

Session- Ending Examination, Feb, 2018

TECHNO MISSION SCHOOL

Samastipur-848101

Class- Std IX
Subject- Science

Time- 3 Hours
F.M.- 80

All questions are compulsory.

- A. Very Short Answer Type Questions: (1x9= 9)
- (1) An object weighs w_1 in air and w_2 when half of its volume is immersed in water. The relative density of the object is-
 - (2) Why evaporation is considered to be the natural phenomenon of the liquid?
 - (3) Name two examples of Phylum "Porifera"
 - (4) The wt. of the Earth is -
 - (5) Name the bacteria that causes Typhoid and Cholera diseases.
 - (6) An element 'X' has a valency 3. Write its formula with Carbonate ions.
 - (7) A body is thrown vertically upward with velocity u , the greatest height h to which it will rise is-
 - (8) Name the causative agents of the disease- AIDS. Write the full form of AIDS also.
 - (9) What do you understand by the term Mole concept?
- B. Very Short Answer Type Questions: (2x7= 14)
- (10) What volume of Ethyl alcohol and water must be mixed together to prepare 250 ml. of 60% by volume of alcohol in water?
 - (11) Interpret force in terms of momentum. Represent the following graphically:

P.T.O.

- (a) Momentum Vs Velocity, when mass is fixed.
- (b) Momentum Vs Mass, when velocity is constant.
- (12) [a] State the law of constant proportions.
[b] Show that water illustrates the law of constant proportions.
- (13) Distinguish between molecular mass and molar mass.

Or,

Which observation led to the discovery of neutron?

- (14) Describe Thomson's atomic model of an atom with the help of a diagram and write its limitation also.
- (15) On the earth, a stone is thrown from height in a direction parallel to earth's surface while another stone is simultaneously dropped from the same height. Which stone would reach the ground first & why?
- (16) Derive a relation between kinetic energy of a body and its momentum.

C. Short Answer Type Questions: (3x9 = 27)

- (17) Discuss the characteristic features of Parenchymatous and Sclerenchymatous tissue drawing a suitable diagram.
- (18) Draw a well-labelled diagram of plant-cell and differentiate between "plant-cell and animal-cell" (any five points).
- (19) Write the demerits of Rutherford atomic model.
- (20) The atomic numbers of two elements A and B are 18 and 16 respectively. Which of the two should be chemically more reactive & why?
- (21) Explain the work-energy theorem with respect to the freely falling body.
State and prove work energy theorem.

P.T.O.

falling bodies.

- (22) Explain "Laws of floatation".
- (23) Distinguish between progressive wave and stationary wave.
- (24) What are weeds? Discuss the process of eradicating weeds from the soil. Also mention why this process is necessary for agriculture.
- (25) Differentiate between "sick person and healthy person".

D. Long Answer Type Questions: (5x6 = 30)

- (26) Discuss the characteristic features of phylum protozoa giving suitable examples and a well-labelled diagram of both.
- (27) What do you know about 'rain-cycle' or 'water-cycle'? Draw a 'water-cycle' diagram.
- (28) Write in brief about useful and harmful micro-organisms in.

Or

Draw a 'nitrogen-cycle' diagram giving definition of Nitrogen-fixation, Ammonification, Nitrification as well as Denitrification.

- (29) [a] Draw a diagram to represent a sound wave.
[b] How is sound produced by a source reach our ears?
[c] Define (i) pitch (ii) quality
(iii) loudness of sound
- (30) An object thrown in the downward direction from-height 10 m. with initial velocity of 15 m/s strikes the ground and bounces back to a height of 12 m. Determine the percentage loss of its energy during collision with ground (Take $g = 10 \text{ m/s}^2$)

P.T.O.

- (31) [a] A sample of ammonia weighs 2.0 g. What mass of sulphur dioxide (SO_2) contains the same number of molecules as present in 2.00 g. of ammonia?
- [b] Calculate the formula unit mass of Na_2CO_3 .
- | | |
|----------------|------|
| At. mass of Na | – 23 |
| C | – 12 |
| O | – 16 |
- [c] Elements A, B, C and D having atomic numbers 11, 8, 1 and 17 respectively. Give the chemical formula formed between (i) A and D (ii) B and C.

