

KAMARAJ COLLEGE (Autonomous)

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(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

(3 Pages)

Reg. No:.....

Question Code: 26E01618

Course Code : 25PMMB22

PG Degree - End Semester Examinations, April 2026

Second Semester

M. Sc., MICROBIOLOGY

Medical Virology and Parasitology

(For those who joined in June 2025 onwards)

Time : 3Hours

Maximum : 75 Marks

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer :

- CO:1 1. Which infectious agent lacks both nucleic acid and capsid?
K:1 (a) Viroid (b) Virusoids
(c) Prion (d) Satellite RNA
- CO:1 2. Why the embryonated chicken eggs are used for the cultivation of
K:1 virus?
(a) Multiple differentiated tissues (b) Sterile conditions
(c) High oxygen tension (d) Rapid viral mutation
- CO:2 3. Which viral family possesses segmented negative-sense RNA?
K:1 (a) Picornaviridae (b) Orthomyxoviridae
(c) Paramyxoviridae (d) Rhabdoviridae
- CO:2 4. Antigenic shift is commonly associated with _____ virus.
K:1 (a) Dengue virus (b) Hepatitis B virus
(c) Ebola virus (d) Influenza virus
- CO:3 5. Which antiviral drug inhibits viral DNA polymerase?
K:1 (a) Amantadine (b) Acyclovir
(c) Zidovudine (d) Interferon- α
- CO:3 6. Find the integration site of bacteriophage λ .
K:1 (a) Att site (b) OriC
(c) Cos site (d) Ter site

- CO:4 7. Select an Infective stage of *Entamoeba histolytica*.
K:2 (a) Trophozoite (b) Cyst
(c) Schizont (d) Sporozoite
- CO:4 8. Which is the Most specific diagnostic test for giardiasis?
K:1 (a) ELISA-based antigen detection (b) Xenodiagnosis
(c) Stool microscopy (d) Culture
- CO:5 9. Choose Humans develop cysticercosis by ingesting.
K:1 (a) Adult worm (b) Oncospheres
(c) Proglottids (d) Eggs of *Taenia solium*
- CO:5 10. Which is the common opportunistic parasite in AIDS patients?
K:2 (a) *Trichinella* (b) *Toxoplasma gondii*
(c) *Wuchereria bancrofti* (d) *Enterobius vermicularis*

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) Write a short note on Prions.

K:3 **(OR)**

(b) Explain the role of cell culture systems in Virus cultivation.

- CO:2 12. (a) Discuss host innate immune defenses against viral infections.

K:3 **(OR)**

(b) Write a short note on laboratory diagnosis of Hepatitis viral infections.

- CO:3 13. (a) Describe the life cycle of Bacteriophage T4.

K:4 **(OR)**

(b) Briefly discuss the role of Vaccines in viral disease prevention.

- CO:4 14. (a) Write a note on pathogenic mechanisms of *Giardia lamblia*.

K:4 **(OR)**

(b) Explain laboratory diagnosis of Amoebiasis.

- CO:5 15. (a) Describe the life cycle of *Fasciola hepatica*.

K:3 **(OR)**

- (b) Explain parasitic infections associated with AIDS and Immunocompromised states.

PART - C (5 X 8 = 40 Marks)

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

Answer should not exceed 600 words.

- CO:1 16. (a) Discuss classification, structure and unique features of
K:5 Viruses.

(OR)

- (b) Outline the principles of Electron Microscopy in viral identification.

- CO:2 17. (a) Elaborate on pathogenic mechanisms and laboratory
K:5 diagnosis of Dengue virus infection.

(OR)

- (b) Compare RNA virus infections caused by *Orthomyxo* and *Paramyxo* viruses.

- CO:3 18. (a) Describe the structure, life cycle and genetic significance of
K:5 Bacteriophage λ .

(OR)

- (b) Explain diagnosis of viral infections and add a note on serological and molecular methods.

- CO:4 19. (a) Discuss the classification of medically important Protozoa
K:5 and explain the host-parasite relationships with suitable examples.

(OR)

- (b) Explain the life cycle, pathogenicity and diagnosis of *Trypanosoma* infections.

- CO:5 20. (a) Explain life cycle, pathogenicity and diagnosis of *Taenia*
K:5 *solium*.

(OR)

- (b) Describe Anti-Protozoan Drugs and their mechanisms of action.