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MODERN PUBLIC SCHOOL, SEC-37, FARIDABAD

WINTER HOLIDAY HOMEWORK

SUBJECT - SCIENCE

(2023-2024)

CLASS - IX

- ① You are provided with a fine white coloured powder which is either sugar or salt. How will you identify it without tasting?
- ② (i) What is the similarity in the electronic structure of the following set of atoms:
a) Lithium b) Sodium c) Potassium
(ii) Which of the above elements is most reactive & why?
- ③ Calculate the atomic no. of the element whose atomic nucleus has mass no. 23 and neutron no. 12. What is the symbol for this element?
- ④ An object of mass 100 kg is accelerated uniformly from a velocity of 5 ms^{-1} to 8 ms^{-1} in 6 s. Calculate the initial & final momentum of the object. Also, find the magnitude of force exerted on the object.
- ⑤ Distinguish between plasma membrane and the cell membrane.
- ⑥ Write a short note on composite fish culture.
- ⑦ (i) Explain how a bat is able to fly freely even in dark.
(ii) A bat can hear the sound upto frequency 120 kHz. Determine the wavelength of sound wave. Given speed of sound in air is 344 m/s.