

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION, September-2016
B.Tech III Semester (Biotechnology)

COURSE CODE: 10B11BT313

MAX. MARKS: 15

COURSE NAME: MICROBIOLOGY

COURSE CREDITS: 04

MAX. TIME: 1.0 HR

Note: All questions are compulsory; Carrying of mobile phone during examination will be treated as case of unfair means. Attempt all questions

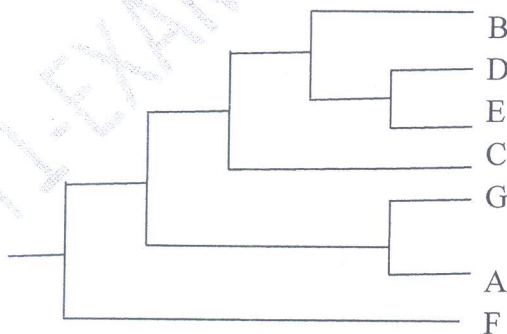
Q1: a) How does Pasteur finally settle the spontaneous generation controversy?
b) Would Microbiology have developed more slowly if Angeline Fanny Hesse had not suggested the use of Agar? Give your reasoning. [2+1]

Q2: a) How has cell wall chemistry been used in the classification of microorganisms? Explain with the help of examples.
b) What organelles would you expect to find in the cytoplasm of a typical fungus? [2+1]

Q3: a) What is numerical taxonomy and how will you calculate Jaccard coefficient (S_J) of two microorganisms?
b) Which pair of species has more similarity, a pair with simple matching coefficient (S_{SM}) of 0.8 or one with a coefficient of 0.6 and why? [2+1]

Q4: a) Do you agree that archaea should be separate from the bacteria although both groups are prokaryotic? Give your reasoning and evidence.
b) Why are actinomycetes of such practical interest? [2+1]

Q5:a)



The above tree shows the phylogeny estimated for microorganisms (A, B, C, D, E, F & G). Explain the pattern of relationship among them.

b) Differentiate between Defined and Complex media giving examples. [2+1]
