



परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society

टर्म-1/आवधिक परीक्षा-2 2023-24 Term-I/PT-II Examination 2023 - 24

कक्षा /Class : VII

अवधि/ Duration :3 Hours

विषय /Subject :Science

अधिकतम अंक/ Maximum Marks :80

General Instructions:

- This question paper comprises of two parts- Part A and Part B. There are 47 questions and all questions are compulsory.
- **Part A:** Question No 1 to 30 are multiple choice type questions (MCQ) carrying one mark each which includes Assertion and Reason type and Case study type questions.
- **Part B:**
 - i) Question No 31 to 37 are Short Answer Type-I (SA-I) questions carrying 2 marks each.
 - ii) Question No 38 to 44 are Short Answer Type-II (SA-II) questions carrying 3 marks each.
 - iii) Question No 45 to 47 are Long Answer Type (LA) questions carrying 5 marks each.
- Draw a neat and labelled diagram wherever necessary.

SECTION A

Choose the correct option for the questions given below:

1x30=30

1. In which of the following set of substances, both the substances are acidic?

a) Grapes, lime water	b) vinegar, soap
c) Curd, milk of magnesia	d) curd, vinegar
2. A parasitic plant with yellow, slender and tubular stem is:

a) pitcher plant	b) Sunflower	c) mistletoe	d) cascuta
------------------	--------------	--------------	------------
3. Which part of a plant helps in capturing solar energy?

a) root	b) stem	c) leaf	d) branches
---------	---------	---------	-------------
4. A beggar wrapped himself with a few layers of newspapers on a cold winter night. This helped him to keep himself warm because:
 - a) Friction between layers of newspaper produces heat
 - b) Air trapped between the layers of newspaper is a poor conductor of heat.
 - c) Newspaper is a conductor of heat.
 - d) Newspaper is at a higher temperature than the temperature of the surroundings

5. What is the range of the temperature reading of a clinical thermometer?

- (a) $35^{\circ}\text{C} - 42^{\circ}\text{C}$ (b) $-10^{\circ}\text{C} - 110^{\circ}\text{C}$ (c) $0^{\circ}\text{C} - 100^{\circ}\text{C}$ (d) $32^{\circ}\text{C} - 42^{\circ}\text{C}$

6. Which of the following blood cells are responsible for clotting of blood?

- a) RBC
b) WBC
c) Platelets
d) all of these.

7. The pores on the lower surface of the leaf are known as:

- a) chlorophyll b) xylem c) phloem d) stomata

8. Rhizobium which helps in increasing the fertility of the soil by fixing Nitrogen is a:

- a) virus b) alga c) bacterium d) fungus

9. Breathing is a process that:

- i) Provides Oxygen to the body ii) breaks down food to release energy
iii) helps the body to get rid of Carbon dioxide iv) produces water in the cells

Which of the following gives the correct combination of functions of breathing?

- a) i) and ii) b) ii) and iii) c) i) and iii) d) ii) and iv)

10. The enzyme present in saliva converts:

- a) fats into fatty acids and glycerol b) starch into simple sugars
c) proteins into amino acids d) proteins into ammonia

11. In the cells, oxygen is used to break down glucose into

- (a) carbon dioxide, water and energy (b) fats
(c) alcohol, carbon dioxide and energy (d) lactic acid, water and energy

12. Which of the following is not a chemical change?

- a) rusting of iron b) digestion of food c) rolling a chapatti d) baking a chapatti

13. Insects have a special network of tubes called

- (a) tracheae (b) gills (c) spiracles (d) lungs

14. When soil is too basic, plants do not grow well in it. To improve its quality, what must be added to the soil?

- a) organic matter(humus) b) quick lime c) slaked lime d) calamine solution

15. One litre of water at 30°C is mixed with one litre of water at 50°C . The temperature of the mixture will be:

- a) 80°C b) More than 50°C but less than 80°C
c) 20°C d) between 30°C and 50°C

16. Pitcher plant traps insects because it _____
- a. is a heterotrophs b. grows in soils which lacks nitrogen
c. does not have chlorophyll d. has a digestive system like human being
17. In human beings the absorption of nutrients and exchange of respiratory gases between blood and tissues takes place through:
- a) heart b) capillaries c) veins d) arteries
18. Which instrument is used to measure heart beat in human beings?
- a) Stethoscope b) sphygmomanometer c) manometer d) potentiometer
19. The respiratory organs in a frog are:
- a) moist skin and lungs b) gills c) trachea d) book lungs
20. During inhalation ribs move:
- a) Upwards and outwards b) upwards and inwards
c) Downwards and inwards d) downwards and outwards

For question numbers 21 to 24 read the following paragraph and answer the questions that follow.

When we take a small strip of Magnesium ribbon and bring its tip near candle flame, it burns with a brilliant white flame. When it is completely burnt it leaves behind a powdery ash. To check the nature of the ash, it is collected and mixed with small amount of water. Mixture is stirred well and tested with blue and red litmus papers.

21. What type of change occurs when Magnesium ribbon is burnt?
- a) Physical b) Chemical c) neither physical nor chemical d) sometimes physical
sometimes chemical depending on the temperature
22. What colour change is observed when mixture of ash and water is tested with litmus papers?
- a) Blue litmus paper changes to red
b) Blue litmus paper changes to green
c) Red litmus paper changes to blue.
d) Red litmus paper changes to green.
23. What is the name of the new substance formed when Magnesium ribbon is burnt in air?
- a) Magnesium Hydroxide b) Magnesium Carbonate c) Magnesium Oxide d) All of these
24. The name of the substance obtained after mixing powdery ash with water is:
- a) Milk of alumina b) Milk of Magnesia/Magnesium hydroxide
c) Calcium Carbonate d) Sodium Hydrogen Carbonate

For question numbers 25-28 read the following paragraph and answer the questions that follow.

Amoeba is a microscopic single celled organism found in pond water. Amoeba has a cell membrane, round dense nucleus and many bubble like vacuoles in its cytoplasm. Amoeba constantly changes its shape and position. It pushes out one or more finger like projections, called pseudopodia for movement and capture of food. Amoeba feeds on some microscopic organisms. When it senses food, it pushes out pseudopodia around the food particle and engulfs it. The food becomes trapped in food vacuole.

25. The mode of nutrition in amoeba is:

- a) autotrophic b) heterotrophic c) saprophytic d) both a) and b)

26. In amoeba digestion of food takes place in:

- a) contractile vacuole b) food vacuole c) gas vacuole d) nucleus

27. The undigested residue of food is expelled outside the body of amoeba by:

- a) nucleus b) cytoplasm c) pseudopodia d) vacuole

28. The function of pseudopodia in amoeba is:

- a) locomotion b) capturing food c) digestion d) both a) and b)

For question numbers 29 and 30 Two statements are given, one labelled **Assertion(A)** and the other labelled **Reason(R)**. **Select the correct answer to these questions from codes (a), (b), (c) and (d) as given below.**

- a) Both assertion and reason are true and reason is the correct explanation of the assertion
b) Both assertion and reason are true but reason is not the correct explanation of assertion.
c) Assertion is true and reason is false
d) Assertion is false, but reason is true

29. Assertion (A): The small intestine in humans is about 7.5 m long and highly coiled.

Reason(R): The small intestine is smaller in length as compared to large intestine.

30. Assertion (A): Xylem transports water and dissolved minerals from roots to the rest of the plant.

Reason(R): Phloem transports food from leaves to the rest of the plant.

SECTION B

Question no.31 to 37 are Short Answer Type questions.

31. What is photosynthesis? Write a word equation for it. (2)

32. Anushka and her friends went for a picnic in a garden near Anushka's house. After having snacks, they started playing. Suddenly Anushka had ant bite. She complained of pain and

burning sensation. One of her friends called her mother and her mother rubbed baking soda on the affected area and she got relief.

- i) What could be the reason for this burning and pain?
- ii) Why did Anushka get relief after rubbing baking soda? (2)
- 33. What are ruminants? Why are they able to digest cellulose? (2)
- 34. Which organ secretes bile in human beings? What is its function? (2)
- 35. At a camp site there are tents of two shades. One is made with black coloured fabric and the other with white fabric. Which one will you prefer for resting on a hot summer afternoon? Give reason for your choice. Would you like to prefer the same tent during winter? (2)
- 36. Write two differences between clinical thermometer and laboratory thermometer. (2)
- 37. List four methods to prevent rusting of iron. (2)

Question number 38 to 44 is Short Answer Type-II questions carrying 3 marks each.

Answer them briefly.

- 38. What is symbiotic association? Explain with an example. (3)
- 39. Name the substances secreted by the inner lining of the stomach. Write one function of each of these substances. (3)
- 40. a) Explain land breeze.
b) While constructing a house in a coastal area in which direction windows should preferably face and why? (3)
- 41. A student took a solution of copper sulphate in a beaker and put a clean iron nail in it and left it for an hour.
a) What change will be observed?
b) Write a word equation to represent the change (3)
- 42. Paheli participated in a 400m race competition her school and won the race. When she came home she had mixed feelings of joy and pain as she had cramps in her leg muscles. After a massage she was relieved of pain.
a) What can be the possible reason for pain in her leg muscles?
b) Why did she feel comfortable after a massage? (3)
- 43. Draw a neat labelled diagram of human excretory system. (3)
- 44. Write one similarity and two differences between aerobic and anaerobic respiration. (3)

Question no.45 to 47 are Long Answer Type questions carrying 5 marks each.

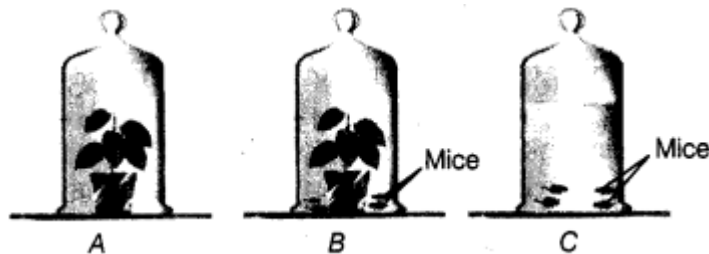
Answer them in detail.

45.(a) There are three animals named A, B and C. Among them A can stay on land as well as in water. When it stays at land it respire through lungs but when it goes into water, it respire through its moist skin. Animal B has specific organs to respire in the water. While animal C is a water animal which respire through nostrils and lungs. Now give the name of animal A, B and C. (3)

(b) Observe the given figures carefully and answer the following questions.

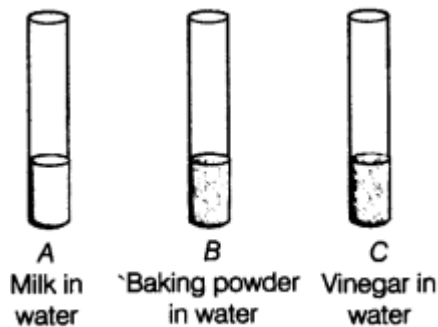
(i) The amount of CO₂ be the highest in which jar. Why?

(ii) The amount of CO₂ be the lowest in which one and why? (2)



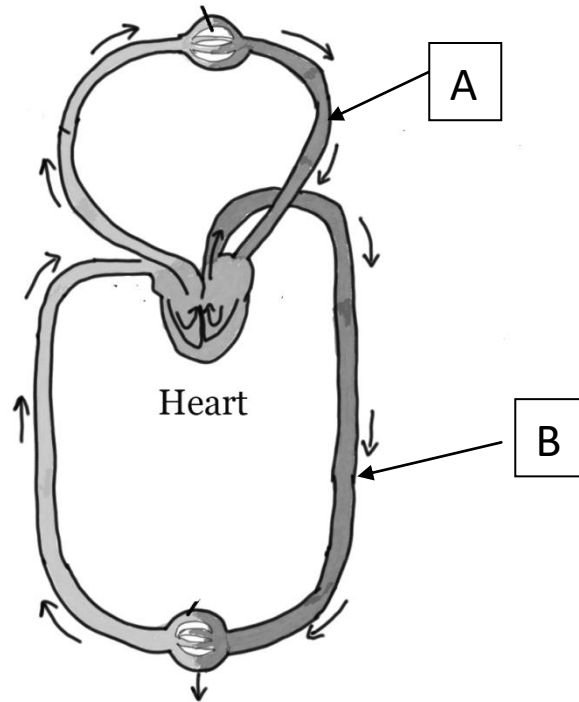
46.(a) A farmer was unhappy because of his low crop yield. He discussed the problem with an agricultural scientist and realised that the soil of his field was either too acidic or too basic. What remedy would you suggest the farmer to neutralise the soil? (2)

(b). Look at the figure which shows solutions taken in test tubes A, B, C. What colour is expected, when a piece of red litmus paper is dropped in each test tube? Nature of the solutions is given in the table for your help. (3)



Test Tube	Nature of solution	Change in colour of red litmus
A	Neutral	
B	Basic	
C	Acidic	

47. (a) Write three differences between arteries and veins. (2)
(b) Why do veins have valves (1)
(c) Label A and B in the following diagram. (2)



Blood Circulation in Human