

Question Paper

Exam Date & Time: 22-Sep-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BOT / B.Sc. PFT / BPT/ B.Sc. OPTOM. / B.Sc. CVT /B.Sc. RT /B.Sc. MIT /B.Sc. RRT&DT / B.Sc. EMT / B.Sc. AOTT / B.Sc. MLT / B.Sc. NMT / B.Sc. CND DEGREE EXAMINATION - SEPTEMBER 2022
SUBJECT: BIC1201 - BIOCHEMISTRY
(2020 SCHEME)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

- 1) With the help of a diagram explain the biosynthesis of mature collagen emphasizing the reactions catalyzed and importance of prolyl hydroxylase, lysyl hydroxylase and lysyl oxidase. (10)
- 2A) Describe transamination and oxidative deamination of amino acids with one example each. (3)
- 2B) Explain the reactions of urea cycle mentioning the site, subcellular site and significance. (7)
- 3A) Define dietary fibers. Explain any FOUR beneficial effects of dietary fibers. (5)
- 3B) Illustrate the mechanisms of absorption of monosaccharides in small intestine and explain the significance of including sodium chloride with glucose in the oral rehydration solution. (5)
- 3C) Mention the RDA, chemical forms, sources and biochemical functions of vitamin E and vitamin K. (5)
- 3D) Explain isoenzymes based on two examples with their clinical significance. (5)
- 4A) Explain mutual supplementation of proteins with an example. (2)
- 4B) Where is glycogen stored in the human body and what are its functions? (2)
- 4C) Define gluconeogenesis and name TWO precursors for it (2)
- 4D) Write the normal serum levels of total cholesterol and urea and indicate ONE clinical condition where their levels are increased. (2)
- 4E) Define thermic effect of food and mention the values for carbohydrates and proteins. (2)

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