



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

कक्षा / Class :VIII

अवधि / Duration: 3hours

विषय / Subject :Science

अधिकतम अंक / Maximum Marks: 80

सामान्य निर्देश / General Instructions:

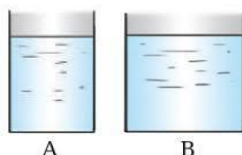
1. The question paper consists of 41 questions.
2. All questions are compulsory.
3. Section A consists of 20 objective questions carrying 1 mark each.
4. Section B consists of 21 to 29 very short questions carrying 2 marks each.
5. Section C consists of 30 to 37 short answer type questions carrying 3 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 labelled diagram wherever necessary

SECTION A

Choose the correct answer for each question given below.

[1 x 20=20]

1. Diseases can be broadly grouped into communicable and non-communicable diseases. From the options given below, identify the non-communicable diseases.
(i) Typhoid (ii) Asthma (iii) Diabetes (iv) Measles
(a) (i) and (ii) (b) (ii) and (iii) (c) (i) and (iv) (d) (ii) and (iv)
2. A water tank is placed on the roof of a building at a height 'H'. To get water with more pressure on the ground floor, one has to _____.
(a) increase the height 'H' at which the tank is placed.
(b) decrease the height 'H' at which the tank is placed.
(c) replace the tank with another tank of the same height that can hold more water.
(d) replace the tank with another tank of the same height that can hold less water.
3. Two vessels, A and B contain water up to the same level as shown in Figure given below. P_A and P_B is the pressure at the bottom of the vessels. F_A and F_B is the force exerted by the water at the bottom of the vessels A and B.



- (a) $P_A = P_B$, $F_A = F_B$
(c) $P_A < P_B$, $F_A = F_B$

- (b) $P_A = P_B$, $F_A < F_B$,
(d) $P_A > P_B$, $F_A > F_B$

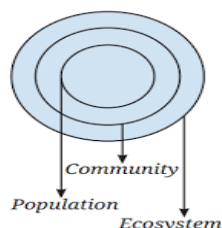
4. Consider the following reaction where two substances, A and B, combine to form a product C:



Assume that A and B cannot be broken down into simpler substances by chemical reactions.

Based on this information, which of the following statements is correct?

- (a) A, B, and C are all compounds and only C has a fixed composition.
 - (b) C is a compound, and A and B have a fixed composition.
 - (c) A and B are compounds, and C has a fixed composition.
 - (d) A and B are elements, C is a compound, and has a fixed composition.
5. You pour oil into a glass containing some water. The oil floats on top. What does this tell you?
- (a) Oil is denser than water
 - (b) Water is denser than oil
 - (c) Oil and water have the same density
 - (d) Oil dissolves in water
6. Refer to the given diagram and select the wrong statement.



- (a) A community is larger than a population.
 - (b) A community is smaller than an ecosystem.
 - (c) An ecosystem is part of a community.
 - (d) Population and community are part of ecosystem
7. What is one major reason Mars cannot currently support life like Earth?
- (a) It has too many volcanoes.
 - (b) It is too close to the Sun.
 - (c) It lacks a thick atmosphere and liquid water.
 - (d) Its magnetic field is too strong.
8. Which of these is an example of geodiversity?
- (a) Variety of bird chirping in a forest.
 - (b) Different landforms like mountains, valleys, and deserts.
 - (c) Changing weather during monsoons.
 - (d) Number of different types of fish in a pond.
9. Which type of mirror is used by dentists to get an enlarged view of teeth?
- (a) convex mirror
 - (b) plane mirror
 - (c) concave mirror
 - (d) combination mirror
10. If the Earth were smaller with the same density, what might happen to its atmosphere?
- (a) It would become thicker and hotter.
 - (b) It would escape into space due to weaker gravity.
 - (c) It would become frozen.
 - (d) It would cause stronger winds.
11. A lightning conductor protects buildings by _____.
- (a) attracting lightning
 - (b) reflecting lightning
 - (c) safely transferring charges to ground
 - (d) stopping rain

12. Water has its highest density at
 (a) 0°C (b) 4°C (c) 100°C (d) 25°C
13. In sexual reproduction, why are offspring different from their parents?
 (a) They grow in different climates.
 (b) They eat different food.
 (c) They acquire new instructions after birth.
 (d) They get mixed instructions (genes) from both parents
14. Rear-view mirrors in vehicles are _____.
 (a) plane mirrors (b) concave mirrors (c) convex mirrors (d) cylindrical mirrors
15. Who is known as the Father of the Indian Space Programme?
 (a) Homi J. Bhabha (b) Vikram Ambalal Sarabhai
 (c) A. P. J. Abdul Kalam (d) Satish Dhawan
16. While measuring 50 mL of water in a measuring cylinder, the curved surface formed by water is called _____.
 (a) Surface tension (b) Meniscus (c) Capillary rise (d) Level mark

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):** Crop rotation helps maintain soil fertility.

Reason (R): Growing the same crop repeatedly enriches the soil with nutrient.

18. **Assertion (A):** Alloys like brass and bronze are considered uniform mixture

Reason (R): Their components are mixed so thoroughly that they appear as a single, consistent substance throughout.

19. **Assertion (A):** Water at 80°C can dissolve less baking soda than water at 20°C .

Reason (R): For most substances, solubility increases with an increase in temperature.

20. **Assertion (A):** The overuse or improper use of antibiotics is a major concern .

Reason (R): This practice accelerates the development and selection of antibiotic resistant strains of bacteria

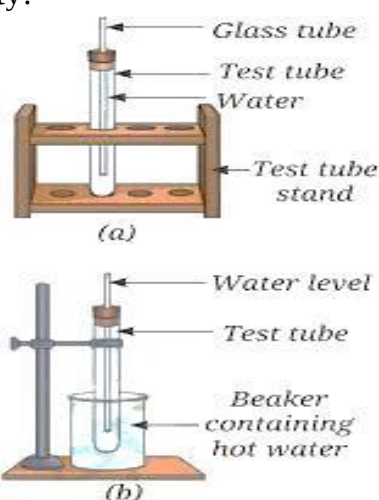
SECTION – B (Questions 21 to 29 carry 2 marks each.)

[2X9=18]

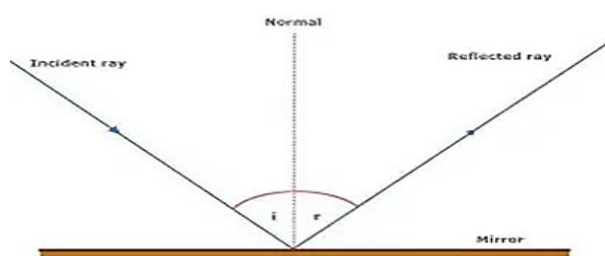
21. When our body encounters a pathogen for the first time, the immune response is generally low but on exposure to the same pathogen again, the immune response by the body is much more compared to the first exposure. Why is it so? (2)
22. The figure below shows trees along the sea coast in a summer afternoon. Identify which side is land— A or B. Explain why? (2)



23. Generally, air acts as an electrical insulator and does not let opposite charges meet. So how does lightning occur? (2)
24. You are provided with an experimental setup as shown in the given figure (a) & (b). On keeping the test tube in a beaker containing hot water ($\sim 70^\circ\text{C}$). What will happen to the water level in the glass tube. How does it affect the density? (2)



25. A light ray is incident as shown in the figure. The angle made by the incident ray with the normal to the mirror is 40° . Find out the angle made by the reflected ray with the mirror? (2)

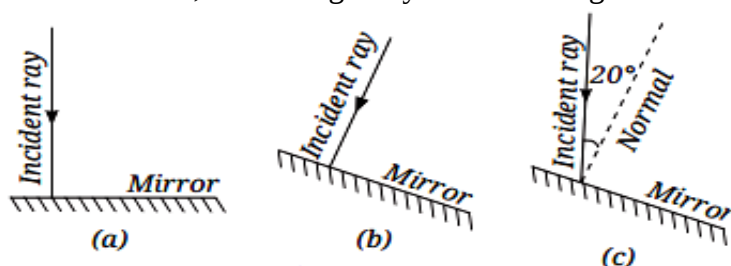


26. What is the new Moon day and what is its alternative name in India? (2)
27. Look at this food chain: (2)
 Grass $\rightarrow$ Grasshopper $\rightarrow$ Frog $\rightarrow$ Snake
 If frogs disappear from this ecosystem, what will happen to the population of grasshoppers and snakes? Why?
28. List out any two factors which makes the earth suitable for life to exist. (2)
29. Water, a compound, has different properties compared to those of the elements oxygen and hydrogen from which it is formed. Justify this statement. (2)

SECTION – C (Questions 30 to 37 carry 3 marks each.)

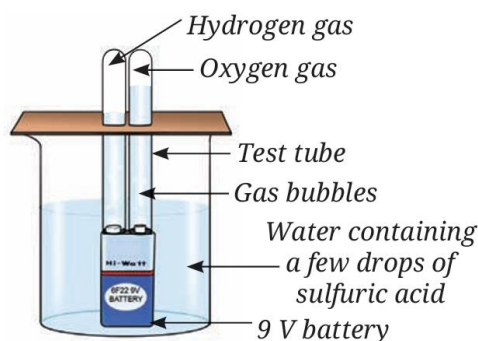
[3X8=24]

30. What would you do if your friend offered you a cigarette at a party? How can schools help prevent students from indulging in such harmful habits? (any two steps) (3)
31. There are two boats, A and B. Boat A has a base area of 7 m^2 , and 5 persons are seated in it. Boat B has a base area of 3.5 m^2 , and 3 persons are seated in it. If each person has a weight of 700 N, find out which boat will experience more pressure on its base and by how much? (3)
32. Lime water is prepared by dissolving calcium hydroxide in water. When this colourless lime water is left exposed to air for some time, it turns milky. This change occurs due to the reaction between lime water and carbon dioxide present in air, forming insoluble calcium carbonate. (3)
- Name the gas present in air responsible for this change.
 - Why does lime water turn milky when left exposed to air?
 - Write the word equation for the above chemical change.
33. Object A has a mass of 200 g and a volume of 40 cm^3 . Object B has a mass of 240 g and a volume of 60 cm^3 . Calculate their densities and also find out which object is denser? (3)
34. The given figure a, b, c shows three different situations where a light ray falls on a mirror: (3)
- The light ray falls along the normal
 - The mirror is tilted, but the light ray still falls along the normal to the tilted surface.
 - The mirror is tilted, and the light ray falls at an angle of 20° from the normal.



Draw the reflected ray in each case. What is the angle of reflection in each case?

35. Two students are performing the activity of Electrolysis of water using two test tubes, a 9V battery according to the setup shown in the figure below: (2)
- How do we detect which gas is released in the two test tubes? (2)
 - Write the word equation for electrolysis of water? (1).



36. On which periodic phenomenon are the following measures of time based? (3)
- day
 - month
 - year
37. Describe mutualism, commensalism and parasitism with one suitable example each. (3)

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

38. 5.6 g of iron filings were taken and mixed with 3.2 g of Sulphur powder, both were mixed and the mixture were divided into two parts Sample A and sample B.

Sample B was heated with continuous stirring till a black mass was obtained. This black mass placed in a mortar and was grounded it with a pestle.

- (a) What will be the effect of magnet on samples A and B? (1)
- (b) What is the nature of samples A and B?(uniform / non uniform) (1)
- (c) What is the effect of Hydrochloric acid on samples A and B? (1)
- (d) Out of samples A and B which is a mixture and which is a compound? Why? (2)

39. Renu is preparing lemonade for her friends on a hot summer day. She takes a jug full of water, adds some sugar and stirs it well. Then she squeezes some lemons into the jug and mixes everything. She notices that the sugar completely disappears.

- (a) Identify the solutes and solvent in Renu's lemonade. (1)
- (b) Why did the sugar dissolve completely in the water, but the lemon pulp settle down? (1)
- (c) If Renu wants the sugar to dissolve faster, what could she do? (1)
- (d) Comment on dilute solution and concentrated solution. (1)
- (e) What do you understand by the term 'solubility'? (1)

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

40. The Sundarbans is the world's largest mangrove forest, located at the meeting point of the Ganges and Brahmaputra rivers. It plays a vital role in protecting coastal areas from storms and floods, provides shelter to endangered plants and animals, and helps regulate climate by absorbing carbon dioxide and releasing oxygen. However, human activities such as deforestation, pollution, illegal hunting, and overuse of natural resources are disturbing the natural balance of this ecosystem. Conserving ecosystems like the Sundarbans is essential to maintain biodiversity and ensure long-term benefits for humans.

- (a) Why are the Sundarbans important for both humans and wildlife? (2)
- (b) Identify any two human activities that threaten the Sundarbans ecosystem. (1)
- (c) How can understanding the interdependence of biotic and abiotic components help in conserving ecosystems? (1)

41. Riya is a Class 8 student. Her parents and teachers often remind her to follow good habits such as maintaining personal hygiene, eating healthy food, exercising regularly, and sleeping on time. Riya follows some of these habits but struggles with others. She spends long hours on her mobile phone, often skips breakfast, and sleeps late at night. Recently, she has started feeling tired, finds it hard to concentrate in class, and gets irritated easily. (4)

- (a) Identify any two healthy habits that Riya is encouraged to follow by her parents and teachers.
- (b) List two unhealthy habits mentioned in the case study that may be affecting Riya's health.
- (c) How do unhealthy habits affect Riya's daily performance at school?
- (d) Based on your own routine, mention one good habit you already follow and one habit you would like to start following.
