Ref. No.: EX/PHARM/T/224/2018.

Bachelor of Pharmacy Examination, 2018.
2nd Year, 2nd Semester.
Applied Microbiology - I

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

Answer any five questions taking at least one from each group

Group – A

1. Classify microbes with suitable examples. Write a note on beneficial role of microbes in health care systems. Define obligate parasites. 8+10+2=20

2. Define and differentiate:
   a) Prokaryotes and Eukaryotes
   b) Gram positive and Gram negative bacteria
   c) Exotoxin and Endotoxin of bacteria

3. Answer the followings: 8+6+6 = 20
   a) What is skatole ?
   b) Define synbiotics.
   c) What is Bergey's Mannual ?
   d) Write the importance of Filtration in Pharmaceutical Industry.

4+4+4+8=20

Subject: Applied Microbiology-I

Class: BPharm-2nd Year-2nd Semester-2018

(Group B)

Questions:

4) 5 mark each

1) Name the organ where T-lymphocytes mature?
2) Can you diagnose basopenia?
3) Name the pentameric antibody.
4) Describe the functions of lymph-nodes.

5) 10 marks each

1) Draw a figure of IgG and label it.
2) Describe M-cells.

6) 20 Marks each

1) Name different primary and secondary lymphoid organs. What are the roles of thymus and lymph nodes with reference to the maturation of lymphocytes.**(10+10)**

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GROUP - C

7. (a)Write down the principle of phase contrast microscopy.
   (b) What do you mean by wet mount and hanging drop techniques of microscopic sample preparation?
   (c) Why wet preparations of microorganisms are observed under a microscope?
   (d)Define dye and stain with example.
   (e)Write a note on negative staining of bacteria.
   (f) Give example of one Gram positive and one Gram negative bacteria.

3+3+4+4+4+2 = 20

8. (a)Write a note on nutritional requirements of bacteria.
   (b) Define selective media and differential media with example.
   (c)Classify bacteria according to the temperature required for their growth. Define each class.
   (d)Write a note on gaseous (oxygen) requirements of bacteria.
   (e)Give example of a bacterium which is an obligate parasite.

8+4+3+4+1 = 20

9. Write a note on any ***four*** of the followings
   (a) Dark fiejd microscopy
   (b) Applications of different types of light microscopy
   (c) Principle of Gram staining of bacteria
   (d) Dextran
   (e) Application of fermentation in the fields of foods and Pharmaceuticals

5x4=20