

PG Examinations June/July 2023

Time : 180 Minutes

Max. Marks : 100 Marks

Microbiology Paper I - 2022

QP CODE: P3051

Your answer should be specific to the question asked

Draw neat labelled diagrams wherever necessary

1. Describe the methods of Gaseous sterilization .
2. Describe the strategies developed by microorganisms to evade host immune response.
Give an example in each
3. Describe plasmids and its role in drug resistance
4. Describe the principle, and applications of Chemiluminescence Immunoassay. Add a note on quality control procedures
5. Define Biofilms. Describe the mechanism of formation of Biofilms, detection methods and clinical implications
6. Discuss the classification of transplants and the allograft reaction
7. Describe the methods of Antibiotic sensitivity testing
8. Enumerate the agglutination reaction with their principles and uses .
9. Describe Type 1 Hypersensitivity reaction and the methods of detection
10. What is Spaulding's classification? Describe the chemicals used in sterilization



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Microbiology Paper II

QP CODE: P3052

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1. Describe the epidemiology, laboratory diagnosis and control of anthrax in man
2. Describe the genetic modifications, methods of detection of Penicillin resistant Pneumococci. Add a note on pneumococcal vaccines
3. Classify Urinary tract infection. Describe the pathogenesis, clinical features and laboratory diagnosis of Urinary tract infection.
4. Enumerate the agents causing Nongonoccal urethritis. Describe the relevance of these agents and their pathogenesis.
5. Describe the mechanism of drug resistance and detection methods in Enterococcus Faecium. Add a note on treatment of Vancomycin resistant Enterococci
6. Describe the pathogenesis, clinical manifestations and laboratory diagnosis of Rat bite fever.
7. Describe the pathogenesis and laboratory diagnosis of Rickettsial infections.
8. Describe the pathogenesis and laboratory diagnosis of Clostridium difficile.
9. Enumerate the virulence factors of Staphylococcus aureus. Describe its role in pathogenesis of Staphylococcal infections
10. Describe the pathogenesis and laboratory diagnosis of the agents causing necrotizing fascitis



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Microbiology Paper III

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1. Eumycotic mycetoma: Agents, pathogenesis and laboratory diagnosis
2. Pneumocystis jirovecii: pathogenesis and laboratory diagnosis
3. Diphyllbothrium latum: life cycle, pathogenesis and laboratory diagnosis
4. Describe the opportunistic infections in AIDS patients
5. Burkitt's lymphoma : Pathogenesis and laboratory diagnosis
6. Cystoisospora belli : Pathogenesis and laboratory diagnosis
7. Trichinella spiralis : life cycle, pathogenesis and laboratory diagnosis
8. Oncogenic viruses: agents, pathogenesis and laboratory diagnosis
9. Vector borne viral infections in India
10. Eosinophilic meningitis: causative agent, life cycle, pathogenesis and laboratory diagnosis



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Microbiology Paper IV

QP CODE: P3054

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1. ESBL: Mechanism of resistance, detection methods, treatment and clinical significance
2. Vancomycin resistance enterococcus; Mechanism of resistance, detection methods, clinical significance and treatment
3. Discuss about the accreditation of clinical microbiology laboratory
4. Genomic sequencing: Principle and its clinical applications
5. Genetic engineering: Principle and applications
6. Food poisoning: Agents, pathogenesis and clinical significance
7. Management of needle stick injury
8. Role and responsibilities of Hospital infection control committee
9. Myiasis: types, causative agents and treatment
10. Discuss the Biosafety levels used in microbiology laboratory

