Std: VII   **M. Marks:50**
Date: **Duration:2hrs.**

General Instructions:

1)   The question paper comprises five sections- A, B, C, D and E. There are 24 questions in the question paper. All questions are compulsory
2)   Internal choice has been provided in some questions. A student has to attempt only one of the alternatives in such questions.
3)   Section A consists of question number 1 to 12. These question are MCQ's and Assertion Reason question. They carry one mark each.
4)   Section B consists of question number 13 to 16. These are short answer questions which carry two marks each.
5)   Section C consists of question number 17 to 20. These are short answer questions which carry three marks each.
6)   Section D consists of question number 21 and 22. These are long answer questions which carry five marks each.
7)   Section E consists of question number 23 and 24. These are Case Based Answer questions which carry four marks each.

SECTION A

1. A thermometer which is used to measure the melting point of ice is
   a) Laboratory thermometer   b) Clinical thermometer
   c) Both (a) and (b)   d) Digital thermometer
2. Symbiosis can also occur in _____
   a) bee and a flower   b) fish and algae   c) both a and b   d) none of the above
3. Name the metal filled in the bulb of thermometer.
   a) Silver   b) Lead   c) Mercury   d) Copper
4. No digestion of food takes place in _____
   a) mouth   b) intestine   c) stomach   d) oesophagus
5. The chemical formula of calcium carbonate is_____
   a) CaO   b) $CaCO_3$ c) $Ca(OH)_2$ d) $CaCl_2$
6. The basic unit of distance is_____
   a) kilogram   b) joule   c) meter   d) gram
7.When an ebonite rod is rubbed against flannel, it develops _____ charge.
   a) no charge   b) positive   c) negative   d) both positive and negative
8. _____ helps to keep the appliances uncharged and also protects us from electric shocks.
   a) Friction   b) conduction   c) induction   d) earthing

Question numbers 9 to12, two statements are given. One labeled Assertion (A) and the other labeled reason (R). Select the correct answer to these question from the codes (a), (b), (c) and (d)
   a) Both (A) and (R) are true and R is the correct explanation of A.
   b) Both A and R are true and R is not the correct explanation of A.
   c) (A) is true but (R) is false
   d) (A) is false but (R) is true.

9. Assertion (A): Pure substances are classified as elements and compounds.

    Reason (R): Mixtures are not pure substances.

10. Assertion (A): Every object moves with a constant speed.

    Reason (R): The basic unit of speed is meter per second.

11. Assertion (A): Bottom of cooking utensils are coated black.

    Reason (R): Black absorbs heat better than other colors.
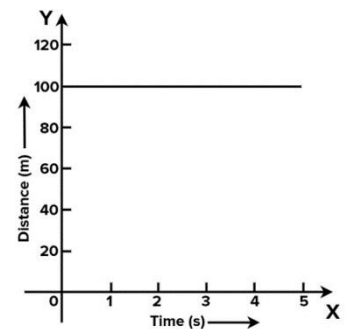
12. Assertion(A): During heavy exercise the breathing rate of a person slows down.

   Reason (R): Frogs breathe through their skin as well as their lungs.

SECTION B

13. a) Identify the state of motion of the object from the distance-time graph shown in the adjoining figure.

    b) Name the quantity that defines distance per unit time of an object. Also give its S.I unit.

14. a) Identify the type of thermometer shown in the adjoining figure.

    b) Write the boiling point of water in Celsius and Fahrenheit.
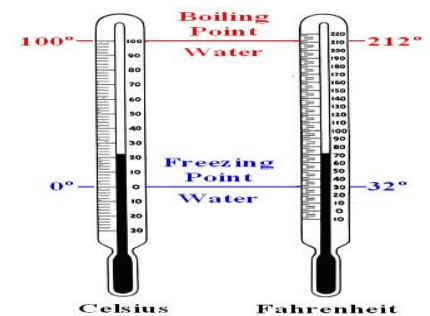
15 a) The mercury does not fall or rise in a clinical thermometer when taken out of the mouth. Explain why?

    b) What do you mean by thermal expansion?

16 a) Identify the type of motion.

    b) Give two more examples of this type of motion.

OR

16. a) Give the chemical symbol of iron and bromine.

   b) Write the chemical formula of aluminum sulphate. (show the steps)

SECTION C

17. Raghu started his trip from Mumbai to Nashik by his own car. On his way, at some places he could drive very fast and some other places he found it very difficult to pick up with the same speed. His speed was constantly monitored by his enthusiastic son studying in class 5. However, he was very much relieved on reaching the destination and then Raghu explained his son the importance of speed and safe driving during the journey.

TIME	Distance covered by Raghu (Km)
6 am	0
7 am	50
8 am	100
9 am	150
10 am	200

a) Plot the distance – time graph for Raghu's car on a graph paper.

b) Identify the type of motion.

18. a) Identify the mode of transfer of heat shown in the figure.

b) Why is metal strip used for this activity?
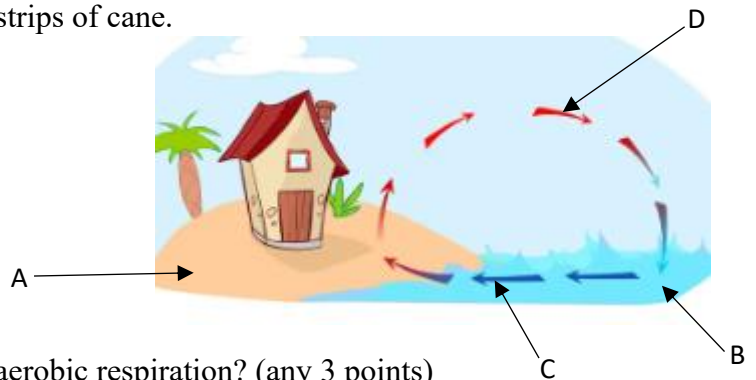
c) Why are cooking pans provided with wooden handles?
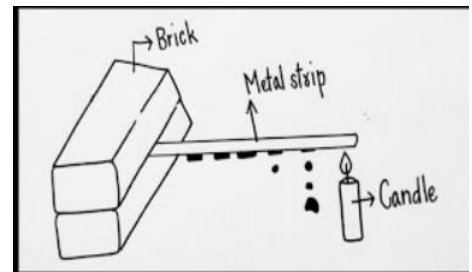
OR

18**. Give reasons: -**

a) Why do organisms take food?
b) The handle of metallic kettle is covered with strips of cane.
c) We get muscle cramps after heavy exercise.

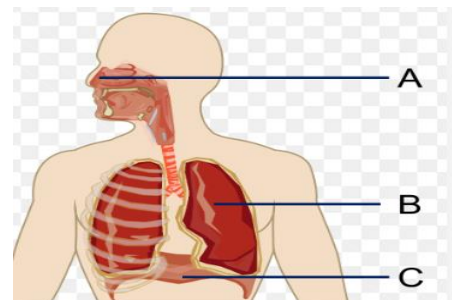19.a) Identify the given figure.

b) Label the parts A, B, C and D

20. How is aerobic respiration different from anaerobic respiration? (any 3 points)

SECTION D

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21.a) Identify the organ system.
b) Identify the organs A, B and C.
c) Define Breathing.
d)What is the function of diaphragm?
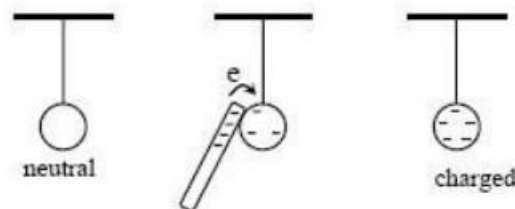e) What is the breathing rate of normal adult?

OR

21. a) Identify the method of charging shown in the figure.

   b) Define the above method of charging.

   c)Identify the charge produced when a glass rod is rubbed

     against silk.

   d)What happens when a positively charged object is brought near a negatively charged object?

   e) When do we say that an object is electrically charged?

22. Rati had gone out for a walk in the evening. Suddenly it started raining heavily and she could also see lightning and hear thunder.

a) What precautions should she take as she is caught in the open? (ANY 2)

b) Give two advantages of lightning.

c) Buildings have tall structures well above the height of building. What is the name given
   to this structure?

SECTION E

Question numbers 23 and 24 are case based questions having 5 sub-parts. You are expected to answer any 4 sub parts in these questions.

23. A car moves from Position A to Position B. The odometer reading noted at the start of the trip was 2800 km and at the end of trip it was 3000 km. As the road was too crowded, the car was moving with a speed of 40km/h.

   a) Calculate the time taken to cover this distance. (Show all the steps)
   b) What type of motion is shown by car?
   c) SI unit of distance is _____
   d) Define average speed.
   e) S.I unit of speed is _____

24. A chemical reaction is a representation of chemical change in terms of symbols and formulae of reactants and products. There are various types of chemical reactions like combination, decomposition, displacement, neutralization following represents one such reaction:

$$2FeSO_4(s) \rightarrow Fe_2O_3 (s) +SO_2(g) + SO_3(g)$$
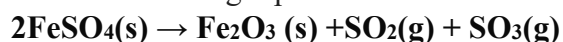
   a) Identify the type of reaction.
   b) Write the names of reactants and products in the given reaction.
   c) Name the elements of Fe_2O_3.
   d) Write the symbol of Iron ion.
   e) In the above reaction, symbols (s) means the compound is in _____ state and (g) means the compound is in _____ state.