

C 21257

(Pages : 3)

Name.....

Reg. No.....

**FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION
APRIL 2022**

Biochemistry

BCH4C04—BIOCHEMISTRY IV

(2014—2018 Admissions)

Time : Three Hours

Maximum : 64 Marks

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

1. The hormone epinephrine is synthesized by _____.
(a) Pancreas. (b) Hypothalamus.
(c) Adrenal gland. (d) Pituitary.
2. Biosynthesis of fatty acids takes place in the _____.
(a) Mitochondria. (b) Cytosol.
(c) Nucleus. (d) Lysosomes.
3. _____ is the best source of biotin.
(a) Oranges. (b) Egg yolk.
(c) Potato. (d) Onion.
4. Menkes disease is caused by the deficiency of _____.
(a) Iodine. (b) Iron.
(c) Copper. (d) Selenium
5. Identify a hormone having structural similarity with cholesterol.
(a) Glucagon. (b) Epinephrine.
(c) Cortisol. (d) Thyroxine.

Turn over

6. List out any *two* digestive enzymes of digestive tract.
7. Cholesterol biosynthesis begins with _____.
8. Name the disease associated with Vitamin C deficiency.
9. Give one example each for glucogenic and ketogenic amino acid.
10. Name the trace mineral necessary for scavenging of peroxides.

(10 × 1 = 10 marks)

Section B

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

11. What are trace minerals? Give two examples.
12. What is fatty acid synthase complex?
13. How is the zymogen form of trypsin activated?
14. Comment on transamination reaction.
15. Write down the functions of glucocorticoids.
16. List out the water soluble vitamins.
17. What is the fate of ammonia in our body?
18. Mention the site of biosynthesis of : (a) Growth hormone ; (b) Glucagon.
19. Give the biochemical functions of pyridoxine.
20. Which is the committed step in cholesterol biosynthesis?

(7 × 2 = 14 marks)

Section C

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

21. Write on the biosynthesis and degradation of glycine.
22. Give one biochemical reaction involving :
 - (a) Biotin.
 - (b) PLP.
 - (c) TPP.

23. Differentiate between glucogenic and ketogenic amino acids with examples.
24. How are hormones classified based on mechanism of action?
25. Give an account on the physiological function of phospholipids.
26. Briefly explain the importance of macro minerals with examples.

(4 × 5 = 20 marks)

Section D

Answer any two questions.

Each question carries 10 marks.

27. Describe the biological role and nutritional importance of any five trace minerals.
28. Elaborate on urea cycle.
29. Detail on β -oxidation of palmitic acid. Calculate the ATP yield in this process.
30. Detail on fat soluble vitamins, their physiological functions and daily requirement.

(2 × 10 = 20 marks)