Register Number:

Date & Session:5-12-22

DATE:

**ST. JOSEPH’S UNIVERSITY, BENGALURU-27**

**M.Sc. MICROBIOLOGY – III SEMESTER**

**END SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**MB 9221-MEDICAL MICROBIOLOGY**

**Time: 2 ½ hrs Max Marks: 70**

**This question paper has 2 printed pages and four parts**.

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

1. a**)** Name two virulence factors of *Pseudomonas aeruginosa*.

 b) What is BSC III?

 c) Why is histoplasmin used?

2. Outline endotoxin identification.

3. Mention the structural components of the corona virus.

4. Give three differences between HSV-1 and HSV-II.

5. What causes Rheumatic fever and how is it caused?

6. Why is Metronidazole administered? What is its mode of action?

7. List the reasons why Muller Hinton agar is used in AST?

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

8. Write a note on the components of Biomedical waste.

9. What is the importance of faecal transplantation?

10. How can you prevent a community from getting giardiasis?

11. Explain the diagnosis of *Cryptococcus*.

12. What are the symptoms of *Helicobacter pylori* infection and can *H.pylori* be transmitted

 from person to person?

13. Explain the mode of action of chloeragen.

14. Write a note on MDR, and XDR.

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

 15. How can adherins, invasins and siderocalins be responsible for microbial

 pathogenesis?

 16. Describe the etiological agent that causes tuberculosis. How is Zeihl Neelsen performed

 and add a note on its chemotherapy.

 17. What exactly is a clinical trial? Who can participate in a clinical trial and what are the

 benefits and risks of participating in a clinical trial?

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

 18. A 30-year-old Indian woman presented to a tertiary care centre in North India with sudden fever and rashes. Systemic history revealed the presence of fever, myalgia, and arthralgia for 5 days and pain in the eyeballs. Tourniquet test conducted was positive.

Keeping in mind the local endemic diseases, the patient was subjected to further blood investigations.

1. What is the torniquet test and why was it conducted? **2**
2. Describe the mechanism of the replication of the organism identified. **8**