

Rajiv Gandhi University of Health Sciences, Karnataka**MBBS Phase – II (CBME) Degree Examination - 11-Dec-2024****Time: Three Hours****Max. Marks: 100****MICROBIOLOGY – PAPER I (RS-4)****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 9 year old boy from an overcrowded colony presented to the paediatric emergency department during monsoons with complaints of profuse and frequent watery diarrhoea since the previous day, accompanied by 2-3 episodes of vomiting. On examination, he was found to be moderately dehydrated. The stool on gross examination had a characteristic 'Rice water' appearance.
 - a. What is the probable etiological diagnosis?
 - b. Discuss in detail epidemiology and pathogenesis of the above condition
 - c. Add a note on laboratory diagnosis
2. A 30 year old young adult with history of multiple sex partners is admitted with complaints of unexplained fever, weight loss, persistent diarrhoea and generalized lymphadenopathy for past 6 months.
 - a) What is the probable diagnosis?
 - b) Discuss the pathogenesis and laboratory diagnosis of the above condition
 - c) What are the preventive measures for the above infection?

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

3. Describe tuberculin type of delayed hypersensitivity.
4. Describe classes of major histocompatibility complex and their role in Immunity.
5. **A child presents with vesicular rashes. Rashes are bilateral, diffuse and centripetal in distribution. Fever appears with each crop of eruption. What is the probable clinical diagnosis & discuss the prevention of this infection**
6. Differentiate eumycotic mycetoma from actinomycotic mycetoma
7. Sequence of events that occur following entry of quadri-nucleate cyst of *Entamoeba histolytica* into the gut
8. **Describe the pathogenesis and the laboratory diagnosis of lepromatous leprosy.**
9. Diarrheagenic *Escherichia coli*
10. Describe the differences between resistance acquired by mutation and transferrable drug resistance

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

11. Morphological classification of fungi with examples
12. Name three bacterial causes of food poisoning
13. **Name three infections produced by *Staphylococcus aureus*.**
14. What is occult filariasis?
15. Name three opportunistic sporozoa that cause diarrhea
16. Name three non-albicans species of *Candida*
17. **List three Complications of falciparum malaria**
18. Type and schedule of Hepatitis B vaccine
19. What are sequestered antigens? Give examples
20. List differences between active immunity and passive Immunity

Rajiv Gandhi University of Health Sciences, Karnataka

Multiple Choice Questions

10 x 1 = 10 Marks

- 21 i) Which of the cells are not associated with immune mechanisms?
- Basophils
 - Dendritic cells
 - Mast cells
 - Epithelial cells
- 21 ii) Tinea versicolor is caused by
- Candida albicans*
 - Trichophyton rubrum*
 - Trichophyton violaceum*
 - Malassezia furfur*
- 21 iii) False statement about dermatophytes
- Fungi that affect the keratinized layer of the skin
 - Fungi affecting hair and nail
 - They may be geophilic
 - They do not grow at room temperature
- 21 iv) Weil Felix reaction is based on
- Auto specificity
 - Iso specificity
 - Species specificity
 - Heterogenic specificity
- 21 v) All of these are antigen presenting cells **EXCEPT**
- T cells
 - B cells
 - Dendritic cells
 - Macrophage
- 22 i) During which of the following phases bacteria are most susceptible to antibiotics?
- Lag Phase
 - Log phase
 - Stationary phase
 - Phase of decline
- 22 ii) Who is the father of antiseptic surgery
- Robert Koch
 - Paul Ehrlich
 - Joseph Lister
 - Alexander Fleming
- 22 iii) During first week of enteric fever, salmonellae can be isolated from all **EXCEPT**
- Bone marrow
 - Blood
 - Duodenal aspirate
 - Urine sample
- 22 iv) Babesiosis is transmitted by bite of
- Anopheles mosquito
 - Sandfly
 - Mite
 - Tick
- 22 v) Causative agent of Calabar swelling is
- Dracunculus medinensis*
 - Wuchereria bancrofti*
 - Brugia malayi*
 - Loa loa*
