



J-0858

Second Year B. Sc. Examination

March/April – 2013

Microbiology : Paper - IV

(Microbial Nutrition, Growth & Control) (Old Course)

Time : Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दशांशके निशानीवाणी विगतो उत्तरवडी पर अवश्य क्षपवी.
Fillup strictly the details of signs on your answer book.

Name of the Examination :
S. Y. B. Sc.

Name of the Subject :
Microbiology : Paper - 4 (Old Course)

Subject Code No. : 0 8 5 8 Section No. (1, 2,.....) : NIL

Seat No. :
[][][][][][][]

Student's Signature

(2) The figure in right indicates full marks of the question.

(3) Draw neat and clean diagram wherever required.

1 Give specific answers : 16

- (a) Differentiate between enrichment media and enriched media.
- (b) How the semisynthetic penicillins are superior to natural penicillin ?
- (c) Define :
 - (i) Thermal death time
 - (ii) Thermal death point
- (d) What is E test ? Give its advantage.
- (e) Give the antimicrobial effect of hyperbaric oxygen with example.
- (f) What is Tyudallization ? State its limitation.
- (g) Define Alkalophiles and osmotolerant.
- (h) Enlist four major characteristics of an ideal antimicrobial agent.

2 Explain/Comment on any **three** of the following : 15

- (a) Chemical antimicrobial agent has an oligodynamic action.
- (b) Continuous culture has various applications.

- (c) Plasma membrane proteins facilitate the diffusion of nutrients.
 - (d) Heat sensitive objects can be sterilized by various gases.
 - (e) Serum bacterial titre provide more precise measure of susceptibility than MIC.
- 3** Attempt any **two** of the following : **12**
- (a) Explain how membrane filter can act as a sterilizing agent ?
 - (b) Discuss the different mode of cell division in bacterial population.
 - (c) Describe the drug resistance, its origin and mechanism of transmission.
 - (d) Explain bacterial growth phases and related growth kinetics.
- 4** Attempt any **one** of the following : **12**
- (a) Explain different methods of isolation of pure culture.
 - (b) Give detail note on bacterial growth measurement.
- 5** Write short notes on any **three** of the following : **15**
- (a) Nutritional types of bacteria
 - (b) Role of culture collection centre
 - (c) Mode of action of antimicrobial agent
 - (d) Halogen as antimicrobial agent
 - (e) Quorum Sensing.
-