



RAN-2106000102030102

2nd M.B.B.S. Examination January - 2023

Microbiology : Paper - II

Time: 3 Hours |

[Total Marks: 100

સૂચના : / Instructions

- (1) નીચે દર્શાવેલ ❖ નિશાનીવાળી વિગતો ઉત્તરવર્તી પર અવશ્ય લખવી.
Fill up strictly the details of ❖ signs on your answer book

Name of the Examination:

2nd M.B.B.S.

Name of the Subject :

Microbiology : Paper - II

Subject Code No.: 2106000102030102

Seat No.: _____

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Student's Signature _____

- (2) Draw a label diagram wherever required with blue pen/pencil only.
- (3) Short notes 100-150 words.
- (4) Write heading of each question properly.

Section - IIA

(Skin and soft tissue infection, Musculoskeletal and respiratory system)

- Que. 1** A 35 year old female from a village of Bihar came to the hospital with history of fever on and off for the past one year and recently developed unilateral swelling of the left lower limb. Her blood sample was sent for peripheral blood smear examination which revealed worm like structures, 240 um in length with pointed tail tip. **(12 marks)**
- Name the disease and its etiological agent.
 - Describe the life cycle, pathogenesis and laboratory diagnosis of this condition.
 - Explain prevention and treatment of this clinical condition.

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Que. 2 Write notes (any four) (4 × 7 = 28 Marks)

- a. Etio-pathogenesis, laboratory diagnosis and complication in a man with necrotic limb wound that crepitates following a road traffic accident.
- b. Fever with rash in a child: four causative organisms and pathogenesis, laboratory diagnosis and prevention of any one
- c. Hospital acquired Infections: types, risk factors and preventive measures.
- d. Pathogenesis and Laboratory Diagnosis of Madura foot.
- e. COVID 19: Laboratory Diagnosis and Vaccines.

Que. 3 Multiple Choice Questions. (10 Marks)

1. Which of the following statement is correct about lepromatous leprosy:
 - a. Multibacillary
 - b. CMI is normal
 - c. Langerhans cells are found
 - d. Positive lepromin test
2. Survival of *M. tuberculosis* inside the macrophages is due to:
 - a. Inhibition of entry into the host cell
 - b. Inhibition of phagosome-lysosome fusion
 - c. Inhibition of entry into the phagosome
 - d. Inhibits degradation by lysosomal enzymes
3. Ecthyma gangrenosum is caused by:
 - a. *Pseudomonas*
 - b. *Brucella*
 - c. *Bordetella*
 - d. *H. influenzae*
4. Which of the following protein is used for Serotyping of *Streptococcus pyogenes* :
 - a. M protein
 - b. T protein
 - c. R protein
 - d. Carbohydrate antigen
5. CAMP test is useful in identification of:
 - a. *S. pyogenes*
 - b. *S. agalactiae*
 - c. Viridans streptococci
 - d. *S. pneumoniae*
6. Gram-stain morphology of *Bacillus anthracis* is:
 - a. Tennis racket appearance
 - b. Bamboo stick appearance
 - c. Drum stick appearance
 - d. Spectacle glass appearance

7. Which viral infection is responsible for Subacute Sclerosing Pan Encephalitis (SSPE):
- | | |
|------------|--------------|
| a. Mumps | b. Measles |
| c. Rubella | d. Influenza |
8. Which of the following is vector for leishmaniasis:
- | | |
|---------------|-----------------------|
| a. Sandfly | b. Reduvid bug |
| c. Tsetse fly | d. Anopheles mosquito |
9. Which of the following fungus **DOES NOT** infect nail:
- | | |
|-------------------|---------------------|
| a. Trichophyton | b. Microsporum |
| c. Epidermophyton | d. Candida albicans |
10. Rhinosporidiosis is characterized by all of the following **EXCEPT**:
- | |
|---|
| a. It is caused by a fungus. |
| b. The fungus is usually found in dirty waters. |
| c. It manifests as polyps that bleed easily. |
| d. It can be cultured easily in laboratory. |

Section - II B
(CNS, Genitourinary, HAI, Miscellaneous)

- Que. 1** A 25 yr. old man presented with painless ulcer with hard base on penis. He had a history of sex with multiple partners. On examination, inguinal lymph nodes were enlarged, discrete, non-tender and rubbery. The blood specimen was collected and sent to the laboratory for serological test. **(12 marks)**
- | |
|--|
| a. What is the clinical diagnosis and possible causative agent? Justify. |
| b. Explain the pathogenesis and laboratory diagnosis of this condition. |
| c. Enlist three possible etiological agents in case the man had multiple painful genital ulcers. |
- Que. 2** **Write notes. (any four)** **(4 × 7 = 28 marks)**
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|--|
| a. Laboratory Diagnosis, treatment and prevention of tetanus. |
| b. Encephalitis: four causative agents and pathogenesis with laboratory diagnosis of anyone. |
| c. Antimicrobial stewardship program: concept and different strategies used in the program. |
| d. Non-tuberculosis Mycobacterium: classification and significance as human pathogen. |
| e. Consent: Definition, types and its importance in autonomy. |

Que. 3 Multiple Choice Questions.**(10 Marks)**

1. Which of the following is the causative agent of chancroid?
 - a. Haemophilus ducreyi
 - b. Klebsiella granulomatis
 - c. Mycoplasma hominis
 - d. Candida albicans
2. Which of the following is **NOT** vaccine-derived poliovirus (VDPVs):
 - a. mVDPV
 - b. cVDPV
 - c. iVDPV
 - d. VDPV
3. Which of the following fungi are associated with zygomycosis?
 - a. Mucor
 - b. Rhizopus
 - c. Absidia
 - d. All of the above
4. Which of the following pigment is diagnostic of Pseudomonas aeruginosa?
 - a. Pyocyanin
 - b. Pyorubin
 - c. Pyomelanin
 - d. Fluorescein
5. Which culture medium is preferred for processing of urine specimens?
 - a. TCBS agar
 - b. CLED agar
 - c. Chocolate agar
 - d. XLD agar
6. Which of the following depicts the decreasing order of risk of transmission following occupational exposure?
 - a. HIV>HBV>HCV
 - b. HBV>HCV>HIV
 - c. HBV>HIV>HCV
 - d. HCV>HBV>HIV
7. Which of the following **IS NOT USED** as indicator organism of fecal contamination of water:
 - a. Fecal E. coli
 - b. Fecal streptococci
 - c. Pseudomonas
 - d. Vibrio cholerae
8. The most effective way of preventing tetanus is:
 - a. Hyperbaric oxygen
 - b. Tetanus toxoid
 - c. Antibiotics
 - d. surgical debridement and toilet
9. Neonatal meningitis acquired through contaminated/ colonized/infected birth canal is due to:
 - a. S. pyogenes
 - b. Viridans streptococci
 - c. S. agalactiae
 - d. S. pneumoniae
10. Serotyping and serosubtyping of meningococci are based on:
 - a. Outer membrane proteins
 - b. Endotoxin
 - c. Capsular polysaccharide
 - d. Transferrin binding proteins