

QP CODE : 1030

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – II (CBME) Degree Examination - 22-Aug-2025

Time: Three Hours

Max. Marks: 100

MICROBIOLOGY – PAPER I (RS-4, RS-5 & RS-6)**Q.P. CODE: 1030****(QP contains two pages)**

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS**2 x 10 = 20 Marks**

1. A 40-year-old farmer was admitted 2 days after crush injury to his right leg following a road traffic accident. On examination, local muscles have been crushed, there was edema, black discoloration of the skin and crepitus was felt on palpation
 - a) What is the provisional diagnosis?
 - b) List the etiological agents causing the above condition
 - c) Discuss the pathogenesis of the clinical condition
 - d) Describe the laboratory diagnosis of the above case
2. A 17-year-old boy presented with diarrhea with blood and mucus, colicky abdominal pain, fever and prostration. He developed the symptoms following consumption of street food. The wet mount examination of stool sample showed motile trophozoites
 - a) What is the clinical diagnosis?
 - b) List the etiological agents of dysentery
 - c) Describe the life cycle, pathogenesis and complications in the above condition
 - d) Discuss the Laboratory diagnosis and treatment

SHORT ESSAYS**8 x 5 = 40 Marks**

3. Bacterial spore
4. Modes of transmission of infection
5. Structure and functions of IgM antibody
6. Type I hypersensitivity
7. Laboratory diagnosis of HIV infection
8. Laboratory diagnosis of cholera
9. Histoplasmosis
10. Mucormycosis

SHORT ANSWERS**10 x 3 = 30 Marks**

11. Three contributions of Louis Pasteur
12. Phases of Bacterial growth curve
13. Three examples of active Immunity
14. Name three viruses causing gastroenteritis
15. Methicillin Resistant *Staphylococcus Aureus* (MRSA)
16. Morphology of egg of *Ascaris lumbricoides* with diagram
17. Name three causes of infective endocarditis
18. Name three causes of viral hemorrhagic fever
19. **Post Streptococcal complications and the mechanism involved**
20. Cutaneous larva migrans

Multiple Choice Questions**10 x 1 = 10 Marks**

- 21 i) Antibody that crosses placenta
- A. IgA
 - B. IgG
 - C. IgE
 - D. IgM

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- 21 ii) Three components of PCR involve all **EXCEPT**
- A. DNA extraction
 - B. Amplification
 - C. Gel documentation
 - D. Blotting
- 21 iii) The part of bacteria that is most antigenic
- A. Protein
 - B. Carbohydrate
 - C. Lipid
 - D. Nucleic acid
- 21 iv) Infective form of malaria parasite
- A. Merozoite
 - B. Sporozoite
 - C. Trophozoite
 - D. Gametocyte
- 21 v) Germ tube formation is seen in:
- A. *Candida glabrata*
 - B. *Candida albicans*
 - C. *Cryptococcus neoformans*
 - D. *Coccidioides immitis*
- 22 i) The recommended investigation for typhoid after two weeks of onset of fever is
- A. Blood culture
 - B. Stool culture
 - C. Urine culture
 - D. Widal test
- 22 ii) Amastigote form of Leishmaniasis is found in
- A. Gastrointestinal tract of insect vector
 - B. Salivary gland of mosquito
 - C. Cells of reticuloendothelial system
 - D. NNN Culture media
- 22 iii) Hepatitis virus that spreads by faecal-oral route
- A. Hepatitis A
 - B. Hepatitis B
 - C. Hepatitis C
 - D. Hepatitis D
- 22 iv) Pityriasis versicolor is caused by
- A. *Malassezia furfur*
 - B. *Trichophyton rubrum*
 - C. *Actinomyces madurae*
 - D. *Hortaea werneckii*
- 22 v) The concentration of glutaraldehyde used in disinfection of endoscopes is
- A. 2%
 - B. 0.5%
 - C. 1.5%
 - D. 1%
