QP Code: **Reg.No.:……**

MD Degree Examinations in Microbiology

(Model Question Paper)

Paper I – General Microbiology & Immunology

Time: 3 hrs **Max marks:100**

- ***Answer all questions***
- ***Draw diagrams wherever necessary***

Essay: **(20)**

1. Discuss genetic basis of drug resistance in bacteria

Short essays: **(8X10=80)**

2. Enlist important primary immunodeficiency diseases. Describe DiGeorge's syndrome.
3. What are histocompatibility antigens. Discuss HLA typing.
4. What is microarray. Describe its principle and applications in microbiology.
5. Explain hybridoma technology and give its applications in microbiology.
6. What is redox potential. Describe giving suitable examples.
7. Enumerate various tests used for determining the efficacy of disinfectants. Discuss briefly the phenol-coefficient test.
8. Differentiate between classical and alternate pathways of complement activation. Discuss the role of complement in various serological tests
9. Categorize pathogens according to hazard and categories of containment. Discuss various types of microbiological biosafety cabinets.

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QP Code: **Reg.No.:……**

MD Degree Examinations in Microbiology

(Model Question Paper)

Paper II – Bacteriology and Mycology

Time: 3 hrs **Max marks:100**

- ***Answer all questions***
- ***Draw diagrams wherever necessary***

Essay: **(20)**

1. Discuss the laboratory diagnosis of antibiotic associated diarrhea.

Short essays: **(8X10=80)**

2. Discuss etiology, pathogenesis and laboratory diagnosis of Weil's disease.
3. What are PBP's. Discuss their role in drug resistance.
4. Discuss briefly GISA.
5. Explain the mechanism of action and methods of detection of enterotoxin
6. Discuss etiology, pathogenesis and laboratory diagnosis of Cat Scratch Disease.
7. Enumerate various dematiaceous fungi and discuss their pathogenicity.
8. What are mycotoxins . Discuss mycotoxicosis.
9. Classify antifungal agents. Discuss the methodsof anti-fungal susceptibility testing.

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QP Code: **Reg.No.:……**

MD Degree Examinations in Microbiology

(Model Question Paper)

Paper III – Virology & Parasitology.

Time: 3 hrs **Max marks:100**

- ***Answer all questions***
- ***Draw diagrams wherever necessary***

Essay: **(20)**

1. Name various pathogenic free living amoebae. Discuss the life cycle, pathogenicity, clinical features and laboratory diagnosis of any one of them.

Short essays: **(8X10=80)**

2. Discuss rapid diagnostic tests in parasitology along with their clinical applications.
3. Enlist and discuss laboratory diagnosis of opportunistic parasitic infections in immunocompromised patients.
4. Discuss the etiology, pathogenesis and diagnosis of Tropical Pulmonary Eosinophilia.
5. Classify oncogenic viruses and explain the various mechanisms of viral oncogenesis.
6. What are Interferons. Explain their mechanism and clinical applications.
7. Discuss etiology, pathogenesis and laboratory diagnosis of viral hemorrhagic fever.
8. Define Prions. Classify Prion diseases and discuss their pathogenesis and diagnosis.
9. Enumerate various congenital viral infections an d discuss their laboratory diagnosis.

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QP Code: **Reg.No.:……**

MD Degree Examinations in Microbiology

(Model Question Paper)

Paper IV – Applied Microbiology and Recent Advances in Microbiology

Time: 3 hrs **Max marks:100**

- ***Answer all questions***
- ***Draw diagrams wherever necessary***

Essay: **(20)**

1. What are edible vaccines. Discuss the current status and future of edible vaccines..

Short essays: **(8X10=80)**

2. What is flow cytometry. Give its principle and uses in clinical microbiology.
3. Define transgenic mice and discuss its role in study of microbial pathogenicity.
4. What is the role of microbiologist in Hospital Infection Control Committee.
5. What is quality control . Describe various methods adopted for internal quality control in microbiology.
6. Discuss the emerging and reemerging bacterial infections.
7. What are biofilms. Describe their significance in clinical microbiology.
8. Discuss PEP in case of needle stick injury.
9. Define and categorize biomedical waste. Discuss its management.

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