

MARCH 2002

[KG 1507]

Sub. Code : 3009

**DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.**

(New Regulations)

Paper II — BIOCHEMISTRY AND MICROBIOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

SECTION A — (50 marks)

(BIOCHEMISTRY)

1. Write in detail about renal function tests. (20)
2. Write short notes on : (3 × 10 = 30)
 - (a) Immunoglobulins.
 - (b) Cholesterol in health and disease.
 - (c) Glycogen storage diseases.

SECTION B — (50 marks)

(MICROBIOLOGY)

3. Classify spirochetes. Discuss the laboratory diagnosis of syphilis. (20)

4. Write briefly on :

(3 × 10 = 30)

- (a) Larva migrans.
- (b) Cryptosporidiosis.
- (c) Candida albicans.

SEPTEMBER 2002

[KH 1507]

Sub. Code : 3009

**DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.**

(New Regulations)

Paper II — BIOCHEMISTRY AND MICROBIOLOGY

Time : Three hours

Maximum : 100 marks

**Section A and B should be answered in a separate
answer book.**

Answer ALL questions.

SECTION A

(BIOCHEMISTRY)

1. Define Atherosclerosis. Explain briefly the risk factors and the pathogenesis of coronary atherosclerosis. (20)

2. Write short notes on : (3 × 10 = 30)

- (a) Glycogen storage disease
- (b) Wilson's disease
- (c) ELISA technique.

SECTION B

(MICROBIOLOGY)

3. Enumerate organisms causing lungs infection. Describe Pathogenesis and laboratory diagnosis of Mycobacterium tuberculosis. (5 + 3 + 12 = 20)

4. Write briefly on :

(3 × 10 = 30)

- (a) Giardia intestinalis
- (b) Opportunistic mycosis
- (c) Hydatid cyst.

APRIL 2003

[KI 1507]

Sub. Code : 3009

DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.

(New Regulations)

Paper II — BIOCHEMISTRY AND MICROBIOLOGY

Time : Three hours

Maximum : 100 marks

Section A and B should be answered in a separate
answer book.

Answer ALL questions.

SECTION A — (50 marks)

(MICROBIOLOGY)

1. Enumerate the organisms causing Meningitis.
Give a detailed account of laboratory diagnosis of
Bacterial Meningitis. (20)
2. Write briefly on : (3 × 10 = 30)
 - (a) Enumerate Protozoan parasites that cause
Diarrhoea. Add a note on their lab diagnosis.
 - (b) Cysticercosis
 - (c) Opportunistic Fungi.

SECTION B — (50 marks)

(BIOCHEMISTRY)

3. Discuss on any FIVE Inborn errors of Amino acid
metabolism. (20)
4. Short notes on : (3 × 10 = 30)
 - (a) Glucose tolerance test
 - (b) Gout
 - (c) Hypothyroidism.

AUGUST 2004

[KL 1507]

Sub. Code : 3009

**DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.**

(New Regulations)

Paper II — BIOCHEMISTRY AND MICROBIOLOGY

Time : Three hours Maximum : 100 marks

**Theory : Two hours and Theory : 80 marks
forty minutes**

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

**Section A and B should be answered in a SEPARATE
Answer Book.**

Answer ALL questions.

SECTION A

(MICROBIOLOGY)

I. Essay : (1 × 15 = 15)

**Enumerate the arboviral diseases prevalent in
India. Discuss the epidemiology, clinical features and
laboratory diagnosis of Japanese B encephalitis.**

II. Write short notes on : (5 × 5 = 25)

- (a) IgG.
- (b) TRIC agents.
- (c) Madura mycoses.
- (d) Elek's test.
- (e) Parasites found in peripheral blood.

SECTION B

(BIOCHEMISTRY)

III. Essay : (1 × 15 = 15)

**Write in detail on the classification of familial
Hyperlipidemias. Add a note on Lab diagnosis of
congenital adrenal hyperplasia.**

IV. Write short notes on : (5 × 5 = 25)

- (a) ELISA.
 - (b) Quality Control.
 - (c) Tumour Markers.
 - (d) Lab Diagnosis of metabolic acidosis.
 - (e) Homocystinuria.
-

FEBRUARY 2005

[KM 1507]

Sub. Code : 3009

**DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.**

(New Regulations)

Paper II — **BIOCHEMISTRY AND MICROBIOLOGY**

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

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

Section A and B should be answered in a **SEPARATE**
Answer Book.

Answer ALL questions.

SECTION A

(BIOCHEMISTRY)

I. Essay : (1 × 15 = 15)

Describe the biological role of water soluble
vitamin and their deficiency disorders.

II. Short notes : (5 × 5 = 25)

- (a) Multiple myeloma
- (b) Haemolytic anaemias

- (c) Polymerase chain reaction
- (d) Congenital hyper bilirubinaemia
- (e) Homocyst inuria.

SECTION B

(MICROBIOLOGY)

III. Essay : (1 × 15 = 15)

Enumerate the blood borne pathogens and discuss
about the universal precautions.

IV. Short notes : (5 × 5 = 25)

- (a) Significant bacteriuria
- (b) Polio vaccines
- (c) Cryptococcus Neoformans
- (d) Phase contrast microscope
- (e) Cell mediated immunity.

MARCH 2006

[KO 1507]

Sub. Code : 3009

DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.

(New Regulations)

Paper II — BIOCHEMISTRY AND MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

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

Section A and B should be answered in a **SEPARATE**
Answer Book.

Answer ALL questions.

SECTION A

BIOCHEMISTRY

I. Essay : (1 × 15 = 15)

(1) What is the normal fasting blood glucose level? Describe how the blood glucose level is maintained by hormonal action regulating the source and utilization of glucose.

II. Write briefly on : (5 × 5 = 25)

(a) Microalbuminuria

(b) PUFA

(c) Phenylketonuria.

(d) Glycated Hemoglobin.

(e) Action of hormone on calcium and phosphorus metabolism.

SECTION B

MICROBIOLOGY

III. Essay : (1 × 15 = 15)

(1) Enumerate the bacteria causing food poisoning and write the lab diagnosis of any one of them.

IV. Short notes on : (5 × 5 = 25)

(a) Japanese encephalitis.

(b) *Cysticercus cellulosae*.

(c) Autoclave.

(d) Type III hypersensitivity.

(e) Cryptococcosis.

[KQ 1507] MARCH 2007 Sub. Code : 3009

DIPLOMA IN CLINICAL PATHOLOGY
EXAMINATION.

(New Regulations)

Paper II – BIOCHEMISTRY AND MICROBIOLOGY

Common to

(Candidates admitted from 1993-94 onwards)

and

(Candidates admitted from 2004-05 onwards)

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

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

Section A and B should be answered in a SEPARATE
Answer Book.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

SECTION A
BIOCHEMISTRY

I. Essay.

1. How urea is synthesised? What are metabolic disorders of urea cycle? Mention normal blood urea concentration. (8 + 6 + 1 = 15)

2. Name Ketone bodies. Enumerate the steps in the synthesis of Ketone bodies. Name two conditions where there is increased production of Ketone bodies. (10)

II. Short notes. (3 × 5 = 15)

(a) Glucose tolerance test.

(b) Biochemical evaluation of a case of suspected Myocardial infarction.

(c) What are Trace elements? How is Iron absorbed and transported in the body?

SECTION B

MICROBIOLOGY

III. Essay :

1. Enumerate the zoonotic diseases and write the pathogenesis and laboratory diagnosis of Human Brucellosis (*Brucella Melitensis*). (15)

2. Discuss the pathogenesis and laboratory diagnosis of Vibrio Cholera. (10)

IV. Short notes : (3 × 5 = 15)

(a) Live viral vaccines.

(b) Castaneda's method of blood culture.

(c) Polymerase chain reaction.

MARCH 2008

[KS 1507]

Sub. Code : 3009

DIPLOMA IN CLINICAL PATHOLOGY EXAMINATION.

Paper II — BIOCHEMISTRY AND MICROBIOLOGY

(Common to all Regulations)

Q.P. Code: 343009

Time : Three hours

Maximum : 100 marks

Answer Section A and Section B in Separate Answer Books

Answer ALL questions.

SECTION A

BIOCHEMISTRY

- I. Essay : (1 × 20 = 20)
1. Enumerate the various liver function tests. Describe in detail the tests used for the diagnosis and classification of jaundice.
- II. Short notes : (5 × 6 = 30)
1. Renal Glycosuria.
 2. Clinical significance of Isoenzymes.
 3. Phenylketonuria.
 4. Albuminuria and Kidney function.
 5. Affinity chromatography.

SECTION B

MICROBIOLOGY

- III. Essay : (1 × 20 = 20)
1. Enumerate bacteria causing pyogenic meningitis. Write in detail the pathogenesis and laboratory diagnosis of pyogenic meningitis and add a note on prophylaxis.
- IV. Short notes: (5 × 6 = 30)
1. Gas gangrene.
 2. Monoclonal antibodies.
 3. Nosocomial Infections.
 4. Hospital waste management.
 5. Prions.
-

September 2008

[KT 1507]

Sub. Code: 3009

DIPLOMA IN CLINICAL PATHOLOGY EXAMINATION.

Paper II – BIOCHEMISTRY AND MICROBIOLOGY
(Common to all candidates)

Q.P. Code : 343009

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

(Answer Section A & B Separately)

SECTION A
(BIOCHEMISTRY)

I. Essay question :

(1 X 20 = 20)

1. Describe the procedure of internal quality control in clinical biochemistry laboratory. Explain the method of plotting Levey Jennings chart and its significance. Add a note on resolution of outliers.

II. Write short notes on :

(5 X 6 = 30)

1. Galactosemia
2. Biomedical waste management.
3. Electrophoresis and its applications.
4. Renal function tests.
5. Physical properties of urine.

SECTION B
(MICROBIOLOGY)

III. Essay question :

(1 X 20 = 20)

1. Discuss the etiology, pathogenesis, laboratory diagnosis, epidemiology and prophylaxis of enteric fever.

IV. Write short notes on :

(5 X 6 = 30)

1. PCR and clinical applications.
 2. Classification of streptococci.
 3. Local immunity.
 4. Infective endocarditis – laboratory diagnosis.
 5. Antibiotic Associated colitis.
-

MARCH -2009

[KU 1507]

Sub. Code: 3009

DIPLOMA IN CLINICAL PATHOLOGY EXAMINATION.

Paper II – BIOCHEMISTRY AND MICROBIOLOGY

(Common to all candidates)

Q.P. Code : 343009

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

(Answer Section A & B Separately)

SECTION A

(BIOCHEMISTRY)

I. Essay question : (1 X 20 = 20)

1. Discuss in detail the pathogenesis and infections caused by Esch.coli.

II. Write short notes on : (5 X 6 = 30)

1. Aseptic meningitis.
2. Teratogenic infections.
3. ELISA test.
4. Antibiotic sensitivity testing methods.
5. Cell mediated immunity.

SECTION B

(MICROBIOLOGY)

III. Essay question : (1 X 20 = 20)

1. Describe in detail the biochemical characteristics of Uremic syndrome.

IV. Write short notes on : (5 X 6 = 30)

1. Sample rejection criteria.
2. Biochemical analysis of cerebrospinal fluid.
3. External quality assessment scheme.
4. Electrophoresis.
5. Reference values.

March 2010

[KW 1507]

Sub. Code: 3009

DIPLOMA IN CLINICAL PATHOLOGY EXAMINATION

Paper II – BIOCHEMISTRY AND MICROBIOLOGY

(Common to all candidates)

Q.P. Code : 343009

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary

Answer ALL questions

(Answer Section A & B Separately)

**SECTION A
(BIOCHEMISTRY)**

I. Essay question : (1 x 20 = 20)

1. Write in detail about liver function test. Discuss about the tests used for the diagnosis and classification of jaundice.

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

1. Electrophoresis.
2. Galactosemia
3. Renal glycosuria.
4. Phenylketonuria.
5. Affinity chromatography.

**SECTION B
(MICROBIOLOGY)**

III. Essay question : (1 x 20 = 20)

1. Name the viruses causing hepatitis. Discuss the pathogenesis and laboratory diagnosis of hepatitis B. Add a note on its prophylaxes.

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

1. Sterilisation using autoclave.
2. Laboratory diagnosis of staphylococcal infections.
3. Immunoglobulin M.
4. CD4 lymphocytes and its estimation.
5. Opportunistic fungal infections.

APRIL 2011

[KY 1507]

Sub. Code: 3009

DIPLOMA IN CLINICAL PATHOLOGY (DCP)

EXAMINATION

BIOCHEMISTRY AND MICROBIOLOGY

Q.P. Code : 343009

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

(Answer Section A & B Separately)

SECTION A

(BIOCHEMISTRY)

I. Elaborate on :

1. Describe in detail how ammonia is detoxified in liver. Add a note on hyperammonemias.

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

11	35	15
----	----	----

II. Write notes on :

1. Urinary Buffers.
2. Galactose metabolism.
3. Fatty liver.
4. Gout.
5. Electrophoresis.

4	10	7
4	10	7
4	10	7
4	10	7
4	10	7

SECTION B

(MICROBIOLOGY)

III. Elaborate on :

1. Enlist the sexually transmitted diseases. Write in detail the morphology, pathogenesis and lab diagnosis of HIV.

11	35	15
----	----	----

IV. Write notes on :

1. Taenia solium.
2. Dermatophytosis.
3. Lab diagnosis of leptospirosis.
4. Complement fixation test.
5. Biomedical waste management.

4	10	7
4	10	7
4	10	7
4	10	7
4	10	7

**DIPLOMA IN CLINICAL PATHOLOGY (DCP) EXAMINATION
BIOCHEMISTRY AND MICROBIOLOGY**

Q.P. Code : 343009

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

**Answer ALL questions in the same order.
(Answer Section A & B Separately)**

**SECTION A
(BIOCHEMISTRY)**

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Write in detail about tests to assess thyroid functions. How will you systematically investigate a patient suspected to be hyperthyroid.	16	35	15

II. Write notes on :

1. Hypercalcemia.	4	10	7
2. Hyperosmolar hyperglycemic non ketotic coma.	4	10	7
3. Urinary indices in acute renal failure.	4	10	7
4. Classification of hyperlipoproteinemia.	4	10	7
5. Enzymes in diagnosis of diseases.	4	10	7

**SECTION B
(MICROBIOLOGY)**

III. Elaborate on :

1. Write in detail etiology, pathogenesis, Laboratory diagnosis, prophylaxis and management of Gas Gangrene.	16	35	15
--	----	----	----

II. Write notes on:

1. TORCH infections.	4	10	7
2. Dengue Haemorrhagic fever.	4	10	7
3. Polymerase Chain Reaction and its applications.	4	10	7
4. Opportunistic fungi.	4	10	7
5. Biomedical Waste Management.	4	10	7

[LB 1507]

OCTOBER 2012

Sub. Code: 3009

DIPLOMA IN CLINICAL PATHOLOGY (D.C.P) EXAMINATION

BIOCHEMISTRY AND MICROBIOLOGY

Q.P. Code: 343009

Time: 3 hours
(180 Min)

Maximum: 100 marks

ANSWER ALL QUESTIONS IN THE SAME ORDER.

(Answer Section A and B Separately)

SECTION A

(BIOCHEMISTRY)

I. Elaborate on:

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Describe in detail about the synthesis of Cholesterol. Add a note on the products formed from Cholesterol.	16	35	15

II. Write Notes on:

1. HMP Shunt pathway	4	10	7
2. Alkaptonuria	4	10	7
3. Porphyrrias	4	10	7
4. Paper chromatography	4	10	7
5. Clinical important enzymes	4	10	7

SECTION B

(Microbiology)

III. Elaborate on:

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Enumerate the Salmonella species which are pathogenic to humans. Discuss the pathogenesis, Laboratory diagnosis and prevention of Typhoid fever.	16	35	15

IV. Write Notes on:

1. Describe with a diagram the morphology of Bacterial Flagella.	4	10	7
2. Explain the principle and enumerate the uses of Immuno fluorescence assay.	4	10	7
3. Discuss the laboratory diagnosis of infection caused by Hepatitis B virus.	4	10	7
4. Describe the life cycle of Entamoeba histolytica.	4	10	7
5. Discuss the laboratory diagnosis of Mycetoma foot.	4	10	7

(LC 1507)

APRIL 2013

Sub. Code: 3009

**DIPLOMA IN CLINICAL PATHOLOGY (DCP) EXAMINATION
BIOCHEMISTRY AND MICROBIOLOGY**

Q.P. Code : 343009

Time: Three Hours

Maximum: 100 marks

(ANSWER SECTION A & B SEPARATELY)

SECTION A

(BIOCHEMISTRY)

I. Elaborate on:

(1X15=15)

1. Describe how calcium homeostasis is maintained. How will you investigate a patient with hypercalcemia?

II. Write notes on:

(5X7=35)

1. Renal tubular acidosis.
2. Diabetic ketoacidosis.
3. Hyperuricemia.
4. Digestion and absorption of Lipids.
5. Laboratory diagnosis of Myocardial infarction.

SECTION B

(MICROBIOLOGY)

I. Elaborate on:

(1X15=15)

1. Classify enteroviruses. Write in detail morphology, Pathogenesis, clinical features, laboratory diagnosis and prophylaxis of Polio virus.

II. Write notes on:

(5X7=35)

1. Type III Hypersensitivity.
2. Genital flagellates.
3. Needle stick injury and its management.
4. Cold sterilization and its applications.
5. Cryptococcus neoformans.

(LD 1507)

OCTOBER 2013

Sub. Code: 3009

**DIPLOMA IN CLINICAL PATHOLOGY (DCP) EXAMINATION
BIOCHEMISTRY AND MICROBIOLOGY**

Q.P. Code : 343009

Time: Three Hours

Maximum: 100 marks

(ANSWER SECTION A & B SEPARATELY)

**SECTION A
(BIOCHEMISTRY)**

I. Elaborate on:

(1X15=15)

1. Write in detail about the investigations carried out in a patient with renal disorders?

II. Write notes on:

(5X7=35)

1. Clinically significant isoenzymes
2. Thyroid profile in diagnosis
3. Glucose tolerance test
4. Galactosemia
5. Calcium Homeostasis.

**SECTION B
(MICROBIOLOGY)**

I. Elaborate on:

(1X15=15)

1. Define Pyrexia of Unknown Origin. Write in detail the characteristics, Pathogenesis and Laboratory Diagnosis of Salmonella.

II. Write notes on:

(5X7=35)

1. Laboratory Diagnosis of Kala Azar.
2. Cryptococcus neoformans.
3. Coagulase Test.
4. Prophylaxis of Rabies.
5. Nosocomial infection.

[LE 1507]

APRIL 2014

Sub. Code: 3009

**DIPLOMA IN CLINICAL PATHOLOGY (DCP) EXAMINATION
BIOCHEMISTRY AND MICROBIOLOGY**

Q.P. Code :343009

Time: Three Hours

Maximum : 100 marks

(ANSWER SECTION A & B SEPARATELY)

**SECTION A
(BIOCHEMISTRY)**

I. Elaborate on: **(1X15=15)**

1. Classify Jaundice. What are the biochemical tests to differentiate the different types of jaundice?

II. Write notes on: **(5X7=35)**

1. Prenatal Diagnosis and its applications.
2. Causes of hyperammonemia.
3. Functions of plasma proteins.
4. Functions and distribution of calcium in the body.
5. Principle of Dialysis.

**SECTION B
(MICROBIOLOGY)**

I. Elaborate on: **(1X15=15)**

1. Discuss the pathogenesis, laboratory diagnosis and prevention of Pulmonary tuberculosis.

II. Write notes on: **(5X7=35)**

1. Laboratory diagnosis of Hepatitis B.
2. Non sporing anaerobes.
3. Autoclave.
4. Candida albicans.
5. Hydatid cyst.

[LF 1507]

OCTOBER 2014

Sub. Code: 3009

**DIPLOMA IN CLINICAL PATHOLOGY (DCP) EXAMINATION
BIOCHEMISTRY AND MICROBIOLOGY
Q.P. Code :343009**

Time: Three Hours

Maximum : 100 marks

(ANSWER SECTION A & B SEPARATELY)

**SECTION A
(BIOCHEMISTRY)**

I. Elaborate on: **(1 x 15 = 15)**

1. Detail the investigations for a case of hypothyroidism

II. Write notes on: **(5 x 7 = 35)**

1. Glycosylated haemoglobin (HbA1c).
2. Bence jones proteins.
3. Lipid profile.
4. Albumin globulin ratio.
5. Vandenbergh test.

**SECTION B
(MICROBIOLOGY)**

I. Elaborate on: **(1 x 15 = 15)**

1. Define Agglutination. What are the different types of agglutination reaction?
Illustrate with examples.

II. Write notes on: **(5 x 7 = 35)**

1. Type III hypersensitivity reaction.
2. Virulent factors of Bacteria.
3. Anaerobic method of cultivation.
4. Health care associated infection and its prevention.
5. Lab diagnosis of cholera.
