Reg. No…….. Name…… **18U616**

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2018

SEMESTER **– 6: CHEMISTRY (CORE COURSE)**

COURSE: **15U6CRCHE10: ORGANIC CHEMISTRY - IV**

(For Regular - 2015 Admission)

Time: Three Hours Max. Marks: 60

SECTION A

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

1. IUPAC name of the fundamental unit of a terpenoid is ----------
2. The deficiency of Vitamin B_1 causes ----------
3. The triglyceride having unsaturated fatty acids are called ----------.
4. Glucose, an aldose sugar does not retain the pink colour of Schiff's reagent since -----
5. Epimers differ in the configuration at ----------
6. In pyridine, the electrophilic substitution reactions take place at ---------- position.
7. Name an enzyme and a reaction catalyzed by this enzyme.
8. ---------- is the steroid found in all mammalian tissues. (1 x 8 = 8)

SECTION B

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

9. What happens when coniine hydrochloride is distilled with Zn dust?
10. Sucrose is a non-reducing sugar. Explain?
11. What happens when indole is treated with dimethylamine and methanol?
12. Explain Gabriel's phthalimide synthesis?
13. Explain induced fit model of Enzyme action?
14. Explain factors affecting enzyme action?
15. What are the functions of HDL cholesterol?
16. What are the functions of Vitamin D (2 x 6 = 12)

SECTION C

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

17. What do you understand by the term rancidity? How is it caused? Discuss its mechanism? How can you prevent rancidity?
18. What happens when glucose is warmed with dilute alkali? Give mechanism.
19. How can you convert an aldohexose to a ketohexose? Give suitable equations.
20. a) Explain Skraup's synthesis with suitable example?
    b) What happens when quinolone and isoquinoline are oxidized using alkaline $KMnO_4$?

21. a) In pyrrole, electrophilic substitution takes place at position 2. Explain?

    b) Pyrrole is acidic in nature. Explain?

22. a) Explain Merrifield method of peptide synthesis?

    b) What is Biuret test? (5 x 4 = 20)

SECTION D

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

23. a) Establish the structure of nicotine? Give its synthesis.

    b) How will you establish the structure of Geraniol?

24. a) Show that Glucose can exist in a six-membered ring form.

    b) How will you convert an aldopentose to aldohexose?

    c) How will you convert an aldohexose to aldopentose?

    d) What happens when fructose is treated with phenyl hydrazine?

25. How will you convert –

    a) Benzaldehyde to Isoquinoline. b) o – Aminobenzaldehyde to Quinoline

    c) Quinoline to 1,2-dihydroquinoline d) Amination of Pyridine.

26. a) Explain N- Terminal residue Analysis?

    b) Explain primary and secondary structures of a protein? (10 x 2 = 20)

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