

Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2019

Subject Name : Microbial Physiology and Development

Subject Code : 5SC02MPD1

Branch: M.Sc. (Microbiology)

Semester : 2

Date : 20/04/2019

Time : 02:30 To 05:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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SECTION -I

Q.1 Attempt the following questions : (7)

- a. Enlist cell adhesion proteins.
- b. What is Warburg Effect?
- c. Industrial fermentation require organism of log phase. True/False.
- d. _____ maintain negative potential across plasma membrane.
- e. Dark reaction take place in?
- f. Define : Chemiluminescence.
- g. The period between inoculation of bacteria in a culture medium and beginning of multiplication is known as?

Q.2 Write a Brief note on : (14)

- a. Microbial growth curve. (7)
- b. TCA Cycle. (7)

OR

Q.2 Write a Brief note on : (14)

- a. Different types of Transport. (7)
- b. Photorespiration in C3 and C4 plants. (7)

Q.3 Write in details on : (14)



- a. Differentiate between Batch and Continuous culture. (4)
- b. Cell division in yeast and E.Coli. (6)
- c. Short note on diauxic growth. (4)

OR

- Q.3 Write a Brief note on :** (14)
- a. Gluconeogenesis. (6)
 - b. Differentiate between oxidative and substrate level phosphorylation. (4)
 - c. Short note on siderophore. (4)

SECTION - II

- Q.4 Attempt the following questions :** (7)
- a. _____ is generation time of E.coli.
 - b. The organism which obtain their energy from chemicals are designated as?
 - c. Lag phase is also known as adjustment period. True/False.
 - d. Define : Chemostat.
 - e. What is alternate name/s of Kreb's Cycle.
 - f. Enlist secondary messengers used in transport.
 - g. Define : Electrogenic Transport.

- Q.5 Write a Brief note on :** (14)
- a. Photosynthetic and accessory pigments. (7)
 - b. Synthesis of polysaccharides. (7)

OR

- Q.5 Write a Brief note on :** (14)
- a. Synthesis of major amino acids. (7)
 - b. Fermentation of carbohydrates. (7)

- Q.6 Write a Brief note on :** (14)
- a. Microbial Differentiation. (7)



b. Biological Nitrogen Fixation. (7)

OR

Q.6 Write a Brief note on : (14)

a. Developmental cycle in Myxomycetes. (5)

b. Chemolithotrophy of sulphur bacteria. (5)

c. Methanogenesis. (4)

