



Progressive Education Society's

Seat No.

Modern College of Arts, Science and Commerce (Autonomous)

Shivajinagar, Pune -5

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First Year B.Sc. Biotech (Mar-2020)

End Semester Backlog Examination, (2019 Pattern) Semester – I

Course Code: 19ScBioU106

Course Name: Biological Chemistry I

Date: 17-03-2020

Time: 10.00 a.m. to 12.00 p.m.

[Time: 2 Hours]

[Max Marks: 60]

Instructions to Candidates:

1. All Questions are compulsory
2. Neat diagrams must drawn whenever necessary
3. Figures to the right indicate full marks

Q1. Answer the following questions in two-three sentences each (any six) (6 x 2M =12M)

1. What are coacervates?
2. What is mutarotation?
3. Calculate the p^{OH} of the 10^{-6} M HCl.
4. Give examples of storage polysaccharide
5. What is beta oxidation?
6. Give two functions of cholesterol
7. Draw structure of oleic acid.

Q2. Answer the following question (any four) (4x3M=12M)

1. what is HH equation. Discuss its importance.
2. Discuss miller and Urey experiment.
3. Athletes use glucose as instant energy source. Justify
4. Sucrose is nonreducing. justify
5. what is phosphatidic acid? draw its structure

Q3. Write short note on (Any three) (3x 4M=12M)

1. Properties of water
2. Chitin
3. Simple lipids
4. Physiological buffers

Q4. Attempt any one of the following (any one)

(2x6M=12M)

- a) Describe monosaccharides as a class of carbohydrates.
- b) Discuss the structure and function of sphingomyelin.

OR

- a) Discuss at least three chemical reactions of glucose.
- b) Explain the functions of lipids in detail

Q5. Attempt the following question (Any One)

(12M)

- a) Discuss structural polysaccharides in detail.

(8M)

OR

- a) Discuss steroids in detail.

- b) Write a note on epimers.

(4M)

OR

- b) Write a note on Anomers