APRIL 2001

[KD 231]

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

Final — Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

All questions carry equal marks.

1. Give an account of the various growth requirements of bacteria and describe the bacterial growth curve. (25)

2. Define antigen antibody reaction and describe the various types of precipitation reactions. (25)

3. Enumerate the physical methods of sterilisation and explain in detail about dry heat sterilisation. (25)

4. Write briefly on : (5 × 5 = 25)

   (a) Bacterial spore

   (b) Mutation

   (c) Passive immunity

   (d) Anaerobic culture methods

   (e) Negative staining.

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SEPTEMBER 2002

[KH 231]

M.Sc. (Non–Clinical) DEGREE EXAMINATION.

Final — Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

All questions carry equal marks.

1. Discuss the structure and functions of bacterial cell wall. (25)

2. Define sterilisation and give an account of sterilisation by moist heat. (25)

3. Describe the various types of agglutination reactions used in the diagnosis of various diseases. (25)

4. Write briefly on : (5 × 5 = 25)
   (a) Louis Pasteur
   (b) Oxygen requirement of bacteria
   (c) Plasmids
   (d) Selective media
   (e) T.A.B. Vaccine.

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APRIL 2003

[KI 231] **Sub. Code : 2976**

M.Sc. (Non–clinical) DEGREE EXAMINATION.

Final

Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Describe the various parts of the bacteria that play a role in their virulence. (25)

2. Enumerate the various antigen–antibody reactions. Write a note on the different types of ELISA. (25)

3. Write briefly on : (5 × 5 = 25)

   (a) Sporicidal disinfectants.

   (b) Coliform count.

   (c) Transduction.

   (d) Monoclonal antibodies.

   (e) Electron microscopy.

4. Describe the various strategies of newer vaccines. (25)

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APRIL 2004

[KK 231] **Sub. Code : 2976**

M.Sc. (Non–Clinical) DEGREE EXAMINATION.

Final

Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Sec. A & B : Two hours and forty minutes Sec. A & B : 80 marks

Sec. C : Twenty minutes Sec. C : 20 marks

Answer Sec. A and Sec. B in the **SAME** Answer Book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

1. Classify culture media. Describe anaerobic culture methods. (15)

2. List the Antigen–Antibody reactions. Write in detail on precipitation reactions. (15)

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on the following :

(a) Negative staining

(b) Hot Air Oven

(c) Fimbriate

(d) Bacterial Growth Curve

(e) Oxidase Reaction

(f) Immunoglobulin G

(g) Delayed Hypersensitivity

(h) Electron Microscope

(i) Monoclonal Antibodies

(j) Adjuvants.

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MARCH 2005

[KM 231] Sub. Code : 2976

M.Sc. (Non–Clinical) DEGREE EXAMINATION.

Final

Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Sec. A & B : Two hours and forty minutes Sec. A & B : 80 marks

Section C : Twenty minutes Section C : 20 marks

Answer Sections A and B in the **SAME** Answer Book.

Answer Section C in the answer sheet provided.

Answer ALL questions.

SECTION A — (2 × 15 = 30 marks)

1. Define Hypersensitivity. Classify hypersensitivity and write in detail on Type I hypersensitivity. (15)

2. Describe the structures of an idealized bacterial cell. (15)

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on :

(a) Gaseous disinfectants

(b) Enriched media

(c) Dark field microscope

(d) Bacterial spores

(e) Methyl red test

(f) Uses of HLA typing

(g) Active immunity

(h) Complement fixation test

(i) Autoclave

(j) Endotoxins.

MARCH 2006

[KO 231] **Sub. Code : 2976**

M.Sc. (Non-clinical) DEGREE EXAMINATION.

Final

Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Sec. A & B : Two hours and forty minutes Sec. A & B : 80 marks

Sec. C : Twenty minutes Sec. C : 20 marks

Answer Sections A and B in the **SAME** Answer Book.

Answer Section C in the answer sheet provided.

Answer ALL questions.

SECTION A — (2 × 15 = 30 marks)

1. Define sterilisation. List the methods of sterilisation. Write in detail about the autoclave. (15)

2. Name various antigen – antibody reactions. Describe in detail the principle and application of precipitation reaction. (15)

SECTION B — (10 × 5 = 50 marks)

3. Write short notes on :

(a) Immunoglobulin G

(b) Counter immuno electrophoresis

(c) Robert Koch

(d) Antibiotic sensitivity testing

(e) Pili

(f) Anaerobic media

(g) Oxidase test

(h) Alternative pathway of complement

(i) Elisa

(j) Heterophile antigens.

[KR 231] **Sub. Code : 2976**

M.Sc. (Non-Clinical) DEGREE EXAMINATION.

Final

Branch V — Microbiology

Paper I — GENERAL BACTERIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. Essay :

(1) Enumerate the various antigen-antibody reactions. Write a note on the different types of ELISA. (20)

(2) Discuss the structure and functions of porins of gram negative bacilli. (15)

(3) Describe antigenic presenting cells and explain MHC restriction. (15)

II. Briefly describe the following : (6 × 5 = 30)

(a) Plasmids

(b) DNA probes

(c) Polymerase chain reaction

(d) Natural killer cells

(e) Anerobic culture techniques

(f) Genetic recombination in bacteria.

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[KU 231] MARCH - 2009 Sub. Code: 2976

M.Sc (Non Clinical) DEGREE EXAMINATION

FINAL

Branch V –MICROBIOLOGY
Paper I – GENERAL BACTERIOLOGY AND IMMUNOLOGY

Q.P. Code : 282976

Time : Three hours **Maximum : 100 marks**

Answer All questions.

I. Essays: **(2 X 20=40)**

1. Discuss in detail the structure of bacterial cell wall of both gram positive and gram negative bacteria. Write a note on their applied aspects.

2. Discuss in detail the different mechanisms employed in transmission of genetic material in bacteria. Write a note on genetic mechanisms of drug resistance.

II. Write Short Notes on : **(10X 6 = 60)**

1. Tyndallization.
2. Bacterial flagella.
3. IMViC tests.
4. Immunoglobulin M.
5. Endotoxins.
6. Anaerobic culture methods.
7. Radio immunoassay.
8. Cytokines.
9. Graft versus host reaction.
10. Coomb's test.

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