INDIAN SCHOOL SALALAH

FINAL EXAMINATION- MARCH 2018

SCIENCE

Class: IX **Maximum marks:80**

Time allowed: 3 hrs

General Instructions:

i) This question paper consists of 5 pages with 27 questions in all.

ii) All questions are compulsory. However an internal choice will be provided in three questions of three marks each and two questions of five marks and one question from Section B of two marks.

iii) All questions of Section A and B are to be attempted separately.

iv) Question numbers 1 and 2 in Section A are one mark question. They are to be answered in one word or in one sentence.

v) Question numbers 3 to 5 in Section A are two marks questions. These are to be answered in 30 words each.

vi) Question numbers 6 to 15 in Section A are three marks questions. These are to be answered in about 50 words each.

vii) Question numbers 16 to 21 in Section A are 5 marks questions. These are to be answered in 70 words each.

viii) Question numbers 22 to 27 in Section B are explanatory questions based on practical skills and each question carry two marks.

SECTION - A

1	Define compost and vermicompost.	1
2	The Kelvin scale temperature is 293 K. What is the corresponding Celsius scale temperature?	1
3	The volume of 50 g of a substance is $20cm^3$. If the density of water is 1 g cm^3,will the substance float or sink?	2
4	Is any work done on a body in uniform circular motion? Justify.	2
5	What are isobars? Give examples.	2
6	a) 15 g of a salt is dissolved in 250g of water. Calculate the percentage amount of the salt in the solution. b) What do you understand by a saturated solution? **OR** What is the principle of centrifugation? Give two applications of this technique.	3
7	a) What is latent heat of vaporization? b) When a solid melts its temperature remains the same. So where does the heat go?	3
8	Mr. Rajender has the unique habit of planting saplings wherever he can in his neighbourhood area to stop soil erosion. Due to his constant efforts, once barren and unused land of village Rampur has got changed into green plantation. a) What is soil erosion?	3

	b) What are the methods of reducing and preventing soil erosion? c) Write any two values shown by Mr.Rajender	
9	a) Draw the waveforms for a low and a high pitched voice. b) What is reverberation? How can it be reduced? **OR** a) Distinguish between loudness and intensity of sound?(any two points) b) Explain sound needs a medium for its propagation with the help of Bell jar experiment?	3
10	a) State universal law of gravitation. b) Prove that the acceleration due to gravity is independent on the mass of the object.	3
11	a) A bus increases its speed on a straight road from 18 kmh^{-1} to 36 kmh^{-1} in 10 s. Find the acceleration of the bus? b) A motor boat starting from rest on a lake accelerates in a straight line at a constant rate of 3 m/sec^2 for 8 s. How far does the boat travel during this time?	3
12.	Describe the structure and the functions of nucleus.	3
13.	(a) Explain the following terms: i) antibiotics ii) carriers iii) Immunisation **OR** a) State in brief the principles of prevention. b) Making anti viral drugs is harder than making anti bacterial drugs. Why?	3
14.	Differentiate between the following: a) Broiler and layer b) Pisciculture and apiculture c) Manures and fertilizers.	3
15	a) Draw a flow chart to represent oxygen cycle. b) What is green house effect?	3
16	a) Draw a flow chart to represent five kingdom classification. Name the biologist responsible for it. **OR** a) What is binomial nomenclature? b) Explain with an example.	5

	c) Write the conventions to be followed while writing scientific names.	
17.	a) What are meristematic tissues? Draw a diagram to represent location of meristematic tissues in plant body. b) Differentiate xylem and phloem.	5
18.	a) Explain the separation of components of air with the help of a flow chart b) Calculate i) the number of moles ii) number of molecules and iii) number of aluminum ions present in 0.051g Al_2O_3. (atomic mass of Al=27u, atomic mass of O=16u)	5
19.	a) Write the postulates of Bohr theory? b) Write the electronic configuration and valency of the following elements. i) Al (atomic number-13) ii) Cl (atomic number-17) **OR** a) A 0.24g sample of compound of oxygen and boron was found by analysis to contain 0.096g of boron and 0.144g of oxygen. Calculate the percentage composition of the compound by weight. b) Write down the formulae of Calcium oxide and ammonium sulphate	5
20.	State the law of conservation of momentum. Prove that the total momentum of the two bodies is conserved.	5
21.	a) A car moving on a plane horizontal road and its velocity gets doubled. Calculate how does it's- i) potential energy change? ii) kinetic energy change? b) Define the S.I unit of power.	5
	SECTION – B	
22.	For hearing the loudest ticking sound while performing the experiment " laws of reflection" of sound. What relation will you get between the angle of incidence and the angle of reflection?	2
23.	A body of weight 500gf in air is fully immersed in water. Will there be any change in its weight in water? Why? **OR** A measuring cylinder has 5 marks between 10 cm^3 to 20 cm^3. What is the least count?	2
24.	In an experiment to verify the law of conservation of mass, reaction between Barium Chloride solution and Sodium Sulphate solution leads to the formation of new compounds. Write a balanced chemical equation of the above reaction and mention the colour of the precipitate.	2

25	What is your observation when a mixture of iron powder and sulphur is shaken with carbon disulphide solvent in a test tube?	2
26	While observing a slide of animal tissue under a microscope, students observed light and dark bands, long and multinucleated cells. What could the slide be of? Where are they found in our body?	2
27	What are the main differences between parenchyma and collenchyma tissue ?	2

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