**SINDHI HIGH SCHOOL, HEBBAL**

**I UNIT TEST [2023-24]**

**Subject: SCIENCE**

**ANSWER KEY**

**Class: IX Max. Marks: 30**

**Date: .06.2023 Reading time: 8:00 – 8:10a.m**

**No. of sides: 1 Writing time : 8:10 – 9:10 am**

**Section A**

1**.** (b) 2r **1**

2**.** Ans; a.308.15K and 391.15K **1**

3**.** Answer b. Particles of water have the property to flow.  **1**

4**.** (d) A is false but R is true. **1**

5. a) Both A and R are true and R is the correct explanation of A. **1**

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**Section B**

**7.** a) Dry raisins swell and become turgid in pure water, later when it is transferred to sugar solution it shrinks and becomes flaccid. ( ½, ½)

b) Storage, modification and packaging of products into vesicles and formation of lysosomes is prevented.

(½, ½) **2**

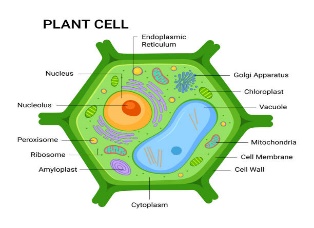
**8.**  Ans: B ˂ A ˂ C. More the interparticle space, lesser would be the interparticle force

Ans:Solid CO2, Ammonium chloride,/iodine/camphor/ naphthalene or any relavant examples **2**

**9.** The particles at the surface of the liquid gain energy from the surroundings or body surface and change into vapour. Thus evaporation cause cooling. Our palm feel cold on pouring some acetone /petrol /perfume on it/Sipping hot tea or milk faster from a saucer rather than a cup/ Desert coolers cools better during summer, Cotton clothes produce cooling effect in summer. (any such relavant examples) **2**

**Section C**

**10.** a) Plastids, large vacuoles (½, ½**)** **3**

 b) **(**  **½** **x4=2)**

(i) Nucleus (ii) Cell wall (iii) Plastids (iv) Vacoule)

**11.** a) Yes, displacement can be zero even when distance is not zero **3**

example :- when a body travels in circular path , after covering a circle the distance cannot be zero, but its displacement is zero.(1)

b)**In the first case:**

Since body starts from stationary position,

Initial velocity, u = 0 (0.5)

final velocity, v = 6 ms-1

time, t = 30 s

a =v−u (0.5)

t

a= 6-0 = 0.2 ms-2  (0.5)

30

**In the second case:**

initial velocity, u = 6 ms–1

time, t = 5 s

a= 4-6

5

= -0.4 ms-2  (0.5)

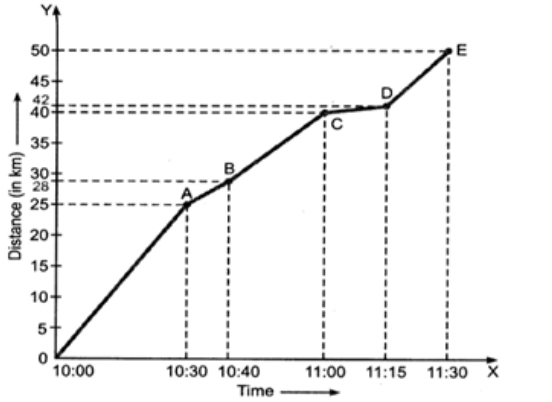
**12.** Ans: (i) Melting point and boiling point

(ii)The heat provided is utilised to break the force of attraction between the particles.Heat energy is absorbed without any rise in temperature.

(iii) On decreasing the temperature , the kinetic energy decreases, for compression, the pressure of gas must be increased **3**

**Section D**

13.i) **5**



ii) Average speed = Total distance

Total time taken

In this problem, the total distance travelled = 50 km.

Total time took 10:00 AM to 11: 30AM= 1.5 hr

Average speed= 50/1.5 = 3.33 Km h-1

iii) We, know, speed = slope of the distance-time graph. The greater the slope the greater is the speed.

From the graph, it is clear that slope of the distance-time graph is maximum between 10:00 AM to 10:30 AM, so the train was travelling at the highest speed during this interval of time.

iv) The part CD of the graph has a minimum slope, so the train had a minimum speed between 11:00 AM and 11:15 AM. Thus, the train had slowed down between 40 km and 42 km.

v) Speed between 10:40 AM to 11:00 AM= Distance

Time

Time= 20 min = 20/60

Speed= (40-28)60 =36 Km/hr

20

**Section E**

**14.**1**.** Mitosis and Meiosis. ( ½) **4**

Mitosis is and equational division and each parent cell gives two daughter cells with same chromosomes as that of parent.

Meiosis is a reductional division and each parent cell gives rise to four daughter cells with half the number of chromosomes of the parent cell. ( 1 ½)  2. Nuclear region of bacterial cell is poorly defined and lacks any covering while nuclear region of an animal cell is well defined and membrane bound 1

3. a. Plastids and Mitochondria. as they have their own DNA and ribosomes so they prepare their own proteins.

1

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