



RB-0731-R

Second Year B. Sc. Examination

April / May – 2010

Microbiology : Paper - III

(Fundamentals of Microbiology & Microbial Diversity)

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="S. Y. B. Sc."/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Microbiology - 3"/>	<input type="text"/>
Subject Code No. : <input type="text" value="0"/> <input type="text" value="7"/> <input type="text" value="3"/> <input type="text" value="1"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	<input type="text"/>
	<input type="text" value="Student's Signature"/>

- (2) Figures to the right indicate full marks of the question.
(3) Draw neat diagram wherever necessary.

1 Give specific answers : 16

- Describe the applications of microorganisms in the field of agricultural microbiology and exomicrobiology.
- What is chromatic aberration? How can it be corrected?
- What are Leuco compounds? Give two examples.
- What are porins? State their role in procaryotic cell.
- What is euchromatin and heterochromatin?
- What are phylogenetic and phenetic classification systems?
- What is diatomaceous earth? Why is it used commercially?
- Give contributions of Charles Chamberland and Dmitrii Ivan Owski in the field of virology.

- 2** Explain/Comment on any **three** of the following : **15**
- (a) Golgi apparatus prepares and packages cell products for secretion.
 - (b) SEM has been used to examine surfaces of microorganisms in great detail.
 - (c) Fungal spores are important for several reasons.
 - (d) Different characteristics are used to place procaryotes in different sections of first edition of Bergey's manual of Systemetic Bacteriology.
 - (e) Koch's postulates prove a relationship between suspected pathogen and a disease.
- 3** Attempt any **two** of the following : **12**
- (a) Explain principle, construction and working of Dark field microscope.
 - (b) What characteristic shapes can bacteria assume? Describe how they arrange themselves?
 - (c) How did Pasteur and Tyndall contributed to the theory of Biogenesis?
- 4** Write an essay on : **12**
- Lysogenic cycle of λ phage (lambda phage)
- 5** Write short notes on any **three** of the following : **15**
- (a) Inclusion bodies in procaryotic cell
 - (b) Importance of Protozoa
 - (c) Major groups of grampositive eubacteria - a summary
 - (d) Ultrastructure of eukaryotic flagella
 - (e) Classification of stains.
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