परमाणु ऊर्जा शिक्षण संस्था
Atomic Energy Education Society
वार्षिक परीक्षा/ Annual Examination 2025- 26

कक्षा /Class :VII **अवधि/Duration: 3 hours**

विषय/Subject :Science **अधिकतम अंक/Maximum Marks: 80**

सामान्य निर्देश / General Instructions:

1. The question paper consists of 41 questions.
2. All questions are compulsory.
3. Section A consists of 20 objective questions carrying 1 mark each.
4. Section B consists of 21 to 29 very short questions carrying 2 marks each.
5. Section C consists of 30 to 37 short answer type questions carrying 3 marks each.
6. Section D consists of 38 to 39 long answer type questions carrying 5 marks each.
7. Section E consists of 40 to 41 Case based questions carrying 4 marks each.
8. Draw neat labeled diagram wherever necessary

SECTION A

Choose the correct answer for each question given below. **[1 x 20=20]**

1. A shadow is formed when:

(a) Light bends around an object (b) An opaque object blocks the path of light

(c) Light is absorbed completely (d) Light passes through a transparent object.

2. Which of the following is not a change seen during adolescence?
(a) Growth of hair in armpits (b) Increase in height
(c) Formation of bones (d) Development of reproductive organs

3. The heat reaches to us from the sun in the form of:

(a) Convection (b) Radiation
(c) Conduction (d) All of these methods

4. A marble tile feels colder than a wooden tile on a winter morning, because the marble tile
(a) is a better conductor of heat than the wooden tile.
(b) is polished while wooden tile is not polished.
(c) reflects more heat than wooden tile.
(d) is a poor conductor of heat than the wooden tile.

5. Which of the following records the distance travelled by the vehicles?
(a) Manometer (b) Odometer (c) Speedometer (d) Motometer

6. Which device is most suitable for measuring the time taken by a runner in a race?

(a) Wall clock (b) Hourglass (c) Stopwatch (d) Sundial

7. The swallowed food moves downwards in the alimentary canal because of
(a) force provided by the muscular tongue (b) the flow of water taken with the food
(c) gravitational pulls (d) the contraction of muscles in the wall of the food pipe.

8. During inhalation, the diaphragm:
(a) Relaxes and moves up (b) Contracts and moves down
(c) Reduce space in the lungs (d) Closes the windpipe

9. What is the function of bile secreted by the liver?
(a) Break down proteins (b) Absorb nutrients
(c) Neutralize stomach acid and break down fats (d) Kill bacteria

10. Small stones swallowed by birds help in
(a) digestion by enzyme (b) absorbing nutrients

(c) Grinding food in the gizzard (d) removing waste

11. If a car travels 60 Kilometers in two hours, it speed is _____.
(a) 20 km/h (b) 60 km/h (c) 30 km/h (d) 120km/h

12. Which gas is absorbed by plants during photosynthesis?
(a) Oxygen (b) Carbon dioxide (c) Nitrogen (d) Hydrogen

13. The scientist who received the Nobel Prize for studying the structure of vitamin B12.-

(a) William Beaumont (b) Christian Huygens (c) Galileo Galilee (d) Dorothy Hodgkin

14. A smoke detector is a device that detects smoke and sounds an alarm. Suppose you are fitting a smoke detector in your room, the most suitable place for this device will be _____

(a) Near the floor (b) in the middle of a wall
(c) on the ceiling (d) anywhere in the room

15. Which of the following devices measure the time on the basis of the changing position of shadows of the objects?
(a) Sundial (b) hourglass (c) water clock (d) candle clock

16. How long does the Earth take to complete one rotation?
(a) 12 hours (b) 365 days (c) 1 hour (d) 24 hours

ASSERTION -REASON QUESTIONS (Q. No. 17 to 20):

Each question below consists of an Assertion (A) and a Reason (R).

Use the following key to choose the appropriate answer.

(a) Both A and R are true and R is the correct explanation of A.

(b) Both A and R are true but R is not the correct explanation of A.

(c) A is true but R is false.

(d) A is false but R is true.

17. **Assertion (A):** An adolescent may feel insecure while trying to adjust to the changes in the body and mind.

Reason (R): An adolescent brain has the greatest capacity for learning.

18. **Assertion (A):** Evaporation is a process where water changes into vapour and rises into the atmosphere.

Reason (R): Evaporation does not require heat energy from the Sun or other sources.

19. **Assertion (A):** The objects which allow the light to pass through them are called translucent objects.

Reason (R): Glass sheets, water, and air are examples of transparent objects.

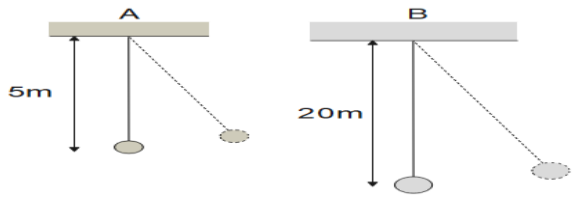
20. **Assertion (A):** The Earth experiences different seasons during the year.

Reason (R): The Earth's axis is tilted and it revolves around the Sun.

SECTION – B (Questions 21 to 29 carry 2 marks each.) [2X9=18]

21. What are secondary sexual characteristics? Give one example each for boys and girls. (2)

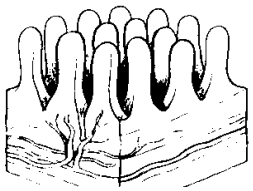
22. In the diagram A and B are two pendulums of equal mass. The length of pendulum A is shorter than B. (2)



a) Which pendulum will have a longer time period?

b) If pendulum A completes 60 oscillations in a minute, what will be its time period?

23. Why we prefer two thin blankets over one thick blanket to keep us warm during winter? (2)
24. Rani studies in class 7. Most of her friends have clear and smooth skin but as she entered adolescence, she developed pimples on her face.. Give reason that why is she getting pimples. Suggest one method to get rid of this condition. (2)
25. The given diagram shows finger like projections present in our alimentary canal. (2)



a) Name the part of alimentary canal in which they are found.
b) What role do they play in our alimentary canal?

26. What is the role of xylem and phloem in plants? (2)
27. In a dark room, a torch is pointed at a small ball. The ball casts a shadow on the wall. Identify which object is luminous and which is non-luminous. Explain. (2)
28. We often sneeze when we inhale a lot of dust-laden air. What can be the possible explanation for this? (2)
29. The Indian cricket team matches in Australia are often held in December. Should they pack winter or summer clothes? Give reason. (2)

SECTION – C (Questions 30 to 37 carry 3 marks each.) [3X8=24]

30. List any three dos and don'ts to be followed on social media. (3)
31. Draw well labeled diagram of water cycle. (3)
32. Mehul's school is 3.6 km from her house. It took her 15 minutes to reach her school riding on her bicycle. Calculate the speed of the bicycle in m/s. (3)
33. Differentiate between uniform and non-uniform linear motion with example. (3)
34. Observe the given figure and answer the following questions (3)

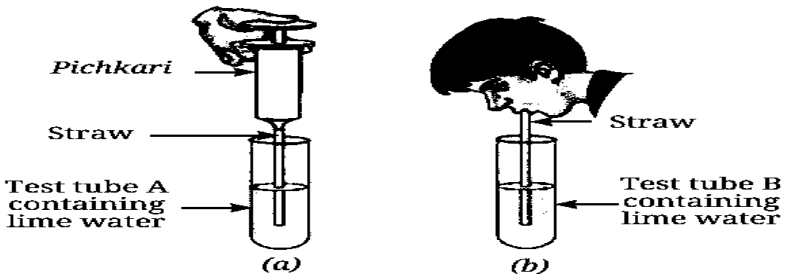


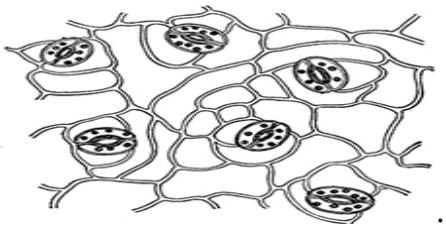
Fig. 9.11: (a) Air is passed into lime water with a pichkari/syringe (b) Air is exhaled into lime water

a) What does the above shown activity tell us about the air we inhale and the air we exhale?

b) What happens when air is exhaled into lime water?

c) How is oxygen carried from the lungs to other parts of the body?

35. Observe the drawing given below: (3)



a) Name the tiny pores seen in the given figure.

b) Where are they found and what is their function?

36. Suggest an activity to prove that light travels in a straight line. (3)

37. Give reasons – (3)

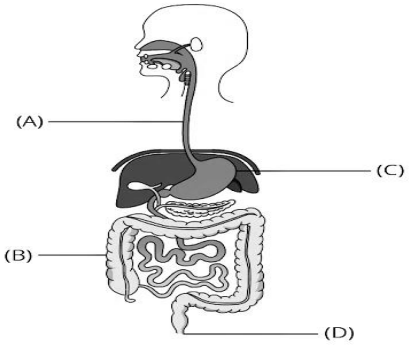
a) Pole star appears nearly stationary in the sky from the earth.

b) For the southern states of India that lie close to the equator, the effect of seasons is not very prominent.

c) The sun appears to rise in the East and set in the West.

SECTION – D (Questions 38 to 39 carry 5 marks each.) [5X2=10]

38.



The diagram shown above is the human digestive system.

a) Name the parts labeled as A, B, C and D. (2)

b) What is the function of the part labeled D? (1)

c) Which part labeled here secretes acid, mucous and digestive juice? (1)

d) How acidic food is made neutral in small intestine? (1)

39. a) What is reflection of light? Name the two instruments which work on the principle of reflection of light. (2)

b) Write the characteristic features of image formed by a plane mirror. (3)

SECTION – E (Questions 40 to 41 carry 4 marks each.) [4X2=8]

40. Normally we take in air through our nostrils. When we inhale air, it passes through our nostrils into the nasal cavity. From the nasal cavity, the air reaches our lungs through the windpipe. Lungs are present in the chest cavity. This cavity is surrounded by ribs on the sides. A large, muscular sheet called diaphragm forms the floor of the chest cavity. Breathing involves the movement of the diaphragm and the rib cage**.** Through the process of breathing, fresh air from outside enters the lungs and fills the alveoli.

a) Write the flow chart of respiratory pathway in humans from Nostrils to Alveoli. (1)

b) Name the muscular sheet which forms the floor of the chest cavity. (1)

c) Write equation to express the process of respiration. (1)

d) How is breathing different from respiration. (1)

41. During a solar eclipse, the Moon comes between the Earth and the Sun, blocking sunlight from reaching parts of the Earth. In contrast, a lunar eclipse occurs when the Earth comes between the Sun and the Moon. Raghav read that lunar eclipses are visible from a larger area than solar eclipses.

a) Which celestial event occurs when the Moon blocks sunlight from reaching the Earth? (1)

b) Why can lunar eclipses be seen from more places on Earth compared to solar eclipses? (1)

(i) The Moon is smaller than the Earth (ii) The Earth casts a larger shadow

(iii) The Moon reflects more light (iv) The Sun is farther away

c) Why is it unsafe during a solar eclipse to watch it directly with the naked eye? (1)

d) What condition leads to a total solar eclipse? (1)

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