

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

SECTION B — (10 × 5 = 50 marks)

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 Sec. A & B : 80 marks
forty minutes**

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)

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.

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 Sec. A & B : 80 marks
forty minutes**

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.
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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 Sec. A & B : 80 marks
forty minutes

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.
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September-2007

[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.

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.

[KZ 1011]

Sub. Code: 2976

M.Sc NON-MEDICAL DEGREE EXAMINATION
FINAL YEAR
BRANCH V - MICROBIOLOGY
PAPER I – GENERAL BACTERIOLOGY AND IMMUNOLOGY
Q.P. Code : 282976

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Define sterilization and Disinfection. Classify various methods of sterilization and disinfectants. Describe in detail about Autoclave.	17	40	20
2. Define Antigen - Antibody Reactions. Classify various Antigen - antibody reactions. Describe in detail about Enzyme Linked Immunosorbent Assay Test.	17	40	20

II. Write notes on :

1. Fluorescent Microscope.	4	10	6
2. Natural Killer cell.	4	10	6
3. Blood Agar Plate.	4	10	6
4. Mediators of Anaphylaxis.	4	10	6
5. Citrate Utilization Test.	4	10	6
6. Immunoglobulin M.	4	10	6
7. Gaspak system.	4	10	6
8. Weil - Felix Test with preparation of Antigen.	4	10	6
9. Collection and Transport of Urine.	4	10	6
10. Theories of Immuneresponse - detail about clonalselection theory.	4	10	6

[LB 1012]

OCTOBER 2012

Sub. Code: 2976

M.Sc NON-MEDICAL DEGREE EXAMINATION

FINAL YEAR

BRANCH V - MICROBIOLOGY

PAPER I – GENERAL BACTERIOLOGY AND IMMUNOLOGY

Q.P. Code : 282976

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

Pages Time Marks
(Max.)(Max.)(Max.)

- | | | | |
|---|----|----|----|
| 1. Define and classify hypersensitivity. Discuss the mechanism of anaphylaxis | 17 | 40 | 20 |
| 2. Describe about bacterial growth and bacterial metabolism. | 17 | 40 | 20 |

II. Write Notes on :

- | | | | |
|--|---|----|---|
| 1. Koch's postulates. | 4 | 10 | 6 |
| 2. Joseph Lister. | 4 | 10 | 6 |
| 3. Bacterial cell wall. | 4 | 10 | 6 |
| 4. Electron microscope. | 4 | 10 | 6 |
| 5. Describe anaerobic culture methods. | 4 | 10 | 6 |
| 6. Disinfectants. | 4 | 10 | 6 |
| 7. Human leucocyte Antigen. | 4 | 10 | 6 |
| 8. Auto Immunity. | 4 | 10 | 6 |
| 9. T lymphocytes. | 4 | 10 | 6 |
| 10. Describe the various methods of testing drug susceptibility in the Laboratory. | 4 | 10 | 6 |

[LD 1013]

OCTOBER 2013
M.Sc NON-MEDICAL DEGREE EXAMINATION
FINAL YEAR
BRANCH V - MICROBIOLOGY
PAPER I – GENERAL BACTERIOLOGY AND IMMUNOLOGY

Sub. Code: 2976

Q.P. Code : 282976

Time : 3 hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on :

(2X20=40)

1. Define Antigen, what are the types of Antigen, Describe the factors determining antigenicity.
2. Define sterilisation. Write different methods of sterilisation. Explain in detail about moist heat sterilisation.

II. Write Notes on :

(10X6=60)

1. Agglutination Reactions.
2. Robert koch.
3. Electron microscope.
4. Bacterial capsule.
5. Bacterial Nutrition.
6. Differential media.
7. Anaerobic culture methods.
8. Difference between active and passive Immunity.
9. Define Antibody and Draw structure of Immunoglobulin.
10. Immunological tolernaace.
