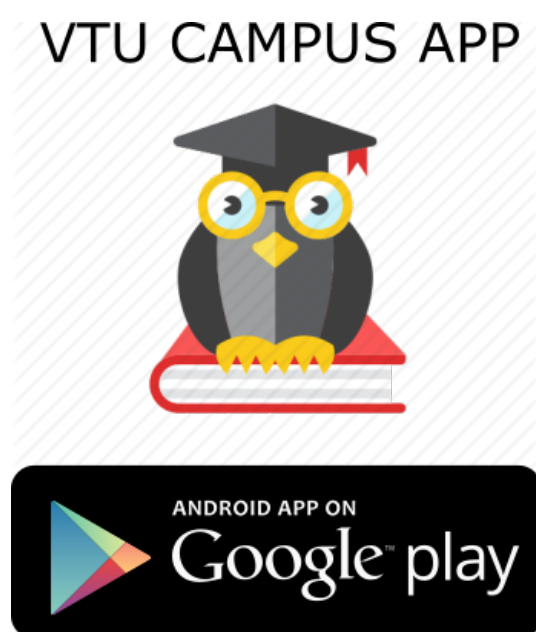


# Biochemistry and Microbiology VTU CBCS Question Paper Set 2018



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# CBCS Scheme

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15NT46

## Fourth Semester B.E. Degree Examination, June/July 2017 Biochemistry and Microbiology

Time: 3 hrs.

Max. Marks: 80

**Note:** Answer FIVE full questions, choosing one full question from each module.

### Module-1

- 1 a. Describe in detail about Nucleic acids. (10 Marks)  
b. Explain about biological membranes, its function and structure. (06 Marks)

OR

- 2 a. Describe about Active and Passive transports. (10 Marks)  
b. What is pH? Explain about buffers and its properties. (06 Marks)

### Module-2

- 3 a. What is the principle of bioenergetics? Explain the thermodynamics of bioenergetics. (10 Marks)  
b. Elucidate Pentose Phosphate pathway of glucose oxidation. (06 Marks)

OR

- 4 a. Explain Glycolysis with the help of a flow chart. (08 Marks)  
b. Elucidate biological oxidation and reduction reaction in detail. (08 Marks)

### Module-3

- 5 a. Explain in detail about the scope of microbiology. (08 Marks)  
b. Briefly explain the structure, classification and reproduction of fungi. (08 Marks)

OR

- 6 a. Explain about the structure, classification and reproduction of viruses. (10 Marks)  
b. Describe about prokaryotes and eukaryotes with neat diagrams. (06 Marks)

### Module-4

- 7 a. Explain in detail the control of micro organisms by physical factors. (10 Marks)  
b. Discuss in detail about microbial growth curve patterns. (06 Marks)

OR

- 8 a. Write a note on physical conditions required for microbial growth. (06 Marks)  
b. Explain about Antibiotics and other chemotherapeutic agents with examples. (10 Marks)

### Module-5

- 9 a. Elucidate the synthesis of nano particles by bacteria. (08 Marks)  
b. Describe about magneto tactic bacteria for natural synthesis of magnetic nano particles. (08 Marks)

OR

- 10 a. Explain the synthesis of nano particles by fungi using extra cellular and intra cellular methods. (10 Marks)  
b. Elucidate the green synthesis of nano particle using tulsi. (06 Marks)

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