CC6

Unit 3

1. Describe the structure of neuron with diagram. (3+2)
2. What is resting membrane potential? 2
3. State the ionic balance of nerve fibre during resting state. 3
4. What is action potential? 2
5. Describe the process of origin of action potential in nerve fibre. (5)
6. What is spike potential? 2
7. Describe the process of nerve impulse transmission through unmyelinated nerve fibre. 5
8. What is saltatory trasmission? Describe the process of nerve impulse transmission through myelinated nerve fibre. 2+5
9. What is synapse? Describe the process of nerve impulse transmission through synapse. 2+5
10. Describe the structure of neuromuscular junction. 5

Unit 4

1. Describe the ultrastructure of skeletal muscle with diagram. 3+2
2. Describe the process of muscle contraction. 6
3. State the characteristics of muscle fibre. 3
4. Write short note 5x3
   a. Histology of skeletal muscle
   b. Histology smooth muscle
   c. Histology of cardiac muscle.
5. Write difference between striated and nonstriated muscle 2
6. Write difference between skeletal and cardiac muscle 2

CC7

Unit I

1. Write short note on 5
   a. Monosaccharide
   b. Disaccharide
   c. Polysaccharide
2. What is aldose and ketose sugar? Give example 3+1
3. What do you mean by D and L isomer of monosaccharide. Give example. 3+1
4. What do you epimerism and anomerism? Give example. 3+1
5. What do mean by tautomeric ring structure of monosaccharide? Give example. 2+1
6. What is optical isomerism? Give example. 2+1
7. What do you mean by penultimate carbon: Explain with an example. 2
8. What do you mean by reducing sugar? Give example. 2+1
9. What is non-reducing sugar? Give example. 2+1
10. Why sucrose is called inverted sugar. 3
11. Mention the structural and functional difference between glycogen and cellulose/ starch and cellulose. 4

12. What do you mean by homoglycan and heteroglycan. Give example. 2+1
13. Write a note on the biological significance of polysaccharide. 3
14. Write a note on derived monosaccharides and their biological significance. 5
15. Describe the process of glycolysis? 5
16. What is EMP pathway? 2
17. Elaborate the ATP production during glycolysis. 3
18. Mention the biological significance of glycolysis. 2
19. Describe the process of Citric acid cycle. 6
20. Illustrate ATP production during citric acid cycle. 4
21. Mention the biological significance of citric acid cycle. 2
22. Why citric acid cycle is called TCA cycle? 2
23. What is gluconeogenesis? What are the key enzymes/ rate limiting enzyme of gluconeogenesis? 2
24. Describe the process of gluconeogenesis from pyruvate/ lactate. 6
25. Describe the process of gluconeogenesis from glycerol. 6
26. Describe the process of gluconeogenesis from amino acids. 6
27. ' Gluconeogenesis is the process of production of glucose from non- carbohydrate source'- Mention the role of fatty acid in gluconeogenesis. 3
28. Describe the process of gluconeogenesis from propionate. 5
29. What is the biological significance of gluconeogenesis? 3
30. What is pentose phosphate pathway? 2
31. Describe pentose phosphate pathway. 6
32. What is the biological significance of pentose phosphate pathway. 3

Unit 5

Discussion after vacation