

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11BY/PC/MI14

M. Sc. DEGREE EXAMINATION, NOVEMBER 2013
BIOTECHNOLOGY
FIRST SEMESTER

COURSE : CORE
PAPER : MICROBIOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS:

20 x 1 = 20

DEFINE / EXPLAIN THE FOLLOWING.

- 1) Ribotyping.
- 2) Prion protein.
- 3) Cytopathic effect.
- 4) Ribosomal RNA.
- 5) Bacillus thuringiensis.
- 6) Peptidoglycan.
- 7) Differential staining.
- 8) Assay medium.
- 9) Plasmid fingerprinting.
- 10) Fermentor.
- 11) Cytoplasmic inclusions.
- 12) Growth factor in bacterial growth.
- 13) Xanthan polymer.
- 14) Monoclonal antibodies.
- 15) Flash Pasteurisation.
- 16) Microbial genome.
- 17) Syphilis.
- 18) Enrichment media.
- 19) TMV.
- 20) Z and f value.

SECTION – B**ANSWER ANY FOUR QUESTIONS EACH ANSWER NOT EXCEEDING 800****WORDS :****4 x 10 = 40**

- 21) Explain the microbial growth with the help of a graph. Add a note on any two factors affecting it.
- 22) Trace the steps involved in amylase production.
- 23) Draw and describe the lytic cycle of a bacteriophage.
- 24) Write the cause, diagnosis and treatment for Leptospirosis.
- 25) Explain the various methods used in preserving microbial culture for industrial and biotechnological uses.
- 26) Write notes o HIV.

SECTION – C**ANSWER ANY TWO QUESTIONS EACH ANSWER NOT EXCEEDING 1500****WORDS :****2 x 20 = 40**

- 27) Define Phylogenetic tree and Evolutionary distance. Add a note on the use of DNA and Protein sequences in Phylogenetic classification.
- 28) Explain in detail isolation, cultivation and purification of viruses.
- 29) List the microbial flora and spoilage of Dairy products and explain various preservation techniques used in Dairy industry.
- 30) Elucidate the role of microorganisms in Biofuel production.
