CENTRAL PUBLIC SCHOOL

Subject – Science | **TAJPUR ROAD, SAMASTIPUR** | **Time- 3 hrs.**

Class – X | **MID TERM EXAM - 2018** | **F. M. – 80**

General instructions:

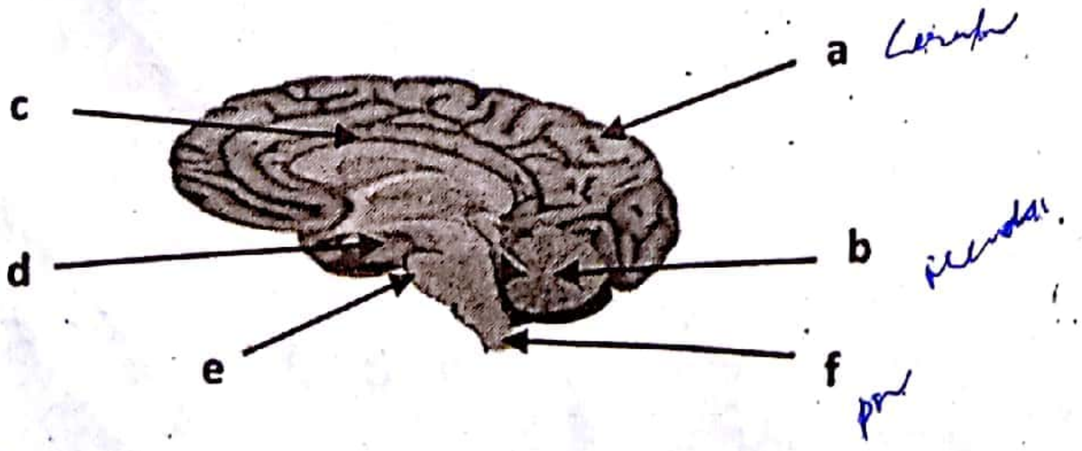
i. *The question paper comprises two sections, A and B . You are to attempt both the sections separately.*
ii. *All questions are compulsory.*
iii. *Question number 1 to 2 in section- A are 1 mark questions and are to be answered in one word or in one sentence each.*
iv. *Question numbers 3 to 5 in section- A are 2 marks questions and are to be answered in 30 words each.*
v. *Question numbers 6 to 15 in section- A are 3 marks questions and are to be answered in about 50 words each*
vi. *Question numbers 16 to 21 in section- A are 5 marks questions and are to be answered in about 70 words each*
vii. *Question numbers 22 to 27 in section- B are based on practical skills. Each question carries 2 marks and is to be answered in brief.*

SECTION – A

1. **During summer season, a milkman usually adds a very small amount of baking soda to fresh milk. Give reason.**
2. **Make the two possible carbon skeletons with five carbon atoms.**
3. **Give an example of double displacement reaction other than one between barium chloride and sodium sulphate solutions.**
4. **What is the role of saliva in the digestion of food?**
5. **What is a good fuel?**
6. **Name the type of chemical reaction represented by the following equations:**
   i. $CaO + H_2O \longrightarrow Ca(OH)_2$
   ii. $3BaCl_2 + Al_2(SO_4)_3 \longrightarrow 2AlCl_3 + 3BaSO_4$
   iii. $2FeSO_4 \xrightarrow{heat} Fe_2O_3 + SO_2 + SO_3$
7. **Explain how the properties of an alloy are different from those of constituent metals?**
8. **What is meant by homologous series of carbon compounds? Classify the following carbon compounds into two homologous series and name them.**
   C_3H_4, C_3H_6, C_4H_6, C_4H_8, C_5H_8, C_5H_{10}
9. **How are the alveoli designed to maximise the exchange of gases?**
10. **Draw and label the parts of human excretory system.**

OR

Label 'a' to 'f' in the given figure of brain.



11. How is reflex arc formed?
12. A metallic wire of resistance R is cut into 10 parts of equal length. Two pieces each are joined in series and then 5 such combinations are joined in parallel. What will be the effective resistance of the combination?
13. How can the magnitude of the induced current be increased?
14. Explain what is short circuiting and over loading electric supply?
15. Bio gas is considered to be a boon to farmers. Give reasons.
16. A Compound 'X' is bitter in taste. It is a compound of washing powder and reacts with dilute HCl to produce brisk effervescence due to a colourless and odourless gas 'Y' which turns lime water milky due to the formation of 'Z'. When excess of CO_2 is passed milkiness disappears due to formation of 'P'. Identify 'X' , 'Y' , 'Z' and 'P'. Write the equations involved in the formation of X , Y , and P.

OR

(i) A dry pallet of common base 'X' , when kept in open air absorbs moisture and turns sticky. The compound is also a by-product of chlor-alkali process. Identify 'X'. What type of reaction occurs when 'X' is treated with strong acid? Write a balanced equation for such reaction.

(ii) Can we store the base 'X' in an aluminium container? Give reason in support of your answer.

17. What are ionic or electrovalent compounds? Give an example of ionic compound. Explain with reasons four properties of these compounds.
18. Plants absorb water from the soil. How does this water reach the tree tops? Explain in details.
19. With the help of an activity demonstrate geotropism in plants.
20. A current of 1 ampere flows in a series circuit having an electric lamp and a conductor of 5Ω when connected to a 10 V battery. Calculate the resistance of the electric lamp. Now if a resistance of 10 Ω is connected in parallel with this series combination, what change (if any) in current flowing through 5 Ω conductor and potential difference across the lamp will take place? Give reason.
21. With the help of a diagram, describe an experiment to show that a change in current flowing through a coil induces an electric current in a neighbouring coil.

OR

With the help of a diagram, explain kicking wire experiment. Also state the rule involved in it.

Section – B

22. A student dips Ph paper in solutions A and B and observes that the Ph paper turns blue and orange respectively in them. What does he infer?
23. While performing an experiment, a student observes that when he heats some green crystals in a boiling tube, the colour of crystal changes to brown and a gas evolves which smells like burning sulphur. Interpret the observation and result.
24. On adding zinc granules to freshly prepared ferrous sulphate solution, what is observed?
25. Plot a graph which shows the dependence of current I on potential difference V across a resistor R.
26. While preparing a temporary stained mount of a leaf epidermal peel, how is the extra stain removed.
27. An ammeter has 20 divisions between marks 0 and 2 on its scale. Find the least count of the ammeter.