

D 22434

Name.....

Reg. No.

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2012

(CUCSS)

Microbiology

MBI C03—ENVIRONMENTAL AND SANITATION MICROBIOLOGY

(2010 Admissions)

Time : Three Hours

Maximum **Weightage** : 36

Section A

*Write briefly on the following. **Weightage** for each answer is 1.*

1. **Extremophiles.**
2. Synergism.
3. Microbial infallibility.
4. **VAM.**
5. Aerosols.
6. **Enterococcus** as indicator of water pollution.
7. Membrane filtration for water analysis.
8. Chlorinating agents.
9. Residual chlorine.
10. Sand filtration of water.
11. Anti microbial activity of iodine.
12. **Bioremediation.**
13. Septic tank.
14. Trickling filter concept:_____ (14 x 1 = 14 **weightage**)

Section B

*Write notes on. **Weightage** for each answer is 2.*

15. Role of microbes in carbon cycle.
16. Sources of microbes in air.
17. Biological weapons—their regulation and precautions.
18. Sources of water **microflora.**
19. Solid waste management.
20. Marine pollution.
21. Treatment of industrial wastes:_____ (7 x 2 = 14 **weightage**)

Section C

*Answer the following. **Weightage** for each answer is 4.*

22. Discuss **bacteriological** examination of water.
23. Discuss the role of microbes in nitrogen cycle. (2 x 4 = 8 **weightage**)

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THIRD SEMESTER M.Sc. DEGREE EXAMINATION, JANUARY 2012

**MB 3C 10 – MOLECULAR BIOLOGY
(2010 Admissions)**

Time: Three hours

Maximum : 36 Weightage

Write, short answers to the following. Answer *all* questions

(Weightage -1)

1. C-value paradox
2. Chargaff's rule
3. Operon
4. Stop codons
5. Episomes
6. Nucleosome
7. Enhancer
8. Shine- Dalgarno sequence
9. Excision repair
10. RNA Editing
11. Prophage
12. Wobble hypothesis
13. Polycistronic mRNA
14. Oncogenes

II. Write short paragraph answers to the following. Answer any *seven* questions **(Weightage- 2)**

15. Reverse transcription
16. Transcription factors
17. Regulation of Lac operon
18. RNA splicing
19. Attenuation
20. Specialised transduction
21. Post translational modifications
22. Tumor suppressor genes
23. Rolling circle replication
24. Complex transposon

III. Explain the following. Answer any *two* questions

(Weightage – 4)

25. Eukaryotic genome organisation
26. DNA damage and repair
27. Trp operon
28. Events at the DNA replication fork