

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech., Winter 2018 - 19 Examination

Semester: 1
Subject Code: 203111101
Subject Name: Biology

Date: 11/12/2018
Time: 2:00 pm to 4:30 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 Objective Type Questions - (Fill in the blanks, one word answer, MCQ-not more than Five in case (15) of MCQ) (All are compulsory) (Each of one mark)

1. Which of the following is a hybrid animal?
 a) Mule b) Zebroid c) Tigon d) All of the above
2. E.coli is a/an _____ organism
 a) unicellular eukaryotic
 b) unicellular prokaryotic
 c) multicellular eukaryotic
 d) multicellular prokaryotic
3. Which of the following model organisms comes under Plantae?
 a) C.elegance b) D. melanogaster c) A. thaliana d) H. sapiens
4. Thermophiles can live in _____ conditions.
 a) extreme salty b) extreme humid c) extreme dry d) extreme temperature
5. Cell Theory was given by _____
 a) C. Linnaeus b) A. Versalius c) C. Galen d) Schwann
6. _____ is called power house of the cell.
7. _____ is an example of aquatic organism
8. Lithotrophs are _____
9. _____ is an advantage of Binomial classification.
10. _____ the smallest structural and functional unit of an organism
11. Biomimicry can be defined as _____
12. _____ is an example of a prokaryote.
13. Genome can be defined as _____
14. _____ is the monomeric unit of lipids.
15. Disaccharides are defined as _____

Q.2 Answer the following questions. (Attempt any three) (15)

- A) Describe the three major kingdoms of life.
- B) Give brief classification of plant kingdom.
- C) Explain the concept of biomimicry using live examples.
- D) Differentiate between unicellular and multicellular organisms

Q.3 A) Why the following organisms are considered model organisms in biology : E.coli, M.musculus (07)
 B) Distinguish between DNA and RNA (08)

OR

- B) Distinguish between prokaryotes and Eukaryotes (08)

Q.4 A) Draw and label the cell structure of a plant cell. (07)

OR

- A) What are the different biomolecules. Explain. (07)

- B) What are amino acids? Explain the formation of peptide bond and function of proteins. (08)