**C 41464** **(Pages 3)** **Name.....**

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

# FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2013

(CCSS)

**Biochemistry**

## BC4 C13—ENZYMOLOGY AND METABOLISM – II

Time : Three Hours Maximum : 30 Weightage

I. Answer all *twelve* questions :

1 Net yield from the complete oxidation of a mole of palmitate is :

(a) **131 ATP.** (b) 129 ATP.

**(c) 121 ATP.** (d) 127 ATP.

2 The first committed step of cholesterol biosynthesis is catalyzed by :

(a) HMG CoA synthase. (b) HMG CoA synthase.

(c) Thiolase. (d) p ketoacyl CoA.

3 Urecotelic orgnaisms are :

(a) Birds. (b) Man.

(c) Fishes. (d) None of these.

4 Secretin stimulated the production of :

(a) Bicarbonate. (b) HCI.

(c) Pepsinogen. (d) Pesin.

5 Trypsin hydrolyses peptide bonds whose carboxyl groups are contributed by :

(a) Lysine. (b) Arginine.

(c) Both a and b. (d) Phenylalanine.

6 The products of glycinesynthesis reaction is :

(a) Serine. (b) Acetoacetate.

(c) $CO_2$ and $NH_4^+$. (d) Fumarte.

7 Proof reading is ____ activity of DNA polymerase.

(a) 5'— 3' pol. **(b) 3' – 5' exonuclease.**

(c) 5' – 3' exonuclease. (d) 3' – 5' endonuclease.

**Turn over**

8 Which among the following is an inhibitor of transcription ?

(a) Actinomycin D. (b) Puromycin.

(c) Tetracycline. (d) Cycloheximide.

9 Ochre codon is :

(a) UAA. (b) UAG.

(c) UGA. (d) AUG.

10 Antihaemorrhagic factor is :

(a) Vitamin D. (b) Vitamin A.

(c) Vitamin E. (d) Vitamin K.

11 Hormone produced by adrenal medulla.

(a) Glucogon. (b) Epinephrine.

(c) Glueocorticoid. (d) Thyroxine.

12 Iron transport protein is :

(a) Ferritin. (b) Transferin.

(e) Cetuloplasmin. (d) None of these.

II. Answer all *nine* questions : (12 x ¼ = 3 weightage)

13 Name the fat soluble vitamins.

14 What is a coding strand ?

15 What are transcription factors ?

16 What is Shine Dalgarno sequence ?

17 Write a biochemical reaction involinv NADP.

18 What are secondary plant products ? Give examples.

19 What is deamination ? Give example.

20 What are Kotogenic aminoacids ? Give example.

21 What are ribozymes ? Give example.

III. Answer any *five* questions from seven : (9 x 1 = 9 weightage)

22 Describe the digestion and absorption of fat.

23 Briefly describe the physiological functions of phospholipids.

24 Describe the structure of tRNA.

25 Describe the post translational modifications of proteins.

26 Write the mechanism of action and site of synthesis of (a) thyroxine ; (b) Insulin.

27 Write the physiological role of (a) Ca ; (b) Iodine.

28 Describe the role of different RNAs in protein synthesis.

(5 x 2 = 10 weightage)

W. Answer any *two* questions from three :

29 Write note on fatty acid synthase and describe its role in the synthesis of fatty acids.

30 Describe the metabolism of Phenylalanine.

31 Describe the physiological function, dietary requirement and deficiency diseases of :

(a) Vitamin C. (b) Vitamin **B1.**

(c) Pyridoxine.

(2 x 4 = 8 weightage)