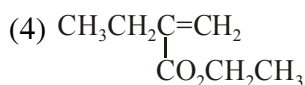
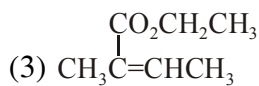
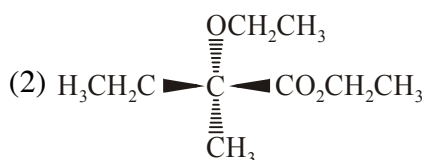
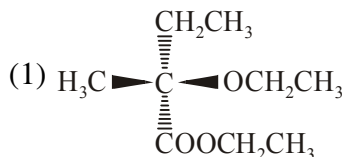
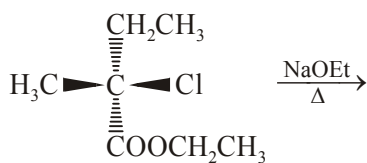
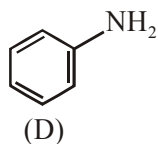
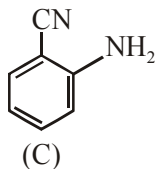
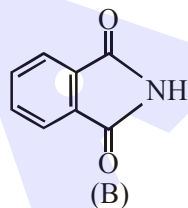
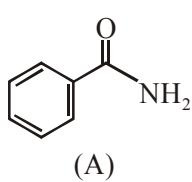


HALOGEN DERIVATIVE

1. निम्न अभिक्रिया का मुख्य उत्पाद है :

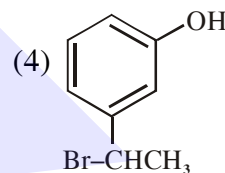
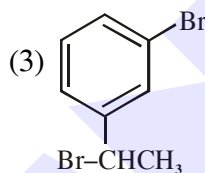
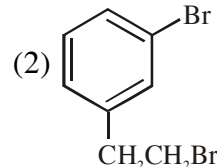
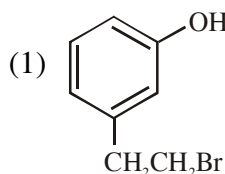
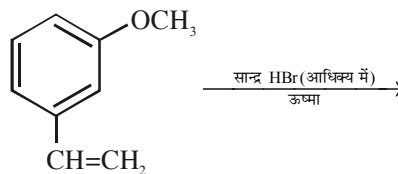


2. निम्न यौगिकों की ऐल्किल हैलाइड के साथ सीधी अभिक्रिया की अभिक्रियाशीलता का बढ़ता क्रम है :

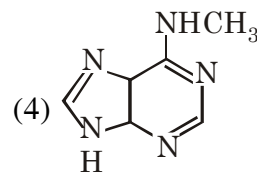
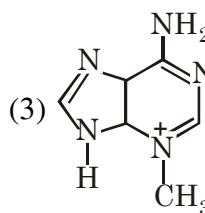
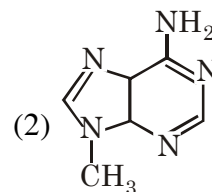
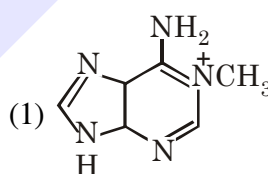
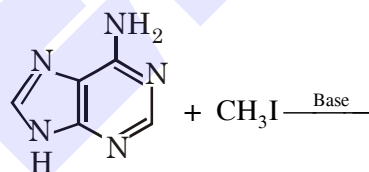


- (1) (B) < (A) < (D) < (C)
- (2) (B) < (A) < (C) < (D)
- (3) (A) < (C) < (D) < (B)
- (4) (A) < (B) < (C) < (D)

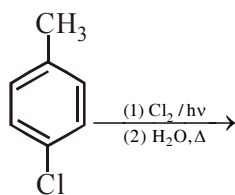
3. निम्नलिखित अभिक्रिया का मुख्य उत्पाद है -



4. निम्न अभिक्रिया में मुख्य उत्पाद है :



5. निम्न अभिक्रिया का मुख्य उत्पाद है :

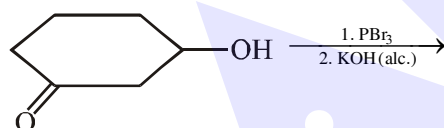


- (1)
- (2)
- (3)
- (4)

6. निम्नलिखित ऐल्कीनों में से कौन-सा एक HCl के साथ अभिक्रिया करके मुख्यतः एक प्रति मार्कोनीकोफ उत्पाद देता है ?

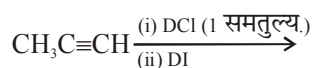
- (1) $F_3C - CH = CH_2$
- (2) $Cl - CH = CH_2$
- (3) $CH_3O - CH = CH_2$
- (4) $H_2N - CH = CH_2$

7. निम्नलिखित अभिक्रिया का मुख्य उत्पाद है :



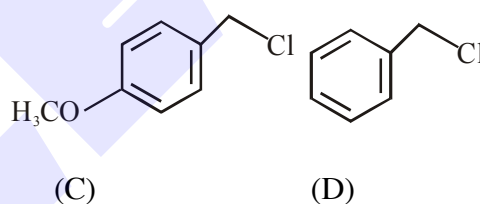
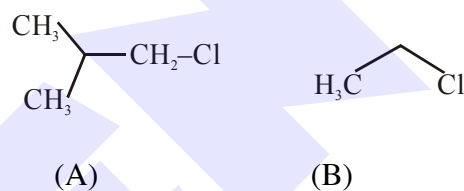
- (1)
- (2)
- (3)
- (4)

8. निम्नलिखित अभिक्रिया का मुख्य उत्पाद है :



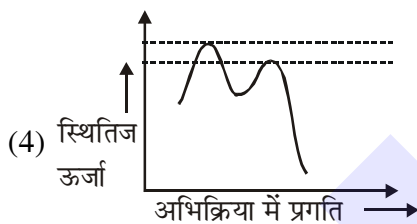
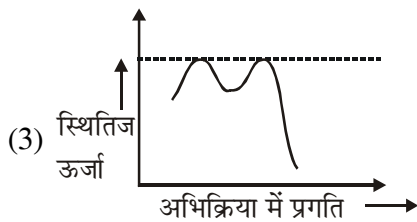
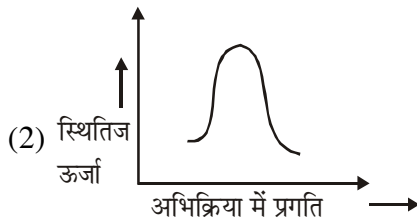
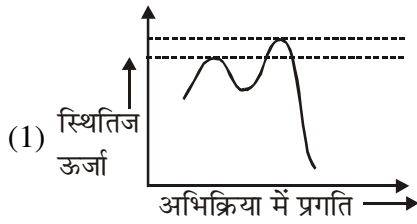
- (1) $CH_3CD(Cl)CHD(I)$
- (2) $CH_3CD_2CH(Cl)(I)$
- (3) $CH_3CD(I)CHD(Cl)$
- (4) $CH_3C(I)(Cl)CHD_2$

9. S_N1 प्रतिस्थापन के लिए निम्न यौगिकों की अभिक्रियाशीलता का बढ़ता क्रम है :

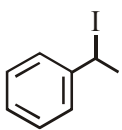


- (1) (B) < (C) < (D) < (A)
- (2) (A) < (B) < (D) < (C)
- (3) (B) < (A) < (D) < (C)
- (4) (B) < (C) < (A) < (D)

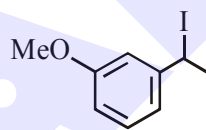
10. स्थितिज ऊर्जा (PE) का निम्न में से कौन सा आरेख S_N1 अभिक्रिया को अभिव्यक्त करता है :



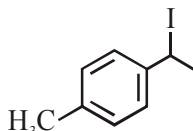
11. निम्न यौगिकों में S_N1 अभिक्रिया की बढ़ती दर होगी :



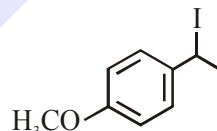
(A)



(B)



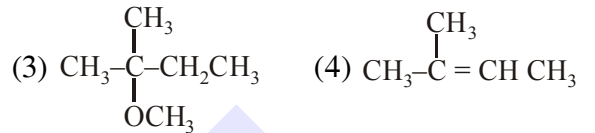
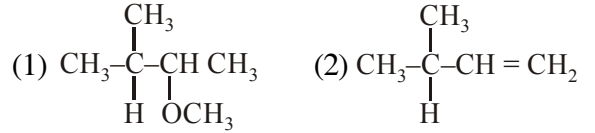
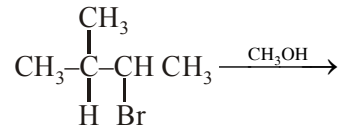
(C)



(D)

- (1) (A) < (B) < (C) < (D)
 (2) (B) < (A) < (D) < (C)
 (3) (B) < (A) < (C) < (D)
 (4) (A) < (B) < (D) < (C)

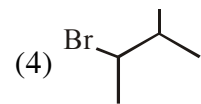
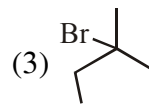
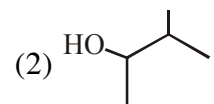
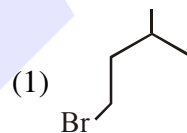
12. निम्न अभिक्रिया का मुख्य उत्पाद है :-



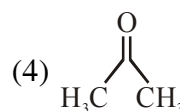
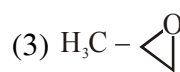
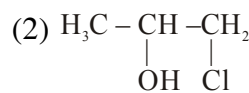
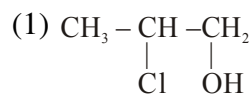
13. निम्न नाभिकरागियों के नाभिकरागिता का बढ़ता क्रम है :

- (a) CH_3CO_2^- (b) H_2O (c) CH_3SO_3^- (d) OH^-
 (1) (b) < (c) < (a) < (d) (2) (a) < (d) < (c) < (b)
 (3) (d) < (a) < (c) < (b) (4) (b) < (c) < (d) < (a)

14. निम्न अभिक्रिया में मुख्य उत्पाद 'Y' है:



15. निम्नलिखित योगात्मक अभिक्रिया का मुख्य उत्पाद है :



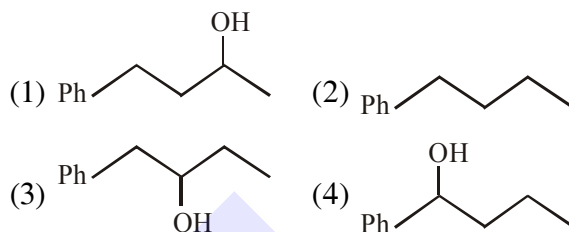
16. एक 'कथन' तथा एक 'कारण' नीचे दिया गया है। निम्न विकल्पों में से सही उत्तर का चुनाव कीजिये :

कथन (A) : विनाइल हैलाइड का नाभिकरागी प्रतिस्थापन आसानी से नहीं होता।

कारण (R) : अदृढ़ π -इलेक्ट्रॉनों द्वारा मध्यवर्ती कार्बोकेटायन के स्थायित्व के बावजूद भी, प्रबल आबंधन के कारण विदलन कठिन है।

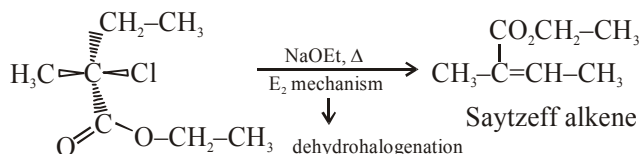
- (1) (A) तथा (R) दोनों ही गलत है।
 (2) (A) तथा (R) दोनों सही हैं तथा (R), (A) की सही व्याख्या है।
 (3) (A) तथा (R) दोनों सही हैं परन्तु (R), (A) की सही व्याख्या नहीं है।
 (4) (A) सही है परन्तु (R) गलत है।

17. 2-क्लोरो-1-फेनिलब्यूटेन को EtOK/EtOH के साथ गरम करने पर X मुख्य उत्पाद के रूप में प्राप्त होता है। $\text{Hg}(\text{OAc})_2/\text{H}_2\text{O}$ के साथ X की अभिक्रिया तत्पश्चात् NaBH_4 के साथ अभिक्रिया से प्राप्त Y मुख्य उत्पाद है। Y है :



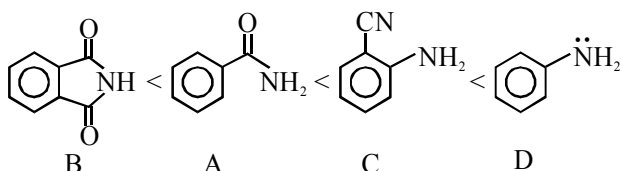
SOLUTION

1. **Ans. (3)**



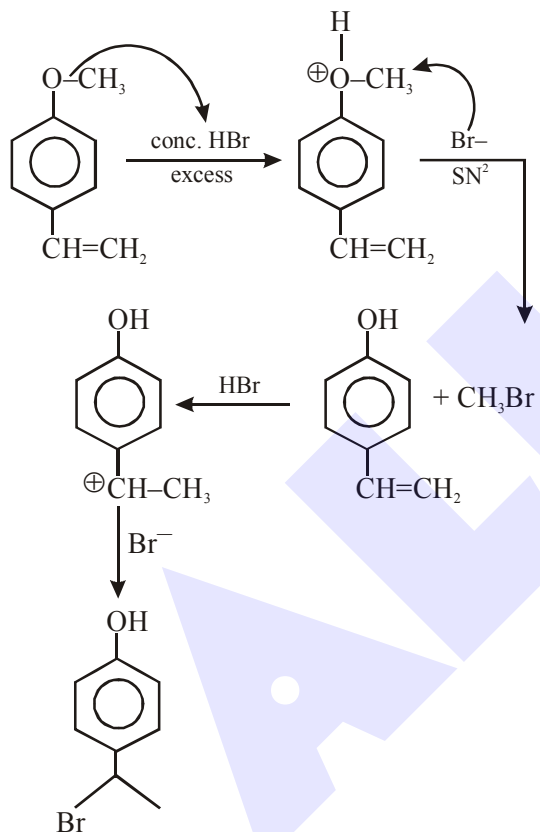
2. **Ans. (2)**

Nucleophilicity order



3. **Ans. (4)**

Sol.

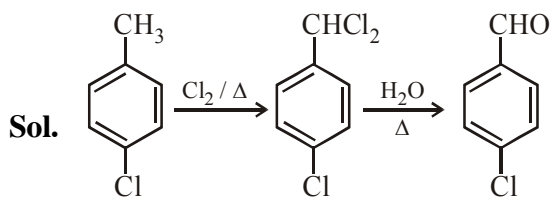


Correct option : (4)

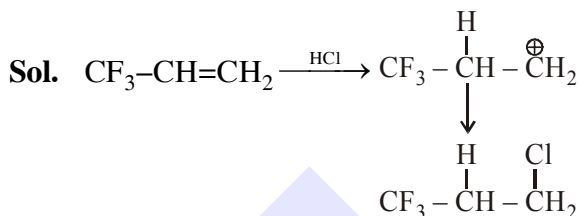
4. **Ans. (Bonus)**

Sol. because one double bond is missing in all given option. So aromaticity is lost in both the ring.

5. **Ans. (4)**



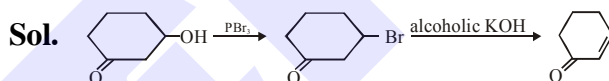
6. **Ans. (1)**



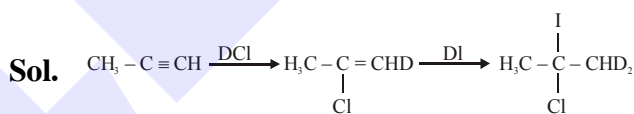
Due to higher e⁻ withdrawing nature of CF₃ group.

It follows anti-Markovnikov product

7. **Ans. (4)**

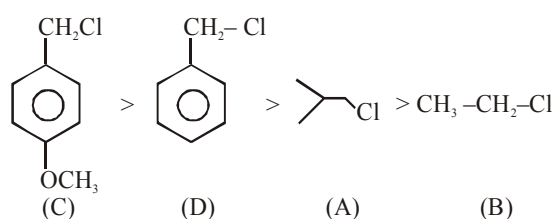


8. **Ans. (4)**



9. **Ans. (3)**

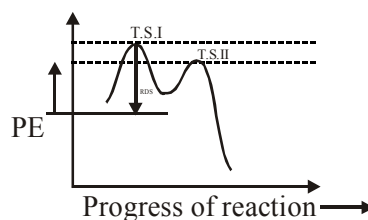
Sol. S_N1 Reactivity order



Order C > D > A > B

10. **Ans. (4)**

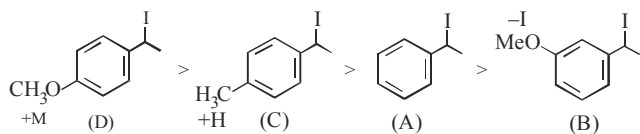
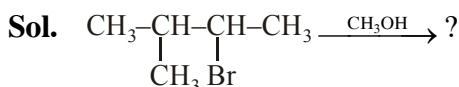
Sol. PE diagram for S_N1



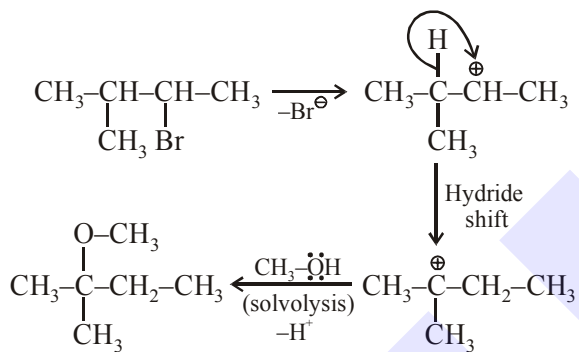
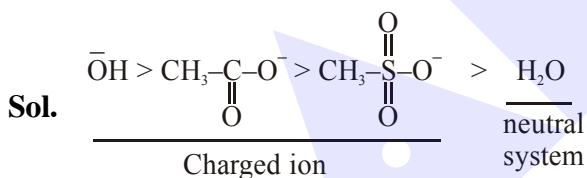
S_N1 is a two-step reaction where in step (1) formation of carbocation is RDS

11. Ans. (3)

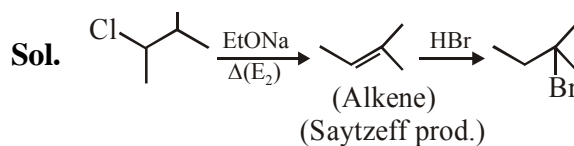
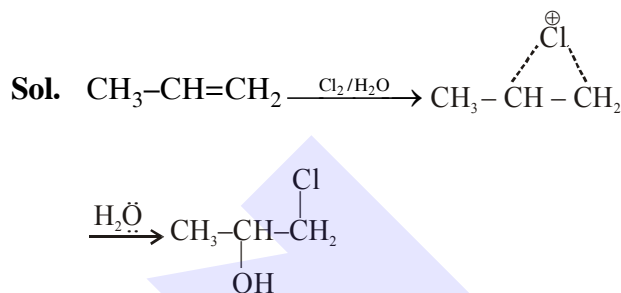
Sol. Rate of S_N1 is directly proportional to stability of first formed carbocation so answer is

**12. Ans. (3)**

In polar protic solvent S_N1 mechanism is favourable hence reaction complete via S_N1 mechanism

**13. Ans. (1)**

ion pair donating tendency on oxygen is reduced, nucleophilicity reduced $b < c < a < d$

14. Ans. (3)**15. Ans. (2)****16. Ans. (4)**

Sol. Vinyl halide $CH_2=\text{CH}-\text{Cl}$ do not undergo S_N reaction

This is due to formation of highly unstable carbocation ($CH_2=\overset{\oplus}{\text{C}}\text{H}$); which cannot be delocalised by the π -electron, also $C-\text{Cl}$ has double bond character because of resonance

17. Ans. (4)