

13.	Beta-oxidation of fatty acids occurs in a) Peroxisome c) Mitochondria	b) Peroxisome and Mitochondria d) Peroxisome, Mitochondria and ER	1	K1
14.	Which one of the following is known as Sanger's reagent. a) BF ₃ c) Phenyl isocyanate	b) FDNB d) α -naphthol	1	K1
15.	The key enzyme in the regulation of fatty acid synthesis is a) acetyl CoA carboxylase c) protein phosphatase	b) AMP-activated protein kinase d) None of the above	1	K1
SECTION B (15 x 1 = 15 marks) Fill in the blanks			CO	KL
16.	When the blood level of ketone bodies rises above the renal threshold, they are excreted in urine. This condition is called _____.		2	K2
17.	The only optically inactive amino acid is _____.		2	K2
18.	Protein are linear sequences of amino acids linked together by _____ bond.		2	K2
19.	Triglycerides on hydrolysis give fatty acids a _____.		2	K2
20.	A steroid from the blood of sharks is _____.		2	K2
Match the following				
21.	HDL & LDL	a. Absence of degradation of fats due to enzyme deficiency	2	K2
22.	Selenium	b. Cholesterol	2	K2
23.	phosphatidyl choline	c. Thyroid dysfunction	2	K2
24.	Hormone	d. Cephalins	2	K2
25.	Nieman Pick disease	e. lecithin	2	K2
		f. Thyroxine		
Answer in a line or two.				
26.	Name two-essential fatty acids.		2	K2
27.	Give the daily recommended dietary allowance of the element sodium.		2	K2
28.	Give the structure of vitamin C		2	K2
29.	Give the risk factor of LDL.		2	K2
30.	Define iodine value.		2	K2
Q. No.	SECTION C Answer any six of the following (6x5 = 30 marks)			KL
31.	Give an account of the digestion and absorption of lipids.		3	K3
32.	Give an account of the urea cycle.		3	K3
33.	Define electrophoresis. Discuss the principle and applications of SDS- PAGE		3	K3

34.	Explain the absorption and retention of elements -calcium and Phosphorus. Give their product in serum.	3	K3
35.	Give an account of phospholipids.	3	K3
36.	Give the definition and the significance of the following – i) Acid value ii) Saponification value iii) Acetyl value	3	K3
37.	Discuss the classification of amino acids based on the R group.	3	K3
Q. No.	SECTION D Answer any four of the following (4 x 5 = 20 marks)		K4
38.	What is the action of the following on an amino acid? (explain with relevant chemical reactions) (1+2+2) a. Mineral acid b. CO ₂ c. FDNB	4	K4
39.	Explain in detail the types of ketone bodies present in our system.	4	K4
40.	Explain the digestion and absorption of proteins.	4	K4
41.	Discuss the biosynthesis of fatty Acids.	4	K4
42.	Explain the amphoteric nature and ion binding capacity of proteins.	4	K4
Q.No.	SECTION E Answer the following (2x 10 = 20 marks)		K L
43.	Discuss in detail the various steps involved in β -oxidation of fatty acids. How many ATPs will be formed from a C-18 fatty acid on oxidation	5	K5
	OR		
	Discuss the mechanism of hormone action. List the functions of Insulin. Give the clinical significance of TSH, T3, and T4	5	K5
44.	Describe the primary, secondary, and tertiary structure of a protein.	5	K5
	OR		
	Explain the principle and list three applications of the following techniques – i) Dialysis ii) HPLC	5	K5
