

KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(3 Pages)

Reg. No:.....

Question Code: 26E01604

Course Code : 24PMMB21

PG Degree - End Semester Examinations, April 2026

Second Semester

M.Sc., MICROBIOLOGY

Medical Bacteriology and Mycology

(For those who joined in July 2024 onwards)

Time : 3Hours

Maximum : 75 Marks

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1
K:1
1. Which of the following microorganism can be found as normal flora in the nasopharynx of healthy individuals?
- (a) *Bacillus cereus* (b) *Clostridium difficile*
(c) *Streptococcus pneumoniae* (d) *Mycobacterium tuberculosis*
- CO:1
K:1
2. The standard method for collection of Cerebrospinal fluid (CSF) is
- (a) Veni puncture (b) Arterial puncture
(c) Lumbar puncture (d) Fingerstick
- CO:2
K:1
3. The bacteria with a "drumstick" appearance, also known as a "tennis racket" appearance, is
- (a) *Staphylococcus aureus* (b) *Streptococcus pneumoniae*
(c) *Clostridium tetani* (d) *Cornebacterium diphtheriae*
- CO:1
K:1
4. Which one of these is the culture medium for *Mycobacterium tuberculosis*?
- (a) Wilson blair medium (b) Löwenstein–Jensen medium
(c) Mac Conkey's medium (d) EMJH medium
- CO:2
K:1
5. What is the primary characteristic of *Mycoplasma*?
- (a) Absence of cell wall (b) Presence of flagella
(c) Absence of cell membrane (d) Presence of a spore membrane

- CO:2 6. The most common causes of peptic ulcers is due to infection with
K:1 (a) *Mycoplasma pneumoniae* (b) *Pseudomonas aeruginosa*
(c) *Leptospirra interrogans* (d) *Helicobacter pylori*
- CO:3 7. Fungi that are not known to produce any sexual spores are known
K:1 as
(a) Basidiomycetes (b) Ascomycetes
(c) Zygomycetes (d) Deuteromycetes
- CO:3 8. _____ is a superficial fungal infection found on the head.
K:1 (a) Tinea cruris (b) Tinea capitis
(c) Tinea pedis (d) Tinea corporis
- CO:3 9. Which one of the following opportunistic fungi known for causing
K:1 invasive pulmonary disease?
(a) *Aspergillus fumigatus* (b) *Histoplasma capsulatum*
(c) *Candida albicans* (d) *Cryptococcus neoformans*
- CO:4 10. Which one of the following antifungals is a polyene?
K:1 (a) Nystatin (b) Ergosterol
(c) Caspofungin (d) Flucytosine

PART - B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

- CO:1 11. (a) Explain the procedure for Lumbar puncture.
K:2

(OR)

- (b) Show case any four media used for culturing microorganisms from clinical specimens.

- CO:2 12. (a) Describe the characteristics of *Corynebacterium* and provide
K:2 examples of medically important species.

(OR)

- (b) Classify *Streptococcus* and add its characteristic features.

- CO:3 13. (a) Summarize zoonotic diseases and its diagnosis and
K:3 treatment.

(OR)

- (b) Explain the laboratory diagnosis of *Helicobacter pylori*.

CO:3 14. (a) Discuss the collection of dermatophytic sample for
K:3 microscopic examination.

(OR)

(b) Define mycotoxin and list out its types.

CO:4 15. (a) Categorize opportunistic fungal infections.

K:3

(OR)

(b) List out antifungal agents and its mode of action.

PART - C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 600 words.

CO:2 16. (a) Categorize medically important bacteria and its importance.

K:3

(OR)

(b) Discuss the blood sample collection, transport, storage and processing procedure.

CO:2 17. (a) Describe the pathogenesis and laboratory diagnosis of

K:4

Mycobacterium tuberculosis.

(OR)

(b) Explain the pathogenesis and laboratory diagnosis of *Staphylococcus aureus*.

CO:2 18. (a) Record the characteristics of *Treponema pallidum* and its role

K:3

in human disease.

(OR)

(b) Write the pathogenesis of *Vibrio cholerae*. Add its lab diagnosis.

CO:3 19. (a) Highlight the Taxonomy and classification of fungi.

K:3

(OR)

(b) Discuss the superficial mycoses and its lab diagnosis.

CO:3 20. (a) Summarize dimorphic fungal infections and its diagnosis.

K:5

(OR)

(b) Write the principle and applications of immunodiagnostic methods in mycology.