

POST GRADUATE EXAMINATION, APRIL - 2019

**MD MICROBIOLOGY
(PAPER ONE)**

GENERAL BACTERIOLOGY & IMMUNOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Define sterilization and disinfections. Describe chemical methods of disinfection and sterilization. **(20)**

Q. 2. Discuss cytokines and their clinical application. **(20)**

Q. 3. Describe briefly: **(3 x 10 = 30)**

- a. Genetic mechanisms of antimicrobial resistance in bacteria
- b. ELISA: Principle, types and applications
- c. Anaerobic culture methods

Q. 4. Write short notes on: **(5 x 6 = 30)**

- a. Biological effects of complement
- b. Prausnitz-Kustner reaction
- c. Autoimmunity
- d. Bacterial cell wall
- e. Contributions of Robert Koch in field of microbiology

X

POST GRADUATE EXAMINATION, APRIL - 2019

MD MICROBIOLOGY
(PAPER TWO)

SYSTEMIC BACTERIOLOGY & MYCOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

- Q. 1. List the micro-organisms responsible for clostridial myositis. Discuss its pathogenesis and laboratory diagnosis. (20)
- Q. 2. How do *leptospira* differ from *treponema*? Discuss the species of *leptospira* causing human infection, their pathogenesis and laboratory diagnosis. (20)
- Q. 3. Describe briefly: (3 x 10 = 30)
- Para-fungal agents
 - Kauffman White scheme of classification of salmonellae
 - Merits and demerits of VDRL test
- Q. 4. Write short notes on: (5 x 6 = 30)
- Cell wall deficient bacteria
 - Vibrio vulnificus*
 - Cutaneous diphtheria
 - ESBL
 - Mycotic keratitis

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MD MICROBIOLOGY
(PAPER THREE)

VIROLOGY AND PARASITOLOGY

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. What are the viruses that cause encephalitis in India? Describe the epidemiology, clinical features, and laboratory diagnosis of any one of these. (5+15 = 20)

Q. 2. Briefly describe the complete clinical spectrum of *Toxoplasma gondii* infection. Discuss its laboratory diagnosis. (10+10 = 20)

Q. 3. Describe briefly: (3 x 10 = 30)

- Treatment of chronic hepatitis C virus infection
- Laboratory diagnosis of HIV
- Laboratory diagnosis of lymphatic filariasis

Q. 4. Write short notes on: (5 x 6 = 30)

- Trichinella spiralis*
- Cancers caused by Epstein-Barr virus
- Polio vaccines
- Concentration methods for demonstrating *Strongyloides stercoralis* in stool samples
- Rotavirus

X

POST GRADUATE EXAMINATION, APRIL - 2019

MD MICROBIOLOGY

(PAPER FOUR)

RECENT ADVANCES

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions
Illustrate with suitable diagrams.

Q. 1. Discuss the recombinant genetic engineering techniques and their applications. (20)

Q. 2. Define nosocomial infections. Write in detail about Hospital infection control. (20)

Q. 3. Describe briefly: (3 x 10 = 30)

- a. DNA microarrays and its application
- b. Recent immunological methods available for detection of antibodies
- c. Role of MALDI – TOF in diagnostic microbiology

Q. 4. Write short notes on: (5 x 6 = 30)

- a. Line probe assay
- b. Uses of mice in microbiological experiments
- c. Personal protective equipments (PPE)
- d. Bioterrorism
- e. Typing methods in bacteria

X