

Seat No. : _____

JD-117
January-2016
B.Sc., Sem.- I
CC-3 – Paper-101 : Microbiology
(Introduction to Microbial World)

Time : 3 Hours]

[Max. Marks : 70

- Instructions :** (1) **All** questions carry equal marks.
(2) **All** questions all compulsory.
(3) Figures on right indicates marks.
(4) Draw neat and clean diagrams wherever necessary.

1. Answer the following : (any **two**) **14**
- (a) Explain developments in laboratory and pure culture techniques.
 - (b) Explain germ theory of disease.
 - (c) Describe contribution of Louis Pasteur in development of vaccines.
 - (d) Explain developments in modern chemotherapy.
2. Answer the following : (any **two**) **14**
- (a) Discuss distribution of micro organisms in nature.
 - (b) Explain habitation of microbes.
 - (c) Discuss distinctive features of bacteria.
 - (d) Write a note on importance of Fungi.
3. Answer the following : (any **two**) **14**
- (a) Discuss areas of study in the field of microbiology.
 - (b) Discuss role of microbes in the ecosystem.
 - (c) Explain applications of micro organisms in biotechnology.
 - (d) Explain streak plate or pour plate methods for isolation of pure culture.

4. Answer the following : (any **two**) **14**
- (a) Explain Fluorescence microscopy and its importance.
 - (b) Write differences between light microscopy and electron microscopy.
 - (c) Discuss microbiological uses of dyes and stains.
 - (d) Explain gram staining with importance of each step.
5. Answer in **one** word / **one** or **two** lines : **14**
- (1) Who suggested the use of agar agar powder as a solidifying agent ?
 - (2) Who invented simple microscope ?
 - (3) Write contribution of Winogradsky in the field of microbiology.
 - (4) What do you mean by “Thermophile” ?
 - (5) What are prions ?
 - (6) Name various groups of microorganisms.
 - (7) Name any two culture collection centres.
 - (8) What do you mean by “Phycology” ?
 - (9) Mention one word for “disease causing micro organism”.
 - (10) What is the use of Lyophilisation ?
 - (11) Name one acidic dye and one alkaline dye.
 - (12) Write full form of SEM and TEM.
 - (13) Complete the equation for resolution : $d =$
 - (14) Mention magnification power of : low power, high power and oil immersion objectives.
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