E 1594 (Pages : 2) Reg. No.....

Name.....

C.B.C.S.S. – B.Sc. DEGREE EXAMINATION, APRIL 2011

Fourth Semester

Core Course – BASIC ORGANIC CHEMISTRY – I

(Common for B.Sc. Chemistry Model I and Model II, B.Sc. Petrochemicals and B.Sc. Chemistry Environment and Management)

Time : Three Hours Maximum Weight : 25

Write equations wherever necessary.

Section A

Answer **all** *questions.*

Each bunch of four questions carry a weight of 1.

I. Fill in the blanks :

1. Two isomers of Naphthols are _____, _____.
2. Structure of Maleic acid is _____.
3. Pinacol is converted into Pinacolone in the presence of _____.
4. Alkoxy Group is estimated by _____ method.

II. 5. Write the reagents in Perkin's reaction.

6. Name one specific use of Sodium Borohydride.
7. Phenol and O nitro phenol, more acidic is _____.

III. 9. What are Epoxides?

10. Write the product formed when Cis 1, 2 Glycol is oxidised with lead tetra acetate.
11. What is the product formed when urea is treated with Nitric acid?
12. Mention one use of acid chloride.

IV. 13. Draw the structure of Resoscinol.

14. Write the test to distinguish between aldehyde and ketone.
15. Name the main acid present in citrus fruit.
16. Draw the structure of Phenanthrene.

(4 × 1 = 4)

Turn over

Section B

Answer any **five** *questions.*
Each question carries a weight of 1.

17. What are the three known Isomeric Napthaquinone? Draw the structures also.
18. How is Ethylene Glycol prepared?
19. How will you convert propanoic acid to Ethanoic acid?
20. Give one method for the preparation of Semicarbazide.
21. What is Mannich reaction?
22. What is Wolf Kishner reduction?
23. What do you mean by Keto-enol tautomerism of Ethyl acetoacetate? Explain.
24. How is cinnamic acid prepared by Perkan reaction?

(5 × 1 = 5)

Section C

Answer any **four** *questions.*
Each question carries a weight of 2.

25. How is citric acid formed by Reformatsky reaction? Write the products formed when citric acid is heated.
26. Aromatic Carboxcylic acids are stronger than alkyl carboxylic acid? Explain.
27. What is Cannizzaros reaction? Explain the mechanisms involved in it.
28. How is primary, secondary and tertiary alcohols separated?
29. How is Guanidine prepared? Explain the Basicity of Guanidine.
30. Discuss on alkylation of Caboxyl compounds via enamines.

(4 × 2 = 8)

Section D

Answer any **two** *questions.*
Each question carries a weight of 4.

31. Discuss the mechanism of :
    (a) Benzoin condensation.
    (b) Meerwein – Pondor of – Verley reaction.
    (c) Claisen rearrangement.
    (d) Fries rearrangement.
32. Give one method each for the preparation of :
    (a) Benzene Sulphonyl chloride.
    (b) Picric acid.
    (c) Malonic acid.
    (d) Coumarin.
33. Give two synthetic applications each of : (a) Grignard reagent ; (b) Malonic ester.

(2 × 4 = 8)