2406000102030702-S
(SUPPLIMENTARY EXAM) FEBRUARY-2025
SECOND MBBS
MICROBIOLOGY (PAPER - II) (NEW) (OMR)

[**Time: As Per Schedule]** **[Max. Marks:100]**

Instructions:
1. Fill up strictly the following details on your answer book
a. Name of the Examination: **SECOND MBBS**
b. Name of the Subject: **MICROBIOLOGY (PAPER - II) (NEW) (OMR)**
c. Subject Code No: **2406000102030702-S**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

Student's Signature

SECTION-I

Q.1 MCQ **20**

1. The fungus that exhibits septate hyphae with dichotomous branching on KOH mount is:

   A. Cryptococcus B. Mucor

   C. Penicillium D. Aspergillus

2. Rhinosporidiosis is characterized by all the following except:

   A. It is caused by a fungus.

   B. The fungus is usually found in dirty water.

   C. It manifests as polyps that bleed easily.

   D. It can be cultured easily in the laboratory.

3. Total number of categories in Biomedical Waste are:

   A. 10 B. 8

   C. 4 D. 2

4. Which medium is preferred for culturing Mycobacterium tuberculosis?

   A. MacConkey agar B. Lowenstein-Jensen medium

   C. Chocolate agar D. Sabouraud's agar

5. Buruli ulcer is caused by:

   A. M. xenopi B. M. malmoense

   C. M. scrofulaceum D. M. ulcerans

6. Neisseria gonococcus is primarily associated with which of the following conditions?

   A. Genital infections B. Pharyngitis

   C. Meningitis D. Skin abscess

7. Ecthyma gangrenosum is caused by:

   A. Brucella B. H. influenzae

   C. Pseudomonas D. Bordetella

8. Which of the following intestinal parasites migrate to the lung in their lifecycle, except:

   A. Trichinella spiralis B. Ancylostoma duodenale

   C. Ascaris lumbricoides D. Strongyloides stercoralis

9. Gram-stain morphology of Bacillus anthracis is:

   A. Tennis racket appearance

   B. Bamboo stick appearance

   C. Drumstick appearance

   D. Spectacle glass appearance

10. Epstein-Barr virus is associated with the following malignancies, except:

A. Nasopharyngeal carcinoma

B. Burkitt's lymphoma

C. Carcinoma of the cervix

D. Non-Hodgkin lymphoma

11. Which of the following is vector for leishmaniasis:

A. Sandfly B. Reduvid bug

C. Anopheles mosquito D. Tsetse fly

12. Cryptococcus neoformans is most likely to cause:

A. Pulmonary infection B. Meningitis

C. Skin infections D. Bone infections

13. MGIT used in tuberculosis diagnosis is:

A. Automated culture B. Biochemical test

C. Microscopic method D. None of the above

14. Which of the following fungus DOES NOT infect nail:

A. Trichophyton B. Epidermonhvton

C. Microsporum D. Candida albicans

15. The amplifier host for Japanese B Encephalitis is:

A. Ardeid birds B. Pigs

C. Forests D. Herons

16. Neisseria meningitidis primarily causes:

A. Meningitis B. Urethritis

C. Endocarditis D. Pharyngitis

17. The fungus that causes mucormycosis most commonly belongs to which genus?

A. Rhizopus B. Candida

C. Cryptococcus D. Aspergillus

18. Which of the following statements about the shape of the virus is correct?

A. Rotavirus-Wheel-shaped

B. Tobacco Mosaic Virus - Filamentous-shaped

C. Ebola Virus - Rod-shaped

D. Adenovirus - Brick-shaped

19. MRSA is mediated due to

A. Plasmid B. Meca Gene

C. Transposons D. None

20. All of the following antimicrobial agents act on cell membrane, except

A. Gramicidin B. Daptomycin

C. Polymyxins D. Vancomycin

SECTION-II

Q.2 Essay **12**

A 55-year-old male was admitted to the hospital with complaints of severe pain in the lateral aspect of his left calf and small amount of pus discharge from the ingrown hair. On physical examination, the local area was found to be red, warm and tender, Pus was aspirated and was subjected to Gram stain showed gram-positive cocci in clusters culture on blood agar (showed golden yellow pigmented beta-haemolytic colonies).

a. What is the clinical diagnosis and its causative organism? **02**

b. List the infections caused by this organism. **02**

c. List the virulence factors of this organism. **03**

d. Briefly discuss the laboratory diagnosis. **05**

Q.3 Answer in Brief (Any 4 out of 5): 28

1. Cutaneous tuberculosis.
2. Superficial fungal infections.
3. Pathogenesis of Streptococcus pyogenes in soft tissue infections.
4. Fever with rash in a child: four causative organisms and pathogenesis, laboratory diagnosis and prevention of anyone
5. Describe the morphology of the rabies virus. Discuss the laboratory methods used for its diagnosis in humans and animals.

SECTION-III

Q.4 Essay 12

A 28-year-old female presents with a 3-day history of burning sensation during urination, increased frequency, and lower abdominal discomfort. She denies fever or back pain. A urine dipstick test shows the presence of nitrites and leukocytes.

1. What is the likely diagnosis? **02**
2. List common organisms causing this condition. **03**
3. Discuss laboratory investigations used to confirm the diagnosis. **04**
4. Outline the treatment and prevention strategies. **03**

Q.5 Answer in Brief (Any 4 out of 5): **28**

1. Role of healthcare workers in preventing HAIs.
2. Rhinosporidiosis
3. Laboratory diagnosis of Candidiasis.
4. Differentiate between healthcare-acquired and community-acquired pneumonia.
5. Filtration techniques used in hospital infection control.

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