D 53513 (Pages : 2) Name.....

Reg. **No.....**

FIRST SEMESTER B.Sc. DEGREE EXAMINATION, JANUARY 2014

(U.G.-CCSS)

Core Course--Microbiology

MB IB 01—GENERAL MICROBIOLOGY

Time : Three Hours Maximum : 30 Weightage

I. Answer all *twelve* questions. Choose the correct answer :

1 Theory of abiogenesis was disproved by :

(a) Winogradsky. (b) Walksman.

(c) Pasteur. (d) Robert Koch.

2 Which of the following is the method of determining viable count of a bacterial suspension ?

(a) Turbidity measurement. (b) Using coulter counter.

(c) Breed method. (d) Plate count.

3 Which of the following antibiotic inhibits Peptidoglycan synthesis ?

(a) Streptomycin. (b) Erythromycin.

(c) Tetracyclines. (d) Vancomycin.

4 Spores of which bacterium is used as dry heat sterilization control :

(a) *Bacillus anthracis.* (b) *Bacillus stearothemophilus.*

(c) *Clostridium tetani.* (d) *Clostridium perfringens.*

Answer the following :

5 Scientist who invented microscope.

6 The method of 'intermittent sterilization' at 100°C.

7 The media used to grow bacteria which are exactly in their nutritional requirements are called.

8 The bacterial forms developing in presence of penicillin in the medium.

Fill in the blanks :

9 The morphological units of capsid are called _____

10 Dimorphic fungi can occur as filaments or as _____ depending on the conditions of growth.

Turn over

11 _____ granules in bacteria stain with Suden Black.

12 In *Bacillus anthracis* capsule is made up of _____

(12 x $^1/_4$ = 3 weightage)

II. Answer all *nine* questions.

Comment on

13 Pleomorphism.

14 Bacteriophages.

15 Actinomycetes.

16 Flagellin.

17 Sex pili.

18 Albert staining.

19 Kanamycin.

20 Nystatin.

21 R.C.M. medium.

(9 x 1 = 9 weightage)

III. Write short notes on any *five* :

22 Penicillins.

23 Spread plate cultures.

24 Bacterial spore staining.

25 Dark field microscopy.

26 Koch's postulates.

27 Differences between eukaryotes and prokaryotes.

28 Filter sterilization.

(5 x 2 = 10 weightage)

IV. Answer any *two* out of three :

29 Describe the different types of microscopy employed in Microbiology.

30 Describe the different staining techniques in Microbiology.

31 Describe the mechanisms of action of antibiotics.

(2 x 4 = 8 weightage)