

Topic : General Organic Chemistry
Type of Questions

Single choice Objective ('-1' negative marking) Q.1 to Q.15

(3 marks, 3 min.)

M.M., Min.

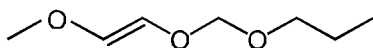
[45, 45]

Subjective Questions ('-1' negative marking) Q.16

(4 marks, 5 min.)

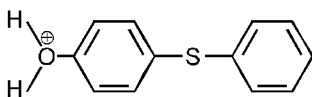
[4, 5]

1. How many lone pairs of electrons are there in the given compound ?



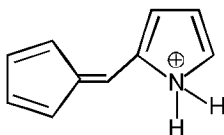
- (A) 4 (B) 2 (C) 8 (D) 6

2. How many lone pairs of electrons are there in the given compound ?



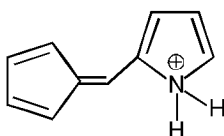
- (A) 4 (B) 3 (C) 8 (D) 6

3. What is the hybridisation of positively charged nitrogen atom ?



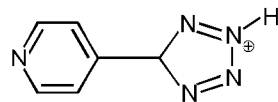
- (A) sp (B) sp² (C) sp³ (D) None of these

4. How many sp² hybridised atoms are there in the given cation ?



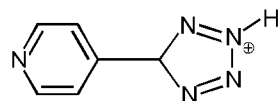
- (A) 8 (B) 9 (C) 10 (D) 12

5. How many lone pairs are present in the given cation ?



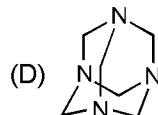
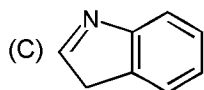
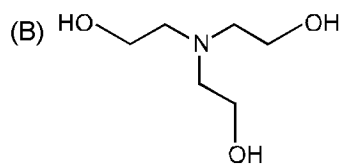
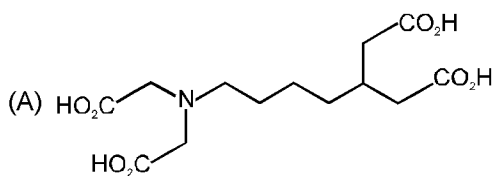
- (A) 3 (B) 4 (C) 5 (D) 6

6. How many N atoms are sp² hybridised in the given cation ?

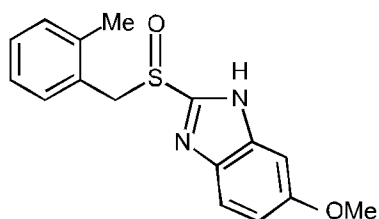


- (A) 3 (B) 4 (C) 5 (D) 6

7. In which of the following molecules is the nitrogen atom sp^2 hybridised ?



8. Geometry around how many carbon atoms is tetrahedral in the given structure ?



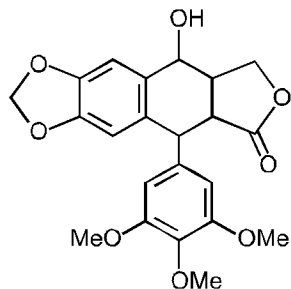
(A) 4

(B) 2

(C) 3

(D) 5

9. How many sp^3 hybridised carbon atoms are there in the given anti-cancer compound (podophyllotoxin) ?



the anti-cancer compound
podophyllotoxin

(A) 6

(B) 7

(C) 9

(D) 8

10. Bond order of C–C bond in benzene is :

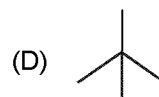
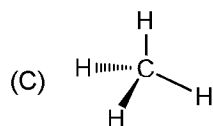
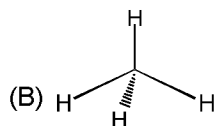
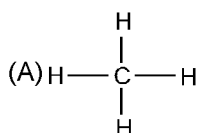
(A) 1

(B) 2

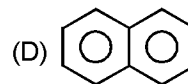
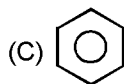
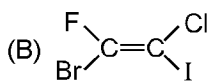
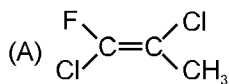
(C) 1.5

(D) two of above

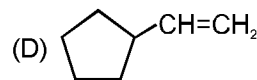
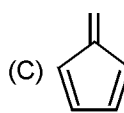
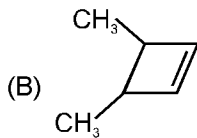
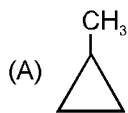
11. Which of the following is correct three dimensional representation of CH_4 ?



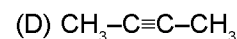
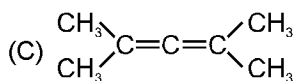
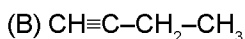
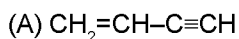
12. In which of the following all atoms do not present in the same plane ?



13. In which of the following all carbon atoms are present in the same plane ?



14. In which of the following are all C atoms linearly arranged ?



15. In How many carbon atoms are linearly arranged ?

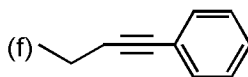
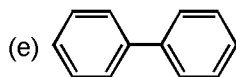
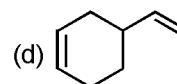
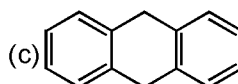
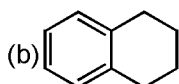
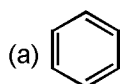
(A) 1

(B) 8

(C) 3

(D) 7

16. A maximum of how many (i) atoms (ii) carbon atoms must lie in same plane in each of the following molecule?



No. of $\text{sp}^2\text{-sp}^2$

σ -bonds

No. of $\text{sp}^2\text{-sp}$

σ -bonds

Answer Key

DPP No. # 10

- | | | | | | | | | | |
|-----|-----|-----------------|-----|-----------------|-----|-----------------|------|----------------|-----|
| 1. | (D) | 2. | (B) | 3. | (C) | 4. | (C) | 5. | (B) |
| 6. | (C) | 7. | (C) | 8. | (C) | 9. | (C) | 10. | (C) |
| 11. | (C) | 12. | (A) | 13. | (C) | 14. | (D) | 15. | (C) |
| 16. | (a) | (i) 12, (ii) 6. | (b) | (i) 12, (ii) 8. | (c) | (i) 12, (ii) 8. | (d). | (i) 6, (ii) 4. | |
| | (e) | (i) 14, (ii) 8. | (f) | (i) 14, (ii) 9. | | | | | |