C U SHAH UNIVERSITY

WADHWAN CITY

Summer examination 2015

Branch: Microbiology Semester: 4th

Subject code: 4LS04MB01 Subject name: Prokaryotic metabolism

Section 1

Q.1 Answer all following questions (Compulsory):- (1x7) 7

(A)What is aerobic respiration?

(B)What is substrate level phosphorylation?

(C)Define metabolism.

(D)What is difference between glucogenesis and glycogenesis

(E)What is PMF?

(F)Define chemolithotrops.

(G)Give any 2 example of chemicals which inhibits ETC.

Q.2 (A)Draw pathway of glycolysis with structure 5

(B)Explain regulation of glycogenesis. 5

(C)Write down significance of TCA 4

OR

Q.2(A)Explain pathway of Crabs cycle. 5

(B)Explain the energetic of glucose phosphrylation 5

(C) Explain regulation of glycolysis 4

Q.3(A)Explain electron transport chain in sulphur reducers 5

(B)Explain methanogenesis from CO_2 5

(C) Write down structure of all four complexes of ETC in mitochondria 4

OR

Q.3(A)Explain energy generation in nitrogen reducers. 5

(B) Explain Structure and function of ATPase. 5

(C) Explain mechanism of electron transport chain. 4

Section 2

Q.4 Answer all following questions (Compulsory):- (1x7) 7

(A)Define photophosphorylation.

(B)Write down names of photosynthetic pigments.

(C)Define lipids.

(D)How much energy released upon complete phosphorylation of a lipid molecule?

(E)What is role of glutamate synthase in amino acid biosynthesis.

(F)What is transamination-deamination reaction

(G)How many cycles of Fatty acid synthesis required for synthesis of 20 C long fatty acid molecule

Q.5 (A)Explain cyclic photophosphorylation in bacteria. 5

(B)Explain light reactions -1 5

(C)Explain Fatty acid synthesis 4

OR

Q.5(A)Explain Light reaction-2 5

(B)Explain photosynthesis in cyanobacteria 5

(C)Explain meachanism of oxygen evolving complex with a proper diagram 4

Q.6(A)Explain β-oxidation of fatty acid. 5

(B)Explain synthesis of amino acids which belongs to oxaloacetate family. 5

(C)Write down name of all amino acid families with amino acid belongs to respective family 4

OR

Q.6(A)Explain Urea cycle 5

(B)Explain corismate synthesis 5

(C)Explain ω oxidation of fatty acids . 4