Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2009

Time : 3 Hrs. [Max. Marks : 100]

ANATOMY - PAPER I (Revised Scheme II)

QP Code: 1075

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Name the intrinsic muscles of larynx. Give thea) Origin b) Insertion c) Nerve supply d) Actions of cricothyroid muscle. Add a note on movements of vocal cords
2. Define Mediastinum. Mention the contents of posterior mediastinum. Describe the thoracicpart of Esophagus. Add a note on its applied anatomy

SHORT ESSAY **10 X 5 = 50 Marks**

3. Lymphatic drainage of tongue
4. Carotid sheath
5. Corpus callosum
6. Falx cerebri
7. Typical intercostal space
8. Cavernous sinus
9. Pronation & supination
10. Yolk sac
11. Microscopic structure of elastic cartilage
12. Microscopic structure of palatine tonsil

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Superficial plamar arch
14. Enumerate muscles of hypothenar eminence
15. Roof of IVth ventricle
16. Development of face
17. Meckels cartilage
18. Parotid duct
19. Draw and label microscopic structure of elastic artery
20. Stratified squamous epithelium
21. Transverse sinus of pericardium
22. Archicerebellum

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2009

Time : 3 Hrs.

[Max. Marks : 100]

ANATOMY – PAPER II (Revised Scheme II)

QP Code: 1076

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe the interior of rectum and anal canal. Add a note on it's
   a) Development b) Applied anatomy
2. Name the arches of the foot. Describe the medial longitudinal arch. Add a note on its applied anatomy

SHORT ESSAY **10 X 5 = 50 Marks**

3. Y chromosome
4. Karyotyping
5. Boundaries of popliteal fossa with neat diagram
6. Cruciate ligaments of knee joint
7. Lymphatic drainage of stomach
8. Paramesonephric duct
9. Rotation of gut
10. Microscopic structure of liver
11. Microscopic structure of vas deferens
12. Hepatorenal pouch

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Contents of adductor canal
14. Anserine bursa
15. Draw and label microscopic structure of urinary bladder
16. Draw and label microscopic structure of duodenum
17. Descent of testis
18. Ectopic pregnancy
19. Enumerate supports of urinary bladder
20. Enumerate branches of celiac trunk
21. Femoral sheath
22. Kline Felter syndrome

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2009

Time: 3 Hrs.

[Max. Marks: 100]

PHYSIOLOGY - PAPER I (Revised Scheme II)

QP Code: 1077

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Enumerate the important Gastro-intestinal hormones. Discuss briefly their various actions on the G.I Tract
2. With a neat flowchart, describe in detail the steps of coagulation of blood. Enumerate the various coagulation factors. Add a note on anticoagulants

SHORT ESSAY **10 X 5 = 50 Marks**

3. Innervations of the heart
4. Standard limb leads
5. Water – Hammer pulse
6. Coronary circulation
7. Rennin-Angiotensin system
8. Chloride shift
9. Glomerular filtration rate
10. Cough reflex
11. Dead space
12. Role of Adenosine in blood flow regulation

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Factors causing hypo effective heart
14. Nephrotic syndrome
15. Bicarbonate buffer system
16. Functions of Hemoglobin
17. Alkaline tide
18. Periodic breathing
19. Oxygen dissociation curve
20. Positive 'G'
21. Swallowing
22. Vitamin K

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2009

Time : 3 Hrs.

[Max. Marks : 100]

PHYSIOLOGY - PAPER II (Revised Scheme II)

QP Code: 1078

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. With the help of a suitable diagram, describe the mechanisms of action of growth hormone. Describe the functions of growth hormone
2. Describe the role of spinal cord and medulla in the control of movement and posture

SHORT ESSAY **10 X 5 = 50 Marks**

3. Physiology of puberty in females
4. Role of calcium in muscle contraction
5. Ionic basis of nerve action potential
6. Effects of thyroxine on body metabolism
7. Physiological basis of differences in cardiovascular effects of adrenaline & noradrenaline
8. Functions of spinocerebellum
9. Neuromuscular blockers
10. Pathways for fast and slow pain
11. Cardiovascular changes on exposure to cold
12. Mechanisms of colour vision

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Role of cyclic GMP as a second messenger
14. Functions of inhibin
15. Alpha-gamma colinkage
16. Functions of prolactin
17. Physiological basis of use of a drug in the treatment of stroke
18. Rheobase
19. Role of vitamin D in the prevention of osteoporosis
20. Functions of parietal lobe of the brain
21. Mechanism of increased BMR in hyperthyroidism
22. Physiological basis of use of a drug in relieving inflammatory pain

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2009

Time: 3 Hours [Max. Marks: 100]

BIOCHEMISTRY (Revised Scheme II)

QP Code: 1079 – PAPER I (Max. Marks: 50)

Your answer shall be specific to question asked. Draw neat and labelled diagrams wherever necessary. **Use separate answer books for section A and section B.**

LONG ESSAY **1 X 10 = 10 Marks**

1. Explain in detail the â oxidation of palmitic acid with its energetics

SHORT ESSAY **5 X 5 = 25 Marks**

2. Function of carbohydrates
3. Competitive inhibition and its importance in medicine
4. Metabolic changes in diabetes mellitus
5. Fatty liver and lipotropic factors
6. Disorders of sulphur containing aminoacids

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Mention two isotopes and mention their application in medicine
8. Mention four tumor markers with their significance
9. Role of cytochrome P_{450} in detoxification reaction
10. Biologically important compounds derived from Tyrosine
11. What is Reactive oxygen species (ROS)? How are they formed?

QP Code: 1080 – PAPER II (Max. Marks: 50)

Use separate answer book

LONG ESSAY **1 X 10 = 10 Marks**

1. Describe in detail biosynthesis of protein and discuss its regulation

SHORT ESSAY **5 X 5 = 25 Marks**

2. Name 5 Heme proteins and their functions
3. Unconjugated hyperbilirubinemia
4. Lesch-Nyhan syndrome
5. Tests based on metabolic and excretory function of liver
6. Applications of recombinant DNA technology

SHORT ANSWERS **5 X 3 = 15 Marks**

7. What is the difference between endonuclease and restriction endonuclease? Give two examples of restriction endonuclease
8. Deficiency manifestation of Vit A
9. Role of dietary fibre in the body
10. Biochemical role of pyridoxine
11. Name the trace elements. Explain the biochemical role of any two trace elements

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June/July 2009

Time : 3 Hrs. **[Max. Marks : 100]**

ANATOMY - PAPER I (Revised Scheme II)

QP Code: 1075

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY — 2 X 10 = 20 Marks

1. Name the muscles of the soft palate. Give a) Origin b) Insertion c) Nerve supply of levator veli palatine muscle. Describe the movements of soft palate. Add a note on development of soft palate
2. Describe the female mammary gland under the following headings a) Blood supply b) Lymphatic drainage c) Nerve supply d) Applied Anatomy

SHORT ESSAY — 10 X 5 = 50 Marks

3. Venous drainage of the heart
4. Boundaries and contents of superior mediastinum
5. Hyoglossus muscle
6. Quadrangular space
7. Radio – Ulnar joint
8. Mid brain
9. Oogenesis
10. Development of right atrium
11. Facial artery
12. Inferior cerebellar peduncle

SHORT ANSWERS — 10 X 3 = 30 Marks

13. Name the rotator cuff muscles
14. Structures in the parotid gland
15. Labeled diagram of microscopic structure of a large artery
16. Nerve supply of tongue
17. Structures in the hilum of right lung
18. Flexor retinaculum of wrist
19. Openings in thoracic diaphragm
20. Neural crest cells
21. Fallots tetralogy
22. Transitional epithelium

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June/July 2009

Time : 3 Hrs. **[Max. Marks : 100]**

ANATOMY - PAPER II (Revised Scheme II)

QP Code: 1076

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe the prostate gland under the following headings a) Capsule b) Lobes c) Blood supply d) Applied Anatomy
2. Describe the intracapsular structures of the knee joint. Add a note on locking and unlocking of the knee joint

SHORT ESSAY **10 X 5 = 50 Marks**

3. Prenatal diagnosis
4. Karyo typing
5. Deltoid ligament
6. Adductor canal
7. Portal vein
8. Ischiorectal fossa
9. Development of rectum and anal canal
10. Development of pancreas
11. Microscopic structure of placenta
12. Ligaments of spleen

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Contents of superficial perineal pouch
14. Ileocaecal folds
15. Barr body
16. Ovarian bursa
17. Vas deferens
18. Blood supply of suprarenal gland
19. Varicose veins
20. Popliteus muscle
21. Draw and label microscopic structure of appendix
22. Draw and label microscopic structure of gall bladder

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June/July 2009

Time: 3 Hrs. **[Max. Marks: 100]**

PHYSIOLOGY - PAPER I (RS-2 & RS-3)

QP Code: 1077

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Define Hypoxia. Classify hypoxias and explain the features seen in the different types of hypoxia
2. Draw a neat labeled diagram of the cardiac cycle, correlating it with pressure and volume changes. Explain the events in detail

SHORT ESSAY **10 X 5 = 50 Marks**

3. T Lymphocyte
4. Body fluid compartments
5. Oxygen therapy
6. Diuresis
7. Juxta-Glomerular Apparatus
8. Chloride shift
9. P-R interval
10. Exocrine secretion of Pancreas
11. Dietary fibre
12. Second stage of deglutition

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Draw a neat labeled diagram showing the innervation of bladder
14. What is migratory motor complex?
15. What is vagal tone? Explain
16. What is the physiologic role of mesangial cells?
17. What is Triple response?
18. What is Alveolar capillary block syndrome?
19. Diagrammatically represent the ventilatory changes during exercise
20. What are the sequelae after partial gastrectomy?
21. Refractory period of a cardiac muscle fibre
22. Draw a neat labeled diagram of the Glomerular filtering membrane

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June/July 2009

Time : 3 Hrs. **[Max. Marks : 100]**

PHYSIOLOGY - PAPER II (RS-2 & RS-3)

QP Code: 1078

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. What are the functions of ovary? How are the ovarian functions regulated?
2. Describe the origin, course, termination and functions of corticospinal tract with the labeled diagram. List the effects of lesion of the tract in right internal capsule

SHORT ESSAY **10 X 5 = 50 Marks**

3. Streth reflex
4. Brown-sequard syndrome
5. Parkinsonism
6. Impendence matching
7. Light and accommodation reflexes
8. Describe the pathway for smell
9. Tests for hearing
10. Sertoli cell
11. Immunological tests for pregnancy
12. Cushing's syndrome

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Safe period
14. Insulin
15. Myxedema
16. Placental hormones
17. Cerebro - spinal fluid
18. Sweat gland
19. Saltatory conduction
20. Hypermetropia
21. Strength - duration curve
22. Tetany

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June/July 2009

Time: 3 Hours **[Max. Marks: 100]**

BIOCHEMISTRY (RS-2 & RS-3)

QP Code: 1079 – PAPER I (Max. Marks: 50)

Your answer shall be specific to question asked. Draw neat and labelled diagrams wherever necessary. **Use separate answer books for section A and section B.**

LONG ESSAY **1 X 10 = 10 Marks**

1. Describe in detail the sources, absorption, functions and factors regulating blood calcium level. Discuss about any clinical condition with abnormal blood calcium level.

SHORT ESSAY **5 X 5 = 25 Marks**

2. What are the biologically important compounds derived from cholesterol?
3. Prostaglandins
4. Give four examples of transmethylation reactions
5. Maple syrup urine disease
6. Energy releasing steps of citric acid cycle

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Name the two endopeptidases with their specifications
8. What are functions of apolipoproteins?
9. Give the significance of uronic acid pathway
10. Clinical importance of transamination
11. Detoxification of alcohol

QP Code: 1080 – PAPER II (Max. Marks: 50)

Use separate answer book

LONG ESSAY **1 X 10 = 10 Marks**

1. Describe in detail the sources, absorption, functions and factors regulating blood calcium level. Discuss about any clinical condition with abnormal blood calcium level.

SHORT ESSAY **5 X 5 = 25 Marks**

2. What are the sources, functions and daily requirement of vitamin A?
3. Transport proteins of blood
4. Formation and fate of bilirubin in the body
5. Basal metabolic rate
6. Bicarbonate buffer system of blood

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Polymerase chain reaction
8. What is the daily requirement of Thiamine, Niacin and Pyridoxine?
9. Give enzyme defect in the following conditionsa) Drug induced haemolytic anaemia b) Criggler-Najjar syndrome
10. Creatinine clearance test
11. Give the normal blood level of the followinga) Fasting blood glucose b) Total protein c) Urea d) Bicarbonate e) Sodium f) Pottasium

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - December 2009

Time : 3 Hrs. **[Max. Marks : 100]**

ANATOMY - PAPER I (Revised Scheme II)

QP Code: 1075

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Name the muscles of the tongue. Give thea) Origin b) Insertion c) Nerve supply d) Actions. Add a note on its development
2. Name the spaces in the palm. Describe the boundaries of midpalmar space. Add a note on its applied anatomy

SHORT ESSAY **10 X 5 = 50 Marks**

3. Tympanic membrane
4. Lingual artery
5. Circle of willis
6. IVth ventricle
7. Right atrium
8. First pharyngeal arch
9. Cubital fossa – boundaries and contents
10. Supinator muscle
11. Epiphysis
12. Microscopic structure of pituitary gland

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Mitochondria
14. Development of parathyroid
15. Claw hand
16. Suboccipital triangle
17. Sigmoid sinus
18. Blood supply of palatine tonsil
19. Coracoclavicular ligament
20. Nerve supply of heart
21. Draw and label medum sized artery
22. Blood supply of lungs

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - December 2009

Time: 3 Hrs. [Max. Marks: 100]

ANATOMY - PAPER II (Revised Scheme II)

QP Code: 1076

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe the urinary bladder under following headings
   a) Surfaces & borders b) Relations c) Nerve supply d) Blood supply e) Development

2. Describe the hip joint under following headings
   a) Type & bones forming b) Ligaments c) Movements and muscles producing
   d) Applied Anatomy

SHORT ESSAY **10 X 5 = 50 Marks**

3. Spleen – situation, surfaces, relations blood supply
4. Lymphatic drainage of stomach
5. Portal vein- formation, course, tributaries
6. Prostate capsule, lobes, blood supply, applied anatomy
7. Microscopic structure of ovary
8. Interior of anal canal
9. Perineal membrane
10. Deep peroneal nerve
11. Adductor canal – boundaries and contents
12. Femoral sheath

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Give four clinical features of Down's syndrome
14. Name the branches of inferior mesenteric artery
15. Draw labelled diagram of microscopic structure of Epididymis
16. Name the layers of suprarenal cortex and the hormones secreted by each layer
17. Name the bones forming lateral longitudinal arch
18. Derivatives of midgut
19. Derivatives of cartilage of 1st arch
20. Hypospadias
21. Development of uterus
22. Tendocalcaneus

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - December 2009

Time: 3 Hrs. **[Max. Marks: 100]**

PHYSIOLOGY - PAPER I (RS-2 & RS-3)

QP Code: 1077

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Name the important plasma proteins. What is the normal value? What are the functions of plasma proteins?
2. Describe the conducting system of heart. Explain the pathway of cardiac impulse. What is A-V nodal delay? What is its importance?

SHORT ESSAY **10 X 5 = 50 Marks**

3. Intercellular connections
4. Excitation – contraction coupling
5. Name the phases of deglutition. Explain the second phase of deglutition
6. Classify Hypoxia. Explain any two of them
7. Four functions of stomach
8. Jugular Venous Pulse (J.V.P)
9. Anticoagulants
10. Saliva
11. Chloride shift
12. Acidification of urine

SHORT ANSWERS **10 X 3 = 30 Marks**

13. What is meant by Exocytosis and Endocytosis? Give one example for each
14. Resting membrane potential
15. Landstainer's law
16. Cystometrogram
17. Tabetic bladder
18. Two functions of juxtra glomerular apparatus
19. Explain facilitated diffusion with an example
20. T-Lymphocyte
21. Functions of thrombocytes
22. Purpura and haemophilia

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - December 2009

Time : 3 Hrs. **[Max. Marks : 100]**

PHYSIOLOGY - PAPER II (RS-2 & RS-3)

QP Code: 1078

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.

LONG ESSAY **2 X 10 = 20 Marks**

1. Draw a neat labeled diagram of the muscle spindle. Explain how muscle tone is maintained in the body
2. What are mineralocorticoids? What is their mode of action? Add a note on Conn's syndrome

SHORT ESSAY **10 X 5 = 50 Marks**

3. Tabulate the differences between classical decerebration and Ischemic decerebration
4. Contents of middle ear
5. Compare and contrast pyramidal and extra pyramidal systems
6. Mechanism of insulin action at cellular level
7. Accommodation reflex pathway. What is Argyll Robertsons Pupil?
8. What are functions of Hypothalamus?
9. What are the effects of hypophysectomy?
10. What are negative feedback loops?
11. Smell and taste are linked - explain
12. Differentiate between actions of Nor - Epinephrine and Epinephrine

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Macular sparing
14. Explain the basis of polyphagia in diabetes mellitus
15. Feto-placental unit
16. Amacrine and Horizontal cells
17. Oxytocin
18. Inhibin
19. Endogenous pyrogens
20. Infertility in female
21. Features of myxoedema
22. Astrocytes

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - December 2009

Time: 3 Hours **[Max. Marks: 100]**

BIOCHEMISTRY (RS-2 & RS-3)

QP Code: 1079 – PAPER I (Max. Marks: 50)

Your answer shall be specific to question asked. Draw neat and labelled diagrams wherever necessary. **Use separate answer books for section A and section B.**

LONG ESSAY **1 X 10 = 10 Marks**

1. What is the normal fasting blood glucose level? Why does it need to be regulated? Describe the various mechanisms of its regulation

SHORT ESSAY **5 X 5 = 25 Marks**

2. Composition and function of any two phospholipids
3. Cell membrane
4. Essential amino acids
5. Enumerate ketone bodies. How they are formed?
6. Phenyl ketonuria

SHORT ANSWERS **5 X 3 = 15 Marks**

7. Formation of Ammonia and its toxicity in brain
8. What is Zymogen? Give examples of zymogen
9. Diagrammatic representation of mitochondrial electron transport chain and location of ATP formation sites
10. Mechanism of carcinogenesis
11. Give two examples of detoxification by oxidation and reduction

QP Code: 1080 – PAPER II (Max. Marks: 50)

Use separate answer book

LONG ESSAY **1 X 10 = 10 Marks**

1. Describe the sources, functions, deficiency, manifestations and daily requirement of vitamin A

SHORT ESSAY **5 X 5 = 25 Marks**

2. Regulation of blood calcium level
3. Catabolism of purines and related disorders
4. Post-transcriptional modifications
5. Acute intermittent porphyria
6. Role of kidney in regulation of blood pH

SHORT ANSWERS **5 X 3 = 15 Marks**

7. What is complete protein?
8. Enumerate sources of atoms of purine ring by a diagrammatic representation
9. Give four characteristic feature of genetic code
10. What is recombinant DNA?
11. Clinical interpretation of estimation of Thyroid Stimulating Hormone (TSH) in blood

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