**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU -27**

Registration Number:

Date & Session7-12-22(9am)

**B.Sc – V SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**MB 5118 – IMMUNOLOGY AND MEDICAL MICROBIOLOGY**

**Time: 2 ½ Hours Max Marks: 70**

This question paper contains **2** printed pages and **four** parts

**I. Answer any Five of the following 5 x 3 =15**

1. List any three characteristic features of antigen-antibody reactions.

2. What is the function of NK cells?

3. Write a note on types of infections.

4. What causes Aspergilloma? How is it identified?

5. How can Dengue be treated?

6. Predict what would happen if Merozoites attack RBC’s?

7. a) What are Kupffer and Veiled cells? -2

 b) Define Xenograft-1

**II. Answer any Five of the following 5x5=25**

8. Outline the principle involved in an ELISA. Classify its types.

9. Why does opsonization take place? Explain how does it happen?

10. Explain the compliment pathway which is antibody independent.

11. Distinguish between MHCI and MHC II.

12. What would be the advantages and disadvantages if a person was injected

 with a live attenuated vaccine?

13. How is adherence and biofilm associated with microbial pathogenesis?

14. What are the signs and symptoms from a person suffering from enteric fever? How is the

 person diagnosed positive for this infection?

**III. Answer any Two of the following 2x10=20**

 15. Draw a neat labelled diagram of the secretory antibody and give its characteristic features.

 16. Explain the mechanisms of Mast cell degranulation?

 17. Why is Ziehl Neelsen staining performed? Explain the technique. What prophylactic

 measures can be taken?

**IV. Answer the following 1x10=10**

18. A research student purified a recombinant protein from a bacterium and injected the

protein into two rabbits. He wanted to study its immunological properties.

He also collected pre-immune serum from the rabbits before injecting the protein.

Then he gave them three booster doses with a span of 7 days. On the 21st day he

collected the serum separately from both the rabbits and tested them for an immune

response which was negative.

1. Why was pre-immune serum collected? **1**
2. Give reasons why there was no immune response against the recombinant protein? **9**