

April-1992

[ 673 ]

BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATIONS  
APRIL 1992.

Second Semester — New Regulations

Paper II — PHYSIOLOGY

(Common to B.P.T. and B.O.T. Examination)

Time : Three hours.

Maximum : 100 marks

Answer question No. 9 and SEVEN others.

1. Name the plasma proteins. Describe their function. (10 marks)
2. Define cardiac impulse. Draw diagrammatically conducting system of the heart. (10 marks)
3. Enumerate the various artificial respiration methods. Describe one method in detail giving reasons why prefer this method. (10 marks)
4. Define deglutition. Describe the second stage in detail. (10 marks)
5. Describe the clinical manifestations of a complete section of the spinal cord. (10 marks)
6. Describe the innervation of the urinary bladder. Which nerve is essential for the emptying of the bladder? (10 marks)

7. How much is the normal serum calcium level? Describe the hormones regulating the normal serum calcium level. (10 marks)

8. Write briefly on spermatogenesis. (10 marks)

9. Write short notes on any FIVE of the following :

(a) Haemophilia.

(b) Synapse.

(c) Tremors.

(d) EMG.

(e) Facial palsy.

(f) Muscle spindle. (5 × 6 = 30 marks)

[NO 785]

November-1994

**Bachelor of Physiotherapy  
Degree Examination**

**Second Semester**

**Paper - II PHYSIOLOGY  
(Common to BPT and BOT)**

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

**Answer Question No 10 and 7 others**

- 1. What is filtration? Explain how this process takes place in two sites in the body**
- 2. Describe clotting of blood**
- 3. What is the normal blood volume? How is it regulated?**
- 4. What is the normal blood pressure? Discuss the mechanisms which serve to regulate the blood pressure**
- 5. Describe the lung function tests**
- 6. Give an account of a balanced diet**
- 7. Describe the steps involved in conversion of glucose molecule to energy**

- 8. Describe the anatomy and physiology of the neuromuscular junction**
- 9. Give an account of the autonomic nervous system**
- 10. Write short notes on any FIVE of the following  
(5X6 = 30)**

- a) White blood cells**
- b) Special properties of cardiac muscle**
- c) Transport of Oxygen in blood**
- d) Artificial ventilation**
- e) Structure of nephron**
- f) Parathyroid hormone**
- g) Spermatogenesis**
- h) Role of cerebellum in voluntary muscle contraction**
- i) Refractory errors**

November-1995

[MB 903]

**Bachelor of Physiotherapy  
Degree Examination**

(New/Revised Regulations)  
Second Semester

Paper II - PHYSIOLOGY  
(Common to BPT and BOT)

Time : Three hours

Maximum : 100 marks

**SECTION - A**

1. Write an essay on any One of the following :
  - a) Regulation of Calcium metabolism
  - b) Oxygen transport in Human blood. (14)
2. Write brief answers on any Two of the following :
  - a) Composition and function of pancreatic juice
  - b) Development of Erythrocytes and factors regulating it.
  - c) Stages of deglutition (2X8 = 16)
3. Write short notes on any Five of the following :
  - a) Functions of platelets
  - b) Functions of saliva
  - c) Structure of skin
  - d) Oral contraceptive pill
  - e) Dark adaptation
  - f) Venous return
  - g) Fat absorption (5X4 = 20)

**SECTION—B**

1. Write an essay on any One of the following :
  - a) Define cardiac output. Describe the regulation of cardiac output
  - b) Neural regulation of respiration. (14)
2. Write brief answers on any Two of the following :
  - a) Composition of lymph and factors affecting its flow.
  - b) Innervation of urinary bladder.
  - c) Describe the steps by which a motor nerve impulse leads to contraction of skeletal muscle. (2X8 = 16)
3. Write short notes on any Five of the following :
  - a) Isometric and isotonic contraction.
  - b) Peculiarities of pulmonary circulation
  - c) Bleeding time and clotting time
  - d) Cerebro spinal fluid
  - e) Ovulation
  - f) Suprarenal glands
  - g) Artificial respiration (5X4 = 20)

April-1996

[AK 903]

**Bachelor of Physiotherapy Degree Examination**

(New/Revised Regulations)

Second Semester

Paper II - PHYSIOLOGY

(Common to BPT and BOT)

Time : Three hours

Max : 100 marks.

Answer Section A and B in separate answer books.

**SECTION—A**

1. Write an essay on any ONE of the following :
  - a) Mechanism of hearing.
  - b) Mechanism of contraction of skeletal muscle.(14)
2. Write brief answers on any TWO of the following :
  - a) Chemistry, biosynthesis and functions Thyroxine
  - b) Chemical regulation of respiration
  - c) Methods of measurement of cardiac output.(2×8 = 16)
3. Write short notes on any FIVE of the following
  - a) Functions of skin
  - b) Vital capacity
  - c) Rh factor
  - d) Pregnancy tests
  - e) Growth hormone
  - f) E.C.G.
  - g) Cerebral circulation(5×4 = 20)

**SECTION—B**

1. Write an essay on any ONE of the following :
  - a) Physiology of menstruation
  - b) Mechanism of micturition(14)
2. Write brief answers on any TWO of the following :
  - a) Visual pathway
  - b) White blood corpuscles
  - c) Digestion of carbohydrates(2×8 = 16)
3. Write short notes on any FIVE of the following :
  - a) Heart sounds
  - b) Entero hepatic circulation
  - c) Hypoxia
  - d) Lymph
  - e) Gastro intestinal hormones
  - f) Cardio vascular effects of exercise
  - g) Functions of thalamus(5×4 = 20)

October-1996

[PK 903]

**BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION.**

**Second Semester**

**(Revised Regulations)**

**Paper II — PHYSIOLOGY**

**(Common to BPT and BOT)**

**Time : Three hours**

**Maximum : 100 marks**

**Answer Sections A and B in separate answer books.**

**SECTION A — (50 marks)**

1. Write an essay on any ONE of the following : (1 × 14 = 14)
  - (a) Factors that maintain blood pressure.
  - (b) Control of voluntary motor activity.
2. Write brief answers on any TWO of the following :  
(2 × 8 = 16)
  - (a) Actions and regulation of secretion of Thyroxine.
  - (b) Mechanism of blood coagulation.
  - (c) Composition and actions of pancreatic juice.
3. Write short notes on any FIVE of the following : (5 × 4 = 20)
  - (a) Age changes in muscle function.
  - (b) Sensory nerve endings.
  - (c) Pupillary reflexes.
  - (d) Sarcomere.
  - (e) Functions of saliva.
  - (f) Functions of white blood cells.
  - (g) Hypoxia.

[PK 903]

**SECTION B — (50 marks)**

4. Write an essay on any ONE of the following : (1 × 14 = 14)
  - (a) Transport of Carbon-di-oxide in blood.
  - (b) Formation of urine.
5. Write brief answers on any TWO of the following :  
(2 × 8 = 16)
  - (a) Blood groups.
  - (b) Digestion of proteins.
  - (c) Regulation of heart rate.
6. Write short notes on any FIVE of the following : (5 × 4 = 20)
  - (a) Functions of cerebral cortex.
  - (b) Arterial pulse.
  - (c) Actions of Insulin.
  - (d) Oxygen debt.
  - (e) Functions of placenta.
  - (f) Spermatogenesis.
  - (g) Auditory pathway.

**[MS 903]**

**BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION.**

**Second Semester**

**(Revised Regulations)**

**Paper II — PHYSIOLOGY**

**(Common to BPT and BOT)**

**Time : Three hours**

**Maximum : 100 marks**

**Answer Sections A and B in separate answer books.**

**SECTION A**

1. Write an essay on any ONE of the following : (20)
  - (a) Define blood pressure. Discuss in detail how the blood pressure is regulated.
  - (b) Describe the hormones of anterior pituitary gland and their actions.
2. Write short notes on any SIX : (6 × 5 = 30)
  - (a) Neuromuscular junction.
  - (b) Functions of large intestine.
  - (c) Heart sounds.
  - (d) Hypoxia.
  - (e) Cerebrospinal fluid.
  - (f) E.C.G.
  - (g) Plasma proteins.
  - (h) Functions of hypothalamus.

**[MS 903]**

**SECTION B**

3. Write an essay on any ONE of the following : (20)
  - (a) What are the descending tracts in spinal cord? Trace the origin and describe the functions of pyramidal tract.
  - (b) What are the parts of a nephron? Describe the formation of urine.
4. Write short notes on any SIX : (6 × 5 = 30)
  - (a) Functions of neutrophils.
  - (b) Myopia and its correction.
  - (c) Isotonic contraction.
  - (d) Anticoagulants.
  - (e) Functions of middle ear.
  - (f) Hypothyroidism.
  - (g) Sarcomere.
  - (h) Pancreatic enzymes.

[SV 903]

Sub. Code : 5117

**BACHELOR OF PHYSIOTHERAPY DEGREE  
EXAMINATION.**

Second Semester

(Revised/Modified Regulations)

Paper II — PHYSIOLOGY

(Common to BPT and BOT)

Time : Three hours

Maximum : 100 marks

Answer Sections A and B in separate answer books.

**SECTION A**

1. Write an essay on any ONE of the following :  
(20 marks)

(a) Name the hormones of adrenal cortex. Describe the actions of cortisol.

(b) Describe the factors that determine the glomerular filtration.

2. Write short notes on any SIX : (6 × 5 = 30 marks)

- (a) Heart sounds.
- (b) Anemia.
- (c) Peristalsis.
- (d) Functions of skin
- (e) EMG.
- (f) Hypoxia.
- (g) Oral contraceptives.
- (h) Peptic ulcer.

**SECTION B**

3. Write an essay on any ONE of the following : (20 marks)

(a) Name the areas of cerebral cortex and give their functions.

(b) Name the clotting factors and describe the mechanism of coagulation of Blood.

4. Write short notes on any SIX : (6 × 5 = 30 marks)

- (a) Dehydration.
- (b) Corpus Luteum.
- (c) Vital capacity.
- (d) Neuro-muscular transmission.
- (e) Refractive Errors of eye.
- (f) Myasthenia gravis.
- (g) Composition of extracellular fluid.
- (h) Leucocytosis.

931]

BACHELOR OF PHYSIOTHERAPY DEGREE  
EXAMINATION.

Second Semester

(New Modified Regulations)

Paper II — PHYSIOLOGY

Three hours

Maximum : 100 marks

Answer Sections A and B in separate answer books.

SECTION A

1. Write an essay on any ONE of the following : (20)

(a) Define Cardiac output. What is its normal value in an adult? How is it measured? Describe the factors that influence it.

(b) Describe the actions and regulations of secretion of the adrenocortical hormones.

2. Write short notes on any SIX : (6 × 5 = 30)

- (a) Structure of skeletal muscle
- (b) Functions of the stomach
- (c) Oxygen transport in blood
- (d) Chemical regulation of respiration
- (e) Blood groups
- (f) Properties of Cardiac muscle
- Muscle tone
- Synapse

SECTION B

3. Write an essay on any ONE of the following : (20)

(a) Name the ascending tracts of the spinal cord. Trace the pathway for the transmission of pain sensations from the body.

(b) Describe the mechanisms of haemostasis in the body.

4. Write short notes on any SIX : (6 × 5 = 30)

- (a) Organ of Corti
- (b) Functions of the Basal Ganglia
- (c) Cretinism
- (d) Functions of the skin
- (e) Micturition
- (f) Functions of bile
- (g) Effects of muscular exercise on the cardiovascular system.
- (h) Functions of oestrogens.

April-2000

[KB 904]

Sub. Code : 5117

**BACHELOR OF PHYSIOTHERAPY DEGREE  
EXAMINATION.**

**Second Semester**

(Revised/Modified Regulations)

**Paper II — PHYSIOLOGY**

**(Common to BPT and BOT)**

Time : Three hours      Maximum : 100 marks

Answer Section A and B in separate answer books

**SECTION A**

1. Write an essay on any ONE of the following (20)

(a) Describe the site, stages and factors regulating R.B.C. production.

(b) What is normal B.P.? How it is regulated in short term and long term?

2 Write short notes on any SIX (6 × 5 = 30)

(a) Hypoxia

(b) Erythroblastosis fetalis

- c) Juxta glomerular apparatus
- (d) Lymph circulation
- e) Contraception
- f) Functions of placenta
- (g) Cystometrogram
- (h) Glial cells.
- (d) Muscle spindle
- (e) Sarcomere
- (f) Bohr effect
- (g) Acromegaly
- (h) Diabetes Incipitus.

SECTION B

3. Write an essay on any ONE of the following :  
(20)

(a) Describe the innervation of bladder and how micturition is initiated. Describe the terms (i) Atonic bladder (ii) Uninhibited neurogenic bladder.

(b) How is an impulse conducted along a neuron? Mention the electrophysiology involved. Add a note on classification of neurons.

4. Write short notes on any SIX : (6 × 5 = 30)

- (a) Platelet functions
- (b) Taste pathway
- (c) Errors of refraction in eye

April-2000

[KB 906]

Sub. Code : 5312

BACHELOR OF PHYSIOTHERAPY DEGREE  
EXAMINATION,

Second Semester

(New Modified Regulations)

Paper II — PHYSIOLOGY

(Common to B.P.T. and B.O.T.)

Time : Three hours

Maximum : 100 marks

Answer Section A and B in separate answer books.

SECTION A

1. . Write an essay on any ONE of the following (20)

(a) Describe the Nervous Regulation of Respiration.

(b) What is Erythropoiesis? what are the stages in it? What are the factors regulating it?

2. Write short notes on any SIX : (6 × 5 = 30)

(a) Anticoagulants

(b) Posterior pituitary hormones

- (c) Electrocardiogram
- (d) Properties of cardiac muscle
- (e) Sweat Glands
- (f) Functions of white blood corpuscles
- (g) Neuron
- (h) Cerebellum

- (e) ESR
- (f) Hypoxia
- (g) Lymph
- (h) Ovarian hormones

### SECTION E

3 Write an essay on any ONE of the following : (20)

(a) Mention the hormones secreted by Thyroid gland. Give an account of their actions on different systems of the body. What are the conditions caused by Hypo and Hyperthyroidisms.

(b) What is normal Blood pressure? How it is measured? What are the factors regulating it?

4 Write short notes on any SIX (6 × 5 = 30)

- (a) Lung volumes
- (b) Retina
- (c) Functions of Saliva
- (d) Nephron

[KC 904]

Sub. Code : 5117

**BACHELOR OF PHYSIOTHERAPY DEGREE  
EXAMINATION.**

**Second Semester**

**(Revised/Modified Regulations)**

**Paper II — PHYSIOLOGY**

**(Common to BPT and BOT)**

**Time : Three hours**

**Maximum : 100 marks**

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

**SECTION A**

**1. Write an essay on any one of the following : (20)**

**(a) Draw and label the structure of a synapse. How synaptic transmission takes place?**

**(b) Explain the changes in cardio-vascular system and respiratory system during exercise.**

**2. Write briefly on any SIX : (6 × 5 = 30)**

**(a) Stretch reflex**

**(b) Balanced diet**

**(c) Aphasia**

**(d) Plasma proteins**

**(e) Clotting time**

**(f) Placenta**

**(g) Parathormone**

**(h) Tests for hearing.**

**SECTION B**

**3. Answer any ONE of the following : (20)**

**(a) Describe the excitation – contraction coupling of skeletal muscle.**

**(b) What is the normal blood volume? Enumerate the conditions in which it varies. How is it regulated?**

**4. Write briefly on any SIX : (6 × 5 = 30)**

**(a) Parkinsonism**

**(b) Accommodation of eye**

**(c) Heart rate**

**(d) Types of muscle contraction**

**(e) Cystometrogram**

**(f) Functions of stomach**

**(g) Babinski sign**

**(h) Oxygen poisoning.**

[KC 904]

October-2000

[KC 906]

Sub. Code : 5312

**BACHELOR OF PHYSIOTHERAPY DEGREE  
EXAMINATION.**

**Second Semester**

**(New Modified Regulations)**

**Paper II — PHYSIOLOGY**

**(Common to B.P.T. and B.O.T.)**

**Time : Three hours**

**Maximum : 100 marks**

**Answer Section A and B in separate answer books.**

**SECTION A**

**1 Write an essay on any ONE of the following : (20)**

**(a) Describe the various types of White Blood Cells and their functions in detail. What Total count and what is differential count?**

**Or**

**(b) How voluntary movemen initiated and regulated?**

2. Write short notes on any SIX : (6 × 5 = 30)

- (a) Volumes and capacity in lung
- (b) Rheobase and chronaxie
- (c) Anticoagulant
- (d) Functions of plasma proteins
- (e) Properties of Cardiac Muscle
- (f) Heart sounds
- (g) Body Temperature regulation
- (h) Digestion of lipids.

SECTION B

3. Write an essay on any ONE of the following : (20)

- (a) How does an excitation of motor neuron lead to muscle contraction?

Or

- (b) What are the hormones of anterior pituitary? Discuss their functions.

4. Write short notes on any SIX : (6 × 5 = 30)

- (a) Isometric and Isotonic contractions
- (b) Surfactant
- (c) Succus entericus
- (d) Cretinism
- (e) Middle ear mechanics
- (f) Functions of cerebellum
- (g) Visual pathway
- (h) Oxygen Debt.