Ref. No. EX/PG/PHAR/T/129F/2018.

**M. Pharmacy 1st yr. 2nd Semester Examination, 2018.**
**Subject: Pharmaceutical Biotechnology- III.**

**Time: Three hours.** **Full Marks: 100**

**Answer any five questions taking at least one from each group.**

## GROUP - A

1. a) Discuss the significance of "Sterility Testing". Write the name of selective media which are used for "Sterility Testing" as per I.P. guidelines. How integrity of the membrane filter to be checked? Write the name of the particular organism is used to check the porosity of the membrane. **5+2+5+2=14**

b) Write the method of validation of HEPA Filter in a Laminar Air Flow hood. **6**

2. Define Psychobiotics. Correlate the importance of Synbiotics with psychobiotics for controlling the disease "irritable bowel syndrome" (IBS). Why probiotics are recommended now-a-days along with different antibiotic therapy? Enlist the name of few probiotic strains.

**4+8+4+4=20**

3. Write short notes on any two of the following:

a) Cord Blood preservation & its importance in therapy.

b) Bio Safety Level-II for biotechnological works.

c) Bio hazards & its proper handling.

d) Intellectual Property Rights. **10 ×2=20**

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**Master of Pharmacy Examination, 2018**
**2nd Semester**

**Pharmaceutical Biotechnology- III**

**Time: Three Hours** **Full Marks: 100**

**Answer any five questions taking at least one from each group**

**Group – B**

4 (a) Describe a method of detecting antagonistic activities of organisms isolated from natural sources.

(b) How antibiotics can be isolated from fermentation broth?

(c) Write a note on Bio-chromatography.

(d) Write a note on combination therapy of antibiotics.

3+8+4+5 = 20

5. Describe the mechanism of action of the following agents inhibiting cell wall synthesis:
D – cycloserine, Bacitracin, Vancomycin, Penicillins and β-lactamase inhibitors, and also mention how sensitive organisms develop resistance to these agents.

20

6. Write a note on mechanisms of action of the following antibiotics inhibiting protein synthesis:
Streptomycin, Tetracyclines, Chloramphenicol and macrolides .
How organisms become resistant to these antibiotics?

20

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*Ref. No.: Ex/PG/PHAR/T/129F/2018*

*M.PHARMACY, FIRST YEAR SECOND SEMESTER 2018*

*SUBJECT: PHARMACEUTICAL BIOTECHNOLOGY – III* *TIME: 3hrs* *FULL MARKS: 100*

## GROUP - C

***Use separate answer scripts for each Group/answer any five questions***

: 100

7. Write notes on 4x5=20
   a) Cytokines
   b) Leukocytes and their classifications
   c) Functions of Leukocytes
   d) The role of Mast cells in the development of allergy

ources.

8. Represent JAK-STAT pathway of cytokine function. 20

9. Outline the plant tissue culture classes and their brief descriptions. 20

5 = 20

n how

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