Sem-III CBSGS 30/03/15
Bio-chemistry - II

QP Code : **13422**

(3 Hours) [Total Marks : 70

N.B. : (1) All questions are **compulsory.**

1.	(a)	Define "Glycolysis."	1
	(b)	The key regulatory enzyme of cholesterol biosynthesis is _____ .	1
	(c)	How many NADH molecules are produced after 6 turns of β-oxidation pathway.	1
	(d)	Name the components involved in ETC cycle.	1
	(e)	Total ATP produced for 1molecule of glucose under aerobic condition is 48- True of false.	1
	(f)	Draw the structure of purines.	2
	(g)	Name any two drugs inhibiting Telomerase.	2
	(h)	Enlist the changes required for converting hnRNA to Active mRNA.	2
	(i)	Define glycogenesis and gluconeogenesis	2
	(j)	Name any two diseases due to disorders of purine metabolism.	2
2.	(a)	Explain in brief Embden-Meyerhof pathway.	4
	(b)	Describe the process of protein synthesis proper and give any two drugs inhibiting the same.	4
	(c)	Draw the salvage pathway of purine nucleotide synthesis.	3
3.	(a)	Give the name and structures of the substrate and products of the following enzyme reactions (any **two**) (i) Succinate dehydrogenase (ii) Gluconolactone hydrolase (iii) Enoyl CoA hydrolase	4
	(b)	Write the structures of the given substrate and product and name the enzyme catalyzing the reaction (any **two**) (i) Glyceraldehyde 3-phosphate → fructose 6 phosphate. (ii) Phosphatidic acid → 1,2-Diacylglcerol (iii) Adenylsuccinate → Adenosine monophosphate	4
	(c)	Explain method for DNA sequencing	3
4.	(a)	Explain pronton motive force	2
	(b)	Enlist ketone bodies and draw structure of any one	2
	(c)	Explain β-oxidation of saturated even number fatty acid.	3
	(d)	Explain peptide sequencing by Edman method.	4

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5. (a) Explain oxidative phosphorylation with example 3
   (b) Describe the process of DNA replication in prokaryotes. 4
   (c) Write a short note on post transcriptional modification of protein. 4

6. (a) Explain the terms DNA polymorphism and SNPs and its involvement in disease state. 3
   (b) Discuss briefly solid phase peptide synthesis 4
   (c) Explain the metabolic pathway for the synthesis of pyrimidine nucleotide. 4
