

SEM	SET	PAPER CODE	TITLE OF THE PAPER
IV	2013	11UBO430406A	CHEMISTRY FOR BIOLOGIST – II

SECTION – A**Answer all the questions:****20 x 1 = 20****Choose the correct answer:**

- In thermodynamics, change in free energy is denoted by
 - ΔE
 - ΔH
 - ΔS
 - ΔG
- Aspirin is an example for
 - antiprotozoal agents
 - analgesics
 - antiulcer drugs
 - antifungal agents
- Example for piperidine alkaloids is
 - hygrine
 - coniine
 - nicotine
 - quinine
- Presence of diamide is tested by
 - Biuret test
 - Carbylamine test
 - Dye test
 - Nitration test
- Chromatography is based on the principle of
 - absorption
 - adsorption
 - filtration
 - distillation

Fill in the blanks:

6. Increase in temperature _____ the rate.
7. Ibuprofen is an example for _____.
8. Nicotine occurs in _____.
9. _____ is the reagent for testing an organic compound for aliphatic or aromatic.
10. In gas chromatography _____ is the mobile phase.

State True or False:

11. Order is an experimental factor.
12. Ether is a local anaesthetic.
13. Camphor is a monoterpene.
14. Schiff's reagent is used to test the functional group aldehyde.
15. Alumina is used as stationary phase in column chromatography.

Match the following:

- | | |
|------------------------------|----------------------|
| 16. Activation energy | - a) papaverine |
| 17. Antimalarial drug | - b) E_a |
| 18. Citral | - c) Bromine water |
| 19. Isoquinoline alkaloid | - d) $C_{10}H_{16}O$ |
| 20. Presence of unsaturation | - e) Chloroquin |

SECTION – B

Answer all the questions:

5 x 4 = 20

21. a. Define: Endothermic reactions (1)
Exothermic reactions (1)
Molecularity (2)

OR

- b. Discuss the factors affecting enzyme catalysis.
22. a. (i) Write the structure of penicillin. (2)
(ii) What are sedatives? Give example. (2)

OR

- b. What are anaesthetics? Write the types. Give examples.
23. a. Write the classification of alkaloids.

OR

- b. Write the structure and uses of camphor.
24. a. Discuss the element test for nitrogen and sulphur.

OR

- b. Explain the tests for acid and amine.
25. a. Write the principle and applications of thin layer chromatography.

OR

- b. Discuss the applications of paper chromatography.

SECTION – C

Answer any FOUR questions:

4 x 15 = 60

26. a. Discuss the kinetics of enzyme catalysis. (10)
- b. Explain the factors affecting the rate of the reactions. (5)
27. a. Define: (i) Drug (5×2=10)
- (ii) Hypnotics
- (iii) Pharmacogenomics
- (iv) Vasodepressor drugs
- (v) Pharmacophore
- b. Write the structure and properties of chloramphenicol. (5)
28. a. Write the isolation, structure, properties and uses of citral. (10)
- b. Write the classification of terpenes. (5)
29. Discuss the tests for the following functional groups:
- a) Carbohydrate b) amide
- c) diamide d) halogens (4×2=8)
- e) saturation and unsaturation (3)
- f) ketone g) phenol (2×2=4)
30. a. Discuss the instrumentation, sampling and applications of gas chromatography. (12)
- b. Write the applications of column chromatography. (3)
