

Reg. No.....

**Third B.Pharm (Ayurveda) Degree Supplementary Examinations March
(November), 2020**

Pharmaceutical Microbiology & Biotechnology

Time: 3 Hours

Total Marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
- *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Write Section A and Section B in separate answer books (32 Pages). Do not mix up questions from section A and section B*

QP CODE: 304008

Section A- Microbiology

Marks: 50

Essay:

(10)

1. Explain the procedure and mechanism of gram staining. Name any five-gram negative and gram positive organisms

Short Notes:

(5x5=25)

2. What are the properties of an ideal disinfectant
3. Differences between transmission electron microscopy and scanning electron microscopy.
4. The process of inflammation.
5. Various factors influencing the growth of microorganisms.
6. What are sterility indicators and how do they ensure the performance of a sterilization process

Answer briefly:

(5x3=15)

7. Define primary immunity and enlist its various types.
8. Define autotrophs, lithotrophs and chemotrophs with suitable examples.
9. Write suitable methods of sterilization for the following: used cotton, eye drops, antiseptic dusting powder
10. What are acid fast organisms, give examples.
11. Mention any three viral diseases

QP CODE: 308008

Section B - Biotechnology

Marks: 50

Essay:

(10)

1. Describe the process of conjugation

Short notes:

(5x5=25)

2. Type II hypersensitivity.
3. Fermentation method for penicillin production.
4. With the help of a flow sheet explain industrial production of extra cellular enzymes.
5. Give the preparation, standardization and storage of viral vaccines.
6. What are the advantages of microbial transformations. Give examples of some steroids produced by transformation

Answer briefly:

(5x3=15)

7. Define antigens, epitopes and adjuvants with suitable examples
8. Name any three bacterial vaccines.
9. Why is E.coli used in many procedures of biotechnology
10. Define the terms Genotype, Phenotype and Recombination.
11. Fluidized bed fermenter
