

A-5/2051
MICROBIAL PHYSIOLOGY–BHB-9
(Semester–II)

Time : Three Hours]

[Maximum Marks : 74

Note : The Paper consists of three sections A, B and C. Section A and B have four questions and each question from Section A and Section B will carry 11 marks each. Candidates are required to do *two* questions each from Section A and B. Section C is compulsory consisting of 15 short answer type questions of 2 marks each.

SECTION–A

- I. What is group translocation? Discuss the various transport systems in microorganisms for nutrient uptake.
- II. Discuss the Nutritional contribution in classification of microorganisms.
- III. Specify various factors which determine the severity of a bacterial growth.
- IV. Discuss the role of electrogenic and electro neural transport with examples.

SECTION-B

- V. Describe the effect of Environment on Microbial Growth.
- VI. Differentiate between Cyclic and Non-cyclic Photophosphorylation.
- VII. Define Phototrophic metabolism. Discuss the light reactions in an Oxygenic phototroph.
- VIII. Name and explain various photosynthetic pigments involved in single celled organisms.

SECTION-C

- IX. Write short notes on the following :
 - (a) Chemo autotrophs.
 - (b) Synchronous growth.
 - (c) Substrate level phosphorylation.
 - (d) Phosphotransferase system.
 - (e) Reverse electron flow.
 - (f) Carboxydo bacteria.
 - (g) Uniport.
 - (h) Continuous culture.
 - (i) Microbial diauxie growth curve.
 - (j) Action spectrum.

- (k) TCA.
 - (l) Anaerobic chemolithotrophs.
 - (m) Phototrophic bacteria.
 - (n) Carbondioxide fixation.
 - (o) Methanogens.
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