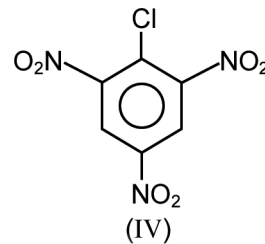
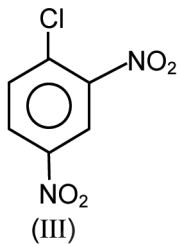
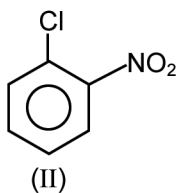
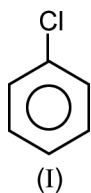


# MOMENTUM

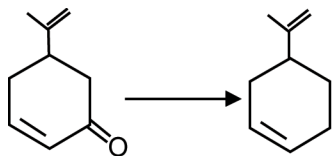
## CHEMISTRY

(24 Feb 2021) Shift-2

1. Compare the rate of aromatic nucleophilic substitution reaction of the following compounds



- (1) IV > II > III > I      (2) III > II > I > IV      (3) I > II > III > IV      (4) IV > III > II > I
2. What is S in Buna-S ?
- (1) Sulphure      (2) Styrene      (3) Rubber      (4) Strength
3. Which of the following set of the reagent is used to convert nitrobenzene 1,3-Dibromobenzene ?
- (1)  $\text{Br}_2/\text{Fe} \longrightarrow \text{Sn}/\text{HCl} \longrightarrow \text{NaNO}_2/\text{HCl} \longrightarrow \text{CuBr}/\text{HBr}$   
(2)  
(3)  
(4)
4. The reagent used to convert the following is ?



- (1)  $\text{NH}_2 - \text{NH}_2 / \text{C}_2\text{H}_5\text{O}^- \text{Na}^\oplus$       (2) Red P/ $\text{Cl}_2$   
(3) Ni/ $\text{H}_2$       (4)  $\text{NaBH}_4$
5. Match the following
- |                   |                        |
|-------------------|------------------------|
| <b>Column - I</b> | <b>Column - II</b>     |
| (a) Valium        | (p) Pernicious anaemia |
| (b) Morphine      | (q) Analgesic          |
| (c) Norethindrone | (r) Tranquilizer       |
| (d) Vitamin B-12  | (s) Antifertility      |

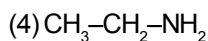
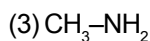
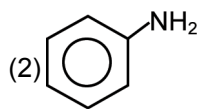
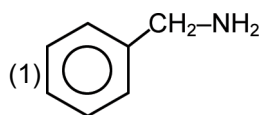
6. **Statement-I** : BOD is the parameter that can be helpful for survival of aquatic life.

**Statement-II** : Optimum value of BOD is 6.5 ppm.

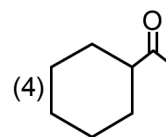
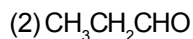
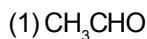
- (1) Statement I is true, Statement II is false  
(2) Statement I is false, Statement II is true  
(3) Statement I, II both are true  
(4) Statement I, II both are false

# MOMENTUM

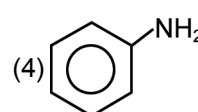
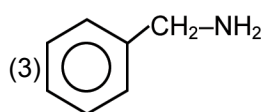
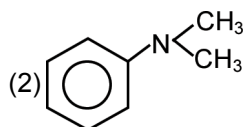
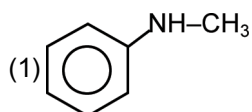
7. How many of the following amines can be prepared by Gabriel phthalimide synthesis ?



8. Which of the following compound cannot be prepared by the reaction of alkyne with  $\text{HgSO}_4/\text{dil. H}_2\text{SO}_4$  ?



9. Diazonium salt of which of the following will give coloured dye on reaction with  $\beta$ -Naphthol in NaOH



10. The correct bond angle & shape of  $\text{I}_3^-$  is



11. Correct statements

(a) K.E.  $\propto \frac{Z^2}{n^2}$

(b)  $(nv) \propto Z^2$

(c) Frequency  $\propto \frac{Z^3}{n^3}$

(d) Electrostatic force  $\propto \frac{Z^3}{n^4}$

(1) a & d are correct

(2) a & b are correct

(3) b & c are correct

(4) b & d are correct

12. Which of the following is incorrect ?

(1)  $\text{Cr}_2\text{O}_3$  is amphoteric

(2)  $\text{RuO}_4$  is oxidising agent

(3)  $\text{VO}_2$  is reducing agent

(4) Ruby appears due to presence of  $\text{Co}^{3+}$

13. Which of the following order of melting point is correct

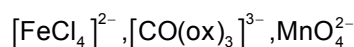
(1)  $\text{LiF} > \text{LiCl}, \text{NaCl} > \text{MgO}$

(2)  $\text{LiF} < \text{LiCl}, \text{NaCl} > \text{MgO}$

(3)  $\text{LiF} > \text{LiCl}, \text{NaCl} < \text{MgO}$

(4)  $\text{LiF} < \text{LiCl}, \text{NaCl} > \text{MgO}$

14. Spin only magnetic moment of the following complexes



(1) 4.9, 0, 1.76 BM

(2) 5.9, 1.73 BM

(3) 1.73, 2.83, 0 BM

(4) 2.83, 6.9, 0 BM

