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1ST YEAR REVISION & TEST SESSION

NAME:				ROLL NO:		TIME:	50: MIN
SUB:	Biology	Date:				CLASS:	1st Year
SYLLABUS	Chp. 6 (Bioenergetics)			T. MARKS	30	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x6=6)

1. **The accessory pigments in plants mainly serve to:**
   (A) Replace chlorophyll in case of deficiency (B) Widen the range of absorbed light wavelength
   (C) Produce ATP in mitochondria (D) Initiate the Calvin cycle
2. **In the chlorophyll structure, the phytol tail:**
   (A) Anchors it into the thylakoid membrane (B) Absorbs green light
   (C) Stored ATP (D) Bind to water molecules
3. **Which enzyme catalyzes the caraboxylation of RuBP in the Calvin cycle:**
   (A) ATP synthase (B) Rubisco
   (C) NADP+ reductase (D) Phosphoglycerate Kinate
4. **The net ATP gain from glycolysis is:**
   (A) 0 (B) 2
   (C) 4 (D) 36
5. **When deprived of oxygen, yeast cells obtain energy by fermentation, producing Co_2, ATP and:**
   (A) Acetyl CoA (B) Ethyl alcohol
   (C) Lactic acid (D) Pyruvic acid
6. **In electron transport chain, FADH: produces how many ATPs:**
   (A) One (B) Two (C) Three (D) Four

PART-I

Q. 2 Write Short Answers of the Following Questions (2x8=16)

i. How does the energy from ATP and NADPH contribute to the reduction phase of the Calvin cycle?
ii. What is the relationship between the Calvin cycle and glycolysis, as indicate by the mention of G3P?
iii. Which molecules contributes Oxygen in glucose? Water or carbon dioxide.
iv. Define electron transport chain.
v. What is the structural difference between chlorophyll-a and chlorophyll-b?
vi. Can pyruvic acid enter Krebs cycle as such? If not, what changes are made to it before Krebs cycle?
vii. Define photophosphorylation. Give its types.
viii. Describe the phases of CAM metabolism in brief.

PART-II

Write Answers of the Following Questions in Detail.

Q. 3 (a) What are photosynthetic pigments and what role they play in the absorption and conversion of light energy? 4

(b) How is glucose broken down to pyruvic acid in glycolysis? 4

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Answer Key							
1	B	**2**	A	**3**	B	**4**	B
5	B	**6**	B				