

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc. Summer 2017-18 Examination

Semester: 3
Subject Code: 11103202
Subject Name: Metabolism - II

Date: 31/05/2018
Time: 10:30 am to 1:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Explain C3 pathway. (08)**
- Q.1. B) Answer the following questions (Any two)**
- (a) Draw the detailed structure of the chloroplast and state the functions of its parts. (04)
 - (b) What is ATP hydrolysis? How much energy is released by the conversion of ATP to AMP. (04)
 - (c) Explain the CAM cycle. (04)
- Q.2. A) Answer the following questions.**
- (a) Define: ATP yield and P:O ratio. (04)
 - (b) Short note on Malate Oxaloacetate-Aspartate shuttle. (04)
- Q.2. B) Answer the following questions (Any two)**
- (a) Differentiate between Light reactions and dark reactions. (03)
 - (b) ATP as universal currency of the cell: Explain the statement. (03)
 - (c) Explain mitochondrial structure with respect to site of oxidative phosphorylation. (03)
- Q.3. A) Explain the mechanism of action of (08)**
- (a) Insulin
 - (b) Steroid hormone.
- Q.3. B) Answer the following questions (Any two)**
- (a) Define: (04)
 - 1. Oxygen toxicity
 - 2. Essential amino acids
 - (b) How is serum calcium regulated? Explain the role of vit D in calcium regulation. (04)
 - (c) Short note: Balanced diet. (04)
- Q.4. A) Answer the following questions.**
- (a) Define: (04)
 - 1. Electrolyte balance
 - 2. Cyclic AMP
 - (b) Short note: Vit A and visual process. (04)
- Q.4. B) Answer the following questions (Any two)**
- (a) Explain acid base regulation. (03)
 - (b) Explain hypervitaminosis. (03)
 - (c) Name 3 sources of dietary phosphates. (03)