

B.Sc. Semester - 3 (CBCS) Examination**Oct/Nov. -2018****MICRO-BIOLOGY(CORE)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Ques.1. (a). Answer the following (any one)**07**

1. Write a detailed note on major characteristics used in taxonomy
2. Discuss in detail about microbial evolution and diversity.

Ques.1. (b). Attempt any one**04**

1. Define taxonomic rank and briefly explain its hierarchy
2. Enlist various phylogenetic groups of eukaryotes and giving one example of each and briefly discuss salient characteristics of any one.

Ques.1. (c). Attempt any three**03**

1. The variety in the living forms from all the types of habitat in the biosphere is called _____
2. Define phylogeny
3. Define metagenomics
4. Numerical taxonomy indicates the % similarity or dissimilarity between the organisms – True or false?
5. Which is the highest taxonomic rank in microbial classification?

Ques.2. (a). Answer the following (any one)**07**

1. Write an essay on major groups of extremophiles.
2. Discuss in detail the general features of gram positive bacteria.

Ques.2. (b). Attempt any one**04**

1. Describe general features of Dissimilatory sulfate reducers
2. Write a brief account of non-motile curved rods.

Ques.2. (c). Attempt any three**03**

1. Give one example of helical vibroid organism
2. What are microaerophilic rods/
3. Define extremophiles
4. What are actinomycetes?
5. Give an example of phototrophic bacteria

Ques.3. (a). Answer the following (any one)**07**

1. Write a detailed note on reproduction in fungi
2. Discuss in detail the economic importance of algae.

Ques.3. (b). Attempt any one**04**

1. Discuss general characteristics of protozoa
2. Enlist major divisions of fungi and discuss any one in detail.

Ques.3. (c). Attempt any three**03**

1. The type of fungal asexual spores produced on a tip of an aerial hypha without any covering over them are called _____
2. Draw a well labeled diagram of amoeba
3. Give two economic importance of fungi
4. Give two differences between yeast and mold
5. Give two economic importance of protozoa

Ques.4. (a). Answer the following (any one)	07
1. Write a detailed note on Lambda phage life cycle	
2. Discuss in detail lytic life cycle of T4 phage.	
Ques.4. (b). Attempt any one	04
1. Write a note on animal virus classification	
2. Discuss the structure and replication of TMV with suitable diagram.	
Ques.4. (c). Attempt any three	03
1. Define viroids giving one example	
2. Define prions and give one example of the disease it causes	
3. What do you mean by cytotoxic effect?	
4. Enlist various methods for virus enumeration	
5. Enlist various structures of viruses	
Ques.5. (a). Answer the following (any one)	07
1. Write an essay on Biomagnification of pesticides	
2. Discuss biofuels in detail.	
Ques.5. (b). Attempt any one	04
1. Write a brief account of bioplastics	
2. Briefly explain the process of Biodeterioration of paper and textile	
Ques.5. (c). Attempt any three	03
1. Enlist various air pollutants	
2. Define biodegradation	
3. Define bioremediation	
4. Define bioleaching	
5. What is microbial enhanced oil recovery?	
