

August 2011

[KZ 6253]

Sub. Code : 6253

BACHELOR OF PHYSIOTHERAPY EXAMINATION

FIRST YEAR

Paper III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code : 746253

Time : Three hours

Maximum : 100 marks

ANSWER ALL QUESTIONS

I. LONG ESSAYS

(2X20=40)

1. Describe the transport of carbon-di-oxide in the blood.
2. Name the various endocrine glands in the body and describe growth hormone and applied physiology.

II. SHORT NOTES

(8X5=40)

1. Endoplasmic Reticulum.
2. Functions of liver.
3. Neuromuscular junction.
4. Functions of pancreas.
5. Hormones of Adrenal Gland.
6. Functions of Leucocytes.
7. Heart sounds.
8. Neuralgia.

III. SHORT ANSWERS

(10X2=20)

1. Define Homeostasis.
2. Define Erythrocyte sedimentation rate.
3. Define Glomerular Filtration Rate.
4. Types of muscles.
5. Define Ovulation.
6. Types of bone cells.
7. Define tidal volume.
8. Glands of the skin.
9. Composition of the blood.
10. Properties of Platelets.

February 2012

[LA 6253]

Sub. Code : 6253

BACHELOR OF PHYSIOTHERAPY EXAMINATION

FIRST YEAR

Paper III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code: 746253

Time: Three Hours

Maximum: 100 marks

Answer ALL questions

I. Elaborate on: (2X20=40)

1. Discuss the mechanism of Skeletal Muscle Contraction.
2. Define Erythropoiesis. Discuss the factors influencing erythropoiesis.

II. Write notes on: (8X5=40)

1. Functions of Thyroxine.
2. Electrocardiogram.
3. Oxygen Dissociation Curve.
4. Cerebrospinal Fluid.
5. Visual Pathway.
6. Micturition Reflex.
7. Lung Volume and Capacities.
8. Properties of Synapse.

III. Short Answers: (10X2=20)

1. List any four functions of Cerebellum.
2. Cyanosis.
3. Slow and fast Muscle Fibre.
4. Reflex Arc.
5. Functions of Bile.
6. Heart Sounds.
7. Name the Cardio –Vascular Reflexes.
8. Erythroblastosis Foetalis.
9. Taste Pathway.
10. Functions of Testosterone.

[LB 6253]

AUGUST 2012

Sub. Code: 6253

FIRST YEAR BPT EXAM

Paper III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code: 746253

Time: Three hours

Maximum : 100 marks

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

I. Elaborate on:

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

- | | | | |
|--|----|----|----|
| 1. Define Neuro- Muscular Junction. Describe the transmission of impulses across Neuro- Muscular Junction. | 19 | 33 | 20 |
| 2. Discuss the mechanism of Blood Clotting. | 19 | 33 | 20 |

II. Write notes on:

- | | | | |
|-------------------------------|---|---|---|
| 1. Electrocardiogram. | 3 | 8 | 5 |
| 2. Muscle Spindle. | 3 | 8 | 5 |
| 3. Bile. | 3 | 8 | 5 |
| 4. Oxygen Dissociation Curve. | 3 | 8 | 5 |
| 5. Functions of Thyroxine. | 3 | 8 | 5 |
| 6. Micturition. | 3 | 8 | 5 |
| 7. Motor Unit. | 3 | 8 | 5 |
| 8. Menstrual Cycle. | 3 | 8 | 5 |

III. Short Answers:

- | | | | |
|---------------------------------------|---|---|---|
| 1. Functions of Cerebro Spinal fluid. | 1 | 5 | 2 |
| 2. Tetanus and Clonus. | 1 | 5 | 2 |
| 3. Erythroblastosis Foetalis. | 1 | 5 | 2 |
| 4. List the functions of Kidney. | 1 | 5 | 2 |
| 5. Hypoxia. | 1 | 5 | 2 |
| 6. Functions of Placenta. | 1 | 5 | 2 |
| 7. Saltatory Conduction. | 1 | 5 | 2 |
| 8. Heart Sounds. | 1 | 5 | 2 |
| 9. List Four functions of Cortisol. | 1 | 5 | 2 |
| 10. All or none Law. | 1 | 5 | 2 |

[LC 6253]

FEBRUARY 2013
FIRST YEAR BPT EXAM

Sub. Code : 6253

Paper III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code: 746253

Time : Three hours
(180 Min)

Maximum : 100 marks

I. Elaborate on:

(2X20=40)

1. Define arterial blood pressure and describe any five factors that determine blood pressure. Explain the Renin Angiotensin mechanism in regulation of blood pressure.
2. What is the normal fasting blood glucose level? Describe the hormonal regulation blood. Glucose level in the body. Add a note on diabetes mellitus.

(8X5=40)

II. Write notes on:

1. Properties of skeletal muscle.
2. Pain pathway.
3. Anticoagulants.
4. Contraception.
5. Deglutition.
6. Glomerular filtration rate.
7. Artificial respiration.
8. Peculiarities of coronary circulation.

III. Short answers:

(10X2=20)

1. What is gravindex test?
2. Draw a neat diagram of a Nephron and label its parts.
3. What is haemophilia ? and what is the cause for it ?
4. What are heart sounds and what are they due to?
5. List any four functions of gastric juice.
6. What is the role of basal ganglia in voluntary movement?
7. What are the hormones involved in regulation of water balance in the body?
8. Define stroke volume and what is the normal value?
9. What is timed vital capacity and its significance?
10. What is Wallerian degeneration?

[LD 6253]

AUGUST 2013

Sub. Code : 6253

FIRST YEAR BPT EXAM

Paper III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code: 746253

Time: Three hours

Maximum : 100

I. Elaborate on:

(2 x 20 = 40)

1. Define cardiac cycle. Describe in detail the changes that occur in different phases of cardiac cycle with a suitable diagram.
2. Name the ascending tracts of spinal cord. Explain in detail the pain pathway and types of pain.

II. Write notes on:

(8 x 5 = 40)

1. Glomerular filtration rate
2. Functions of liver
3. Placental hormones
4. Chemical regulation of respiration
5. Parturition
6. Upper motor neuron(UMN) and Lower motor neuron lesion(LMN)
7. Carbohydrate metabolism
8. Spermatogenesis

III. Short Answers:

(10 x 2= 20)

1. Uses of Electrocardiogram
2. Salivary glands
3. Draw structure of cell
4. Cretinism
5. Define cardiac output
6. Acid base balance
7. Types of jaundice
8. What is anemia
9. Taste receptors
10. Regulation of pancreatic juice

[LE 6253]

FEBRUARY 2014

Sub. Code : 6253

FIRST YEAR BPT EXAM

Paper III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code: 746253

Time: Three hours

Maximum : 100 marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Immunity. What are types of immunity? Discuss the mechanism of cell mediated immunity.
2. Explain the neural regulation of respiration. What are the changes that occur in respiration during exercise.

II. Write notes on:

(8 x 5 = 40)

1. Movements of small intestine.
2. Juxtaglomerular apparatus(JGA).
3. Cardiac cycle.
4. Functions of placenta.
5. Referred pain.
6. Anaemia.
7. Enterohepatic circulation.
8. Cerebrospinal circulation.

III. Short Answers:

(10 x 2= 20)

1. Name any four immunoglobulins.
2. Name any two enzymes present in saliva.
3. What is anatomical dead space? What is the normal value?
4. What are the components of conducting system of heart.
5. What is cretinism?
6. Name the hormones secreted by posterior pituitary gland.
7. Write any four abnormal constituents of urine.
8. Write any two functions of hypothalamus
9. What is myoglobin?
10. Draw a neat diagram of a neuron and label the parts.

[LF 6253]

AUGUST 2014

Sub. Code : 6253

**FIRST YEAR BPT EXAM
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum : 100 marks

I. Elaborate on:

(2 x 20 = 40)

1. Define hemostasis. Discuss in detail the two pathways of coagulation. Add a note on hemophilia.
2. Explain the molecular mechanism of contraction in skeletal muscle with a suitable diagram. Add a note on myasthenia gravis.

II. Write notes on:

(8 x 5 = 40)

1. Function of saliva.
2. Oxygen-hemoglobin dissociation curve (ODC).
3. Methods to estimate cardiac output.
4. Actions of insulin.
5. Reflex arc.
6. Passive transport across the cell membrane.
7. Erythroblastosis foetalis.
8. Neuroglia.

III. Short Answers:

(10 x 2= 20)

1. Name the agranulocytes of white blood corpuscles (WBC).
2. What is succus entericus? Name one enzyme present in it.
3. What is surfactant? What is its function?
4. Name the normal pace-maker of heart. What is the normal heart rate?
5. What are the hormones involved in calcium metabolism?
6. Name the fat soluble vitamins.
7. What are the layers of glomerular filtering membrane?
8. Name any two inhibitory neurotransmitters.
9. Write any four properties of cardiac muscle.
10. Draw a net diagram of a synapse and label the parts.

[LG 6253]

FEBRUARY 2015

Sub. Code : 6253

**FIRST YEAR BPT EXAMINATION
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum : 100 marks

I. Elaborate on:

(2 x 20 = 40)

1. Name the hormones of Anterior Pituitary and Posterior Pituitary gland. Write about their actions in detail.
2. Describe in detail the three steps in formation of urine. Add a note on micturition.

II. Write notes on:

(8 x 5 = 40)

1. Hypoxia
2. Blood groups
3. Neuromuscular junction
4. Cerebrospinal fluid
5. Functions of liver
6. Diagram of cell structure and its organelles with their functions
7. Diabetes mellitus
8. Electrocardiogram

III. Short answers on :

(10 x 2= 20)

1. Sarcomere
2. Placental hormones
3. Types of immunity
4. Platelets
5. Structure of sperm
6. Functions of skin
7. Enzymes in pancreatic juice
8. Muscles of inspiration
9. Define blood pressure
10. Receptors of vision

[LH 6253]

AUGUST 2015

Sub. Code: 6253

B.P.T. DEGREE EXAMINATION

FIRST YEAR

PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY

Q.P. Code: 746253

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. Define Cardiac cycle. Explain the events in different phases of cycle with illustrative diagram.
2. Name the three steps in formation of urine. What is Glomerular filtration rate and factors regulating it? Add a note on renal clearance.

II. Write notes on:

(8 x 5 = 40)

1. Chemical regulation of respiration.
2. Types of muscle.
3. Pyramidal tract.
4. Heart rate.
5. Functions of liver.
6. Lactation.
7. Cushing's syndrome.
8. Intrinsic mechanism of coagulation.

III. Short Answers on:

(10 x 2 = 20)

1. Enzymes in pancreatic juice.
2. Testicular hormones.
3. Acquired immunity.
4. Blood groups.
5. Neuroglia.
6. Taste receptors.
7. Functions of skin.
8. Cyanosis.
9. Gigantism.
10. Define Stroke volume.

[LI 6253]

FEBRUARY 2016

Sub. Code: 6253

**FIRST YEAR BPT EXAMINATION
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Discuss the mechanism of Blood Coagulation. Add a note on Haemophilia.
2. Define Blood Pressure. Discuss the factors regulating Arterial pressure.

II. Write notes on:

(8 x 5 = 40)

1. Micturition Reflex.
2. Blood Grouping.
3. Salivary Juice secretion.
4. Endometrial cycle.
5. Visual pathway.
6. Calcitrophic Hormones.
7. Functions of Hypothalamus.
8. Isotonic and Isometric contractions.

III. Short answers on:

(10 x 2= 20)

1. Name the Lung volumes.
2. Any four functions of Thyroxine.
3. Functions of Placenta.
4. Sarcomere.
5. List the types of Hypoxia.
6. Phagocytosis.
7. Stroke Volume.
8. Functions of Cerebrospinal fluid.
9. List the refractive errors.
10. Hazards of blood transfusion.

[LJ 6253]

AUGUST 2016

Sub. Code: 6253

**BPT EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Erythropoiesis. Explain the different stages of Erythropoiesis. List the factors influencing Erythropoiesis.
2. Explain in detail about the molecular mechanism of Skeletal muscle contraction with a neat diagram.

II. Write notes on:

(8 x 5 = 40)

1. Mechanism of secretion of hydrochloric acid in stomach.
2. Renin – angiotensin system.
3. Actions of thyroid hormone.
4. Hormonal regulation of menstrual cycle.
5. Conducting system of heart.
6. Non-respiratory functions of lung.
7. Cerebrospinal fluid.
8. Errors of refraction.

III. Short answers on:

(10 x 2 = 20)

1. What is apoptosis?
2. Name any four Gastro Intestinal Hormones.
3. Name the types of sweat glands. Mention any two differences between them.
4. Name the different ways by which heat loss occurs in our body.
5. What is Diabetes Mellitus?
6. Functions of Sertoli cells.
7. Draw and mark the normal waves of Electrocardiogram.
8. Define vital capacity.
9. Mention any two uses of Electroencephalogram.
10. Name any two tests for hearing.

[LK 6253]

FEBRUARY 2017

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Cardiac output. Explain various factors regulating Cardiac output.
2. What is a Synapse? Classify synapse. Explain the properties of synapse.

II. Write notes on:

(8 x 5 = 40)

1. Phagocytosis.
2. Erythroblastosis foetalis.
3. Neuroglia.
4. Surfactant.
5. Mechanism of hydrochloric acid secretion.
6. Functions of liver.
7. Conducting system of Heart.
8. Spermatogenesis.

III. Short answers on:

(10 x 2 = 20)

1. Complications of mismatched blood transfusion.
2. Tidal volume.
3. All or None Law.
4. Emulsification of fat.
5. Heart sounds.
6. Acromegaly.
7. Neurotransmitters.
8. Functions of middle ear.
9. Glomerular filtration rate.
10. Facilitated diffusion.

[LL 6253]

AUGUST 2017

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum: 100 Marks

I. Elaborate on: (2 x 20 = 40)

1. Define Arterial Blood pressure. Discuss in detail about the regulation of Arterial Blood Pressure. Add a note on hypertension.
2. Explain in detail about the transport of oxygen in blood.

II. Write notes on: (8 x 5 = 40)

1. Cell mediated immunity.
2. Excitation contraction coupling.
3. Enterohepatic circulation.
4. Peculiarities of renal circulation.
5. Functions of glucocorticoids.
6. Parkinsonism.
7. Difference between upper and lower motor neuron lesion.
8. Taste pathway.

III. Short answers on: (10 x 2 = 20)

1. Define homeostasis?
2. Endoplasmic reticulum and its function.
3. Erythroblastosis foetalis.
4. Functions of saliva.
5. List the non-excretory functions of kidney.
6. What is cretinism?
7. Name any four contraceptive methods in female.
8. What is surfactant? What is its function?
9. Define shock. What are the types of shock?
10. Name two excitatory and two inhibitory neurotransmitters.

[LM 6253]

FEBRUARY 2018

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain the composition, functions and various phases of gastric secretion.
2. Enumerate the divisions of Cerebellum. Write the connections of cerebellum. Add a note on functions of cerebellum.

II. Write notes on:

(8 x 5 = 40)

1. Active transport.
2. Functions of plasma proteins.
3. Hypoxia.
4. Deglutition reflex.
5. Properties of cardiac muscle.
6. Oral contraceptives.
7. Oxygen–Haemoglobin dissociation curve.
8. Aphasia.

III. Short answers on:

(10 x 2 = 20)

1. Leukaemia.
2. Name the muscle proteins.
3. Frank–starlings Law.
4. Cushing's syndrome.
5. Waves of ECG.
6. Components of reflex arc.
7. Parkinsonism.
8. Taste buds.
9. Apnoea.
10. Proteinuria.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LN 6253]

AUGUST 2018

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. What is erythropoiesis? Write in detail about the stages of erythropoiesis and factors affecting it.
2. Name the ascending tracts of spinal cord. Add a note on pain pathway-its origin, course and its termination.

II. Write notes on:

(8 x 5 = 40)

1. Jaundice.
2. Types of leucocytes and its function.
3. Visual pathway.
4. Renin angiotensin system.
5. Plasma proteins.
6. Regulatory centres of respiration.
7. Adrenocortical hormones.
8. Effects of exercise on cardiovascular system.

III. Short answers on:

(10 x 2 = 20)

1. Rods and cones.
2. Two functions of oxytocin.
3. Functions of bile.
4. What is innate immunity?
5. Name two gastrointestinal hormones.
6. Define cardiac output.
7. Three steps in formation of urine.
8. What is synapse?
9. Cause of cretinism.
10. Name two clotting factors.

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Name the various blood groups. What is the importance of knowing the blood groups? Add a note on transfusion reaction.
2. Describe the location of the respiratory centres and the nervous regulation of respiration.

II. Write notes on:

(8 x 5 = 40)

1. Difference between cortical and juxta-medullary nephrons.
2. Formation of hydrochloric acid.
3. Neuro-muscular junction.
4. Carbon-dioxide transport.
5. Spermatogenesis.
6. Hypothyroidism.
7. Parkinsonism.
8. Conduction system of heart.

III. Short answers on:

(10 x 2 = 20)

1. Refractory period.
2. Platelets.
3. What are the different types of hypoxia?
4. Peptic ulcer.
5. Mention any four functions of calcium.
6. Define Glomerular Filtration Rate. What is the normal GFR?
7. Define cardiac output. Name two methods of determining cardiac output.
8. Functions of middle ear.
9. Structure of skin.
10. Name the muscle proteins.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LP 6253]

AUGUST 2019

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 20 = 40)**

1. Define Immunity. What are types of immunity? Discuss the mechanism of cell mediated immunity.
2. Write in detail about the effects of Brown-Sequard syndrome and diseases of Spinal cord.

II. Write notes on: **(8 x 5 = 40)**

1. Properties of Synapse.
2. Menstrual cycle.
3. Anticoagulants.
4. Passive transport across the cell membrane.
5. Neuromuscular junction.
6. Electrocardiogram.
7. Functions of Kidney.
8. Lung volume and capacities.

III. Short answers on: **(10 x 2 = 20)**

1. Positive feedback.
2. Pyknosis.
3. Action potential.
4. Tetanus.
5. Refractory period.
6. Electromyogram.
7. Bile salts.
8. Disorders of anterior pituitary gland.
9. Medical Termination of Pregnancy (MTP).
10. Dyspnea.

[LQ 6253]

FEBRUARY 2020

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY**

Q.P. Code: 746253

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain in detail the changes that occur in Respiratory system and Cardiovascular system during Exercise.
2. Define Cardiac output. Describe in detail various factors regulating Cardiac Output.

II. Write notes on:

(8 x 5 = 40)

1. Refractory period.
2. Function of Glottis.
3. Surfactant.
4. Excitation contraction coupling.
5. Visual pathway.
6. Hemisection of the spinal cord.
7. Small intestine motility.
8. Diabetes mellitus.

III. Short answers on:

(10 x 2 = 20)

1. Name the enzymes present in Succus entericus.
2. Functions of saliva.
3. Write any two functions of cerebellum.
4. Functions of Rods and Cones.
5. Name any four female contraceptive methods.
6. Define blood volume and mention its types.
7. Types of Cyanosis.
8. Platelets.
9. Write any two uses of Electrocardiogram.
10. Define Synapse.

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[LR 1220]

**DECEMBER 2020
(AUGUST 2020 EXAM SESSION)**

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY
Q.P. Code: 746253**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Name the ascending tracts of Spinal cord. Explain in detail the Pain Pathway. Add a note on types of Pain.
2. Explain in detail about the transport of oxygen in blood. Add a note on Caisson's disease.

II. Write notes on:

(8 x 5 = 40)

1. Male contraceptive methods.
2. Functions of bile.
3. Errors of refraction.
4. Lung function test.
5. Electrocardiogram (ECG).
6. Functions of Nephron.
7. Cushing's Syndrome.
8. Muscle Spindle.

III. Short answers on:

(10 x 2 = 20)

1. Mention the phases/stages of Ovarian cycle.
2. Name any two functions of Pancreatic juice.
3. Define Tidal Volume.
4. List the non excretory functions of kidney.
5. Rigor mortis.
6. Define Erythropoiesis.
7. Functions of cell membrane.
8. Any two hazards of blood transfusion.
9. What is Myoglobin?
10. List the types of Hypoxia.

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[BPT 0921]

**SEPTEMBER 2021
(FEBRUARY 2021 EXAM SESSION)**

Sub. Code: 6253

**BPT DEGREE EXAMINATION
FIRST YEAR - (Regulations of 2004-2005 and 2006-2007 admitted candidates are
merged with 2010-2011)
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY
*Q.P. Code: 746253***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Synapse. Classify Synapse and explain in detail the properties of Synapse.
2. Describe in detail the transport of Carbon dioxide in the blood.

II. Write notes on:

(8 x 5 = 40)

1. Glucagon.
2. Cerebrospinal fluid.
3. Spermatogenesis.
4. Deglutition.
5. Heart sound.
6. Taste pathway.
7. Juxtaglomerular apparatus.
8. Micturition reflex.

III. Short answers on:

(10 x 2 = 20)

1. What is apoptosis?
2. Sarcomere.
3. Components of conducting system of heart.
4. Define stroke volume.
5. Functions of placenta.
6. All or none law.
7. Wallerian degeneration.
8. Surfactant and its significance.
9. Receptors of vision.
10. What are the types of Jaundice?

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[BPT 0122]

**JANUARY 2022
(AUGUST 2021 EXAM SESSION)**

Sub. Code: 6253

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
FIRST YEAR - (Regulations of 2004-2005 & 2006-2007 are merged with 2010-2011)
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY
*Q.P. Code: 746253***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain skeletal muscle contraction with a suitable diagram. Add a note on Myasthenia gravis.
2. Name the hormones of Anterior Pituitary and Posterior Pituitary gland. Write about their actions in detail.

II. Write notes on:

(8 x 5 = 40)

1. Write about Hypoxia and its types.
2. Functions of Cerebrospinal fluid.
3. What is Cushing's syndrome.
4. Explain Micturition Reflex.
5. Write about the conducting system of heart.
6. Non-respiratory functions of lung.
7. Explain Erythroblastosis foetalis.
8. Write about Neuroglia.

III. Short answers on:

(10 x 2 = 20)

1. Neurotransmitters and give examples.
2. Emulsification of fat.
3. All or none Law.
4. Facilitated diffusion.
5. Name the Lung volumes.
6. Functions of Placenta.
7. Stroke Volume.
8. Renin – angiotensin system.
9. Any four functions of Thyroxine.
10. Draw and mark the normal waves of Electrocardiogram.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[BPT 0622]

JUNE 2022

Sub. Code: 6253

(FEBRUARY 2022 EXAM SESSION)

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
FIRST YEAR - (Regulations of 2004-2005 & 2006-2007 are merged with 2010-2011)
PAPER III – PHYSIOLOGY AND APPLIED PHYSIOLOGY
Q.P. Code: 746253**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Define Neuromuscular junction. Describe the transmission of impulse across Neuromuscular junction.
2. Explain in detail the hormones of anterior and posterior pituitary gland.

II. Write notes on:

(8 x 5 = 40)

1. Cell structure and its organelles.
2. Reflex arc.
3. Anemia.
4. Upper motor neuron lesion and lower neuron lesion.
5. Contraception.
6. Oxygen hemoglobin dissociation curve.
7. Thyroxine.
8. Plasma proteins.

III. Short answers on:

(10 x 2 = 20)

1. Define Homeostasis.
2. What is salutatory conduction?
3. Define blood pressure.
4. Heart sounds and its significance.
5. What is anatomical dead space?
6. List the functions of kidney.
7. Blood groups.
8. Taste receptors.
9. Mention any four of gastro intestinal hormones.
10. Name the various lung volumes.
