Set - 1

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**HALF YEARLY EXAM 2018-19**

**M.M-80 CLASS-X (SCIENCE) TIME-3:00 Hrs**

**General Instructions:**

1. *The question paper comprises two sections, A and B. You are to attempt both the sections.*
2. *All questions are compulsory.*
3. *All questions of Section A and Section B are to be attempted separately.*
4. *There is an internal choice in three questions of three marks each, two questions of five marks each in Section A and in one question of two marks in Section B.*
5. *Question Numbers 1 and 2 in Section A are one-mark questions. These are to be answered in about 30 word or in one sentence.*
6. *Question 3 to 5 in Section A are two-mark questions. These are to be answered in above 30 words each.*
7. *Question 6 to 15 in Section A are three-mark questions. These are to be answered in above 50 words each.*
8. *Question 16 to 21 in Section A are five-mark questions. These are to be answered in above 70 words each.*
9. *Question 22 to 27 in Section B are based on practical skills. Each question is a two-mark questions. These are to be answered in brief.*

**SECTION-A**

1. Name the largest cell present in human body.
2. Name two metals which are found in nature in Free State.
3. A solution of substance ‘ X’ is used for white washing. Name the substance and write chemical reaction of ‘X’ with water.
4. Write one example of each of the following tropic movement –

i) Positive Phototropism ii) Negative Phototropism

iii) Hydrotropism iv) Chemotropism

1. An electric motor takes 5A current from a 220V line. Determine the power of the motor and the energy consumed in 2 hours.
2. Give an example of metal which –
	* 1. is the best conductor of electricity
		2. Is a liquid at room temperature
		3. Is a poor conductor of heat
3. Give two examples of amphoteric oxides. Give reactions of any one of them to show both acidic and basic behaviour.
4. a. Define 1 diopter of power of a lens.

b. Find the power of a concave lens of focal length 2 m.

1. Draw a labelled diagram of nephron.
2. Differentiate between aerobic and anaerobic respiration. Give two examples where anaerobic mode of respiration is found.
3. An object is placed at a distance of 10 cm from a convex mirror of focal length 15cm.Find the position and nature of the image.

 OR

A concave mirror produces two times magnified, real image of an object placed at 10 cm in front of it. Where the image is located and also determines the focal length of mirror.

1. a. On what factors does the resistance of a conductor depend?

b. Why are the coils electrical toasters and electric irons made of an alloy rather than a pure metal?

1. A wire of length L and resistance R is stretched so that its length is doubled and area of cross section is halved. How will its resistance change?

 OR

An electric iron of resistance 20Ω takes a current of 5A. Calculate the heat developed in 30 second.

1. Rahul’s father can easily read the novel but finds the images blurred while watching T.V. Name the defect he is suffering from and write its causes and corrections.
2. Draw a longitudinal section of a flower and label the following parts:
	* 1. Part that develops into fruit
		2. Part that produces pollen grain
		3. Part that is sticky
3. Define rancidity and corrosion with examples. Also write three preventive measures for each.
4. a. Draw electron dot structure of methane.

 b. Draw the structures for following compounds-

 i. Butanol ii. Ethanoic Acid

 c. Compare any two properties of covalent and ionic compounds.

1. a. Name the human male reproductive organ that produces sperms and also secretes a

 hormone. Write the functions of secreted hormone.

 b. Name the parts of human female reproductive system where –

 i. fertilization takes place

 ii. Implantation of fertilized egg occurs.

 c. Explain how embryo gets nourishment inside the mother’s body.

1. a. How do auxins promote the growth of a tendril around a support ?

 b. What is the difference between a reflex action and walking? Draw path of reflex action with

 the help of ray diagram.

 OR

 (A) Draw well labeled diagram of neuron.

 (B) What do you mean by reflex arc? Draw schematic diagram of reflex arc?

 (C) What happens at synapse between two neurons?

1. What is atmospheric refraction? Use this phenomenon to explain the following natural events.
	1. Twinkling of stars
	2. Advanced sun rise and delayed sun set

 Draw diagrams to illustrate your answer.

 OR

 (A) What do you mean by dispersion of light?

 (B) Describe the formation of rainbow in the sky.

 (C) What do you mean by power of accommodation of eye? Name the part of eye, which helps in this phenomenon and state how does it help?

1. a. What are strong and weak acids? In the following list of acids, separate strong acids from weak acids.

 Hydrochloric acid, Acetic acid, Citric acid, Nitric acid,

 b. Write the formula, preparation, and two uses of washing soda.

**SECTION-B**

1. When you add sodium hydrogen carbonate to acetic acid in a test tube, gas liberates immediately with brisk effervescence. Name this gas. Describe the method of testing this gas.
2. While demonstrating a reaction in laboratory, a teacher added small amount of sodium sulphate solution to barium chloride solution in a test tube.
	1. Name the products obtained
	2. Write the type of chemical reaction in this case.
3. Draw in sequence binary fission in amoeba (four steps)
4. Name the staining and mounting material used while preparing a temporary mount of stomata.
5. An ammeter has range of 0-3 ampere and there are 30 divisions on its scale. Calculate the least count of the ammeter.
6. An object is placed at F1 of a convex lens. Draw the ray diagram after refraction and state the position of the image formed.