R D RAJPAL SCHOOL, DWARKA
MID TERM EXAM (2017-18)
CLASS- IX
SCIENCE –SET B

TIME ALLOTTED : 3 Hrs

MM : 80
No. of printed sheet: 3

GENERAL INSTRUCTIONS:-

1. The question paper comprises of two sections, **A and B**. You have to attempt both the sections.
2. All questions are compulsory.
3. Question number1 and 2 in section A are **one** mark question
4. Question number3 to 5in Section A are **two** marks questions
5. Question number6 to 15 in Section A are **three** marks question
6. Question number16 to 21in Section A are**five** marks questions.
7. Question number**22 to 27**in Section B are based on practical skills . Each question is **two** mark question..

SECTION - A

Q1.What can you say about the motion of an object if its velocity-time graph is a straight-line parallel to the time axis? (1)

Q2.Which organelle is involved in forming complex sugar from simple sugar? (1)

Q3 Calculate formula unit mass of $CaSO_4.2H_2O$. (2)

Q4 Name the bacterium which causes peptic ulcer and who discovered this bacteria for the first time. (2)

Q5.An astronaut has 80 kg mass on the Earth.

a) What is his weight on the Earth? (Given: g on the Earth is $10m/s^2$)
b) What will be his weight on the moon? (2)

Q6. a)What does the area of velocity-time graph give: displacement or acceleration? (1)

b)Calculate the acceleration of a body which starts from rest and travels 87.5 m in 5s. (2)

Q7.a) State law of conservation of momentum.

b) From a rifle of mass 4 kg ,a bullet of mass 50g is fired with a velocity of 35 m/s. Calculate the recoil velocity of the rifle. (3)

Q8.a) Define 1N force. (1)

b)State Newton's third law of motion and how does it explain the walking of man on the ground? (2)

Q.9Amit buys few grams of gold at the poles as per the instruction of one of his friends. He hands over the same when he meets him at the equator. Will the friend agree with the weight of the gold bought? If not, then why? (3)

Q10 (a) List the two conditions essential for using distillation as a method for separation of the components from a mixture.

(b) Give any example of the colloidal solution in which solid acts as the dispersed phase and gas as the dispersion medium. (3)

Q 11 (a) In which of the following substance you expect strongest and in which the weaker molecular forces. (3)

(i)Sodium chloride   (ii) Carbon dioxide

(b) Change the following Celsius temperature to Kelvin scale :

(i) +30 ^{0}C (ii) −40^0 C

Q12.Givereasons : (3)

(a)Gases are compressible but not liquids .

(b)Rate of evaporation of a liquid increase with temperature

(c)Nail polish remover evaporates faster than water.

Q13.Explain the different means by which infectious diseases are spread (any three). (3)

Q14.Differentiate between Bone and Cartilage . (3)

Q15. (i)How does an Amoeba obtain its food? Explain (2)

(ii) What happened when RBC are kept in pure water? (1)

Q16.a) Why does an athlete put some sand or cushion on the ground while high jumping . (2)

b)A force of 15N acts for 5s on a body of mass 5kg, which is initially at rest. Calculate:

i) final velocity of the body   ii)the displacement of the body (3)

Q17.a) What is upthrust? Why does a block of cork released under water come up to the surface of

water? (1+2=3)

b)Define density and mention its S.I unit. (2)
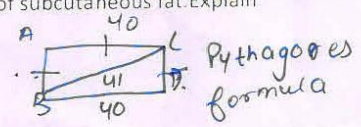
Q18. Give reasons for the following:

(i)   Antibiotic is not effective for viral diseases.
(ii)   Name the target organ for the pneumonia.
(iii)   What is immunisation? Mention the two diseases against which immunisation are done in our country. (2+1+2)

Q19. (a) Identify the following tissue on the basis of characters mentioned below:

(i)Tissue which filled the space inside the organ.

(i)Tissue which provide flexibility to plants.

(b)Why animals of colder regions like polar bear have a thick layer of subcutaneous fat.Explain

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(c) Draw the diagram of skeletal/striated muscle showing the following labellings (i) sarcolemma

(ii) sarcoplasm (iii) nucleus (iv) striations   (1+2+2)

Q20. (a) Outline a scheme to separate the constituent of a mixture containing iodine, sodium chloride and sand.

(b) List the points of difference between (i) homogeneous and heterogeneous mixture (ii) Mixture and compounds . (2points in each)   (5)

Q21. (a) Give the formula of the compound that will be formed from the following sets of compounds

(i) Calcium and Fluorine   (ii) Magnesium and Oxygen

(b) Write the chemical symbols of two elements which are formed from the first letter of the elements name

(c) The valency of an element is 4 . Write the formula of the oxide.

(d)What is the valency of Calcium in Calcium carbonate. ($CaCO_3$)   (5)

SECTION B (Practical based questions)

Q22. The volume of a 500 g sealed packet is 350 cm^3 .Will the packet float or sink in water if the density of water is 1g/cm^3 ? What will be the mass of the water displaced by this packet?   (2)

Q23.The pressure exerted by a cuboidal block on surface is 5 Pa if it is made to lie on the surface with its sides of dimensions 3cm×1cm . Calculate the weight of the block. (where Force = weight).   (2)

Q24. (i) Write down the formula to calculate the percentage of water imbibed by raisin when soaked in water   (1)

(ii) Isha has observed a large vacuole while observing a slide, on the basis of this character identify whetherit is a plant tissue or an animal tissue.   (1)

Q25. How you Identify parenchyma slide from the sclerenchyma slide on the basis of following character (i) shape of cell (ii) nucleus (iii) intercellular space (iv) cell wall   (2)

Q26 Iron of Fe + S is attracted by a magnet while Fe of FeS is not . Give reason .   (2)

Q27. An aqueous solution of ferrous sulphate is taken in a clean test tube and a strip of copper is dipped in it. In another test tube an aqueous solution of copper sulphate is taken and a clean iron nail is dipped in it. State in which test tube a visible change will be observed ? Mention the conclusion drawn from this experimental observation.   (2)