

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

Semester: 1/2
Subject Code: 11101101
Subject Name: Cell Biology

Date: 09/05/2018
Time: 02:00 pm to 04:30 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) Compare and contrast between prokaryotic and eukaryotic cells (08)**
- Q.1. B) Answer the following questions (Any two)**
- (a) Short questions (Each of 02 marks) (04)
1. Explain the constitution of prokaryotic and eukaryotic ribosomes
 2. Write the functions of Endoplasmic Reticulum
- (b) Short note on Endosymbiotic Theory (04)
- (c) Short note on discovery and postulates of Cell Theory (04)
- Q.2. A) Answer the following questions.**
- (a) Fill in the blanks. (Each of 02 marks) (04)
1. The function of golgi is _____ and of lysosomes is _____.
 2. The _____ and _____ are structures found in Nucleus.
- (b) Short note on Ribosomes (04)
- Q.2. B) Answer the following questions (Any two)**
- (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
1. The cell organelle involved in photosynthesis is:
 (A) Chloroplast (B) Thylakoids (C) Stroma (D) Mitochondria
 2. It provides the strength and shape to the cell
 (A) Cell wall (B) Cell membrane (C) Ribosome (D) Cilia
 3. Open configuration of Chromosome in nucleus is....
 (A) Heterochromatin (B) Euchromatin (C) Mixed chromatin (D) Chromosomes
- (b) What are the properties of a cell ? (03)
- (c) How are solutions classified based on their comparative tonicity? (03)
- Q.3. A) Write a note on structure, parts and functions of chloroplast with a labeled diagram (08)**
- Q.3. B) Answer the following questions (Any two)**
- (a) Short note on Diffusion (04)
- (b) Short note on Active transport with subtypes (04)
- (c) Short note on the Bulk transport (04)
- Q.4. A) Answer the following questions.**
- (a) Fill in the blanks. (Each of 02 marks) (04)
1. _____ protein is present in microfilaments whereas _____ protein is present in microtubules
 2. _____ and _____ are the functions of cytoskeleton
- (b) Short note on Meiosis-I (04)
- Q.4. B) Answer the following questions (Any two)**
- (a) Short questions. (Each of 01 marks) (03)
1. Name 2 important features of DNA replication in S-phase
 2. What do you mean by osmotic pressure
 3. Name the phase in which chiasmata are observed
- (b) Short note on Mitosis (03)
- (c) Explain autocrine, paracrine and endocrine signaling with diagrams (03)