Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2008

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. Define Isoenzymes. Mention the principles used for separation of Isoenzymes. Write about the clinical importance of Isoenzymes

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

2. List the important products formed from Tyrosine and write the metabolic pathways leading to the formation of any two of them
3. Mechanisms of action of Glucagon
4. Single electron carrier components of respiratory chain
5. Mechanism of pyruvate dehydrogenase enzyme action and it's biochemical importance
6. List various types of fatty acid oxidation. Write about activation of fatty acids for oxidation

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

7. Functions of plasma membrane
8. Lipid peroxidation – clinical importance
9. Role of growth factors in carcinogenesis
10. Glucose 6 phosphate dehydrogenase deficiency
11. Functional classification of proteins

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

Use separate answer book

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

1. What is the importance of maintaining acid-base balance in the body? Write in detail how kidney helps in maintaining acid-base balance

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

2. Replication of lagging strand
3. List metabolic functions of Ascorbic acid. How do you detect it's deficiency? What is the daily requirement?
4. BMR (Basal Metabolic rate)
5. Degradation of Heme
6. Gene therapy

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

7. Iodine metabolism
8. Importance of base pairing
9. Molecular defect in and consequences of sickle cell disease
10. Sources and beneficial effects of dietary fiber
11. What is reference range? How is it calculated?

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(16)

1075

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - July 2008

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 mastication. Give their
   a) Origin b) Insertion c) Nerve supply d) Actions. Add a note on its development
2. Describe the brachial plexus under the following headings
   a) Roots b) Trunks c) Cords d) Branches. Add a note on carpal tunnel syndrome

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

3. Muscles of Pharynx
4. Deltoid muscle
5. Draw & label section at level of superior colliculus of midbrain
6. Mediastinal surface of right lung
7. Notochord
8. Blood supply of breast
9. Interrosseus membrane
10. Classification of joints
11. Cutaneous innervation of face
12. Microscopic structure of thyroid gland

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

13. Chorionic villi
14. Openings in the right atrium
15. External intercostal muscle
16. Lumbricals of the hand
17. Suboccipital triangle
18. Nerve supply of tongue
19. Openings of Diaphragm
20. Draw and label taste bud
21. Draw and label microscopic structure of compact bone
22. Second pharyngeal arch



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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - July 2008

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 knee joint under the following headings
   a) Ligaments b) Bursae around knee joint c) Menisci d) Movements
2. Describe the urinary bladder under the following headings
   a) Relations b) Supports c) Blood supply d) Development & applied anatomy

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

3. Coeliac trunk
4. Quadriceps femoris
5. Femoral sheath
6. Supports of uterus
7. Dorsalis pedis artery
8. X chromosome
9. Microscopic structure of ileum
10. Anterior relations of right kidney
11. Microscopic structure of pancreas
12. Blood supply of stomach

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

13. Enumerate bare areas of liver
14. Mc Burneys point
15. Omental bursa
16. Gluteus maximus muscle
17. Tibial collateral ligament of knee joint
18. Draw and label microscopic structure of Vasdeferen's
19. Draw and label microscopic structure of ureter
20. Derivatives of Mid Gut
21. Enumerate any three contents of umbilical cord
22. Venous drainage of testis

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(18) 1077

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - July 2008

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 plasma proteins along with their site of synthesis. List the important functions of plasma proteins and their normal serum levels. Define hypoproteinemia & discuss its clinical significances
2. What is ECG? Enumerate the various ECG leads with a suitable diagram. Discuss the various waves in ECG & their importance

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

3. Chemical Regulation of Respiration
4. Na^+K^+ Pump
5. P-R Interval
6. Poiseuille's law
7. Triple reaction
8. Auto regulation of renal blood flow
9. Baroreceptors
10. Lung function tests
11. T cells V/s B cells
12. Intestinal movements and slow wave

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

13. Capacitance vessels
14. Filtration coefficient
15. Atrial natriuretic factor
16. Role of loop of henle in urine concentration mechanism
17. Metabolic acidosis
18. Erythropeitin
19. Surfactant
20. Reticulo endothelial system
21. Alkaline tide
22. Periodic breathing

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(19) 1078

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - July 2008

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. Explain the interplay between ovarian and hypothalamic – pituitary hormones for regulation of menstrual cycle
2. Draw a diagram showing physiological anatomy of synapse. Describe electrical events during neuronal excitation

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

3. Functions tympanic membrane and ossicles
4. Functions of glucagon
5. Vestibular apparatus
6. Problems in prematurity
7. Motivation and addiction
8. Withdrawal reflex
9. Role of conduction type of heat loss in treating heat stroke
10. Walk along mechanism for contraction of muscle
11. Primary hyperparathyroidism
12. Factors that increases and decreases the insulin secretion

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

13. Different types of summation in neurons
14. Draw the diagram showing dorsal column leminiscal system
15. Discuss papilledeoma
16. Mass reflex
17. Schematic diagram showing regulation of thyroid hormones
18. Decorticate rigidity
19. Presbiopia and its correction
20. Dyslexia
21. Mechanism of depth perception of object by the eyes
22. Sympathetic and parasympathetic tone

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - July 2008

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. Describe TCA cycle. Discuss in detail its energetics, regulation and its role

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

2. Secondary structure of proteins
3. Glycogenesis
4. Serotonin
5. Antioxidants
6. General mechanism of action of steroid hormones

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

7. PSA
8. Uncouplers of oxidative phosphorylation
9. Refsum's disease
10. Significance of HMP pathway
11. Rancidity

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

Use separate answer book

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

1. Discuss in detail recombinant DNA technology and its clinical application

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

2. Chloride shift
3. Functions and deficiency manifestations of Vitamin C
4. Metabolic Acidosis
5. Degradation of pyrimidines
6. Salient features of genetic code

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

7. Carboxy hemoglobin
8. Fluorosis
9. Immuno Electrophoresis
10. Anticoagulants
11. ~~Limiting~~ Essential aminoacid

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(14) 1078.doc

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2008

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 suitable diagrams, describe the mechanisms of action of hormones through different system of second messengers
2. List the features of cerebellar disorder. Describe the role of cerebellum in the control of motor functions

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

3. Hypothalamo-pituitary-gonadal axis in females
4. Cardiovascular and CNS effects of thyroxine
5. Molecular basis of skeletal muscle contraction
6. Endogenous pain inhibiting system
7. Role of hypothalamus in temperature regulation
8. Hearing tests
9. Rennin-angiotensin-aldosterone axis
10. Concept of cerebral dominance (categorization of hemisphere)
11. Immediate cardiovascular changes on exposure to hot climate
12. Errors of refraction

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

13. Tests for ovulation
14. Waves of EEG
15. Dermatomal theory of referred pain
16. Effects of insulin on glucose transporters
17. Physiological basis of use of a drug in the treatment of thyrotoxicosis
18. Distal changes in the axon following nerve injury
19. Physiological basis of three features of Addison's disease
20. Rinne's test
21. Explain, why cortisol is not advised in patients with osteoporosis
22. Dissociated anesthesia

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(11)

1075

Rajiv Gandhi University of Health Sciences, Karnataka

M.B.B.S. PHASE - I Degree Examination - January 2008

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 pharynx. Give the
   a) Origin b) Insertion c) Nerve supply d) Actions e) Relations of superior constrictor muscle of pharynx. Add a note on its surgical anatomy
2. Describe the right atrium under the following headings
   a) Interior b) Blood supply c) Development d) Anomalies

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

3. Nasal septum
4. Posterior wall of middle ear
5. Draw & label section at level of inferior colliculus
6. Mediastinal surface of left lung
7. Development of tongue
8. Mesodermal somites
9. Movements of wrist joint
10. Blood supply and nerve supply of scalp
11. Supra pleural membrane
12. Microscopic structure of palatine tonsil

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

13. Radio-ulnar joint
14. Fate of ectodermal clefts
15. Blood supply of long bone
16. Enumerate the contents of posterior mediastinum
17. Origin of diaphragm
18. Deep palmar arch
19. Glenohumeral ligaments
20. Draw and label microscopic structure of spinal ganglion
21. Blood supply of hypophysis
22. Buccinator muscle



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(12)

1076

Rajiv Gandhi University of Health Sciences, Karnataka

M.B.B.S. PHASE - I Degree Examination - January 2008

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. Name the arches of the foot. Describe the lateral longitudinal arch. Add a note on its applied anatomy
2. Describe the kidney, add a note on its applied anatomy

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

3. Klinefelter syndrome
4. Genetic counseling
5. Hamstring muscles
6. Extensor retinacula in foot
7. Lesser sac
8. Sites of portocaval anastomosis
9. Microscopic structure of testis
10. Microscopic structure of Duodenum
11. Development of pancreas
12. Development and anomalies of urinary bladder

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

13. Adductor muscles
14. Foot drop
15. Draw and label microscopic structure of umbilical cord
16. Draw and label microscopic structure of fundic stomach
17. Iliofemoral ligament
18. Monozygotic twins
19. In vitro fertilization
20. Epiploic foramen
21. Inguinal rings
22. Contents of spermatic cord

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2008

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. Define Blood Pressure, mean arterial pressure and pulse pressure. Discuss the long term regulatory mechanisms of blood pressure
2. Discuss the mechanism of formation of concentrated urine. Add a note on diuresis

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

3. Enumerate various transport mechanisms across cell membrane. Explain active transport
4. Tabulate the differences between first and second heart sounds. Add a note on splitting of II heart sound
5. What is Asphyxia? Explain its features
6. Discuss the enterohepatic circulation of bile. Explain its significance
7. Explain the significance of Rh factor
8. Explain the role of platelets in haemostasis
9. List the types of movements seen in intestine
10. Define and give examples of ventilation perfusion ratio
11. Define periodic breathing, and explain its occurrence in various diseases
12. Depict the pressure volume relationship in the urinary bladder

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

13. Why is blood clotting abnormal in patients with vitamin K deficiency?
14. Draw and label ECG tracing in lead II
15. Enumerate the factors governing oxygen consumption by the heart
16. Explain acquired immunity
17. What is Apoptosis?
18. Why is renal medulla very susceptible to hypoxic damage?
19. What is volume obligatoire?
20. What is megacolon?
21. What is a cholagogue and choleretic? Give examples
22. Name two bleeding disorders. What is von Willebrand's factor?



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(13) 1077.doc

Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination - January 2008

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PHYSIOLOGY - Paper I (Revised Scheme II)

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