B. Pharm. 2nd year 2nd semester Examination 2019

Subject: Applied Microbiology I

Time: 3 hours

Full Marks: 100

(Answer any five taking at least 2 from each group)

Group A

1. Define and classify immunity with suitable explanation. Explain characteristic features primary immune response. What are antigens? Write an account on the mechanisms of antigen antibody reactions.

$(2+2)+4+2+10=20$

2. Define antibodies. Write down the characteristic features of antibodies. Discuss the basic structure of antibodies with the help of a neat sketch. Explain the terms, haptens and epitopes.

$2+3+12+(1.5 \times 2)=20$

3. Write explanatory notes on (any two)
   a) Role of interferons and natural killer cells in defense mechanism
   b) Immunoglobulins
   c) Phagocytosis as a defense mechanism

$10+10=20$

4. Write notes on
   a) Passive immunization
   b) Conjugated vaccines
   c) Recombinant sub-unit vaccine
   d) Complement systems

$5 \times 4=20$

Bachelor of Pharmacy Second Year Second Semester Examination 2019.

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GROUP - B

1. a) Enlist few bacteria (Both Gram Positive and Gram Negative) including their pathogenicity.

b) Write a note on-- Beneficial role of microbes in healthcare system.

c) Define Obligate parasites with example (including pathogenicity) .

8+8+4=20

2.a) Define the term Contamination.

b) Classify bacteria—i) according to the oxygen consumption.

ii) according to the temperature.

iii) according to the nutrients

iv) according to the staining

c) Parenterals must be apyrogenic—explain why?

d) Define Tyndallization.

2+(4x3)+4+2=20

3. a) Briefly discuss about Bacterial Growth Phase.

b) Write a note on Filtration Sterilization and its importance in Pharma Industry.

c) Define Sterile air. What is HEPA filter ?

10+6+4=20

4. Define and Differentiate:

a) Eukaryotes and Prokaryotes

b) Incubation period and Generation time

c) Autotrophic and Heterotrophic bacteria

d) Brewer's yeast and Baker's yeast

4x5=20