[KT 503] **AUGUST 2008** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL questions**

Draw Suitable diagrams wherever necessary

I. Essay Questions : **(2 x 15 = 30)**

1. Enumerate the descending tracts of spinal cord.
   Describe in detail the pyramidal tracts.
   Mention its functions and effects of lesion at different levels.
2. Define arterial blood pressure.
   Describe the nervous regulation of arterial blood pressure.

II. Write Short notes on : **(10 x 5 = 50)**

1. Surfactant.
2. Chloride Shift.
3. Artificial respiration.
4. Taste Pathway.
5. Effects of lesion in optic pathway.
6. Brown sequard syndrome.
7. Functions of Thalamus.
8. Pacemaker Potential.
9. Regulation of coronary circulation.
10. Neuromuscular transmission.

III. Short Answer Questions : **(10 x 2 = 20)**

1. Define sarcomere. Mention normal length of sarcomere.
2. Myasthenia gravis.
3. Windkissel effect.
4. Phonocardiogram.
5. Haldane's effect.
6. VO2 Max.
7. Babinski sign.
8. Alpha block.
9. Functions of Aqueous humor.
10. Rinne's Test.

****

[KU 503] **FEBRUARY 2009** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL questions**

I. Essay Questions : **(2 x 15 = 30)**

1. Name the functional divisions of the cerebellum.
   Describe the structure, connections, and functions of cerebellum.
   Mention two signs of cerebellar lesions.
2. Define cardiac cycle.
   Describe in detail with the help of a diagram.
   The mechanical changes during cardiac cycle. Add a note on heart sounds.

II. Write Short notes on : **(10 x 5 = 50)**

1. Neuro-muscular junction.
2. Compare rem and nonrem sleep.
3. Triple response.
4. Describe formation, circulation and functions of cerebrospinal fluid (C.S.F.).
5. Functions of vestibular apparatus.
6. Explain ‘Dark Adaptation’.
7. Organ of corti.
8. Describe decompression sickness.
9. Describe chemical control of respiration.
10. What is myasthenia gravis. Describe the biological basis of its treatment.

III. Short Answer Questions : **(10 x 2 = 20)**

1. Explain the basic defect in astigmatism and its correction.
2. Draw a labelled diagram of arterial pulse and explain.
3. Draw a labelled diagram of pathways for taste.
4. Rigor mortis.
5. Phantom limb.
6. Oxygen debt.
7. What is Bohr’s effect? What is its physiologic significance?
8. Draw a normal E.C.G. and label it.
9. Refractory period.
10. Define Terms: Chronaxie, Rheobase and utilization time.

****

[KV 503] **AUGUST 2009** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions

Draw Suitable diagrams wherever necessary

I. Essay Questions : **(2 x 15 = 30)**

1. Enumerate the ascending tracts in the spinal cord.
   Describe the pathway for pain in detail. Add a note on referred pain.
2. Describe the neural regulation of respiration. Add a note on periodic breathing.

II. Write Short notes on : **(10 x 5 = 50)**

1. Compliance of lungs.
2. Brown sequard syndrome.
3. Blood brain barrier.
4. Surfactant.
5. Chronaxie and rheobase.
6. Pupillary light. Reflexes.
7. Pace maker potentials.
8. Atrial natriuretic peptide.
9. Draw the optic pathway. Depict the lesions at various levels.
10. Peculiarities of pulmonary circulation.

III. Short Answer Questions : **(10 x 2 = 20)**

1. Wernicke's aphasia.
2. Acetyl choline.
3. Parkinson's disease: Features.
4. Rapid – Eye movement sleep.
5. Anti – G. Suit.
6. Clinical significance of electro encephalo gram.
7. Chloride shift.
8. Jugular venous pulse.
9. Contents of middle ear.
10. Functions of placenta.

****

[KW 503] **FEBRUARY 2010** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions

Draw Suitable diagrams wherever necessary

I. Essay Questions : **(2 x 15 = 30)**

1. What are the types of muscular exercise?
   Discuss the various physiological changes occurring during and after exercise.
2. Elucidate how pressure vibrations in the air are perceived as sound.

II. Write Short notes on : **(10 x 5 = 50)**

1. Kirchoff's law and Einthoven's law.
2. Excitation contraction coupling in cardiac muscle.
3. Triple response in skin.
4. Physiological dead space.
5. Dysbarism.
6. Causes of muscle tone.
7. Function of palaeostriatum.
8. Climbing, mossy and parallel fibres.
9. Control of appetite.
10. Induction of sleep.

III. Short Answer Questions : **(10 x 2 = 20)**

1. Tracing of arterial pulse.
2. Reynold's number.
3. Pre load and after load in the heart.
4. Sneezing reflex.
5. Denervation hypersensitivity.
6. Reciprocal inhibition.
7. Consolidation of memory.
8. Formation of cerebrospinal fluid.
9. Gustatory receptors.
10. Dark adaptation.

****

[KX 503] **AUGUST 2010** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions

Draw Suitable diagrams wherever necessary

I. Essay Questions : **(2 x 15 = 30)**

1. Discuss the short term and long term regulation of Arterial blood pressure. Add a note on Neurogenic Hypertension.
2. With the help of a diagram, describe the auditory pathway. Add a note on conduction deafness.

II. Write Short notes on : **(10 x 5 = 50)**

1. Theories of Hearing.
2. Anterior spino thalamic tract.
3. Postural reflexes.
4. Aqueous humor.
5. Taste pathway.
6. Cerebral circulation.
7. Color vision.
8. CO_2 transport.
9. Chemo receptors.
10. Endothelins.

III. Short Answer Questions : **(10 x 2 = 20)**

1. Broca's Area.
2. Spinal Animal.
3. SCUBA diving.
4. Cardiac Index.
5. Bohr's effect.
6. Inverse stretch reflex.
7. Respiratory distress syndrome.
8. Thalamic syndrome.
9. Unipolar limb leads.
10. Astigmatism.

****

[KY 503] **FEBRUARY 2011** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions

Draw Suitable diagrams wherever necessary

I. Essay Questions : **(2 x 15 = 30)**

1. Define Cardiac output.
   Discuss the factors regulating the cardiac output. Add a note on Fick's principle.
2. Trace the visual pathway and the effects of lesion at various points in the pathway.

II. Write Short notes on : **(10 x 5 = 50)**

1. Normal ECG in Lead II.
2. Regulation of coronary blood flow.
3. Compliance of lung.
4. Carbon dioxide transport.
5. Dysbarism.
6. Functions of Thalamus.
7. REM sleep.
8. Decerebrate rigidity.
9. Taste pathway.
10. Theories of hearing.

III. Short Answer Questions : **(10 x 2 = 20)**

1. State Frank Starling's law of the heart.
2. List short term regulation of blood pressure.
3. Intrapleural pressure.
4. State dead space and its normal value.
5. Define Histotoxic hypoxia with an example.
6. What is Bell – Megendie law?
7. Four functions of Reticular activating system.
8. Functions of prefrontal lobe.
9. What is Endo chochlear potential?
10. Delta waves in EEG.

****

[KZ 503] **AUGUST 2011** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 100 Marks**

Answer **ALL** questions

I. Essay Questions : **(2 x 10 = 20)**

1. Name the functional Division of Cerebellum.
   Describe the Structure, connections and functions of cerebellum.
   Mention any two signs of cerebellar lesion.
2. Describe the structure and function of the conducting system of the Heart.
   List the properties of cardiac muscle.

II. Write Short notes on : **(10 x 5 = 50)**

1. Non respiratory functions of lung.
2. What is FRC? How will you measure FRC and its clinical Importance?
3. Artificial respiration.
4. Referred pain and its theories.
5. Special features of coronary circulation.
6. Colour Vision.
7. Taste pathway.
8. Explain Dark adaptation.
9. What is Myasthenia Gravis? Explain the biological basis of it's treatment.
10. Brown sequared syndrome.

III. Short Answer Questions : **(15 x 2 = 30)**

1. Draw the diagram of alveocapillary membrane and write the thickness of it.
2. What is SCUBA?
3. Who discovered J receptors? What is its Physiological significance?
4. What are otolith organs?
5. What is alpha block?
6. Define Frank-Starling law.
7. What is Monroe Kellie Doctrine law?
8. What is Stereognosis? Where is its centre?
9. What are the functions of frontal lobe?
10. What are the mechanoreceptor? Give example.
11. What is summation? Mention its types
12. What are Cholinergic & Adrenergic receptors?
13. Draw the structure of rods & Cones.
14. What is the difference between the Spasticity and Rigidity.
15. Define histotoxic hypoxia.

****

[LA 503] **FEBRUARY 2012** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

Revised (Non-Semester) Regulations

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : 180 Minutes **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on :

1. Draw an oxygen dissociation curve & describe how oxygen is transported in the blood. Depict the Bohr's effect. **(1 x 10 = 10)**
2. Classify pain. What are the receptors for pain? **(1 x 5 = 5)**
   Describe the dual Pathways for pain. What is Analgesic system in the brain?

II. Write Short notes on : **(10 x 2 = 20)**

1. Frank-starling's law of the heart.
2. Cardiac pacemaker potential.
3. Draw a labelled diagram of a normal ECG in lead II. Write a brief note on PR interval.
4. Non progressive shock.
5. Travelling waves in the ear.
6. Ventilation-perfusion ratio.
7. Caisson disease.
8. Brown Sequard syndrome.
9. Functions of Ascending reticular activating system.
10. Role of purkinje cells of cerebellum.

III. Short Answers on : **(15 x 1 = 15)**

1. Astigmatism.
2. Ocular dominance columns.
3. Dicrotic notch.
4. Cardiac reserve.
5. Reynold's number.
6. J point.
7. Extrasystole.
8. Bell-magendie law.
9. Cog-wheel rigidity.
10. Betz cells.
11. Homunculus.
12. Anomic aphasia.
13. Timed vital capacity.
14. Pneumotaxic centre.
15. Asphyxia.

****

[LB 503] **AUGUST 2012** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : 180 Minutes **Maximum: 100 Marks**

Answer **ALL** questions

Draw Suitable diagrams wherever necessary

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Define cardiac output. Discuss the factors affecting cardiac output and any one method of determination. What is the significance of ejection fraction in ventricular functioning?	16	25 min.	15
2. List the ascending tracts in the spinal cord and discuss the tracts of posterior column with diagram.	16	25 min.	15
II. Write notes on:			
1. Chemical regulation of respiration.	3	8 min.	5
2. Functions of middle ear.	3	8 min.	5
3. Hypovolumic shock.	3	8 min.	5
4. Ventilation-Perfusion ratio.	3	8 min.	5
5. Parkinson's disease with treatment.	3	8 min.	5
6. Classification of nerve fibres.	3	8 min.	5
7. Heart Sounds.	3	8 min.	5
8. Errors of refraction with correction.	3	8 min.	5
9. Transport of oxygen in blood.	3	8 min.	5
10. Waves of EEG.	3	8 min.	5
III. Short Answers on:			
1. Reynold's number.	1	5 min.	2
2. Summation.	1	5 min.	2
3. Herring - Breuer inflation reflex.	1	5 min.	2
4. Taste receptor.	1	5 min.	2
5. PR interval in ECG.	1	5 min.	2
6. Chronaxie.	1	5 min.	2
7. CSF formation.	1	5 min.	2
8. Phasic changes in coronary circulation.	1	5 min.	2
9. FEV_1.	1	5 min.	2
10. Dopamine.	1	5 min.	2

****

[LC 503] **FEBRUARY 2013** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : 180 Minutes **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(2 x 7.5 = 15)**

1. Define cardiac cycle. Describe in detail the pressure volume changes that occur during a Cardiac cycle with suitable Diagram.
2. Describe the connections and Functions of Hypothalamus.

II. Write notes on : **(10 x 2.5 = 25)**

1. Functional Residual capacity and its significance.
2. Types of Hypoxia and its cause.
3. Respiratory membrane.
4. Neural centres for Regulation of respiration.
5. Dead space.
6. Pacemaker potential.
7. Cardiac Index.
8. Dark adaptation.
9. Functions of Basal Ganglia.
10. Vestibulo cerebellum.

III. Short Answers on: **(10 x 1 = 10)**

1. Muscles of inspiration.
2. P50.
3. End diastolic volume.
4. Attenuation Reflex.
5. Perimetry.
6. Summation.
7. Referred pain.
8. Types of memory.
9. Thalamic syndrome.
10. Kluver Bucy syndrome.

****

[LD 503] **AUGUST 2013** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : 180 Minutes **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(2 x 7.5 = 15)**

1. Describe the process of transport of carbondioxide from tissues to lungs.
2. Describe in detail the photochemical mechanism of vision and mechanism of dark adaptation.

II. Write notes on: **(10 x 2.5 = 25)**

1. Decompression sickness
2. Middle ear functions
3. Define cardiac output. What are the methods to measure the cardiac output?
4. Heart sounds
5. Define synapse and describe its properties.
6. Describe the functions of thalamus.
7. What are the functions of basal ganglia?
8. Describe the physiology of speech.
9. Decerebrate rigidity.
10. Functions of prefrontal lobe.

III. Short Answers on: **(10 x 1 = 10)**

1. What is P50?
2. What are the types of hypoxia?
3. Mention common refractory errors of the eye.
4. SA node as pacemaker.
5. PR interval.
6. Reflex arc.
7. Functions of cerebrospinal fluid.
8. What is righting reflex?
9. Name the nuclei responsible for hunger and satiety in human being.
10. What is referred pain?

****

[LD 503] **NOVEMBER 2013** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : 180 Minutes **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(2 x 7.5 = 15)**

1. Define the term Blood pressure. Discuss the determinants and regulation of blood pressure.
2. Trace the pathway for perception of pain. Discuss the descending pain modulatory pathways. Discuss the terms 'Gating of pain' and 'Referred pain'.

II. Write notes on: **(10 x 2.5 = 25)**

1. Ionic basis of the pace-maker potential.
2. Windkessel effect of aorta.
3. Illustrate with a diagram, the left ventricular volume and pressure changes during a cardiac cycle.
4. Role of myelin sheath in conduction of nerve impulse.
5. Functions of hypothalamus.
6. Clinical features of cerebellar lesions.
7. Physiological roles of muscle spindle.
8. Chemical regulation of respiration.
9. Hamburger's chloride shift.
10. Role of surfactant in pulmonary function.

III. Short Answers on: **(10 x 1 = 10)**

1. List the calcium transporters on the sarcoplasmic reticular membrane in the ventricular Muscle.
2. State Starling's law of the heart.
3. What is the effect of 2,3 diphosphoglycerate on the oxygen-hemoglobin dissociation curve? Does it help in loading or unloading of oxygen?
4. What are the types of hypoxia?
5. Region of the cochlea which vibrates most for the highest sound frequency in the audible range.
6. Visual field defect when the optic chiasma is cut in the centre.
7. State the refractive error in astigmatism. How is it corrected?
8. What is 'Blind spot'?
9. Receptors for vestibular sensation.
10. Name of tracts made up by second order neurons in the pathway for
    (a) fine touch (b) pain.

****

[LE 503] **FEBRUARY 2014** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : 180 Minutes **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(2 x 7.5 = 15)**

1. Define the terms Cardiac output and Total Peripheral resistance and discuss their determinants.
2. What are the neural mechanisms involved in spontaneous breathing? Discuss chemical regulation of respiration. Distinguish between the two types of respiratory failure.

II. Write notes on: **(10 x 2.5 = 25)**

1. Describe the 3 bipolar limb leads of ECG. What is the significance of (a) PR interval (b) ST segment in an ECG?
2. Discuss the changes in ventricular volume during different phases of the cardiac cycle with a diagram.
3. Discuss any two pulmonary function tests which can detect obstructive lung disease.
4. Trace the pathway for perception of fine touch.
5. Operant conditioning.
6. Clinical features of cerebellar lesions.
7. Define muscle tone and discuss the phenomenon responsible for it. What conditions lead to alterations of tone?
8. Endogenous opioid peptides.
9. Refractory errors of the eye.
10. Discuss the phenomena by which sound waves in air induce action potentials in the cochlear nerve.

III. Short Answers on: **(10 x 1 = 10)**

1. List the types of shock.
2. Define Preload and state its effect on cardiac function.
3. Baroreceptor reflex.
4. What is myocardial infarction? State one ECG change in this condition.
5. Role of myelin sheath in conduction of nerve impulse.
6. Conditions where Plantar response is ‘extensor’.
7. Finding in Weber’s test in conduction deafness of the left side.
8. Muscle actions responsible for (a) normal expiration (b) forced expiration.
9. Oxygen carrying capacity of blood.
10. Hypoxic vasoconstriction – where does it occur and what are its complications?

****

[LF 503] **AUGUST 2014** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 50 Marks**

Answer **ALL** questions

I. Essay: **(1 x 10 = 10)**

1. Define blood pressure. Discuss in brief the various factors which influences the pressure. Add a note on hypertension.

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

1. Neural regulation of respiration.
2. Functions and tests of cerebellum.

III. Short Answer Questions : **(10 x 3 = 30)**

1. Heart sounds.
2. Waves of ECG in Lead II.
3. Different types of hypoxia.
4. Aphasia.
5. Stages of sleep.
6. Optic pathway.
7. Functions of ascending reticular activating system.
8. Components of vestibular apparatus.
9. Features of Parkinson's disease.
10. Functions of middle ear.

****

[LF 503] **NOVEMBER 2014** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 50 Marks**

Answer **ALL** questions

I. Essay : **(1 x 10 = 10)**

1. Define cardiac cycle.
   Describe the sequence of events during cardiac cycle in detail with suitable diagrams.

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

1. Brown Sequard syndrome.
2. Oxygen dissociation curve.

III. Short Answer Questions : **(10 x 3 = 30)**

1. Dead space.
2. Hering Breuer reflex.
3. Korotkoff sounds.
4. Draw a diagram of the pathway of crude touch and label it.
5. Functions of CSF.
6. Fluent aphasia.
7. Receptor potential.
8. Motor homunculus.
9. Attenuation reflex.
10. Taste pathway.

****

[LG 503] **FEBRUARY 2015** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(1 x 10 = 10)**

1. Define cardiac output. Explain the factors regulating cardiac output. Add a note on ejection fraction.

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

1. Auditory pathway with suitable diagram
2. Adjustment in respiratory physiology at high altitudes

III. Short Answer Questions : **(10 x 3 = 30)**

1. Accommodation reflex
2. Conducting system of the heart
3. Artificial respiration
4. Conditioned reflexes
5. Surfactant
6. Central analgesic system
7. VO_2 Max
8. Functions of CSF
9. Decompression sickness
10. Babinski's sign and its clinical significance

****

[LH 503] **AUGUST 2015** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(1 x 10 = 10)**

1. Describe in detail the Pyramidal tract.
   List out the differences between UMN and LMN lesions.

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

1. Functions of Hypothalamus.
2. Baroreceptor reflex.

III. Short Answer Questions : **(10 x 3 = 30)**

1. Dark adaptation.
2. Periodic breathing.
3. Pacemaker potential.
4. Cardiac reserve.
5. Referred pain theories.
6. Features of Shock.
7. Peak expiratory flow rate.
8. Oxygen debt.
9. Mass Reflex.
10. Impedance matching.

****

[LI 503] **NOVEMBER 2015** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q. P. Code : 524054

Time : Three hours **Maximum: 50 Marks**

Answer **ALL** questions

I. Elaborate on: **(1 x 10 = 10)**

1. Explain the chemical regulation of respiration. Add a note on oxygen toxicity.

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

1. Effects of lesions in optic pathway.
2. Determinants of Blood pressure.

III. Short Answer Questions : **(10 x 3 = 30)**

1. Phasic changes in coronary blood flow.
2. AV nodal delay.
3. Properties of reflex.
4. Splanchnic circulation.
5. Functions of middle ear.
6. Nitrogen narcosis.
7. Effects of positive ‘g’.
8. Papez circuit.
9. Heart sounds.
10. Differentiate REM and NREM sleep.

****

[LJ 503] **AUGUST 2016** **Sub. Code : 4054**

FIRST M.B.B.S. DEGREE EXAMINATION

PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS - II

Q. P. Code : 524054

Time : Three hours **Maximum: 50 Marks**

Answer **ALL** questions.

I. Elaborate on: **(1 x 10 = 10)**

1. What is cardiac cycle? Describe the various events in the cardiac cycle.

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

1. Golgi tendon reflex.
2. Oxygen-haemoglobin dissociation curve.

III. Short answers on: **(10 x 3 = 30)**

1. Putamen circuit of basal ganglia.
2. Caisson disease.
3. Hering - Breuer inflation reflex.
4. Einthoven’s law.
5. Endo cochlear potential.
6. Describe the normal waves in electro encephalogram (EEG).
7. Presbyopia.
8. Bainbridge reflex.
9. Transpulmonary pressure.
10. Wernicke’s and global aphasia.

****

[LJ 503] NOVEMBER 2016 **Sub.Code :4054**

M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS - II

Q.P. Code: 524054

Time: Three hours **Maximum : 50 Marks**

Answer All Questions

I. Essay: **(1 x 10 = 10)**

1. Describe the oxygen transport in blood. Add note on fetal haemoglobin.

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

1. Auto rhythmicity of heart.
2. Describe the connections and functions of temporal lobe.

III. Short answers on: **(10 x 3 = 30)**

1. Taste receptors.
2. Functions of utricle and saccule.
3. Sleep-Wake theory.
4. Mechanism of accommodation.
5. P-R interval.
6. Trichromatic theory of color vision.
7. Mean arterial pressure.
8. Reward and punishment centers.
9. Changes in cardiac output during exercise.
10. Surfactant.

****

[LL 503] AUGUST 2017 **Sub.Code :5054**

M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS - II

Q.P. Code: 525054

Time: Three hours **Maximum : 50 Marks**

Answer All Questions

I. Essay: **(1 x 10 = 10)**

1. Define blood pressure. Explain in detail short term regulation of blood pressure. Add a note on hypertension.

II. Write notes on: **(5 x 4 = 20)**

1. Compliance.
2. Hypoxic hypoxia.
3. Pacemaker potential.
4. Stages of sleep.
5. Functions of cerebellum.

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

1. Triple response.
2. Bain bridge reflex.
3. Residual volume.
4. Artificial respiration.
5. Functions of middle ear.
6. Features of Parkinsonism.
7. Papez circuit.
8. Name two facilitatory and inhibitory neurotransmitters and their sites of action.
9. Saltatory conduction.
10. Sensations carried by posterior column.

****

[LN 503] AUGUST 2018 **Sub.Code :5054**

M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS - II

Q.P. Code: 525054

Time: Three hours **Maximum : 50 Marks**

Answer All Questions

I. Essay: **(1 x 10 = 10)**

1. Describe the classification, connections and functions of cerebellum.

II. Write notes on: **(5 x 4 = 20)**

1. Triple response.
2. Non-respiratory functions of lungs.
3. Mechanism of receptor potential.
4. Factors regulating cardiac output.
5. Anatomic dead space.

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

1. The law of projection.
2. Types of hypoxia.
3. Antegrade amnesia.
4. Draw a normal electrocardiogram (ECG). What is Einthoven's triangle?
5. Respiratory exchange Ratio.
6. Attenuation reflex.
7. Mean arterial pressure.
8. Reynold's number.
9. Astigmatism.
10. Functions of thalamus.

****

[LN 503] NOVEMBER 2018 **Sub.Code :5054**

M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS - II

Q.P. Code: 525054

Time: Three hours **Maximum : 50 Marks**

Answer All Questions

I. Essay: **(1 x 10 = 10)**

1. Discuss in detail the neural regulation of respiration.

II. Write notes on: **(5 x 4 = 20)**

1. Ventricular action potential.
2. Tract of Gall and Burdach.
3. Venous return.
4. Lung volumes and capacities.
5. Fetal circulation.

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

1. Clinical uses of ECG.
2. P_{50}.
3. Types of deafness.
4. Blood – brain barrier.
5. Anaphylactic shock.
6. Red – green color blindness.
7. Reflex arc.
8. Primary taste sensations.
9. Functions of limbic system.
10. Physiological dead space.

****

[LP 503] AUGUST 2019 **Sub.Code :5054**

M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS – II

Q.P. Code: 525054

Time: Three hours **Maximum : 50 Marks**

Answer All Questions

I. Essay: **(1 x 10 = 10)**

1. Describe the optic pathway from the photoreceptors to the visual cortex. Add a note on visual field defects produced by lesions at various levels of the pathway.

II. Write notes on: **(5 x 4 = 20)**

1. Brown – sequard syndrome.
2. Histotoxic hypoxia.
3. Physiology of fetal circulation before and after birth.
4. Special features of coronary circulation.
5. Caisson's disease.

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

1. Implicit memory.
2. Stages of sleep cycle.
3. Denervation hypersensitivity.
4. Determinants of force of contraction of heart.
5. Bohr effect.
6. Jugular venous pulse.
7. Endogenous opioids.
8. Mouth to mouth respiration.
9. Heart block.
10. Respiratory distress syndrome of new born.

****

[LP 503] NOVEMBER 2019 **Sub.Code :5054**

M.B.B.S. DEGREE EXAMINATION
FIRST YEAR
PAPER IV – PHYSIOLOGY INCLUDING BIO-PHYSICS - II

Q.P. Code: 525054

Time: Three hours **Maximum : 50 Marks**

Answer All Questions

I. Essay: **(1 x 10 = 10)**

1. Describe the origin, course, termination and functions of pyramidal tract. Write a note on upper motor lesion.

II. Write notes on: **(5 x 4 = 20)**

1. Hypoxic Hypoxia.
2. Thalamic syndrome.
3. Surfactant.
4. Sino aortic reflex.
5. Myocardial Infarction.

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

1. Measurement of dead space.
2. Haldane effect.
3. Ventilation perfusion ratio.
4. Give two examples of high cardiac output state and low cardiac output state.
5. AV nodal delay.
6. Synaptic plasticity.
7. Prefrontal lobotomy.
8. Accommodation reflex pathway.
9. Travelling wave theory of hearing.
10. Taste pathway.

****