2019 Scheme

Q.P. Code: 215001 **Reg. no.: ……**

Second Professional MBBS Degree Regular/Supplementary Examinations January 2023

Microbiology - Paper I

Time: 3 Hours **Total Marks: 100**

- ***Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space***
- ***Answer all parts of a single question together • Leave sufficient space between answers***
- ***Draw table/diagrams/flow charts wherever necessary***

Long Essays **(2x15=30)**

1. A 30-year-old previously healthy woman presented to Medicine OPD with malaise, low-grade fever, nausea, vomiting, aversion to food, mild itching since one month. Serum showed elevated levels of AST and ALT and presence of antiHBcIgM.
   (a) What is the probable clinical diagnosis.
   (b) Which phase is the patient in.
   (c) What are the common etiological agents for a similar condition.
   (d) In the above case scenario, what are the other serological investigations required.
   (e) How does one get this infection.
   (f) What is the long-term concern in this infection.
   (g) How does one prevent this infection. Give details. (1+1+2+2+2+2+5)
2. A 20-year-old woman came to the Medicine OPD with history of fever, fatigue and abdominal discomfort since 4 days. It did not resolve with antipyretics. Samples were collected for the common probable causes of this condition and was confirmed as typhoid fever.
   (a) What are the common probable causes of the above case scenario.
   (b) Which is the confirmatory test for typhoid fever.
   (c) What is the most important instruction to be given for sample collection for the above test.
   (d) How does one get this infection.
   (e) Who is a chronic carrier of typhoid. In whom is chronic carriage likely.
   (f) How to detect chronic carriers. Give details.
   (g) What is the public health importance of detecting a chronic carrier.
   (h) Define Multi drug resistant Salmonella Typhi.
   (i) How to prevent typhoid infection. (2+1+1+1+2+3+1+1+3)

Short essays **(5x8=40)**

3. Quantitative buffy coat examination– principle, applications, advantages and Disadvantages. (3+1+2+2)
4. Describe the indications and different methods of blood culture. Discuss sample collection for blood culture. (3+2+3)
5. Antimicrobial susceptibility testing methods – types with respective principle, interpretation, purpose of selective reporting. (4+3+1)
6. Discuss mechanisms of innate immunity.
7. List antigen presenting cells and discuss their role in immune response.

Short answers **(5x4=20)**

8. List four parasitic infections especially seen in immunocompromised patients.
9. Laboratory diagnosis of invasive candidiasis.
10. Importance of biofilms in management of infections.
11. List the various roles of Cell mediated immunity with specific examples.
12. Healthcare associated infections – definition, major types, four micro-organisms transmitted through contact. (1+1+2)

Objective type questions **(10x1=10)**

13. What is the mode of transmission of visceral leishmaniasis.
14. Which is the microbe causing lymphatic filariasis.
15. What is the stage in the life cycle of trypanosomes infective to Man.
16. What are dimorphic fungi.
17. Clinical importance of plasmids in bacteria with two examples.
18. List FOUR clinical clues associated with anaerobic infections.
19. What is the role of memory cells in immune response.
20. What is mucosal immunity.
21. Name the disinfectant (with %) to be used for a large spill.
22. Name two narrow spectrum antibiotics.

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