



**ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27**  
**B.Sc MICROBIOLOGY – V SEMESTER**  
**SEMESTER EXAMINATION - OCTOBER 2019**  
**MB 5116 –IMMUNOLOGY AND MEDICAL MICROBIOLOGY**

**Time: 2 1/2 hrs**

**Max marks: 70**

This question paper has **1** printed page and **4** parts.

**I. Answer any Five of the following**

**5x3=15**

1. Define vaccine and give 2 examples.
2. What are Interferons?
3. Comment on IgG.
4. Define: (i) Pyemia (ii) Pandemic Disease (iii) Extrinsic Incubation Period.
5. Comment on (i) Germ tube test (ii) Craigie's tube experiment.
6. Mention the applications of ELISA.
7. Define Opsonization.

**II. Answer any Five of the following**

**5x5=25**

8. Tabulate the features of innate and adaptive immune system.
9. Explain the principle of agglutination with an example.
10. Write a short note on superantigens.
11. Differentiate immediate and delayed hypersensitivity.
12. Elaborate the process of B cell maturation.
13. Draw the life cycle of malarial parasite.
14. Elaborate the methods of transmission of infection.

**III. Answer any Two of the following**

**2x10=20**

15. Define Monoclonal antibodies and its production.
16. With a flow chart, explain the classical pathway of complement system.
17. Write a short note on:
  - (a) Mechanism of graft rejection.
  - (b) Normal human flora.

**IV. Answer the following**

**1x10=10**

18. A patient with otitis media was asked to give a sample for microbiological examination. When gram staining was done on the colonies isolated from sample, gram positive, capsulated bacteria with lanceolate appearance was observed. Name the sample, pathogen, pathogenicity, Prophylaxis and treatment.