

GUJARAT BOARD CLASS 9 TERM 2 SCIENCE SAMPLE PAPER- SET 2

Time: 2 hrs

Total Marks: 60

General Instructions:

PART A

- In MCQs, internal options will not be given.
- 30 MCQs will be asked in this part of the paper. Each carries **1 Mark**. All these questions are compulsory.

PART B

- Internal options will be asked from the same chapter with equal difficulty level.
 - **Section A:** → Question no. 1 to 5 are to be answered in short. Each carries 2 marks.
→ Internal option will be available in two questions.
 - **Section B:** → Question no. 6 to 9 are to be answered in brief. Each carries 3 marks.
→ Internal option will be available in one question.
 - **Section C:** → Question no. 10 to 11 are to be answered in detail. Each carries 4 marks.
→ Internal option will be available in one question.
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PART A

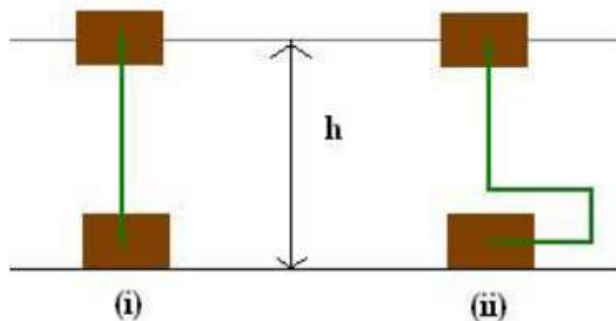
Choose the correct option from the given choices for each of the following questions:
[1 mark each] [30]

1. In longitudinal waves, in which direction does a particle of the medium vibrate when compared to the direction of propagation of wave?
(a) Pependicular
(b) Parallel
(c) At 45°
(d) At 60°
2. The intensity of sound is known as:
(a) Pitch
(b) Loudness of sound
(c) Tone
(d) Threshold of hearing.

3. A body of mass 4 kg has a momentum of 25 kg m/ s, its K.E. is:
(a) 25 J
(b) 50 J
(c) 70 J
(d) 100 J
4. The sensation of sound persists in our brain for about
(a) 0.1 s
(b) 1.3 s
(c) 0.5 s
(d) 1 s
5. A ship on the surface of water sends a signal and receives it back after 4 seconds from a submarine inside the water. Calculate the distance of the submarine from the ship (The speed of sound in water is 1450 m/ s)
(a) 2.9 km
(b) 29 km
(c) 290 km
(d) 2900 km

6.

If an object is lifted from a point A on the ground to another point B at a height h , through two different paths as shown in i) and ii) then



- (a) work done in i) > work done in ii)
(b) work done in ii) > work done in i)
(c) work done in i) = work done in ii)
(d) no such conclusion can be drawn about work done in the two cases.

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7. Which waves are employed in SONAR?
- (a) X-rays
 - (b) Infrasonic wave
 - (c) Ultrasonic wave
 - (d) Sonar wave
8. The kinetic energy changes from 12 J to 60 J due to the action of a force of 5 N on an object of mass 4 kg. The work done by the force is:
- (a) 24 J
 - (b) 36 J
 - (c) 48 J
 - (d) 60 J
9. Mendeleev's classification was based on:
- (a) decreasing atomic number
 - (b) decreasing atomic mass
 - (c) increasing atomic number
 - (d) increasing atomic mass
10. On moving down a group the atomic radius:
- (a) remains constant
 - (b) increases
 - (c) decreases
 - (d) first increases than decreases
11. Which law states that the properties of elements are a periodic function of their atomic masses?
- (a) Dobereiner's Law
 - (b) Newland's Law
 - (c) Mendeleev's Periodic Law
 - (d) Modern periodic law

12. Which one of the following does not increase while moving down a group in the periodic table?
- (a) Atomic radius
 - (b) Valence electrons
 - (c) Metallic character
 - (d) Shells in the atoms
13. What was the name given to Eka-silicon after it was discovered?
- (a) Gallium
 - (b) Scandium
 - (c) Magnesium
 - (d) Germanium
14. Covalent compounds are soluble in:
- (a) Polar solvents
 - (b) Non-polar solvents
 - (c) Concentrated acids
 - (d) All solvents
15. Which of the following is a non-polar molecule?
- (a) NH_3
 - (b) H_2O
 - (c) HF
 - (d) O_2
16. How is the formation of a precipitate indicated in a chemical equation?
- (a) By a downward arrow
 - (b) By an upward arrow
 - (c) By the letter (g)
 - (d) By the letter (p)
17. The chemical formula of calcium hydrogen carbonate is:
- (a) $\text{Ca}(\text{OH})_2$
 - (b) $\text{Ca}(\text{NO}_3)_2$
 - (c) $\text{Ca}(\text{HCO}_3)_2$
 - (d) CaSO_4

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18. A positive charge on an ion or a radical indicates that it has a tendency to _____ electrons.
- (a) donate
 - (b) accept
 - (c) share
 - (d) retain
19. Which of the following gases is used to flush the bags of chips?
- (a) Oxygen
 - (b) Nitrogen
 - (c) Chlorine
 - (d) Carbon dioxide
20. Chemically rust is:
- (a) Iron
 - (b) Iron sulphide
 - (c) Hydrated ferric oxide
 - (d) Iron nitrate
21. Which of the following division is known as the amphibian of the plant world?
- (a) Thallophyta
 - (b) Bryophyta
 - (c) Pteridophyta
 - (d) Angiospermae
22. Animals belonging to which phylum show the presence of Cnidoblasts?
- (a) Porifera
 - (b) Coelenterate
 - (c) Nematoda
 - (d) Arthropoda
23. Which of the following Protists use cilia for locomotion?
- (a) Euglena
 - (b) Amoeba
 - (c) Paramecium
 - (d) Noctiluca

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24. Which of the following organisms is not triploblastic?
- (a) Jellyfish
 - (b) Tapeworm
 - (c) Liverfluke
 - (d) Roundworm
25. The coastal areas during day time are characterised by
- (a) Movement of air from sea towards land
 - (b) Movement of air from land towards sea
 - (c) The flow of air in any direction
 - (d) Flow of air at a very high speed
26. Which of the following is not a source of fresh water?
- (a) Lakes
 - (b) Ponds
 - (c) Rivers
 - (d) Seas
27. Which of the following animals does not belong to Class Pisces?
- (a) Shark
 - (b) Whale
 - (c) Sea-horse
 - (d) Electric ray
28. Who is known as the father of Green Revolution in India?
- (a) M.S. Swaminathan
 - (b) C. V. Raman
 - (c) Verghese Kurien
 - (d) Dr. Abdul Kalam

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29. In crop plants, biotic stress is caused by:

- (a) Salinity
- (b) Frost
- (c) Disease
- (d) Drought

30. The Italian bee variety which is commonly used for commercial honey production is:

- (a) *Apis cara indica*
- (b) *Apis dorsata*
- (c) *Apis floera*
- (d) *Apis mellifera*

PART B
Section A

Answer the following questions in short:
[2 marks each]

[10]

1. Define work. What are the conditions on a force for doing work on an object? [2]

2.

(a) Why sound wave is called as longitudinal wave? [2]

(b) A bat can hear sound at frequencies up to 120 kHz. Determine the wavelength of sound in air at this frequency. Take the speed of sound in air as 344.

3. How does the tendency of an element to lose electrons change in a group? [2]

OR

How does the tendency of an element to lose electrons change in a period?

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4. What is crop rotation and what are its advantages? [2]

OR

State the differences between mixed cropping and intercropping with examples.

5. Which phylum has following characteristics, state only their names? [2]

- (a) Body segmented and jointed legs, with compound eyes
- (b) Body unicellular and microscopic
- (c) Body having calcareous shell and ventral foot
- (d) Spiny skinned organisms

Section B

Answer the following questions in short: [12]
[3 marks each]

6. Describe three uses of decomposition reactions. [3]

7. Define the following terms with example. [3]

- (a) Corrosion
- (b) Rancidity

8. Identify the organism given below. Name the Phylum to which this organism belongs. Write any two characteristic features of this phylum. [3]



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9. Write a short note on Kingdom Fungi. [3]

OR

Differentiate between Thallophyta and Pteridophyta (based on habitat, body structure, root, stem and leaf system, vascular system and sex organs).

Section C

Answer the following questions in detail: [8]
[4 marks each]

10. Explain the properties of covalent compounds. [4]

OR

Explain in brief the covalent bonding in chlorine molecule.

11. [4]

- (a) Certain force acting on a 20 kg mass changes its velocity from 5 m/ s to 2 m/ s. Calculate the work done by the force.
- (b) If the kinetic energy of a body is increased by 300% then determine the percentage increase in its momentum.