

**Madhya Pradesh Medical Science University,  
Jabalpur  
MBBS Second Professional Examination April-  
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.

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

- 1) Human acquire cysticercus cellulosae infections by all except:
- (a) Ingestion of contaminated vegetables
  - (b) Autoinfection
  - (c) Reverse peristalsis.
  - (d) Ingestion of contaminated pig's meat
- 2) Which of the following parasites is transmitted by cat?
- (a) Balantidium coli
  - (b) Toxoplasma gondii
  - (c) Echinococcus granulosus
  - (d) Toxocara canis
- 3) Serotyping and serosubtyping of meningococci are based on:
- (a) Outer membrane proteins
  - (b) Endotoxin
  - (c) Capsular polysaccharide
  - (d) Transferrin binding proteins
- 4) Which of the following parasites is transmitted by dog?
- (a) Echinococcus
  - (b) Hymenolepis nana
  - (c) Taenia solium.
  - (d) Diphyllbothrium
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- 5) Which of the following site is most commonly affected by *C. diphtheriae*:
- (a) Skin
  - (b) Conjunctiva
  - (c) Faucial
  - (d) Kidney
- 6) Botryomycosis is a mycetoma-like disease caused by:
- (a) Nocardia
  - (b) Actinomyces
  - (c) Staphylococcus
  - (d) Streptococcus
- 7) Pathognomonic cells in bacterial vaginosis are called:
- (a) Smudge cells
  - (b) Atypical cells
  - (c) Decoy cells
  - (d) Clue cells
- 8) A laboratory receives a specimen from an animal which died of Anthrax. What is the recommended level of Biosafety (BSL) to be used for handling this specimen?
- (a) BSL-1
  - (b) BSL-2
  - (c) BSL-3
  - (d) BSL-4
- 9) Reactive arthritis syndrome consists of all except:
- (a) Conjunctivitis
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- (b) Urethritis
- (c) Polyarthrititis
- (d) Myocarditis

10) Co-cultivation method is used for:

- (a) HBV
- (b) HCV
- (c) HSV
- (d) HIV

### **Long Answer Questions 2 x 20 = 40**

Q2. a. An 8-year-old child was admitted to the hospital with chief complaints of high-grade fever, headache,

vomiting, altered mental status and neck rigidity. CSF was sent for Biochemical analysis, direct microscopy and

Culture & sensitivity testing.

I What is the probable clinical diagnosis

II What are the etiological agents, pathogenesis and clinical manifestations of this disease?

III Describe the laboratory diagnosis in detail

IV What are the treatment modalities according to the etiological agents

b. A 25-year-old male was admitted in the hospital four days after Road Traffic Accident (RTA); on examination,

crush injury right foot with soiled gauze contaminated with soil was observed. There was edema, crushed

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muscles and pain at the site. On palpation crepitus was felt.

I What is the clinical condition?

II Mention the etiological agent responsible for this condition?

III Describe the pathogenesis and clinical manifestations of this condition?

IV Describe in detail the laboratory diagnosis and treatment of this disease?

### **Brief Answer Questions 6 x 05 = 30**

Q3. a. Vaccine associated paralytic poliomyelitis (VAPP)

b. What is congenital infection? List the various organism causing congenital infection? Write in detail about

congenital syphilis.

c. List the cutaneous parasitic infection. Write briefly on cutaneous lava migrans.

d. A child aged 6 years with high grade fever, toxic pain in the throat, inability to swallow was brought to the

casualty. On examination a white patch was found on the tonsillar fossa which started bleeding when

touched. No history of immunization available. What is the clinical diagnosis? Write in detail laboratory

diagnosis of this condition.

- e. Discuss in detail about MRSA (Methicillin - Resistant Staphylococcus Aureus)
- f. Write the clinical feature and lab diagnosis of Plague.

**Short Answer Questions 10 x 2 = 20**

- Q4. a. Explain Weil-Felix Test and its application.
- b. Differences between Actinomyces and Nocardia
  - c. RNA viruses causing viral exanthems
  - d. Name two prion diseases along with their hosts
  - e. Pneumococcal vaccine.
  - f. Categories of Biomedical waste and types of containers used for their disposal.
  - g. Spill management.
  - h. Name diseases transmitted by tick
  - i. What is TORCH infection?
  - j. Enlist the organism causing nongonococcal urethritis

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