

**II-MBBS****Second M.B.B.S. (Main) Examination (New Scheme)**

January - 2022

**MICROBIOLOGY**

Paper-First

Time: Three Hours

Maximum Marks: 100

Attempt all questions in both sections

(Use separate answer book for each section)

**Section-A****Fill in the blanks:****6 x 1 = 06**

- a) Joseph Lister is known as Father of \_\_\_\_\_ for his contributions.
- b) \_\_\_\_\_ retinopathy is found in Congenital Rubella syndrome.
- c) *Spirillum minus* is having \_\_\_\_\_ type of flagella.
- d) Slide culture technique is used in detection of \_\_\_\_\_.
- e) \_\_\_\_\_ is the complement receptor present on B cell and is involved in humoral immune response.
- f) \_\_\_\_\_ is an ovoviviparous parasite.

**Answer the followings (Multiple Choice Questions):****4 x 1 = 04**

- i) *Bartonella Henselae* is associated with all except-
    - a) Cat Scratch disease
    - b) Bacillary angiomatosis
    - c) Bacillary peliosis
    - d) Trench fever
  - ii) Which is helpful in the detection of typhoid carriers?
    - a) Widal
    - b) Bile culture
    - c) Stool culture
    - d) Urine culture
  - iii) 1-3 beta-D-glucan assay for fungi is not used for-
    - a) *Aspergillus* species
    - b) *Candida* species
    - c) *Cryptococcus* species
    - d) *Pneumocystis jirovecii*
  - iv) The hookworm thrives on-
    - a) Whole blood
    - b) Plasma
    - c) Serum
    - d) RBC
3. A 35-year-old female patient presented with Step ladder pattern of remittent fever, chills, myalgia, Arthralgia and pain abdomen. On examination relative bradycardia, mild hepatosplenomegaly and rose spots were found.
- a) What is the most probable diagnosis along with other significant differential diagnosis?

**02**

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- b) Write pathogenicity caused by the organism. 03
- c) Write Lab diagnosis of the causative organism. 07
- d) Immuno-Prophylaxis against the causative organism. 03
4. Write short notes on (Any five): 5 x 2 = 10
- a) Contributions of Paul Ehrlich. b) Demonstration of Spores.
- c) Automated antimicrobial susceptibility testing. d) Types of Cell Lines.
- e) Types of Monoclonal antibodies. f) Cytokines and disease.
5. Explain briefly (Any three): 3 x 5 = 15
- a) Drug resistance in typhoidal salmonellae.
- b) NACO strategic algorithms of HIV.
- c) Malarial vaccine.
- d) Dimorphic fungi.

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### Section-B

- 6 Define fever of unknown origin (FUO). Enumerate aetiologies associated with FUO. Write about Lab diagnosis of FUO along with special focus on special tests used in diagnosis of FUO. 20
7. Explain briefly (Any five): 5 x 2 = 10
- a) New taxonomic name of clostridium difficile, Enterobacter aerogenes, Penicillium marneffeii and Isospora belli.
- b) Functions of IgM antibody.
- c) Live attenuated vaccines.
- d) Complications of Falciparum malaria.
- e) Null cells.
- f) Enumerate transfusion transmitted infections.
8. Explain briefly (Any four): 4 x 5 = 20
- a) Localized anaphylaxis. b) Graft versus host reaction.
- c) Catheter associated urinary tract infection. d) Biological indicators of sterilization.
- e) Waste bins used in biomedical waste management.