

Time: 3 hrs

MM 80

SECTION A

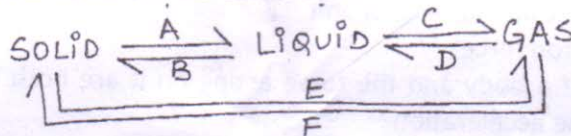
(68)

- Q1 A scooter acquires a velocity of 20m/s in 10s just after the start. Calculate the acceleration of the scooter. 1
- Q2 In which of the following, the particles have the highest forces of attraction? Water, NaCl (solid), Ice and wax. 1
- Q3 It is a hot summer day, Priyanshi and Ali are wearing cotton and nylon clothes respectively. Who do you think would be more comfortable and why? 2
- Q4 What is the use of odometer and speedometer in a vehicle? 2
- Q5 Write two main features of kingdom 'protista'. 2
- Q6 Give any two differences between angiosperms and gymnosperms. Give one example of each. 3
- Q7 Draw a plant cell and label plasma membrane, vacuole and nucleus. 3
- Q8 Write three differences between plants and animals. 3
- Q9 Name the following: 3
- a) Animals with jointed legs *Batuo* b) Spiny skinned organisms
- c) *Buo* Amphibians of plant kingdom
- Q10 What are the differences between mass of an object and its weight? 3
- Q11 Why is it advised to tie your luggage kept on the roof of a bus with a rope? 3

OR

- Q12 Give three examples of Newton's 2nd law of motion. 3
- Q12 Neha swims in a 100m long pool. She covers 200m in one minute and forty seconds by swimming from one end to the other and back along the same straight path. Find (a) the average speed (b) the average velocity of Neha. 3

- Q13 a) Name the process of each interconversion. 1½x2=3



A- B- C- D- E- F-

- b) 'A small volume of water in a kettle can fill a kitchen with steam.' Explain.

OR

- a) Do as directed 1½x2=3
- (i) Convert -273°C to K (ii) Covert 373K to °C (iii) Convert 25°C to K
- b) Distinguish between solids, gases and liquids on the basis of (i) compressibility, (ii) diffusion
- Q14 Anil had a jar of kerosene oil which was kept for running the generator. He also had a jar of water kept at the same place. Both were half filled. Anil thought of putting all the kerosene oil in one jar. Then he realised his mistake that he had mixed water into oil. He narrated this problem to his friend Sunil. Sunil said, "There is nothing to worry. I shall solve your problem."
- a) What remedy do you think Sunil provided to Anil?
- b) What is the principle of the technique suggested by Sunil?
- c) What values are displayed by Sunil?
- Q15 How will you separate the components of a mixture containing ammonium chloride, sand and iron fillings? 3

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- Q16 Give reasons for the following :- 5
- a) Ice floats on water.
 - b) Palm feels cooler when acetone is poured on it.
 - c) Temperature remains constant during the change of state.
 - d) Diffusion is faster during summers.
 - e) Boiling point of water in Shimla is lower than that in Delhi.

- Q17 a) Classify each of the following as physical or chemical change: - 5
- i) Drying of a shirt in the sun.
 - ii) Burning of kerosene in a lantern.
 - iii) Change in the colour of black tea on adding lemon juice to it.
 - iv) Churning of milk cream to get butter.
 - v) Rusting of iron.
 - vi) Mixing of iron fillings and sand.
- b) Calculate the mass of sodium sulphate required to prepare its 20%(m/m%) solution in 100g of water.

- Q18 a) What is the function of muscular tissue?
 b) Name the protein present in muscular tissue.
 c) Draw the three muscular tissues and label them. 5

OR

- What is a neuron? Draw a diagram of neuron and label its parts. 5
- Q19 a) Define 'osmosis' and 'diffusion'.
 b) What happens to a cell when placed in hypotonic, hypertonic and isotonic solutions? 5

- Q20 a) State the universal law of gravitation. 5
 b) Is the force of gravity stronger on a piece of iron than a piece of wood if both have the same mass?
 c) Differentiate between 'gravitational constant, G' and 'acceleration due to gravity, g'.

- Q21 a) Define momentum. State its SI unit. 5
 b) Define 1 Newton force.
 c) If the mass of a body and the force acting on it are both doubled what happens to the acceleration?

SECTION B

(12)

- Q22 On reflection from a surface, sound obeys the laws of reflection. State this law of reflection of sound. 2

- Q23 a) Define pulse. 2
 b) Can sound travel in vacuum?

- Q24 Draw the transverse section of sclerenchyma and label it. 2

- Q25 Write two characteristics of
 a) Annelida b) Aves 2

- Q26 A sample of water under study was found to boil at 102°C at normal temperature and pressure. Is the water pure? Explain your answer. 2

- Q27 A sample of milk was taken in a beaker and placed in front of a light source like a torch. The milk looked illuminated but when the same test was done with a salt solution, it was found that light simply passed through it. 2
- a) Name the phenomenon involved.
 - b) Why the same result was not obtained with a salt solution?

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