19/Sept./2017 **Set - B**

First Term Examination

SCIENCE

Class – IX

Time Allowed : 3 hours **Maximum Marks : 80**

General Instructions :

1. The question paper comprises of **two Sections, A** and **B**. You are to attempt both the sections.
2. **All** questions are **compulsory**
3. Question numbers **22** to **27** in **Section-B** are questions based on practical skills. Each question is of **two marks.**
4. **Draw well labelled diagram wherever necessary.**

SECTION-A

1	Convert the following temperature to the Kelvin scale (a) 30^0C (b) 270^0C	1
2	Name two foreign cattle breeds that are selected for long lactation period.	1
3	A solution contains 30g of sugar dissolved in 370g of water. Calculate the concentration of this solution.	2
4	What happens to the gravitational force between two objects if: a) The mass of one object is doubled b) The distance between two objects is doubled.	2
5	Why some of the leaves may get detached from a tree if we vigorously shake its branch?	2
6	Give reasons" (a) Why desert cooler cools better on a hot dry day? (b) Why smell of food being cooked in the kitchen reaches us even from a distance. **OR** a) Why water kept in earthen pot remain cools in summer b) Why ice at 0^0C is ore effective in cooling than water at same temperature?	2
7	a) How is prokaryotic cell different from eukaryotic cell? (any four) b) What is the function of chromosome?	3
8	a) Draw the well labelled diagrams of Cardiac muscle. b) What is the specific function of this muscle?	3
9	(a) What are the desirable characters of bee varieties suitable for honey production? (write any two) (b) Which is the best variety of Honey bee for commercial honey production?	3
10	Define macro nutrients and micronutrients. Write one example of each. **OR** Define hybridization. Explain its two types.	3

11	What is Acceleration due to gravity? Derive relation between 'g' and 'G'.	3
12	An object is thrown vertically upwards and rises to a height of 10m. i) Calculate the velocity with which the object was thrown upwards. ii) The time taken by the object to reach the highest point. ($g=9.8m/sec^2$)	3
13	The given velocity time graph represents the motion of an object a) Calculate the acceleration of the body in time interval between 0 and 10 seconds. b) Calculate the distance covered between 10 seconds to 20 seconds. c) What does BC represents?	3
14	a) How will you separate a mixture of iron fillings, chalk powder and common salt? b) Write one difference between a true solution and colloidal solution giving examples.	3
15	Ram had a poor yield due to failure of the crop. His father Vijay suggested that he should grow two or more crops simultaneously in his field as this would cover the risk of loss. He suggested two crops that can be grown together. a) Write the name of cropping pattern which his father suggested. b) Mention any two values that are worth appreciated in his father's behaviour. c) Write the name of examples of crop given by his father.	3
16	(i) Classify the meristematic tissue on the basis of their location. Write function of each. (ii) Name the types of elements that together make up the phloem tissue.	5
17	a) Write one function of each of the following cell organelle: i) Endoplasmic reticulum (ii) Golgi bodies (iii) Lysosome b) What happens to the cell it if is placed in hypertonic solution? c) What is plasmolysis?	5
18	a) Derive second equation of motion $(s = ut + \frac{1}{2}at^2)$ graphically. b) Why uniform circular motion is called an accelerated motion. c) State universal law of gravitation.	5
19	a) State law of conservation of linear momentum. b) A gun fired a shell of mass 1.5kg with velocity of 150m/s and recoils with velocity of 2.5m/s. Calculate the mass of gun. c) Why is gun recoils while firing a bullet?	5
20	i) Which of the following can be separated by using a separating funnel and which cannot be separated by using a separating funnel and give reason for your answer.	5

		a) Water and kerosene mixture b) Water and acetone mixture ii) Define a) Aerosol (b) Saturated solution	
	21	a) Define latent heat of fusion b) Classify the following as physical and chemical change (i) Dissolution of common salt in water (ii) Burning of paper c) Name the element in the following compound (i) Baking soda (ii) potassium sulphate	5
		SECTION - B	
	22	A student prepared three solutions. A solution of milk, alum and soil in water. Can you distinguish between the three on the basis of transparency and stability? Explain.	2
	23	X is a mixture of iron filling and sulphur and y is a product obtained by heating. Identify X and Y.	2
	24	Write any two features that best describe the cells of the parenchyma.	2
	25	If the weight of dry raisins is 15gm and the weight of raisins after they absorb water is 20g. What is the percentage of water absorbed by dry raisins? Write formula also.	2
	26	Find the value of x	2
	26	Which is the incorrect statement (a) Sound travels in straight line (b) Sound travels as waves (c) Sound is a form of energy (d) Sound travel faster in vacuum than in air.	2
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