SUCCESS KEY TEST SERIES

X (English)

(Worksheet-2 Sci-1 (Ch- 5,6))

Science And Technology - I-

DATE:

TIME: 1 hrs

MARKS: 20

SEAT NO:

Q.1 A) Solve the following questions. **(2)**

1) Air : lowest refractive index : : ..... : highest refractive index

2) The velocity of light rays of all frequencies in vacuum is ..... .

B) Choose the correct alternative and rewrite the sentence **(3)**

1) Yesh find out F_1 and F_2 of symmetric convex lens experimentally then which conclusion is true.

a. $F_1 = F_2$ b. $F_1 > F_2$ c. $F_1 < F_2$ d. $F_1 \neq F_2$

2) Ice/water is a substance that ..... .

a. Expands on melting and contracts on freezing

b. Contracts on melting and does not undergo change in volume on freezing

c. Contracts on melting and expands on freezing

d. Does not undergo any change in volume on melting or freezing

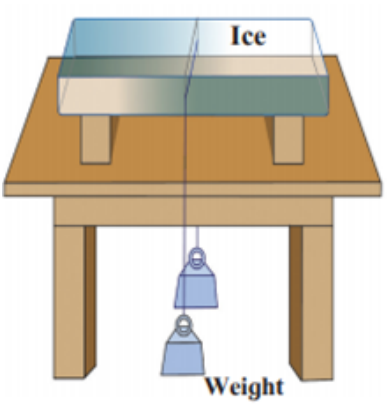
3) Water expands on reducing its temperature below …….. $^{\circ}$C.

a. 0 b. 4 c. 8 d. 12

Q.2 Solve the following questions. (Any two) **(4)**

1) The sun is seen before sunrise and after the sunset.

2) Study the figure and answer the following questions.



1. Identify and explain the phenomenon shown in the figure.

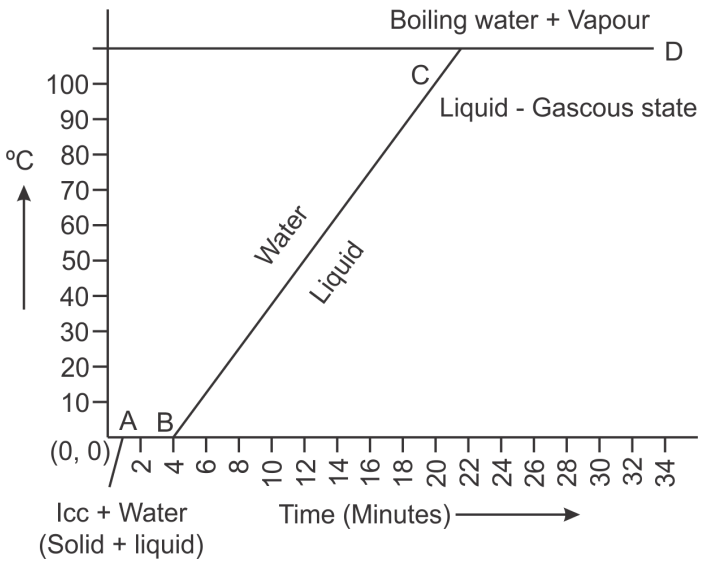
2. What happens to the melting point when pressure is applied or removed from ice slab?

3) 1. What can be studied with Hope's apparatus?

2. What mixture is used for this experiment?

Q.3 Solve the following questions. (Any two) **(6)**

1) Explain the following temperature vs time graph.

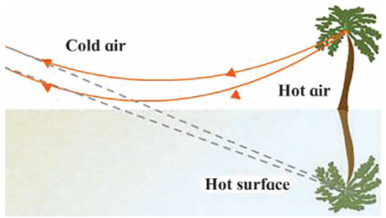


3) A thermally insulated pot has 150 g ice at temperature 0°C. How much steam of 100°C has to be mixed to it, so that water of temperature 50°C will be obtained? (given latent heat of melting of ice = 80cal/g, Latent heat of vaporization of water = 540cal/g, specific heat of water = 1cal/g°C).

2) i. What are the different ways of heat transfer ?
ii. Is the concept of latent heat applicable during transformation of gaseous phase to liquid phase and from liquid phase to solid phase ?
iii. Where does the latent heat go during these transformations ?
iv. We feel that some objects are cold and some are hot. Is this feeling related in some way to our body temperature ?

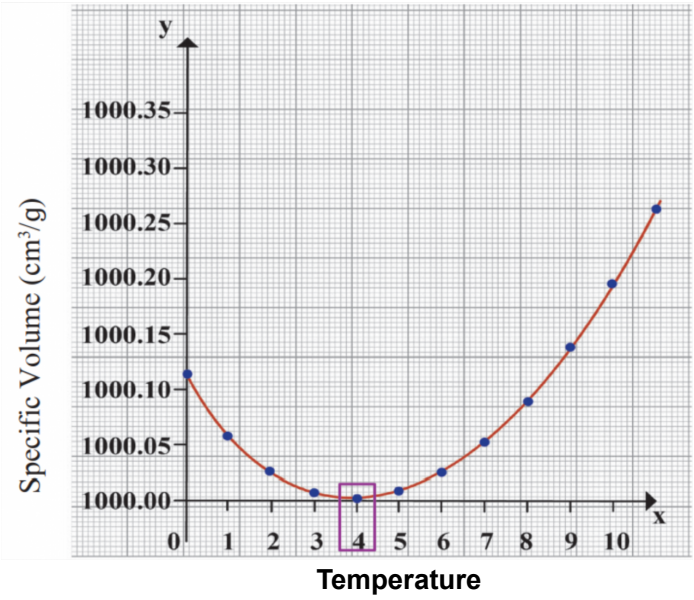
Q.4 Solve the following questions. (Any one) **(5)**

1)



i. Name the phenomenon. (1)
ii. Define the phenomenon. (1)
iii. State the cause of this phenomenon. (3)

2) Observe the following graph. Considering the change in volume of water as its temperature is raised from 0°C, discuss the difference in the behavior of water and other substances. What is the behavior of water called ?


y
1000.35
1000.30
1000.25
1000.20
1000.15
1000.10
1000.05
1000.00
Specific Volume (cm³/g)
0
1
2
3
4
5
6
7
8
9
10
x
Temperature