

**POST GRADUATE EXAMINATION, MAY- 2020**

**MD MICROBIOLOGY**

**(PAPER ONE)**

**GENERAL BACTERIOLOGY & IMMUNOLOGY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

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**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Define immunity. Discuss different kind of defense system in human body. Discuss specific immune response and immune tolerance. **(20)**

**Q. 2.** Discuss the epidemiological markers used for tracing the source of an outbreak. How will you proceed to identify the cause of an outbreak of septicemia in a neonatal ward? **(20)**

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

- a. Monoclonal antibodies
- b. Blood culture media
- c. Immediate type of hypersensitivity reaction

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

- a. Sterilization by filtration
- b. DNA probing
- c. Limulus amoebocyte lysate (LAL) assay
- d. Bacterial capsule
- e. Biofilms

**POST GRADUATE EXAMINATION, MAY- 2020**

**MD MICROBIOLOGY**

**(PAPER TWO)**

**SYSTEMIC BACTERIOLOGY & MYCOLOGY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

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**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Describe newer methods for diagnosis of MDR tuberculosis. **(20)**

**Q. 2.** Describe epidemiology, pathogenesis and laboratory diagnosis of pneumocystis jiroveci pneumonia. **(20)**

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

- a. Mycotic keratitis
- b. Pheohyphomycosis
- c. Newer antifungal agents in pipeline

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

- a. Vancomycin resistant enterococci
- b. Laboratory diagnosis of scrub typhus
- c. Antibiotic associated diarrhoea
- d. Pneumococcal vaccines
- e. Leptospirosis in India

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**POST GRADUATE EXAMINATION, MAY- 2020**  
**MD MICROBIOLOGY**  
**(PAPER THREE)**

**VIROLOGY AND PARASITOLOGY**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

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**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Discuss the role of microbiology laboratory in investigating an outbreak of viral pneumonia. (20)

**Q. 2.** Discuss the viral etiology and mechanism of cancer. (20)

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

- a. Occult filariasis
- b. Chagas disease
- c. Lung flukes

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

- a. Viral zoonosis
- b. Current status of HIV vaccine
- c. Human babesiosis
- d. Guinea worm disease
- e. Free living amoebae

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**POST GRADUATE EXAMINATION, MAY- 2020**

**MD MICROBIOLOGY**

**(PAPER FOUR)**

**RECENT ADVANCES**

**[Time allotted: Three hours]**

**[Max Marks: 100]**

**Note:** Attempt all questions  
Illustrate with suitable diagrams.

**Q. 1.** Discuss in detail quality assurance in the microbiology laboratory. **(20)**

**Q. 2.** Discuss the role of microbiologists in formulating antibiotic policies. **(20)**

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

- a. Pathogenic 'rapid-grower' mycobacteria
- b. Rotavirus vaccines
- c. Prions

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

- a. MALDI TOF MS
- b. Molecular diagnosis of invasive fungal infections
- c. The role of gut microbiota in human health and disease
- d. Toll-like receptors
- e. Bacteriophages as therapeutic agents

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