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M.B.B.S.**Second Professional Examination (Main), Jan 2022****Microbiology – I***Time: Three Hours]**[Maximum Marks: 100*

Note: Attempt all questions. Use separate answer sheets for Sec. B & Sec. C. For Sec. A, a separate sheet will be provided and answer it on that sheet. Parts of a question must be attempted in sequence. Draw well labeled diagrams wherever necessary.

Section –A

MCQs (separate sheet)

[20

Section –B

1. Define and classify Hypersensitivity reactions. Describe the mechanism and mediators of type 1 hypersensitivity reaction. [2+3+5+5
2. Define Sterilization. Describe the principle and working of an Autoclave and also mention biological and chemical sterilization control of an autoclave. [2+8+5
3. Write short notes on: [5x2
 - a. Bacterial cell wall
 - b. IgM

Section –C

1. Mr. Amit, 20 year male presented in the OPD complaining of high grade fever for last 10 days. Fever never touches the baseline. He also complains of loss of appetite, headache and mild pain in abdomen. On examination his body temperature is 104 degree celsius with step ladder pattern of fever and there is relative bradycardia.
 - a. What is the most probable diagnosis, route of infection and infective dose? [3
 - b. Write its pathogenesis. [4
 - c. Discuss its laboratory diagnosis. [8
2. Enumerate routes of infection of HIV. Describe its life cycle and laboratory diagnosis. [2+5+8
3. Write short notes on – [5x2
 - a. Intestinal amoebiasis
 - b. Mycoplasma pneumonia

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M.B.B.S.**Second Professional Examination (Main), Jan 2022****Microbiology – II***Time: Three Hours]**[Maximum Marks: 100*

Note: Attempt all questions. Use separate answer sheets for Sec. B & Sec. C. For Sec. A, a separate sheet will be provided and answer it on that sheet. Parts of a question must be attempted in sequence. Draw well labeled diagrams wherever necessary.

Section –A

MCQs (separate sheet)

[20

Section –B

1. An adult female was admitted with the history of fever with chills, burning and increased frequency of micturition since last 5 days. Urine microscopy revealed motile bacilli and pus cells.
 - a. What is the clinical diagnosis? [1
 - b. Enlist various etiological agents of this condition [4
 - c. Discuss the laboratory diagnosis in detail [10
2. Enlist various infective syndromes of skin, soft tissue and musculoskeletal system. Discuss laboratory diagnosis of Staphylococcal infections. [5+10
3. Write short notes on: [5x2
 - a. Different causes of genital ulcer. Discuss about Herpes Simplex virus
 - b. Hand hygiene

Section –C

1. A 5 year old girl was admitted to the hospital with complaints of high-grade fever, headache, vomiting, altered mental status, seizure and neck rigidity. On physical examination, Brudzinski's sign and Kernig's sign were positive. CSF sample was collected by lumbar puncture in a sterile container and sent to the laboratory for biochemical analysis, direct microscopy, culture and sensitivity testing.
 - a. What is the clinical diagnosis of this patient? [2
 - b. Enumerate the various etiological agents of this clinical diagnosis. [5
 - c. How will you proceed to diagnose the bacterial (pyogenic) etiology in the laboratory? [8

2. Enumerate various Tissue nematodes. Discuss in detail about *Wuchereria bancrofti*. [5+10]
3. Write short notes on:
- a. Laboratory diagnosis of pulmonary tuberculosis [5]
 - b. Role of empathy in the care of patients [5]
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