Date: November 8, 2025
Answer key Sub- Science Assignment Class -IX

Ans1 C
Ans2 A
Ans3 B
Ans4 D Assertion is false, reason is true
Ans5. (A) Positively charged protons and negatively charged electrons balance each other out and because of it the atom contain a net zero charge, and becomes neutral.
(B) Helium atom has only one shell, and it's already complete with 2 electrons, so it can neither lose electrons nor gain electrons. Hence, its valency is zero.
C) Atomic number of Fluorine, F = Number of electrons = 9
Number of electrons in F- = 9+1=10
Atomic number of Sodium, Na = Number of electrons = 11
Number of electrons in Na+ = 11-1= 10
Ans6. i. Macronutrients are nutrients required by plants in large quantities, such as nitrogen, phosphorus, and potassium.
ii. Excessive fertilizer use can reduce soil fertility, kill beneficial microbes, and cause water pollution when washed into rivers and lakes.
iii. Vermi-composting improves soil structure, increases organic content, and provides slow-release nutrients, enhancing soil fertility.

Section -B

Ans7. Assertion is false, reason is true
Ans8. Both people do the same amount of work because they are lifting the same mass to the same vertical height. However, the person who runs up the stairs does more power because they complete the task in a shorter amount of time. Power is the rate of doing work, so the faster rate means higher power, as shown by the formula P=W/T
Ans9. A) To show that liquid pressure increases with depth, use a plastic bottle with holes at different heights, fill it with water, and observe that the water jet from the lowest hole travels the farthest, indicating it has the greatest pressure. This is because the water at the bottom has to support the weight of the entire water column above it, and more weight means more pressure.

B) The walls of a dam are made thicker at the bottom to withstand the immense pressure of the water, which increases with depth. Since water pressure is directly proportional to depth (P=h rho g) , the pressure at the base is the greatest, requiring a wider and stronger base to prevent the dam from breaking or tipping over.

C) By using formula of finding pressure at any depth in a fluids
Pressure =depth * density of liquid*gravity
Ans= 98000 Pa