Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination – June / July 2011

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

ANATOMY - PAPER I (RS 2 & RS 3)

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. Describe the blood supply of heart in detail
2. Describe the muscles of mastication in detail

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

3. Bronchopulmonary segments
4. Blastocyst
5. Microscopic structure of cardiac muscle
6. Somites
7. Axillary artery
8. Movements of supination and pronation
9. Circle of willis
10. Lacrimal apparatus
11. Carotid sheath
12. Development andlymphatic drainage of tongue

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

13. Sternal angle
14. Palmar aponenrosis
15. Laws of ossification
16. Cells of connective tissue
17. Musculocutaneous nerve
18. Clavi – pectoral fascia
19. Claw hand
20. Filum terminale
21. Ansa cervicalis
22. Structures passing through foramen magnum

* * * * *

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination – June / July 2011

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

ANATOMY - PAPER II (RS 2 & RS 3)

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 Uterus in detail. Add a note on its development
2. Describe the parts, blood supply, lymphatic drainage, microscopic structure and development of pancreas

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

3. Porto – caval anastamoses
4. Ischio – rectal fossa
5. Bile duct
6. Lesser sac
7. Innervation and development of urinary bladder
8. Right supra renal gland
9. Inguinal ligament
10. Hamstring muscles
11. Developmental derivatives of mid gut
12. Fertilization

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

13. Microscopic structure of ileum
14. Mutation
15. Sex – chromatin
16. Development of rectum and anal canal
17. Linea aspera of femur
18. Lymphatic drainage of stomach
19. Flexor retinaculum
20. Cutaneous innervation of dorsum of foot
21. Medial longitudinal arch of foot
22. Microscopic structure of ureter

* * * * *

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June / July 2011

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. Discuss the formation and fate of ketone bodies

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

2. Glycogenolysis
3. Decarboxylation of amino acids
4. Diagnostic uses of enzymes
5. Fatty acid synthase complex
6. Detoxification by oxidation

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

7. Free radicals and disease
8. Active transport
9. Essential amino acids
10. Any three enzymes unique to gluconeogenesis
11. Uncouplers of oxidative phosphorylation

QP Code: 1080 – **PAPER II (Max. Marks: 50)**
Use separate answer book

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

1. What is genetic code. Describe the process of eukaryotic translation

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

2. Nitrogen balance
3. Functions of albumin
4. Biochemical functions and deficiency manigestations of vitamin D
5. Functions of iodine
6. Structure of mRNA

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

7. Types and causes of beri – beri
8. Causes of sickle cell anemia
9. Immunoglobulin A (IgA) and immunoglobulin M (IgM)
10. Describe any three renal function tests
11. Deficiency features of orotic aciduria. Explain the biochemical basis of manifestation

Rajiv Gandhi University of Health Sciences

MBBS PHASE I Degree Examination – June / July 2011

Time: Three Hours **Max. Marks: 100 Marks**

PHYSIOLOLOGY – I
(RS 2 & RS 3)
Q.P. CODE: 1077

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

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Name the lead systems employed in recording Electrocardiogram. Draw and label a typical Electrocardiogram and explain the causation of various deflections and intervals
2. Classify the leucocytes and describe their morphological features with the help of diagrams. Elaborate the steps involved in the phagocytic function of neutrophils

SHORT ESSAYS **10 x 5 = 50 Marks**

3 Draw a diagram of Juxta Glomerular apparatus. Explain its functions

4 Mention the causation, morphological features of red cells and treatment of pernicious anemia

5 Describe the factors regulating gastric emptying

6 Describe the chemical regulation of respiration

7 Describe how cushing's reflex is activated and its effect on systemic blood pressure

8 Define Fick's principle. Give details of estimation of cardiac output based on it

9 Describe the mode of Glucose reabsorption in the proximal tubule of the Nephron and TmG

10 What are the types of jaundice, their salient features and method of differentiation

11 Give a brief account of respiratory distress syndrome (Hyaline Membrane Disease)

12 Describe the pharyngeal phase of deglutition

SHORT ANSWERS **10X3=30 Marks**

13 What are micelles and how are they formed

14 Define functional residual capacity, its normal range and significance

15 Explain the operation of Hering – Breuer reflex

16 Mention the likely mode of development of diabetes insipidus and its resultant signs and symptoms

17 What are the types of dead space and their extent

18 What is facilitated diffusion and how does it differ from simple diffusion

19 Name the important proteolytic enzymes and their mode of activation

20 Describe how gastric acid secretion can be reduced to treat acid peptic ulcer

21 Mention the effects of vagal stimulation on heart

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - June / July 2011

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. Classify sensory receptors with an example for each. Describe any five properties of receptors
2. Describe the structure of Neuro Muscular Junction and the mechanism of transmission of impulse across neuromuscular junction of skeletal muscle

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

3. Describe the functions of Basal ganglia
4. Describe the endometrial changes during menstrual cycle
5. Differences between UMN and LMN lesions
6. Principal actions of Insulin
7. Role of hypothalamus in regulation of body temperature
8. Explain the changes during Wallerian degeneration and regeneration of injured nerve fibers
9. Describe the Errors of refraction and their correction
10. Give an account of Acromegaly
11. Describe the actions of testosterone
12. Contents and functions of middle ear

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

13. Name the primary taste sensations. What is Aguesia
14. What is aphasia? What are its types
15. What is the normal serum calcium level? List the hormones regulating it
16. What is Aldosterone escape
17. Draw and label a sarcomere in the relaxed state
18. Draw and label olfactory pathway
19. What is the mechanism of action of oral contraceptives
20. What is the normal intra ocular pressure? What is its clinical significance
21. What is phantom limb? What is its physiological basis
22. List the clinical features of cretinism

* * * * *

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - Dec 2011 / Jan 2012

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. Describe the thyroid gland under the following headings"
   a) Capsule (B) Parts (c) Relations (d) Blood supply (e) Development
2. Describe the blood supply of heart. Give its applied anatomy

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

3. Microscopic structure of submandibular salivary gland
4. Clavipectoral fascia – extent, attachments and structures piercing it
5. Corpus callosum
6. Muscles of soft, palate, nerve supply & action
7. Major openings in the thoracic diaphragm
8. Movements of wrist joint
9. Red nucleus – location, connections
10. Boundaries and contents of sub – occipital triangle
11. Capacitation
12. Second pharyngeal arch

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

13. Calcarine sulcus
14. Microscopic structure of lymph node
15. Actions of lumbrical muscles of hand
16. Development of arch of aorta
17. Filum terminale
18. Draw and label microscopic structure of thick skin
19. Enumerate the functions of palcenta
20. Straight sinus
21. Contents of lower triangular space of arm
22. Enumerate the structures passing through foramen ovale

* * * * *

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination – Dec 2011 / Jan 2012

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 parts, coverings and relations of prostate gland. Add a note on its surgical importance
2. Describe the sciatic nerve under the following headings:
   a) Root value (b) Course and relations (c) Branches (d) Applied anatomy

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

3. Non – dysjunction
4. Lesser omentum – attachments, contents
5. Profunda femoris artery
6. Extensor retinaculum of foot
7. Caecum
8. Autosomal dominant inheritance
9. Development of spleen
10. Bile duct
11. Microscopic structure of ovary
12. Microscopic structure of suprarenal gland

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

13. Pudendal nerve
14. Placental barrier
15. Ligamentum patellae
16. Enumerate the derivatives of midgut
17. Tubectomy
18. Hypospadias
19. Name the veins connected by the medial ankle perforators
20. Development of vermiform appendix
21. Draw and label microscopic structure of testis
22. Draw and label microscopic structure of liver

* * * * *

Rajiv Gandhi University of Health Sciences

MBBS PHASE I Degree Examination – Dec 2011 / Jan 2012

Time: Three Hours | Max. Marks: 100 Marks

PHYSIOLOLOGY – I (RS 2 & RS 3)

Q.P. CODE: 1077

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

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Describe in detail the mode of carbondioxide transport in the blood
2. Illustrate the mechanism of water reabsorption in different segments of nephron

SHORT ESSAYS **10 x 5 = 50 Marks**

3 Describe the factors promoting venous return to the heart
4 Give the value of resting coronary blood flow and describe the phasic variation of coronary blood Flow during cardiac cycle
5 Describe the Esophageal phase of deglutition. What is achalasia cardia and its qeffect
6 Describe the formation, drainage and functions of lymph
7 What is the basis of classification blood groups? Define and explain how landsteiner's law is applicable to the blood group systems
8 What are the various method of artificial respiration
9 Describe the ventricular events occurring during cardiac cycle
10 Describe the causes and events in vomiting (Emesis)
11 Describe with the help of diagrams various types of cell junctions and their functional significance
12 Name the enzymes of succus entericus and their actions

SHORT ANSWERS **10X3=30 Marks**

13 What is respiratory quotient and the effect of metabolism of various food stuffs on its value
14 Which segments of vascular system contribute the resistance to blood flow and why? Give the formula relating resistance to pressure and flow
15 Define cyanosis and mention its causes
16 What is sinus arrhythmia and its cause
17 What is packed cell volume (Hematocrit) and how is it determined
18 Describe the initiation, progress and purpose of peristalsis in small intestine
19 What is opsonization and its purpose? Name few opsonins
20 Describe the enterogastric reflex and its purpose
21 Describe the Bainbridge reflex
22 What is colloidal osmotic pressure and its significance

****

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - Dec 2011 / Jan 2012

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. Trace the pathway for touch sensation with the help of diagram. What are the effects of "Tabes Dorsalis" on sensory functions
2. List the hormones of pituitary gland and elaborate the actions of the growth hormone in the body and the effects of its deficiency and excess secretion

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

3. Describe the organization and function of sarcotubular system in the skeletal muscle
4. Draw and label diagram of organ of corti and give its functional details
5. Describe the causes and clinical manifestations of cushing's syndrome
6. Describe the functions of sertoli cells of testis
7. What are the sites, causes and effects of muscle fatigue? What is contraction remainder or physiological contracture
8. Explain the sequence of events involved in target cell response to hormonal action
9. Describe the structure of taste bud, the location of taste buds and the taste pathway
10. Describe any five functions of Estrogens
11. What is frontal lobe syndrome and its behavioral effects
12. What are the waves of EEG (Electro Encephalogram)and their characteristics? What is alpha block?

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

13. Which are the large diameter myelinated nerve fibers according to Erlanager and Gasser's classification? Describe the mode of transmission of impulse in myelinated nerves
14. Define and explain "Capacitation" of sperms
15. Locate the broca's area and mention its role in speech
16. Describe the babinski's sign and its cause
17. In which conditions tremors are observed and how they are differentiated
18. Depict by means of sketches refractory errors in myopia and hypermetropia and their correction
19. What is the normal intra ocular pressure? How is it measured? Define glaucoma
20. Describe briefly about attenuation reflex/ Tympanic reflex and its significance
21. What are the secretary and synthetic functions of skin
22. What is motor unit and significance of such arrangement in skeletal muscle

* * * * *

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - Dec 2011 / Jan 2012

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 the reactions of Urea cycle. Discuss the interrelation of urea cycle and citric acid cycle. What is the reference range for serum urea?

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

2. Classify transport mechanisms across cell membranes. Define uniport, symport and antiport. Give an example of each
3. Define primary, secondary, Tertiary and Quarternary structure of protein. What are the noncovalent forces which preserve the secondary structure
4. Explain the mechanism of action of Allosteric Enzymes? Name the Allosteric Inhibitor and Allosteric Activator for Phosphofructokinase and Acetyl CoA – Carboxylase
5. Outline the steps for synthesis of cholesterol. Discuss the rate limiting step and regulation of synthesis of cholesterol
6. Describe the reactions of Citric Acid cycle

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

7. Oncogenes
8. Thyroid function tests – Routine and anti – TPO
9. Cytochromes
10. GTT Graph for Renal Glycosuria
11. Anti – oxidants

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

Use separate answer book

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

1. What is gluconeoqenesis? Describe the pathway in detail and add a note on its significance

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

2. Briefly outline the steps of Denovo synthesis of purine
3. Hormonal regulation of Fluid and Electrolyte
4. Briefly explain the renal mechanisms involved in maintenance of pH of blood
5. Sources, biochemical role and dietary requirement of vitamin A
6. Protein Calorie malnutrition

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

7. Operon concept
8. Bence jones proteins
9. What is porphyria? Mention the defect and signs and symptoms of acute intermittent porphyria
10. Enumerate three functions of the liver and three tests with reference ranges to assess them
11. What is a Chimeric DNA molecule. Give the applications of recombinant technology

* * * * *