

M.D. Examination

Microbiology : Branch XVI

Paper-I

(Applied Basic Sciences)

Date : 02-04-2019, Tuesday]

[Max. Marks : 100

Time : 3 Hours]

- Instructions : (1) Figure to the right indicates marks.
 (2) Write legibly and to the point.
 (3) Draw diagrams wherever necessary.

- Q1 Define Minimal inhibitory Concentration (MIC). What are MIC 50 and MIC 90? 20
 Describe different methods of MIC determination along with their advantages and disadvantages.
- Q.2 Define autoimmunity. Discuss mechanism of autoimmunity. Describe 20
 different autoimmune diseases and their laboratory diagnosis. Write in brief about immunological tolerance
- Q 3. Write short notes on
- a) Efficacy testing of disinfectants 10
 b) Quantity assurance in antimicrobial susceptibility testing. 10
- Q 4. Write short notes on
- a) Hospital infection control programme 10
 a) B cell synthesis, maturation and uses. 10
- Q 5. Write short notes on
- a) Methods of detection of biofilms 10
 b) Major histocompatibility complex 10
-

M.D. Examination

Microbiology : Branch XVI

Paper II

(Systemic Microbiology)

Date : 04-04-2019, Thursday]

Time : 3 Hours]

[Max. Marks : 100

- Instructions :** (1) Figure to the right indicates marks.
 (2) Write legibly and to the point.
 (3) Draw diagrams wherever necessary.

- Q1. List the bacterial causes of sexually transmitted diseases. Describe in detail the laboratory diagnosis of syphilis. Mention the merits and demerits of the various tests available for diagnosis of syphilis. 20
- Q2. Enumerate and classify anaerobes. Describe the various infections produced by spore forming anaerobes . Describe the pathogenicity and laboratory diagnosis of *Clostridium perfringens* 20
- Q 3. Write short notes on
- a) Vancomycin resistant enterococci 10
- b) Cultural and biochemical characters of *Acinetobacter baumannii*. 10
- Q 4. Write short notes on
- a) Mycobacteria other than tuberculosis (MOTT) 10
- b) Describe in brief about epidemiology, clinical features and diagnosis of *Cholera* 10
- Q 5. Write short notes on
- a) Identification of noncultivable bacteria 10
- b) Differential coliform test 10
-

M.D. Examination

Microbiology : Branch XVI

Paper III

(Virology, Mycology & Parasitology)

[Max. Marks : 100]

Date : 08-04-2019, Monday]

Time : 3 Hours]

- Instructions :** (1) Figure to the right indicates marks.
 (2) Write legibly and to the point.
 (3) Draw diagrams wherever necessary.

Q1. Enumerate haemoparasites. Discuss the epidemiology, pathogenesis, clinical features & laboratory diagnosis of *Plasmodium falciparum* infection. 20

Q2 Define mechanism of viral oncogenesis. List the human oncogenic viruses Describe various virus originated carcinoma in humans. 20

Q 3. Write short notes on

- a) Antifungal susceptibility testing for *Candida* species 10
 b) NACO strategy for HIV diagnosis 10

Q 4. Write short notes on

- a) Human herpes viruses infections 10
 b) *Histoplasma capsulatum* 10

Q 5. Write short notes on

- a) Mycetoma 10
 b) Dermatophytes 10
-

M.D. Examination

Microbiology : Branch XVI

Paper IV

(Modern Trends & Recent Advances)

[Max. Marks : 100]

Date : 10-04-2019, Wednesday]

Time : 3 Hours]

- Instructions :** (1) Figure to the right indicates marks.
 (2) Write legibly and to the point.
 (3) Draw diagrams wherever necessary.

Q1 Outline briefly the history of vaccination. Discuss the concept of immunization. 20

Describe different categories of vaccines with special reference to recently developed vaccine and future vaccines. Write about Measles Rubella Vaccination Campaign 2017.

Q2 Enumerate Emerging and Reemerging Neglected Tropical Diseases. 20

Write key characteristics, and risk Factors, of these diseases. Write about

One Health Initiative to Emerging and Reemerging Neglected Tropical Diseases

Q 3. Write short notes on

- a) DNA microarrays and its application 10
- b) Principle, construction and application of fluorescent microscope 10

Q 4. Write short notes on

- a) Gnotobiotic animals in research their use and limitation. 10
- b) Line probe assay 10

Q 5. Write short notes on

- a) Faecal microbiota transplantation: applications and limitations 10
- b) Immune reconstitution inflammatory syndrome (IRIS) 10
-