

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2014**(UG—CCSS)**

Core Course—Microbiology

MB 5B 08—MICROBIAL PHYSIOLOGY

Time : Three Hours

Maximum Weightage : 30

Section A*Answer **all** the twelve questions.*

1. Give two examples for **thermophilic** bacteria.
2. Name an enzyme that protects aerobic and facultative organisms from the toxic, derivatives of oxygen.
3. Organisms which are able to grow at 0° C., but grow best at a temperature above 20°C. are called _____
4. _____ are the organisms that derive energy from light and use carbon dioxide as its sole carbon source.
5. Micro-organisms whose growth is accelerated or dependent on high said concentrations are called _____
6. Organisms that cannot be cultivated in ordinary medium because of their need for special nutritional factors are called _____
7. The time interval necessary for a cell to divide is called _____
8. Name the device used for the cultivation of anaerobes.
9. The carbon source of **heterotrophs** is _____
10. The photosynthetic pigment in bacteria is _____
11. Name two **photoautotrophic** bacteria.
12. The net yield of ATP per glucose molecule in glycolysis is _____

*(12 x $\frac{1}{4}$ = 3 weightage)***Section B***Answer **all** the **nine** questions in **one** or **two** sentences.**Each question carries 1 weightage.*

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|-------------------------------|-----------------------|
| 13. Osmotic pressure. | 14. Stationary phase. |
| 15. Plasmolysis. | 16. Bacteriophage. |
| 17. CFU. | 18. ATP synthase. |
| 19. Microaerophilic bacteria. | 20. Barophiles. |
| 21. Diffusion. | |

x 1 = 9 weightage)**Turn over**

Section C

*Answer briefly any **five** questions.
Each question carries 2 weightage.*

22. Bacterial growth curve.
23. Active transport.
24. Effect of pH on bacterial growth.
25. Chemostat.
26. Continuous cell lines.
27. Methods of reproduction in bacteria.
28. Electron transport chain.

(5 x 2 = 10 weightage)

Section D

*Answer any **two** questions in detail.
Each question carries 4 weightage.*

29. Discuss the methods of measurement of population growth in bacteria.
30. Explain bacterial photosynthesis.
31. Write briefly on the different environmental factors influencing microbial growth.

(2 x 4 = 8 weightage)