

**C.U.SHAH UNIVERSITY**

Summer-2015

Subject Code: 4LS01MBO3

**Subject Name: Microbial Diversity and Taxonomy**

Course Name: B.Sc(Microbiology)

Date: 11/5/2015

Semester: I

Marks: 70

Time: 10:30 TO 01:30

**Instructions:**

- 1) Attempt all Questions of both sections in same answer book/Supplementary.
- 2) Use of Programmable calculator & any other electronic instrument prohibited.
- 3) Instructions written on main answer book are strictly to be obeyed.
- 4) Draw neat diagrams & figures (if necessary) at right places.
- 5) Assume suitable & perfect data if needed.

Q.1 Answer all following questions (Compulsory):-

7

- (A) Explain phylogenetic analysis.
- (B) Define Microbial taxonomy.
- (C) What are microaerophilic bacteria?
- (D) Write down the name of scientist who invented Gram's test. (E) Explain viruses are connection link between living and non living.
- (E) What are bacteriophages?
- (F) Write any 4 differences between prokaryotes and eukaryotes.
- (G) How many cycles of reproduction required to produce 64 cells, if organism dividing mitotically?

**Attempt any 4 questions**

- Q.2 (A) Explain cell wall and cell membrane of archaebacteria. . 5
- (B) Explain Neumarical taxonomy. 5
- (C) Write down differences between Eubacteria and archebacteria. 4
- Q.3 (A) Explain Molecular chronometer. 5
- (B) Explain nucleic acid hybridization technique in detail. 5
- (C) Explain Whittakar's classification system in detail 4



Q.4 (A) Explain features of gram positive bacteria's cell wall.	5
(B) Explain importance of 16s rRNA sequencing method.	5
(C) Explain types of spores with examples.	4
Q.5 (A) Explain features of gram negative bacteria's cell wall.	5
(B) Explain DNA melting.	5
(C) Explain principle of Gram's test and write down differences between Gram positive and gram negative bacteria.	4
Q.6 (A) Write down characteristics of fungi.	5
(B) Explain reproduction in algae.	5
(C) Explain lytic cycle.	4
Q.7 (A) Explain characteristics of fungi.	5
(B) Explain reproduction in fungi with diagram (any one method).	5
(C) Explain lysogenic cycle.	4
Q.8 (A) Explain different shapes of viruses.	5
(B) Explain structure of a typical bacteriophage.	5
(C). Explain importance of fungi.	4

