Reg. No..   Name...

B. Sc. DEGREE END SEMESTER EXAMINATION MARCH 2017
SEMESTER – 4: COMPLEMENTARY COURSE FOR BSC BOTANY AND ZOOLOGY
COURSE: 15U4CPCHE6: ADVANCED BIO-ORGANIC CHEMISTRY - II
(Regular 2015 Admission)

Time: Three Hours   Max. Marks: 60

PART A

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

1. Give an example of ketohexose.
2. ....is an example of neutral amino acid.
3. Which vitamin is known as Ascorbic acid?
4. Give the name of any one female sex hormone.
5. With chloroform and alkali, indole gives..............
6. An example of dispensable aminio acid.
7. Mention one important biological function of lipids.
8. On heating with sodamide in liquid NH_3, pyridine gives ....

$(1 \times 8 = 8)$

PART B

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

9. Pyrrole is less basic than ammonia. Why?
10. What happens when glucose is treated with sodium amalgam and water?
11. What are zwitter ions?
12. Explain the physiological action of conine.
13. Explain the term mutarotation.
14. Explain the term R_f value
15. In what respect vitamins differ from hormones?
16. Give the sources of vitamins C, K, A and D.

$(2 \times 6 = 12)$

PART C

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

17. Discuss the principle and process involved in TLC.

18. How is glucose converted into fructose and vice versa?

19. How is pyridine isolated from coal tar? Why is it basic in nature?

20. Give the reactions of amino acids with (a) NaOH (b) HCl (c) acetic anhydride

21. What is cholesterol? Discuss the important properties of it.

22. What are essential oils? How they are extracted from plants.

$$(5 \times 4 = 20)$$

Section D

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

23. i) Give an account of the structure of protein.

   ii) What are the difficulties encountered in the synthesis of peptides? How have these been overcome ?

24. What are hormones? Give the names of four hormones and explain their functions.

25. What are alkaloids? Establish the structure of conine.

26. What are oils and fats? What are the different methods for the analysis of oils and fats?

$$(10 \times 2 = 20)$$

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