas
    d) Plasma
    Answer: c) Gas

43. The boiling point of water on the Celsius scale is:
    a) 0°C
    b) 50°C
    c) 100°C
    d) 273 K
    Answer: c) 100°C

44. Which of the following processes causes a cooling effect?
    a) Condensation
    b) Evaporation
    c) Freezing
    d) Fusion
    Answer: b) Evaporation

45. What is the SI unit of pressure?
    a) Joule
    b) Newton
    c) Pascal
    d) Atmosphere
    Answer: c) Pascal

46. Sublimation is the change of a substance directly from:
    a) Solid to liquid
    b) Liquid to gas
    c) Solid to gas
    d) Gas to solid

Answer: c) Solid to gas

47. Which of the following is an example of a substance that shows sublimation?
    a) Water
    b) Camphor
    c) Oil
    d) Milk
    Answer: b) Camphor

48. Which of these will show the highest rate of diffusion?
    a) Solids
    b) Liquids
    c) Gases
    d) Plasma
    Answer: c) Gases

49. What happens to the motion of particles when heat is supplied to a substance?
    a) It decreases
    b) It stops
    c) It increases
    d) It remains constant
    Answer: c) It increases

50. Which of the following affects the rate of evaporation?
    a) Surface area
    b) Temperature
    c) Wind speed
    d) All of these
    Answer: d) All of these

Section D: Evaporation and Cooling (51–70)

51. Evaporation is a:
    a) Bulk phenomenon
    b) Surface phenomenon
    c) Chemical change
    d) Condensation process
    Answer: b) Surface phenomenon

52. Which of the following increases the rate of evaporation?
    a) Decrease in surface area
    b) Decrease in wind speed
    c) Increase in temperature
    d) Increase in humidity
    Answer: c) Increase in temperature

53. Evaporation causes:
    a) Heating
    b) Cooling
    c) Condensation
    d) Boiling
    Answer: b) Cooling

54. Wet clothes dry faster:
    a) On a humid day

b) In a closed room
c) On a windy day
d) At night
Answer: c) On a windy day

55. Rate of evaporation increases with:
a) Increased humidity
b) Decreased temperature
c) More surface area
d) Lesser wind speed
Answer: c) More surface area

56. What happens when acetone is poured on the palm?
a) It becomes hot
b) It dissolves the palm skin
c) It causes cooling
d) It evaporates without any effect
Answer: c) It causes cooling

57. Evaporation of sweat from the body surface helps in:
a) Heating
b) Digesting
c) Cooling
d) Respiration
Answer: c) Cooling

58. Which condition decreases evaporation?
a) High temperature
b) High surface area
c) High humidity
d) High wind speed
Answer: c) High humidity

59. Why do we wear cotton clothes in summer?
a) To look good
b) To absorb heat
c) To absorb sweat and help evaporation
d) To reduce humidity
Answer: c) To absorb sweat and help evaporation

60. Why does water sprinkled on a hot floor evaporate quickly?
a) The floor is rough
b) The floor absorbs water
c) High temperature increases evaporation
d) The water is dirty
Answer: c) High temperature increases evaporation

61. Water kept in an earthen pot becomes cool because of:
a) Condensation
b) Filtration
c) Evaporation
d) Absorption
Answer: c) Evaporation

62. What happens to the kinetic energy of particles when temperature increases?
a) It decreases

b) It remains same
c) It increases
d) It becomes zero
Answer: c) It increases

63. Why does perfume spread quickly in a room?
a) It evaporates and diffuses
b) It reacts with air
c) It sinks
d) It solidifies
Answer: a) It evaporates and diffuses

64. What is humidity?
a) Dust in air
b) Amount of water vapour in air
c) Amount of oxygen
d) Dryness in air
Answer: b) Amount of water vapour in air

65. Evaporation is more when:
a) The air is humid
b) The air is dry
c) The air is cold
d) There is no wind
Answer: b) The air is dry

66. Evaporation occurs at:
a) Only 100°C
b) Only 0°C
c) All temperatures
d) Only under pressure
Answer: c) All temperatures

67. Evaporation takes place faster when:
a) Surface area is small
b) There is no air flow
c) Humidity is high
d) Temperature is high
Answer: d) Temperature is high

68. Which of the following shows evaporation causing cooling?
a) Ice melting
b) Water boiling
c) Sweating
d) Steam forming
Answer: c) Sweating

69. Why does tea cool faster in a saucer?
a) Saucer is colder
b) Saucer has more surface area
c) Tea evaporates
d) Saucer has less heat
Answer: b) Saucer has more surface area

70. Why do we see water droplets on the outer surface of a glass with ice water?
a) Glass leaks

b) Water comes out of the glass
c) Water vapour condenses
d) Ice melts
Answer: c) Water vapour condenses

Section E: Conceptual & Application-Based (71–90)

71. Naphthalene balls disappear over time due to:
    a) Freezing
    b) Diffusion
    c) Sublimation
    d) Melting
    Answer: c) Sublimation

72. The conversion of gas directly to solid is called:
    a) Evaporation
    b) Condensation
    c) Deposition
    d) Fusion
    Answer: c) Deposition

73. Which of the following changes state directly from solid to gas?
    a) Ice
    b) Camphor
    c) Salt
    d) Sugar
    Answer: b) Camphor

74. What is dry ice?
    a) Frozen oxygen
    b) Solid carbon dioxide
    c) Ice with salt
    d) Frozen nitrogen
    Answer: b) Solid carbon dioxide

75. Which gas is used in LPG cylinders?
    a) Nitrogen
    b) Carbon dioxide
    c) Liquefied petroleum gas
    d) Oxygen
    Answer: c) Liquefied petroleum gas

76. Which property of gas helps in compressing it into a cylinder?
    a) Low mass
    b) Low energy
    c) High compressibility
    d) Low pressure
    Answer: c) High compressibility

77. What is the SI unit of pressure?
    a) Newton
    b) Pascal
    c) Kilogram
    d) Joule

Answer: b) Pascal

78. Which unit is used for measuring temperature in SI system?
    a) Celsius
    b) Fahrenheit
    c) Kelvin
    d) Degree
    Answer: c) Kelvin

79. What happens when pressure on gas is increased?
    a) Particles move apart
    b) Temperature increases
    c) It liquefies
    d) It becomes hot
    Answer: c) It liquefies

80. Conversion of solid to liquid involves:
    a) Increase in pressure
    b) Decrease in temperature
    c) Increase in energy
    d) Loss of mass
    Answer: c) Increase in energy

81. Conversion of liquid to gas is also called:
    a) Melting
    b) Condensation
    c) Boiling
    d) Solidification
    Answer: c) Boiling

82. Steam causes more severe burns than boiling water because:
    a) It is hotter
    b) It is lighter
    c) It has latent heat
    d) It is a gas
    Answer: c) It has latent heat

83. When a substance changes directly from gas to solid, it is called:
    a) Freezing
    b) Sublimation
    c) Deposition
    d) Melting
    Answer: c) Deposition

84. The density of a substance is calculated as:
    a) Volume ÷ Mass
    b) Mass ÷ Volume
    c) Force × Acceleration
    d) Length × Breadth × Height
    Answer: b) Mass ÷ Volume

85. Unit of density in SI system is:
    a) kg/m^2
    b) kg/m^3
    c) g/mL
    d) kg/L

Answer: b) kg/m³

86. 300 K is equal to:
    a) 27°C
    b) 0°C
    c) 100°C
    d) 37°C
    Answer: a) 27°C

87. Which physical state has highest density generally?
    a) Gas
    b) Solid
    c) Liquid
    d) Vapour
    Answer: b) Solid

88. Which state of matter has no fixed shape and no fixed volume?
    a) Solid
    b) Liquid
    c) Gas
    d) None
    Answer: c) Gas

89. What is responsible for the shape and volume of solids?
    a) Strong attraction between particles
    b) Random motion
    c) Low pressure
    d) High energy
    Answer: a) Strong attraction between particles

90. When humidity is high, evaporation:
    a) Increases
    b) Stops
    c) Slows down
    d) Becomes faster
    Answer: c) Slows down