

AUGUST - 2005

[KN 824]

Sub. Code : 4884

B.Sc. (Nursing) DEGREE EXAMINATION.

(For Trained Nurses)

First Year — Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours

Maximum : 75 marks

**Sec. A & B : Two hours and
forty five minutes**

Sec. A & B : 60 marks

Sec. C : Fifteen minutes

Sec. C : 15 marks

Answer Sections A and B in SEPARATE answer books.

Answer Section C in the answer sheet provided.

SECTION A

(BIOCHEMISTRY)

1. Define Gluconeogenesis. How Blood glucose level is maintained? Classify Diabetes Mellitus and add a note on hyper and hypoglycemia. (15)

**2. Write short notes on any THREE of the following :
(3 × 5 = 15)**

- (a) Enzyme profile in Myocardial infarction**
- (b) Phospholipids and its functions**
- (c) Lysosomes**
- (d) Hyperuricemia.**

SECTION B

(BIOPHYSICS)

**3. Answer the following essay question : (1 × 15 = 15)
What is meant by electrocardiogram (ECG)? Describe its relevance in evaluating the function of the heart.**

**4. Write short notes on any THREE of the following :
(3 × 5 = 15)**

- (a) Define density, relative density and specific gravity. Describe their relevance in nursing.**
- (b) What is meant by friction? Discuss the various means of reducing friction.**
- (c) What is meant by refraction? Describe the refraction taking place in human eye.**
- (d) What is meant by atmospheric pressure? How does this vary?**

[KO 824]

Sub. Code : 4884

B.Sc. (Nursing) DEGREE EXAMINATION.

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First Year — Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours

Maximum : 75 marks

Sec. A & B : Two hours and

Sec. A & B : 60 marks

forty five minutes

Section C : Fifteen minutes

Section C : 15 marks

**Answer Sections A and B in SEPARATE
Answer books.**

Answer Section C in the answer sheet provided.

SECTION A

BIO CHEMISTRY

1. What is Ketosis? Mention two conditions associated with ketoacidosis? Write in detail about the synthesis, utilisation and catabolism of ketone bodies.

(15)

2. Short notes on any THREE:

(3 × 5 = 15)

(a) Kwashiorkor

(b) Diagnosis of diabetes mellitus

(c) Importance of protein in urine and its detection

(d) Van den-berg test.

**SECTION B
BIO PHYSICS**

(1 × 15 = 15)

1. Explain the basis of light and its Bio applications in medicine.

2. Short Notes on any THREE of following:

(3 × 5 = 15)

(a) Heat and sterilization.

(b) Ultrasound

(c) MRI

(d) Pace maker.

August-2006

[KP 824]

Sub. Code : 4884

SECTION B

(BIOPHYSICS)

B.Sc. (Nursing) DEGREE EXAMINATION.

(For Trained Nurses)

First Year — Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours Maximum : 75 marks

Descriptive : Two hours and Descriptive : 60 marks
forty five minutes

Objective : Fifteen minutes Objective : 15 marks

Answer Sections A and B in **SEPARATE**

Answer books.

SECTION A

(BIOCHEMISTRY)

1. Discuss in detail the different factors affecting enzyme activity. Add a note on clinically important enzymes. (15)

2. Write short notes on any **THREE** of the following :
(3 × 5 = 15)

- (a) Importance of biochemistry in nursing
- (b) G.T.T.
- (c) Essential amino acids
- (d) Role of liver in fat metabolism.

1. Explain Radio activity and enumerate the role of radiation in medicine. (15)

2. Write short notes on any **THREE** of the following :
(3 × 5 = 15)

- (a) ECG & EEG
- (b) CT scan
- (c) Radiation protection
- (d) Noise pollution and prevention.

[KQ 824]

Sub. Code : 4884

SECTION B

(BIOPHYSICS)

B.Sc. (Nursing) DEGREE EXAMINATION.

(For Trained Nurses)

First Year — Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours

Maximum : 75 marks

Descriptive : Two hours and
forty five minutes

Descriptive : 60 marks

Objective : Fifteen minutes

Objective : 15 marks

Answer Sections A and B in **SEPARATE**
Answer books.

SECTION A

(BIOCHEMISTRY)

1. Describe the reactions of Urea Cycle. Discuss the interrelation of urea cycle and citric acid cycle. (15)

2. Write short notes on any **THREE** of the following :
(3 × 5 = 15)

- (a) Lipotropic factors
- (b) Kwashiorkor
- (c) Isoenzymes
- (d) Key enzymes of gluconeogenesis.

1. Explain the mercury thermometer. Why mercury is used as thermometer liquid? High light about the clinical thermometer. (15)

2. Write short notes on any **THREE** of the following :
(3 × 5 = 15)

- (a) Describe pulleys.
- (b) How ultrasound is used in physiotherapy?
- (c) Explain the principle of blood cell counter.
- (d) Differentiate between systolic and diastolic pressure.

AUGUST 2007

[KR 824]

Sub. Code : 4884

B.Sc. (Nursing) DEGREE EXAMINATION.

(For Trained Nurses)

First Year — Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours Maximum : 75 marks

**Descriptive : Two hours and Descriptive : 60 marks
forty five minutes**

Objective : Fifteen minutes Objective : 15 marks

Answer ALL questions.

SECTION A

(BIOCHEMISTRY)

I. Essay :

(1) Describe the process of glycolysis. Explain how many molecules of ATP are formed in aerobic and anaerobic glycolysis. Add a note on glycolysis in RBC.
(15)

(2) Write short notes on the following :

(3 × 5 = 15)

- (a) Enzyme profile in liver disease**
- (b) Diabetic keto acidosis**
- (c) Plasma proteins.**

SECTION B

(BIOPHYSICS)

II. Essay :

(1) What is surface tension? What are the factors affecting surface tension. Mention the biological applications.
(15)

(2) Write short notes on the following :

(3 × 5 = 15)

- (a) Membrane transport**
- (b) What is Radioactivity? What is the unit of Radioactivity? Mention the applications of radioactivity in Medicine.**
- (c) Ultrafiltration.**

FEBRUARY 2008

[KS 824]

Sub. Code : 4884

B.Sc. (Nursing) DEGREE EXAMINATION.

(For Trained Nurses)

First Year — Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 75 marks

Descriptive : Two hours and
forty five minutes

Descriptive : 60 marks

Objective : Fifteen minutes

Objective : 15 marks

Write Section A and B in a **SEPARATE** Answer Book.

Answer ALL questions.

SECTION A

(BIOCHEMISTRY)

I. Essay :

(1 × 15 = 15)

(1) What are ketone bodies? Name them. Discuss the formation, utilisation and disposal of ketone bodies in our system.

(2) Write short notes on the following :(3 × 5 =15)

(a) Neoglucogenesis.

(b) Cholesterol.

(c) Importance of mitochondria.

SECTION B

(BIOPHYSICS)

II. Essay :

(1 × 15 = 15)

(1) What is the principle of Dialysis? Mention the biological applications of dialysis. Add a note on renal dialysis.

(2) Write short notes on :

(3 × 5 = 15)

(a) Radio immuno assay (RIA) and its applications.

(b) Ionophores.

(c) Buffers of biological fluids in pH regulation.

August-2008

[KT 824]

Sub. Code : 4884

B.Sc. (Nursing) DEGREE EXAMINATION.

(For Trained Nurses)

First Year – Non-Semester

Paper III — BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 75 marks

Write Section A and B in a SEPARATE answer book.

Answer ALL questions.

SECTION A

(BIOCHEMISTRY)

I. Essay : (1 × 15 = 15)

(1) Give a detailed account on Glycogen synthesis and degradation. Add a note on its regulation.

II. Write short notes on : (3 × 5 = 15)

(1) Factors affecting enzyme activity.

(2) Lipoproteins.

(3) Gout.

III. Short answer questions : (5 × 2 = 10)

- (1) Name the cytoplasmic filements.
- (2) What is the effect of pH on enzyme activity?
- (3) Name two enzymes elevated in liver disease.
- (4) What is the normal plasma concentration of albumin?
- (5) Name any four functions of albumin.

SECTION B

(BIOPHYSICS)

I. Essay : (1× 15 = 15)

- (1) Describe the physiology of vision and write about various types of refractory errors and its corrections.

II. Write short notes on : (2 × 5 = 10)

- (1) Advantages of using Mercury in clinical thermometer.
- (2) What is acceleration and explain Newton's second law with suitable examples.

III. Short answer questions : (5 × 2 = 10)

- (1) Explain the principle of reducing body temperature by using cold water.
- (2) Why plungers and barrels of syringes should be separated before boiling for sterilization?
- (3) Example for Third class lever in human body.
- (4) Effect of electricity in human body.
- (5) Pascals law.

B.Sc (Nursing) DEGREE EXAMINATION**(For Trained Nurses)****First Year****Non-Semester****Paper III – BIOCHEMISTRY AND BIOPHYSICS****Q.P. Code : 684884****Time : Three hours****Maximum : 75 marks****Answer All questions.****Answer Section A and B in a SEPARATE answer book.****SECTION – A****(BIOCHEMISTRY)****I. Essay:****(1 x 15 = 15)**

1. What is anaerobic glycolysis? Explain the pathway and indicate the key enzymes.

II. Write Short Notes on :**(3 x 5 =15)**

1. Ketone bodies.
2. Plasma proteins.
3. classification of enzymes.

III. Short Answer Questions:**(5 x 2 =10)**

1. Define gluconeogenesis.
2. What is the normal blood urea level? Name two conditions in which the level is elevated.
3. Give two examples of transport proteins.
4. Name the aminoacids found in glutathione.
5. Name the disaccharides.

SECTION – B**(BIOPHYSICS)****I. Essay:****(1 x 15 = 15)**

1. Discuss the various methods of ultra sound imaging.

II. Write Short Notes on :**(2 x 5 =10)**

1. Clinical thermometer.
2. Laser.

III. Short Answer Questions:**(5 x 2 =10)**

1. How do the antiseptics cause the destruction of the pathogenic bacteria?
2. What is systolic and diastolic blood pressure?
3. Refractive errors of vision.
4. Refraction and Reflection.
5. Harmful effects of ultra violet rays.

August 2009

[KV 824]

Sub. Code: 4884

B.Sc (Nursing) DEGREE EXAMINATION

(For Trained Nurses)

First Year

Non-Semester

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 75 marks

Answer All questions.

Answer Section A and B in a SEPARATE answer book.

SECTION – A

(BIOCHEMISTRY)

I. Essay:

(1 x 15 = 15)

1. Explain glucose tolerance test with reference to normal, mild, moderate and severe diabetic glucose tolerance test curves.

II. Write Short Notes on :

(3 x 5 =15)

1. Mechanism of enzyme action.
2. Plasma proteins and their functions.
3. Cholesterol.

III. Short Answer Questions:

(5 x 2 =10)

1. Renal glycosurea.
2. Essential fatty acids.
3. Digestive enzymes.
4. Acidosis.
5. Codons and anticodons.

SECTION – B

(BIOPHYSICS)

I. Essay:

(1 x 15 = 15)

1. What is Radio activity? Explain the use of radioisotopes in medicine.

II. Write Short Notes on :

(2 x 5 =10)

1. Pacemaker.
2. Sphygmomanometer.

III. Short Answer Questions:

(5 x 2 =10)

1. State Newton's second law of motion.
2. State the law of floatation.
3. What is traction?
4. What is Doppler effect?
5. Boyle's law and charles law.

B.Sc (Nursing) DEGREE EXAMINATION

(For Trained Nurses)

First Year

Non-Semester

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 75 marks

Answer All questions.

Answer Section A and B in a SEPARATE answer book.

**SECTION – A
(BIOCHEMISTRY)**

I. Essay:

(1 x 15 = 15)

1. Define Gluconeogenesis. Write in detail the pathway and regulation of gluconeogenesis.

II. Write Short Notes on :

(3 x 5 =15)

1. Ketone bodies.
2. Plasma proteins and their functions.
3. Mitochondria.

III. Short Answer Questions:

(5 x 2 =10)

1. What is normal serum levels of sodium and potassium?
2. Name two digestive enzymes.
3. Define Glycogenolysis.
4. Write two enzymes that are elevated in jaundice.
5. What are lipo proteins? Give two examples.

**SECTION – B
(BIOPHYSICS)**

I. Essay:

(1 x 15 = 15)

1. Describe the various types of pulleys and explain the lever mechanism in the human body.

II. Write Short Notes on :

(2 x 5 =10)

1. Pulse oximeter.
2. Application of light in nursing.

III. Short Answers Questions:

(5 x 2 =10)

1. What is centrifugal force?
2. What is the use of Calorimeter?
3. What is ocular pressure?
4. What is piezo electric effect?
5. What is electrolysis?

[KX 824]

Sub. Code: 4884

**B.Sc (Nursing) DEGREE EXAMINATION
(For Trained Nurses)
First Year – Non – Semester
Paper III – BIOCHEMISTRY AND BIOPHYSICS
Q.P. Code : 684884**

Time : Three hours

Maximum : 75 marks

**Answer ALL questions.
Answer Section A and B in a SEPARATE answer book.**

**SECTION A
(BIOCHEMISTRY)**

I. Essay: (1X15=15)

1. Discuss the factors affecting Enzyme activity. Name two Enzymes that are used for therapy.

II. Write Short Notes on : (3X 5 =15)

1. Malabsorption Syndrome of Lipids.
2. Ketone bodies and their utilisation.
3. Glucose Tolerance Test. (GTT).

III. Short Answer Questions: (5X 2 =10)

1. Nitrogenous constituent of urine.
2. Normal serum level of cholesterol and uric acid.
3. Functions of electrolytes.
4. Define oxidative phosphorylation.
5. Write the normal values of blood glucose during fasting and postprandial state.

**SECTION B
(BIOPHYSICS)**

I. Essay: (1X15=15)

1. Explain about basic levers and body mechanics.

II. Write Short Notes on : (2X 5 =10)

1. Line and center of gravity of the human body.
2. Electricity and human body.

III. Short Answers Questions: (5X 2 =10)

1. Units of length, weight, mass and time.
2. Temperature scales.
3. Arterial and venous blood pressure.
4. State the loss of electromagnetic induction.
5. What are the biological effects of radiation?

February 2011

[KY 824]

Sub. Code: 4884

B.Sc (Nursing) DEGREE EXAMINATION
(For Trained Nurses)
First Year – Non – Semester
Paper III – BIOCHEMISTRY AND BIOPHYSICS
Q.P. Code : 684884

Time : Three hours

Maximum : 75 marks

Answer ALL questions.

Answer Section A and B in a SEPARATE answer book.

SECTION A
(BIOCHEMISTRY)

I. Essay: (1X15=15)
1. Give a detailed account on regulation of blood Glucose level. How is Glucose Tolerance Test (GTT) carried out?

II. Write Short Notes on : (3X 5 =15)
1. Ketone Bodies.
2. Plasma proteins.
3. Urea cycle.

III. Short Answer Questions: (5X 2 =10)
1. Peroxisomes.
2. Extra cellular fluid.
3. Non reducing disaccharide.
4. Sulphar containing amino acids.
5. Increased enzyme Amylase.

SECTION B
(BIOPHYSICS)

I. Essay: (1X15=15)
1. Describe briefly the use of various electronic equipments in patient care.

II. Write Short Notes on : (2X 5 =10)
1. Pulleys and its types.
2. What is noise pollution? How can it be prevented?

III. Short Answers Questions: (5X 2 =10)
1. Myopia and Hypermetropia.
2. Boyle's law and Charle's law.
3. Properties of X-Ray.
4. Law of conservation of energy.
5. Types of lenses.

POST BASIC BACHELOR OF SCIENCE IN NURSING DEGREE

EXAMINATION

First Year - Non Semester

(For candidates admitted from 2004-2005 onwards)

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

Answer Section A and B in a SEPARATE answer book.

SECTION A

(BIOCHEMISTRY)

I. Essay: (1X20=20)

1. Write the Neoglucogenesis (Glucogenesis) process in detail and explain the key enzymes action on it.

II. Write Short Notes on : (4X 5 =20)

1. Mechanism of action of enzymes.
2. Lipoproteins and their distribution.
3. When and How glucose tolerance test (GTT) is performed?
4. Plasma proteins and their functions.

III. Short Answer Questions: (5X 2 =10)

1. What is glycemia?
2. Lysosomes.
3. Abnormal level of lipase.
4. Hyper uricemia.
5. Write the sources of potassium.

SECTION B

(BIOPHYSICS)

I. Essay: (1X20=20)

1. Explain about basic levers and body mechanics.

II. Write Short Notes on : (4X 5 =20)

1. Line and center of gravity of the human body.
2. Electricity and human body.
3. Acceleration and Deceleration.
4. Application of traction force in medical field.

III. Short Answers Questions: (5X 2 =10)

1. Units of length, weight, mass and time.
2. Temperature scales.
3. Arterial and venous blood pressure.
4. State the laws of electromagnetic induction.
5. What are the biological effects of radiation?

February 2012

[LA 824]

Sub. Code: 4884

**POST BASIC BACHELOR OF SCIENCE IN NURSING DEGREE
EXAMINATION**

First Year - Non Semester

(For candidates admitted from 2004-2005 onwards)

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 75 marks

Answer ALL questions.

Answer Section A and B in a SEPARATE answer book.

**SECTION A
(BIOCHEMISTRY)**

I. Elaborate on: (1X15=15)

1. Describe the beta- oxidation of Fatty acid and its energetics.

II. Write notes on : (3X 5 =15)

1. Glycogen storage diseases.
2. Transamination.
3. Creatinine clearance.

III. Short Answer: (5X 2 =10)

1. Name the hypo and hyperglycemic hormones.
2. Essential amino acid.
3. Define Isoenzymes with two examples.
4. Hyperkalemia.
5. Name the abnormal constituents of urine.

**SECTION B
(BIOPHYSICS)**

I. Elaborate on: (1X15=15)

1. What is ultrasound? Discuss the various methods of ultrasound imaging in medicine.

II. Write notes on : (2X 5 =10)

1. Clinical thermometer.
2. Pace maker.

III. Short Answers: (5X 2 =10)

1. Differentiate between vector and scalar quantities.
2. What are the forces acting on the human body?
3. What is Astigmatism?
4. What is Electroconvulsive therapy (ECT)?
5. What is a thermo luminescent dosimeter (TLD)?

[LB 824]

AUGUST 2012

Sub. Code: 4884

FIRST YEAR P.B.B.Sc (NURSING) EXAM
Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours

Maximum : 100 marks

(180 Min) Answer ALL questions in the same order.

Answer Section A and B in a SEPARATE answer book.

SECTION A

(BIOCHEMISTRY)

I. Essay:

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

- | | | | |
|---|----|----|----|
| 1. Explain Glycolysis and its regulation in detail. | 19 | 33 | 20 |
|---|----|----|----|

II. Write Notes on:

- | | | | |
|--------------------------------------|---|---|---|
| 1. Mucopolysaccharides. | 3 | 8 | 5 |
| 2. Enzymes of diagnostic importance. | 3 | 8 | 5 |
| 3. Rancidity. | 3 | 8 | 5 |
| 4. Malabsorption syndrome of Lipids | 3 | 8 | 5 |

III. Short Answer on:

- | | | | |
|--|---|---|---|
| 1. Normal values of blood glucose during fasting and postprandial state. | 1 | 5 | 2 |
| 2. Alkalosis. | 1 | 5 | 2 |
| 3. Denaturation. | 1 | 5 | 2 |
| 4. Serum creatinine phosphokinase. | 1 | 5 | 2 |
| 5. Nucleotides. | 1 | 5 | 2 |

SECTION B

(BIOPHYSICS)

I. Elaborate on:

- | | | | |
|--|----|----|----|
| 1. What is Radio activity? Explain the use of radioisotopes in medicine. | 19 | 33 | 20 |
|--|----|----|----|

II. Write Notes on:

- | | | | |
|---|---|---|---|
| 1. Biological effects of light. | 3 | 8 | 5 |
| 2. Relative humidity and specific heat. | 3 | 8 | 5 |
| 3. Laser | 3 | 8 | 5 |
| 4. Sphygmomanometer | 3 | 8 | 5 |

III. Short Answers on:

- | | | | |
|------------------------------------|---|---|---|
| 1. Third order lever with example. | 1 | 5 | 2 |
| 2. Refraction and Reflection. | 1 | 5 | 2 |
| 3. Osmosis. | 1 | 5 | 2 |
| 4. Pulse Oximeter. | 1 | 5 | 2 |
| 5. Temperature Scales | 1 | 5 | 2 |

[LC 824]

FEBRUARY 2013

Sub. Code: 4884

POST BASIC BACHELOR OF SCIENCE IN NURSING DEGREE

EXAMINATION

First Year - Non Semester

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

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

Maximum : 100 marks

Answer Section A and B in a SEPARATE answer book.

SECTION A

(BIOCHEMISTRY)

I. Essay: (1x20=20)

1. Explain the gluconeogenesis process and add a note on Cori's cycle

II. Write Notes on: (4x5=20)

1. Mechanism of enzyme action
2. Lipoproteins
3. Transamination
4. Two liver function tests .

III. Short Answer on: (5x2=10)

1. Define reducing disaccharides
2. Function of lipids
3. What is oxidative phosphorylation
4. Atherosclerosis
5. Normal value of blood urea and blood cholesterol .

SECTION B

(BIOPHYSICS)

I. Essay: (1x20=20)

1. a) Newton's laws of motion with an examples for each
b) Explain the four methods of heating the tissues
c) Explain the laws of radioactivity

II. Write Notes on:

(4x5=20)

1. Five rules and conventions in the use of symbols in SI units
2. Center of gravity and states of equilibrium with examples
3. What is a simple machine and explain the types of pulleys
4. Explain reflection and refraction with neat diagram

III. Short Answers on:

(5x2=10)

1. Boyle's law
2. P,Q,R,S,T wave of an electrocardiogram
3. Half life of a radioactive element with an example
4. What is a pacemaker
5. Fundamental unit with an example

[LD 824]

AUGUST 2013

Sub. Code: 4884

POST BASIC BACHELOR OF SCIENCE IN NURSING DEGREE

EXAMINATION

First Year - Non Semester

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours
(180 Min)

Maximum : 100 marks

Answer Section A and B in a SEPARATE answer book.

SECTION A

(BIOCHEMISTRY)

I. Essay

(1x20=20)

1. Write down the normal blood glucose level. Describe the hormonal regulation of Blood glucose level. Add a note on glycosuria.

II. Write Notes on:

(4x5=20)

1. Essential amino acids
2. Kidney Function tests
3. Enzymes – clinical significance
4. Elevated blood uric acid level.

III. Short Answer on:

(5x2=10)

1. Name the ketone bodies
2. Serum proteins and their normal values
3. Phospholipids
4. Name any four important abnormal constituents of urine
5. Phosphorylation

SECTION B

(BIOPHYSICS)

I. Essay:

(1x20=20)

1. Describe in detail various equipments used in intensive care unit.

II. Write Notes on:

(4x5=20)

1. Application of light in nursing.
2. Noise Pollution
3. Blood pressure measurements.
4. Radio isotopes used in medicine.

III. Short Answers on:

(5x2=10)

1. Second order of lever.
2. Normal ECG waveform.
3. Differentiate between scalar and vector quantities.
4. Biological effects of electric shock.
5. Myopia and Hypermetropia.

[LE 824]

FEBRUARY 2014

Sub. Code: 4884

POST BASIC BACHELOR OF SCIENCE IN NURSING DEGREE

EXAMINATION

First Year - Non Semester

Paper III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code : 684884

Time : Three hours (180 Min)

Maximum : 75 marks

Answer Section A and B in a SEPARATE answer book.

SECTION A

(BIOCHEMISTRY)

I. Essay

(1x15=15)

1. Explain the various factors which influence enzyme activity. Give the diagnostic importance of the enzymes-Transaminase and Alkaline phosphatase.

II. Write Notes on:

(3x5=15)

1. Plasma proteins and their functions
2. TCA Cycle
3. Biological importance of lipids.

III. Short Answers on:

(5x2=10)

1. Lysosome
2. Normal level of blood urea and creatinine
3. Acidosis
4. Two differences between DNA and RNA
5. Name the aromatic amino acids

SECTION B

(BIOPHYSICS)

I. Essay:

(1x15=15)

1. What is Gravity? Give an essay on the effect of gravity on the human body and its application in nursing.

II. Write Notes on:

(2x5=10)

1. Focusing elements of the eye
2. What is radioactivity? Give the names of two isotopes and their applications in medicine.

III. Short Answers on:

(5x2=10)

1. Temperature scales.
2. Acceleration.
3. Refraction.
4. Relative humidity.
5. Specific heat.

[LF 824]

AUGUST 2014

Sub. Code: 4884

**POST BASIC BACHELOR OF SCIENCE IN NURSING DEGREE
EXAMINATION**

First Year - Non Semester

PAPER III – BIOCHEMISTRY AND BIOPHYSICS

Q.P. Code: 684884

Time: Three Hours

Maximum: 75 marks

Answer Section A and B in a SEPARATE answer book.

**SECTION A
(BIOCHEMISTRY)**

I. Essay: (1x15=15)

1. Describe the metabolism of Krebs cycle. Explain how many ATP molecules are formed in this cycle?

II. Write Notes on: (3x5=15)

1. GTT
2. Enzymes of clinical importance
3. Lipoproteins

III. Short Answers on: (5x2=10)

1. Ribosomes
2. Phenylketonuria
3. Scurvy
4. Fluoride
5. Essential Fatty acids

**SECTION B
(BIOPHYSICS)**

I. Essay: (1x15=15)

1. Discuss the application of the principles of pressure in nursing.

II. Write Notes on: (2x5=10)

1. Sphygmomanometer.
2. Electromagnetic spectrum

III. Short Answers on: (5x2=10)

1. Equation for relationship between energy, frequency and wavelength of light
2. Application of hydrometer.
3. Simple pulleys.
4. Liquid Crystal Display (LCD)
5. Total internal reflection
