

24. Match List-I with List-II and select the correct answer using the code given below the Lists:

List-I (Exponent) List-II (Law)

A. John Dalton

1. Law of definite proportion by volume

B. Joseph Proust

2. Law of multiple proportion

C. Antoine Lavoisier

3. Law of definite proportion by

weight

D. Joseph Louis Gay- 4. Law of conserva-Lussac

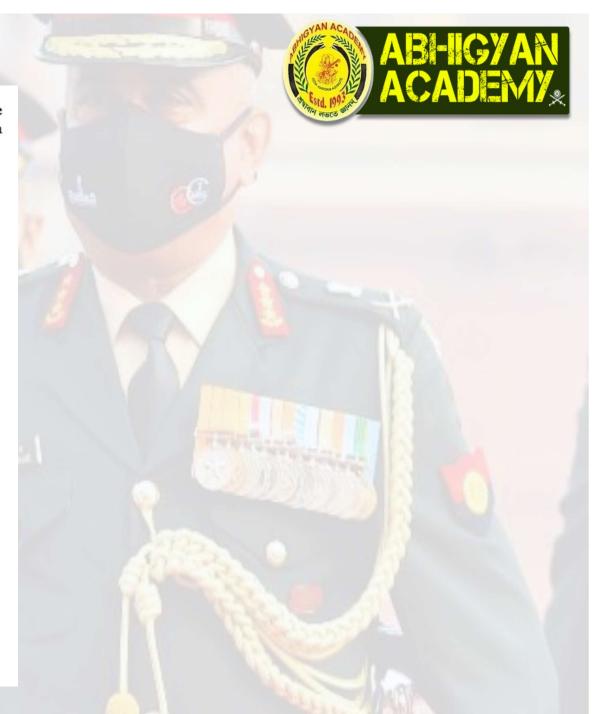
tion of mass

## Code:

(a) A D (b) A

(c) A D

(d) A D





27. In which one of the following reactions, the maximum quantity of H<sub>2</sub> gas is produced by the decomposition of 1 g of compound by H<sub>2</sub>O/O<sub>2</sub>?

(a) 
$$CH_4 + H_2O \rightarrow CO + 3H_2$$

(b) 
$$CO + H_2O \rightarrow CO_2 + H_2$$

(c) 
$$CH_4 + \frac{1}{2}O_2 \rightarrow CO + 2H_2$$

(d) 
$$C_{12}H_{24} + 6O_2 \rightarrow 12CO + 12H_2$$



10. Which one of the following equations is the balanced chemical equation for the given reaction?

$$\mathrm{Fe} + \mathrm{H_2O} \, \rightarrow \, \mathrm{Fe_3O_4} + \mathrm{H_2}$$

(a) Fe + 
$$4H_2O \rightarrow Fe_3O_4 + H_2$$

(b) 
$$3\text{Fe} + \text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 2\text{H}_2$$

(c) 
$$3\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + 4\text{H}_2$$

(d) 
$$3\text{Fe} + 4\text{H}_2\text{O} \rightarrow \text{Fe}_3\text{O}_4 + \text{H}_2$$

