

INTERNATIONAL INDIAN SCHOOL, DAMMAM
ANNUAL EXAMINATION(2017-18)
SCIENCE
SET-B

CLASS: IX

TIME: 3Hrs

MARKS: 80

GENERAL INSTRUCTIONS

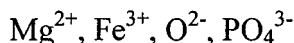
1. All questions are compulsory.
2. Questions numbers 7, 10 and 18 have internal choices.
3. Question numbers 1 to 2 in section A are **one mark** questions.
5. Question numbers 3 to 5 in section A are **two mark** questions.
6. Question numbers 6 to 15 in section A are **three mark** questions.
7. Question numbers 16 to 21 in section A are **five marks** questions.
8. Question numbers 22 to 27 in section B are based on practical skills and carry **twomarks** each.

SECTION A

1. List two human activities which would lead to air pollution. 1
2. What is composite fish culture? 1
3. a) What does the odometer of an automobile measure? 2
b) Which of the following is moving faster?
A scooter moving with a speed of 300 m per minute or A car moving with a speed of 36Km/hour.
Justify your answer.
4. What is immunization? Write any two vaccines that are administered during childhood. 2
5. a) Which property of gases makes it possible to fill large volume of gases in small cylinders? 2
b) With which name is the phenomenon of changing of a liquid into its vapours at a temperature below its boiling point known?
c) Why Naphthalene balls stored in clothes disappear over a period of time?

6. One day Amaan came to school with running nose, reddish and watery eyes and coughing. He met Anubhav in the morning assembly who advised him to sit on a separate desk in the classroom till he recovers. 3
- Name the disease from which Amaan is suffering from.
 - Name the causal organism.
 - Enlist any two preventive measures.
 - What is your view point on Anubhav's advice?
7. a) Differentiate between Aves and Mammals. (any two points) 3
 b) Give any two distinguishing characteristics of phylum Arthropoda.
 (OR)
 a) To which kingdom Agaricus and Penicillium belong to? Give any three distinguishing characters of this kingdom.
 b) Define haemocoel.
8. a) What is the functional difference between tendon and ligament? 3
 b) Name the fluid connective tissue and mention any one function of it.
 c) Why is xylem and phloem known as complex permanent tissue?
9. a) Define animal husbandry. 3
 b) List any two scientific practices that you can undertake to obtain higher yield from agriculture.
10. a) What is echo? State any two applications of multiple reflection. 3
 b) A sound wave travels at a speed of 339m/s. If its wavelength is 1.5cm, What is the frequency of the wave? Will it be audible?
 (OR)
 a) State and define the wave property that determines the loudness of sound.
 b) Define SONAR? Explain the technique used to find the depth of the sea.
11. a) Give any one difference between g and G 3
 b) Where is the value of weight of a body (a) minimum and (b) maximum at the surface of the earth?
 c) What happens to the force between two objects if mass of one object is doubled? Justify.
12. a) Why the chemical properties of isotopes are similar. 3
 b) State the observation in alpha particle scattering experiment which led Rutherford to make following conclusion- Most of the space in an atom is empty.
 c) What is the difference between Mg and Mg^{2+} in terms of electrons?

13. a) Write the chemical formula of all the compounds that can be formed by the combination of the following ions. 3



b) An element B forms an oxide with formula B_2O_3

i) State the valency of B

ii) Write the formula of chloride B and sulphate of B.

14. How is boiling point related to intermolecular forces of attraction? Why is latent heat of vaporization higher than latent heat of fusion? 3

15. What is meant by fractional distillation? How is it different from simple distillation? Give one application of Fractional distillation. 3

16. a) Draw a schematic diagram of the nitrogen cycle occurring in nature. 5

b) Mention any two consequences of air pollution.

17. a) Draw a neat diagram of an animal cell and label the following. 5

i) Cell organelle having its own DNA material.

ii) Outermost covering of the cell.

iii) Cell organelle that stores and packages products of RER.

iv) Cell organelle that synthesizes lipids.

b) What is binomial nomenclature? Write any two conventions followed while writing the scientific name of an organism.

18. a) How would you differentiate between a molecule of an element and a molecule of a compound? 5

b) What do the following denote O and 5O_2 ?

c) Calculate the formula unit mass of $\text{Al}_2(\text{CO}_3)_3$, [Al = 27u, C = 12u, O = 16u]

d) Convert 12g of oxygen into mole.

(OR)

a) Calculate the number of atoms in 120g of calcium and 120g of iron. Which one has more number of atoms? [Ca = 40u, Fe = 56u]

b) Give the difference between anion and a cation?

c) Write the chemical formula of

i) Sodium Carbonate ii) Ammonium Chloride

19. a) State Archimedes principle. 5

b) The volume of 50g of a substance is 20cm^3 . If the density of water is 1g/cm^3 . Will the substance float or sink? Justify your answer.

c) Name two forces which act on a body immersed in a liquid. Give the direction in which they act.

d) Which will exert more pressure 100kg mass on 10m^2 or 50kg mass on 4m^2 ($g = 10\text{m/s}^2$). Justify your answer.

20. a) How do you differentiate kilowatt from kilowatt hour? 5
 b) In an office a tube of 40W, a fan of 75W and a cooler of 150W have been installed. If all these appliances are used for 9 hours a day, calculate the energy consumed per day in commercial unit of energy.
 c) Derive an expression for Kinetic energy for an object of mass 'm' moving with a uniform velocity 'v'
21. a) Explain why do we fall backward when a stationary bus starts moving? 5
 b) State the law of conservation of momentum.
 c) State Newton's three laws of motion.

SECTION B

22. Write any four steps for making a temporary mount of an onion peel in a sequential manner. 2
23. Name the most important element of nervous tissue and mention the three main parts of it. 2
24. a) Amongst common salt, sugar and copper sulphate which forms a true solution? Why? 2
 b) A mixture of sand and common salt is dissolved in water and then filtered. Name the residue and filtrate.
25. 5g of CaCO_3 on complete decomposition gives of 2.2g of CO_2 gas. Based on law of conservation of mass. What is the mass of the residue left behind? 2
26. a) In an experiment when an object is immersed in water what does the volume of the displaced water indicate?
 b) A body is immersed in a liquid contained in an overflow can. The volume and mass of liquid collected are 12cm^3 and 9.8g respectively. What is the density of the liquid?
27. In which direction the particles of medium oscillate in 2
 a) Longitudinal wave
 b) Transverse wave
