Reg. No…….. Name…… **15U516**

B.Sc. DEGREE END SEMESTER EXAMINATION OCTOBER 2017

SEMESTER **–5: CHEMISTRY (CORE COURSE)**

COURSE: **15U5CRCHE06: ORGANIC CHEMISTRY III**

(For Regular 2015 admission)

Time: Three Hours Max. Marks: 60

SECTION A

Answer **all** questions. Each question carries **1** mark

1. Imine is .....?
2. What is Syndets?
3. Explain Red shift used in UV-Visible spectroscopy?
4. What is Borsche's reagent?
5. Mention the use of KBr in IR Spectroscopy?
6. Explain about PVC polymer?
7. Which of the following molecule is IR inactive?
   (a) CH_3NH_2 (b) CO_2
   (c) N-H (d) S-H
8. Explain Nitrogen rule. (1 x 8 = 8)

SECTION B

Answer **any Six** questions. Each question carries 2 marks

9. Explain preparation and chemical structure of Diazo acetic ester.
10. Write one method of preparation of Alizarin dye.
11. Write synthesis and mechanism of Schiemann reaction.
12. Explain Beer-Lambert law for absorption of light by molecules in UV-Visible spectroscopy.
13. Write preparation and reactions of NBS.
14. What is Non-ionic detergents and write any two examples?
15. What are Charge – transfer complexes?
16. Write a short note about Urea formaldehyde resin and its uses. (2 x 6 = 12)

SECTION C

Answer **any Four** questions. Each question carries 5 marks

17. Write synthesis and uses of BUNA S and BUNA N Rubber.
18. Explain about LAS and ABS detergents and benfits of LAS over ABS.
19. Write the synthesis and applications of Diazonium salts.
20. Explain synthesis and uses of Paracetamol and Analgin.
21. Write structure of Butadiene on basis of molecular orbital theory.
22. Write a short note about various types of detergent additives. (5 x 4 = 20)

SECTION D

Answer **any Two** questions. Each question carries 10 marks

23. (a) Explain Arndt – Eistert synthesis, Wolf rearrangement and their mechanisms.
    (b) Discuss Separation of mixture of amines.
24. Write theories of colour and chemical constitution of dyes.
25. Explain method of preparation and relative stabilites of cycloalkanes.
26. (a) What is FT NMR in NMR spectroscopy
    (b) Explain Spin- Spin Coupling and Spin –Spin Splitting in NMR spectroscopy (10 x 2 = 20)

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