



# RAN-1027

## B. Sc. Microbiology SEM-V Examination

March / April - 2019

### MB 12: Microbial Physiology

Time: 2 Hours ]

[ Total Marks: 50

#### સૂચના : / Instructions

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fill up strictly the details of signs on your answer book

Name of the Examination:

B. Sc. Microbiology Sem-V

Name of the Subject :

MB 12: Microbial Physiology

Subject Code No.: 1 0 2 7

Seat No.:

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Student's Signature

#### Q.1 Give specific Answers:

(12)

1. State the types of quinones of ETC in gram positive and gram negative bacteria. Which quinone is used by *E.coli* for aerobic respiration?
2. Define: Fermentation. Why is it important for some microorganisms?
3. Give example of electron acceptor used for oxidation of organic substrates like lipids and proteins.
4. Give the reaction centre for Calvin cycle in the eukaryotes and prokaryotes.
5. Who demonstrated transaminase activity in bacteria? Name two major transaminase found in bacteria.
6. Define: (a) Transamination (b) Deamination

**Q.2 Explain/Comment on any two of the following: (12)**

1. Arrangement of ETC in cell membrane plays important role for transfer of NADH in aerobic respiration.
2. Role of Pigments in Phototrophs by oxygenic photosynthesis using light reaction.
3. Certain prokaryotes replace glycolytic pathway with ED pathway.

**Q.3 Discuss any two of the following: (16)**

1. Discuss the process of energy generation in chemolithotrophic organism.
2. Explain TCA Cycle in detail.
3. Discuss in detail oxidation of Fatty acids.

**Q.4 Write short notes on any two of the following: (10)**

1. ATP generation by electron transport.
  2. Rhodopsin based phototrophy.
  3. Stickland Reactions.
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