C 4009 (Pages : 2) Name.....

Reg. **No.....**

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2016

(CUCBCSS–UG)

Complementary Course

BCH 4C 04 – BIOCHEMISTRY IV

Time : Three Hours Maximum : 80 Marks

Section A

Answer **all** *questions.*

Each question carries 1 mark.

1. _____ is the rate limiting enzyme of cholesterol biosynthesis.
2. _____ is a thyroid hormone.
3. Rickets is caused by the deficiency of _____
4. Vitamin _____ is involved in blood clotting.
5. Fatty acid oxidation takes place in _____
6. _____ is a ketogenic amino acid.
7. What is the co factor in carboxylation reactions?
8. _____ is a fat soluble vitamin.
9. _____ is a peptide hormone.
10. _____ is a phospholipid.
11. Give an example of a ketone body.
12. What is the precursor of steroid hormones?
13. Bile is produced in _____

    (liver, pancreas, small intestine, mouth)
14. _____ stimulate the release of hormone sensitive lipase.

    (epinephrine, glucagon, growth hormone, insulin)
15. Where does Urea cycle takes place.?

    (liver, pancreas, small intestine, kidney)
16. _____ is the co factor involved in fatty acid synthesis.

    (NAD, NADP, FMN, TPP)

(16 x 1 = 16 marks)

Turn over

Section B

Answer any **eight** *of the following.*
Each question carries **3** *marks.*

17. What are proteolytic enzymes? Give *two* examples.

18. What is decarboxylation reaction? Give an example

19. What are the physiological functions of pyridoxine?

20. What is scurvy? What are is symptoms and contributing factors?

21. What are the sources of Vitamin E?

22. What are the functions of glucagon?

23. What are second messengers? Give an example..

24. What is β-oxidation?

25. Write down the reaction catalysed by arginase.

26. How ornithine is formed in urea cycle?

(8 x 3 = 24 marks)

Section C

Answer any **four** *of the following.*
Each question carries **5** *marks.*

27. What is carnitine? Explain its role in β-oxidation.

28. Explain the regulation of cholesterol biosynthesis.

29. Explain the biological roles of potassium.

30. Explain the classification of hormones with suitable examples.

31. Explain the physiological functions of Vitamin A.

32. Explain the physiological functions of phospholipids.

(4 **x** 5 = 20 marks)

Section D

Answer any **two** *of the following*
Each question carries **10** *marks.*

33. Explain the digestion and absorption of lipids.

34. Explain fatty acid synthesis and its regulation.

35. Explain urea cycle .

(2 x 10 = 20 marks)