

**INTERNATIONAL INDIAN SCHOOL DAMMAM  
PRELIMINARY EXAMINATION, JANUARY 2018**

**CLASS:IX**

**SET A**

**MARKS:80**

**Time:3Hrs**

**SCIENCE**

**General instructions:**

- (i) The question paper comprises two sections, A and B. you are to attempt both the sections.
- (ii) All questions are compulsory.
- (iii) All questions of section A and B are to be attempted separately.
- (iv) There is an internal choice in two questions of three marks and two questions of five marks.
- (v) Question numbers 1 and 2 in section A are one mark question. They are to be answered in one word or in one sentence.
- (vi) Question numbers 3 to 5 are in section A are two marks questions. These are to be answered in 30 words each.
- (vii) Question numbers 6 to 15 in section A are three marks questions. These are to be answered in about 50 words each.
- (viii) Question numbers 16 to 21 in section A are 5 marks questions. These are to be answered in 70 words each.
- (ix) Question numbers 22 to 27 in section B are based on practical skills. Each question is a two marks question. These are to be answered in brief.

**SECTION- A**

1. Name the physical quantity which changes continuously during uniform circular motion. 1
2. When we jump into a swimming pool ,we feel lighter .Why? 1
3. What is mixed cropping ?What are its advantages? 2
4. Define Antibiotics. Name 2 antibiotics 2
5. (A)Mention two factors that need to be varied to liquefy atmospheric gases. 2  
(B)Atomic number of an element is 16.what is its valency and valence electrons?
6. (A)Mention two uses of ultrasonic waves. 3  
(B)Ceilings of conference halls and concert halls are curved. Give reason  
(C)What is meant by reverberation? How can you reduce it?

**OR**

- (A)When you lift an object ,two forces act on it .Identify these forces.
- (B)State the law of conservation of energy.
- (C) State the value of commercial unit of electrical energy in joules.

7. (A) Define uniformly accelerated motion. Name the quantity which is measured by the area occupied below velocity –time graph. 3  
 (B) A train starting from rest moves with a uniform acceleration of  $0.2\text{m/s}^2$  for 5 minutes.  
 Calculate the final velocity and distance travelled in this time.
8. Give reason for the following 3  
 (A) Isotopes of an element are chemically similar.  
 (B) An atom is electrically neutral.  
 (C) Noble gases show least reactivity.
9. Write the chemical formula for (A) Zinc phosphate (B) calcium hydroxide 3  
 Calculate the number of moles present in 20gm of water. [H=1 u , O= 16u]
- 10 (A) Define simple distillation. 3  
 (B) A solution contains 50gm of sugar in 350gm of water. Calculate the concentration of solution in terms of mass by mass percentage .

**OR**

- (A) Write any two points of difference between solution and suspension.  
 (B) What is the difference between  $2\text{N}$  and  $2\text{N}_2$
- 11 (A) Define latent heat of vapourisation. 3  
 (B) Write two factors affecting rate of evaporation.  
 (C) Write the chemical name of dry ice. How is it stored?
12. Arun's Grandfather is suffering from oral cancer for last six months. Both Arun and his Grandfather used to play various games together before the disease. They enjoy each other's company very much. Arun wants grandfather to live longer and discusses his concern on the helpline with NGO. 3
- What value is shown by Arun?  
 What can Arun do to help his Grandfather?  
 Is cancer an Infectious or Non infectious Disease.
13. Define Classification. What is the need for classification? 3
14. Give Reasons for 3  
 A) Intercellular spaces are absent in sclerenchymatous tissue.  
 B) Branches of a tree move and bend freely in high wind velocity.  
 C) It is difficult to pull out the husk of coconut.

15. What are the desirable characters of bee varieties suitable for honey production? 3

OR

Explain composite Fish culture

16. (A) Draw a schematic atomic structure of element Mg and write the no of neutrons and protons present in it. (atomic number-12, mass number-24) 5

(B) State the three observations and conclusions made by Rutherford on his alpha particle scattering experiment.

OR

(A) Name the separation technique you will apply for the separation of the following.

(i) To separate mustard oil from water .

(ii) To separate the different pigments from flower petals.

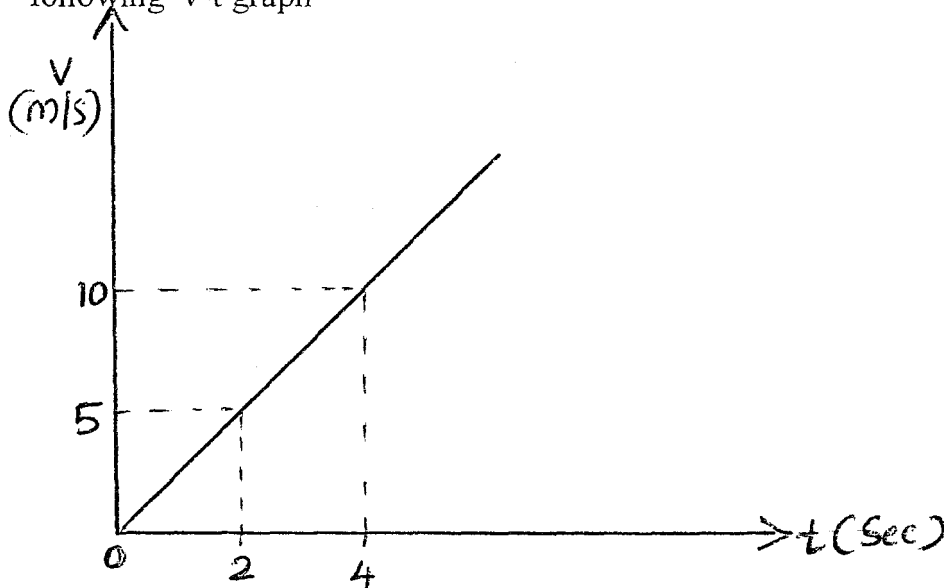
(B) State two ways in which you can change a saturated solution to unsaturated solution.

(c) Write two reasons why crystallization is better than simple evaporation.

17. (A) State Newton's second law of motion. 5

(B) Using second law of motion, Derive the relation between force and acceleration.

(C) Find the acceleration and force acting on a body of mass 4Kg using the following v-t graph



18. (A) State universal law of gravitation. 5

(B) Suppose a planet exist whose mass and radius both are half those of earth.

Calculate the acceleration due to gravity on the surface of this planet.

(C) Define mass and weight of an object. An object has mass of 20Kg on earth.

What will be its mass and weight on the surface of moon? ( $g$  on moon is  $1.6\text{m/s}^2$ )

19. (A) List two conditions for work to be done. 5

(B) What is the work done by the force of gravity on a satellite moving round the earth. Justify your answer.

(C) Calculate the power of an electric motor that can lift 800Kg of water to store in a tank at a height of 15meter in 20sec. ( $g=10\text{m/s}^2$ )

20. (A) Name and draw a cell which does not have a well defined nuclear region. 5

Label any 2 parts.

(B) What is the difference between Plasma membrane and Cell wall. Give one function each.

21. (A) What are Biogeochemical cycles? Name any two cycles. 5

(B) Explain Nitrogen cycle with a neat Diagram.

**OR**

(A) What are Natural resources? Name two types of Natural resources.

(B) Explain carbon cycle with a neat diagram.

**Section B**

22. What is the role of airbladder in Fish? Are the Fishes cold blooded or warm blooded. 2

23. (A) What method will you suggest to separate iodine from a mixture of iodine, marble powder and sand? Write a reason for your answer. 2

(B) You are given a mixture of iron fillings and sulphur. You are asked to heat the mixture. What will you observe?

24. What is an echo? Calculate the minimum distance between the source of sound and reflecting body for hearing an echo, when velocity of sound is 340m/s. 2

**OR**

Define relative density. If the mass of a body is increased by two times, what will be the effect on its density?

25. What is a tissue? What do we call the study of tissues 2

26. (A) What is the colour of the flame when magnesium burns in oxygen? 2

(B) 5gm of calcium carbonate on complete decomposition gives off 2.2gm of carbon dioxide gas. Based on the law of conservation of mass, what is mass of residue left behind?

27. What do you understand by the term buoyant force? If an object weighing 50N displaces water weighing 10N. What will be the weight of object in water? 2