

**COUNCIL OF CBSE AFFILIATED SCHOOLS IN THE GULF**  
**GULF SAHODAYA EXAMINATION, FEBRUARY 2009 / MARCH 2009**

**SCIENCE & TECHNOLOGY**

Class : IX

Max. Marks : 60

Date : 22 FEB 2009

Duration : 2½ Hours

Set No. : I

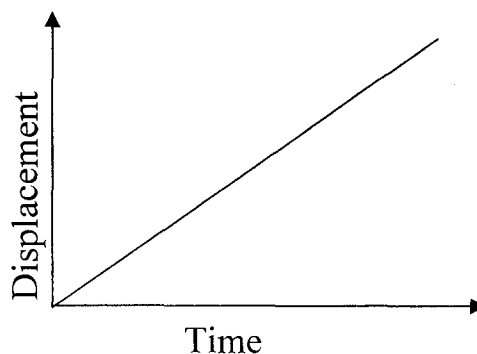
Code No. ■ 9231

**GENERAL INSTRUCTIONS:**

1. The question paper consists of two **Sections A & B**.  
You have to attempt both the sections.
2. The candidates are advised to attempt **all** the questions of Section A and Section B **separately**.
3. All the questions are **compulsory**.
4. There is no overall choice. However internal choice has been provided in two questions of 5 marks category in **Section A** and one question of 5 marks category in **Section B**. You are to attempt only one option in such questions.
5. Marks allotted to each question are indicated against it.
6. Question numbers 1 – 6 in Section A and 17 – 19 in Section B are very short answer questions. These are to be answered **in one word or one sentence each**.
7. Question numbers 7 – 11 in Section A and 20 – 23 in Section B are short answer questions. These are to be answered in **30 – 40 words each**.
8. Question numbers 12 – 14 in Section A and 24 – 26 in Section B are very short answer questions. These are to be answered in **40 – 50 words each**.
9. Question numbers 15 – 16 in Section A and 27 in Section B are long answer questions. These are to be answered in **70 words each**.

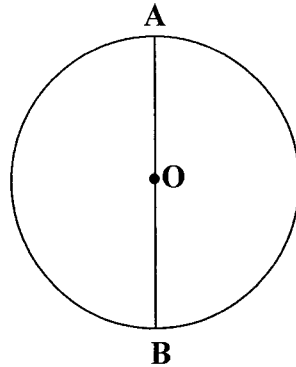
**SECTION – A**

1. What conclusion can you draw about the velocity of a body from the Displacement-time graph shown below: (1)



2. Explain why some of the leaves may get detached from a tree if we vigorously shake its branch. (1)
3. Name the scientist who discovered g. (1)
4. How does the water kept in an earthen pot become cool during summer? (1)
5. What is suspension? (1)
6. Write the names of the compounds.  
(a)  $\text{Ag}_2\text{O}$  (b)  $\text{CuS}$  (1)
7. Give **two** reasons for the variation of 'g' at the equator and at the poles. (1)
8. Define the term Inertia. Name the quantity that measures it. (2)
9. Explain briefly the following:  
(a) Wave length (b) Frequency  
(c) Time period (d) Amplitude (2)
10. Give reasons for the following observations:  
(a) The smell of hot sizzling food reaches you several metres away, but to get the smell from cold food you have to go close.  
  
(b) Naphthalene balls disappear with time without leaving any solid. (2)
11. Write the formulae of:  
(a) Carbon tetrachloride (b) Dinitrogen tetroxide  
(c) Phosphorus pentachloride (d) Sulphur trioxide (2)
12. State the **three** laws of **motion**. (3)
13. Compare the properties of electrons, protons and neutrons. (3)

14. A circular cycle track has a circumference of 314 m with AB as the diameter. A cyclist travels from A to B along the circular path with a constant velocity of magnitude  $15.7 \text{ ms}^{-1}$ .



Find:

- the distance moved.
  - the displacement of the cyclist if AB represents North – South direction.
  - the average velocity. (3)
15. (a) Write **any two** differences between longitudinal and transverse waves.  
(b) Name the sound waves used by bats to move about freely even in total darkness. What can we say about their frequency?  
(c) What does the abbreviation “SONAR” stands for? Give any two applications of “SONAR”.

**OR**

- Define work, energy and power. State the SI units for each of these quantities.
  - A man whose mass is 80 kg. climbs up 30 steps of the stairs in 30 seconds. If each step is 12.5 cm in height, calculate the power used in climbing the stairs ( $g = 10 \text{ m / s}^2$ ) (5)
16. Describe Thomson Model of atom with the help of neat labelled diagram. Give draw back of Thomson Model of atom.

**OR**

- An element “X” has two isotopes. Its average atomic mass is 35.5u. Identify the element. Write its electronic configuration and valency.
- Identify **true solutions** among the following:-  
(i) Soil      (ii) Sea water      (iii) Vinegar  
(iv) Air      (v) Coal      (vi) Soda water
- Classify the following into elements, compounds and mixtures:  
(i) Sodium   (ii) Soil      (iii) Sugar  
(iv) Silver   (v) Water (5)

**SECTION – B**

17. Name two organelles that contain their own genetic material? (1)
18. Name any **4** diseases caused by viruses. (1)
19. Name any **two** common weeds that grow with wheat and paddy. (1)
20. What is the criterion for classification of organisms belonging to Kingdom **Monera** or **Protista**? (2)
21. List out the major differences between **Bryophyta** and **Pteridophyta**. (2)
22. What are two forms of oxygen found in the atmosphere? (2)
23. Name some of the damaging effects of the ultra – violet rays on the plant and human life. (2)
24. Draw a neat labelled diagram of a typical prokaryotic cell. (3)
25. Compare the use of manures and fertilizers in maintaining the fertility of soil. (3)
26. What are biogeochemical cycles? Draw a flow chart of carbon cycle. (3)
27. Write the characteristic features of the phylum **Porifera**.

**OR**

Write the characteristic features of the phylum **Arthropoda**. (5)

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