

**Madhya Pradesh Medical Science University,
Jabalpur**
**MBBS Second Professional Examination August-
2024**
Subject- Microbiology
Paper- II (new scheme)

Time: 3:00 Hours

Maximum Marks :100

Instructions:

- a) All questions are compulsory
- b) Draw diagrams wherever necessary
- c) Answers of Questions and Sub-questions must be written strictly according to serial order of question paper.
- d) MCQ has to be answered in theory answer book
- e) Please write MCQ answer neatly and in serial order with black or blue pen in brackets; for example: - 1. (a) 2. (c)
- f) MCQ has to be answered only once, any kind of repetition or cutting or erasing or whitener will be considered as malpractice, such answers will not be counted in marks and action will be taken according to UFM rules of university.
- g) Subjective answer should be answered in up to 30 words per marks. For example, if a question having 2 marks should answered in up to 60 marks.

Q1. Total MCQs: $10 \times 1 = 10$

1. Most common mode of transmission of HIV after sexual transmission:
(a) Blood and blood products (b) Occupational (c) Breastfeeding (d) Perinatal
 2. Which of the following is a yeast
(a) Candida (b) Mucor (c) Rhizopus (d) Cryptococcus
 3. Tuberculoid Leprosy cases
(a) Have good CMI (b) Have Positive Lepromin test (c) Involved tissue have TH-1 Profile (d) All of the above
 4. The gold standard test for diagnosis of Covid19 is-
(a) Real time RT-PCR (b) Antibody demonstration (c) Antigen demonstration (d) None of the above
 5. Tsetse fly transmits
(a) Trypanosoma brucei (b) Trypanosoma Cruzi (c) Kala-azar (d) Oriental sore
 6. Which of the following bacteria can cause acute bacterial meningitis?
(a) Neisseria meningitidis (b) Streptococcus pneumoniae (c) Hemophilus influenzae (d) All of the above
 7. Drumstick appearance of spores is a characteristic feature of
(a) Clostridium perfringens (b) Clostridium novyi (c) Clostridium tetani (d) Clostridium difficile
 8. Causative agent of lymphogranuloma venereum is?
(a) Chlamydia trachomatis serotype A to C (b)
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Chlamydia trachomatis serotype D to K (c) Chlamydia trachomatis L1 to L3 (d) Chlamydia pneumoniae

9. Whooping cough can be caused by
(a) Bordetella pertussis (b) Bordetella parapertussis (c) Bordetella bronchiseptica (d) All of the above
10. All of the following are Zoonotic diseases except
(a) KFD (b) Plague (c) Brucellosis (d) Anthrax

Q2. Long Answer Questions 2 x 20 = 40

a. A 25-year-old man presented with productive cough for 2 months with blood-tinged sputum. He has a history of loss of appetite and of low-grade fever. He gave a history of smoking and no other significant medical history. Chest X-ray revealed cavitory lesion in the left upper lobe.

I. What is the provisional diagnosis and etiological agent?

II. Describe the pathogenesis and clinical features.

III. Write in detail about its laboratory diagnosis.

IV. Write briefly on treatment and prevention of the above disease.

b. A 21-year-old male, throughout the body had developed characteristic well demarcated annular or ring-shaped pruritic scaly skin lesion with central clearing and raised edges. Culture of the skin scarping done on sabouraud's dextrose agar reveals velvety colonies with red pigment on the reverse. Microscopy of the culture isolate reveals plenty of tear drop-shaped microconidia and few, long, pencil-shaped macroconidia.

- I. What is the clinical diagnosis and what is the most likely etiological agent?
- II. Describe the various clinical manifestations produced by organism.
- III. Add a note on the laboratory diagnosis of this condition.

Q3. Brief Answer Questions 6 x 05 = 30

- a. Dengue virus.
- b. Cysticercosis
- c. Zygomycosis.
- d. NACO strategies of HIV laboratory diagnosis.
- e. Enlist agents causing Burn wound infection. Write about approach to lab diagnosis of Burn wound infection.
- f. Describe Rapid growers in NTM

Q4. Short Answer Questions 10 x 2 = 20

- a. Recrudescence malaria.
- b. Name 4 treponemal tests for diagnosis of syphilis.
- c. Enumerate the name of emerging and reemerging viruses.
- d. Mention four cutaneous parasitic infections.
- e. Virulence factors of *S.pyogenes* (any 4).
- f. Significant bacteriuria.
- g. Draw a labeled diagram of Rabies virus.
- h. Agents causing atypical pneumonia

- i. Enumerate two lesions caused by staphylococcus epidermis.
- j. Mention 2 viral inclusion bodies with their causative organism

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