Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – JULY 2015

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

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 ESSAYS **2 x 10 = 20 Marks**

1. Describe the extraocular muscles under the following headings: attachments, nerve supply and actions.

2. Describe the structure, lymphatic drainage and arterial supply of breast.

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

3. Neural tube formation

4. Microscopic anatomy of Hyaline cartilage

5. Buccinator

6. Layers of scalp

7. Ansa cervicalis

8. Rotator cuff

9. Thyroid cartilage

10. External jugular vein

11. Venous drainage of heart

12. Subarachnoid cisterns

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

13. Ovulation

14. Draw a neat labeled diagram of boundaries and subdivisions of anterior triangle of neck

15. Fate of sinus venosus

16. Adductor pollicis

17. Coracoid process

18. Basilar artery

19. Speech areas of brain

20. Derivatives of first pharyngeal arch

21. Chorda tympani nerve

22. First rib

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – JULY 2015

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

Anatomy – Paper II (RS2 & RS3)

Q.P. CODE: 1076

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

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the formation, termination, course and tributaries of portal vein. Mention the sites of portocaval anastomosis. (1+1+3+2+3)

2. Describe the arches of foot under the following heads.
a) Types and bones taking part b) Factors maintaining the arches and c) Applied aspect (3+4+3)

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

3. Microscopic anatomy of liver
4. Pudendal canal
5. Ligaments and relations of spleen
6. Stomach bed
7. Second part of duodenum – relations and development
8. Internal iliac artery – course and branches of distribution
9. Ureter – relations and constrictions
10. Rotation of gut
11. Sciatic nerve – relations and branches of distribution
12. Klinefelter's syndrome

SHORT ANSWERS **10 x 3 = 30 Mar**

13. Obturator internus – nerve supply and action
14. Spermatic cord – coverings and contents
15. Cruciate anastomosis – formation and applied aspect
16. Iliotibial tract
17. Segments of kidney
18. McBurney's point
19. Positions of appendix
20. Nerve supply of urinary bladder
21. Conjoint tendon
22. Enumerate the branches of abdominal aorta

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – JULY 2015

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

PHSIOLOGY-PAPER I
(RS2 & RS3 SCHEME)
QP Code: 1077

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

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the coagulation process in detail. Add a note on tests for coagulation.
2. Explain the regulation of cardiac output.

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

3. Conducting system of human heart
4. Coronary circulation
5. Lung surfactant.
6. Bohr effect and Haldane effect
7. Cyanosis
8. Macrocytic anemia.
9. Factors affecting glomerular filtration rate
10. Counter current multiplier system
11. Gastrin
12. Secondary active transport.

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

13. Inulin clearance
14. Parasympathetic innervation of urinary bladder.
15. Chemotaxis
16. Eosinophil
17. Functional residual capacity
18. List forms of transport of Carbon dioxide in blood.
19. Enteric nervous system
20. Composition of bile
21. Conditioned salivary secretion
22. Body fluid compartments

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination – JULY 2015

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

PHYSIOLOGY - II (RS2 & RS3)

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. Describe the parts, connections and functions of cerebellum.
2. Describe the ovarian and endometrial changes during menstrual cycle. Explain their hormonal regulation.

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

3. Role of hypothalamus in regulation of food intake
4. Components and functions of limbic system
5. Role of cortisol in stressful situation
6. Explain the action of insulin on carbohydrate metabolism.
7. Steps in thyroid hormone synthesis and their clinical applications
8. Mechanisms involved in accommodation reflex
9. Describe taste pathway.
10. Describe neuromuscular transmission in skeletal muscle.
11. Role of calcium in skeletal muscle contraction
12. What is core and shell temperature? Explain heat loss mechanisms.

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

13. Write the role of epididymis, seminal vesicle and prostate in reproduction.
14. Functions of CSF
15. Write differences between cardiac and smooth muscle.
16. Draw a sarcomere in relaxed and contracted state.
17. Three differences between superficial and deep reflexes
18. Functions, absorption of Aqueous humor and its applied aspect
19. Attenuation reflex and impedance matching
20. Draw a visual pathway.
21. Mention three hormones regulating blood calcium levels. State their mechanism of actions.
22. What is an aldosterone escape?

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – JULY 2015

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

BIOCHEMISTRY (RS2 & RS3)

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

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

Use separate answer books for section A and Section B

1 x 10 = 10 Marks

LONG ESSAYS

1. Describe the β-oxidation of fatty acids. Give its energetics and explain the regulation of acetyl CoA in our body.

5 x 5 = 25 Marks

SHORT ESSAYS

2. How is glycogen digested and absorbed? Describe glycogenolysis in the liver.
3. How are bile acid synthesized? Mention **two** functions of bile acids.
4. Describe the conversion of methionine to cysteine. Add a note on homocystinuria.
5. Outline the synthesis of epinephrine and give its functions.
6. Give the coenzyme role of pantothenic acid and its importance

5 x 3 = 15 Marks

SHORT ANSWERS

7. Denaturation of proteins.
8. Uncouplers of oxidative phosphorylation.
9. Reverse cholesterol transport.
10. Bonds stabilizing protein structure.
11. UDP-Glucuronic acid.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination - JULY 2015

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

BIOCHEMISTRY (RS2 & RS3)

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

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

Use separate answer books for section A and Section B

LONG ESSAYS **1 x 10 = 10 Marks**

1. Draw neat diagram of Watson Crick model of DNA, explain its characteristics and the bonds that play a role in the stability of DNA structure.

SHORT ESSAYS **5 x 5 = 25 Marks**

2. Describe salvage pathway of purine synthesis and its significance.
3. What are porphyrias? Mention four porphyrias with the defective enzyme.
4. Explain the role of kidneys in acid base regulation.
5. What is a balanced diet? Discuss the components of a balanced diet.
6. What are the sources of dietary fibers? Discuss the importance of it in nutrition. Outline the functions of proteins.

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

7. Point mutation.
8. Hormones that regulate water balance
9. SDA.
10. Ribosomal RNA.
11. Define anti oxidants and give two examples.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – DECEMBER 2015

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

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 ESSAYS **2 x 10 = 20 Marks**

1. Describe the cartilages and muscles of larynx.
2. Describe the formation and branches of brachial plexus.

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

3. Microscopic anatomy of cerebellum
4. Cutaneous nerve supply of ring finger – diagram only
5. Lacrimal apparatus
6. Draw a neat labeled diagram of medulla oblongata at the level of sensory decussation
7. Left coronary artery
8. Flexor retinaculum of hand
9. Oogenesis
10. Arterial and nerve supply of scalp
11. Movements of temporomandibular joint and muscles causing them
12. Development of thyroid gland

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

13. Auriculotemporal nerve
14. Innervation of tongue
15. Blood supply of thyroid gland
16. Chorion-formation and fate
17. Draw a neat labeled diagram of medial surface of left lung
18. Submandibular duct
19. Deep cardiac plexus
20. Fibrous joint
21. Levator palpabrae superioris
22. Styloid process

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – I Degree Examination - DECEMBER 2015

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

Anatomy – Paper II (RS2 & RS3)

Q.P. CODE: 1076

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

LONG ESSAYS **2 x 10 = 20 Marks**

1. Describe the Arches of Foot in detail. Add a note on its applied importance. (7+3)
2. Describe the gross features, relations, development and applied Anatomy of Pancreas. (2+3+3+2)

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

3. Karyotyping
4. Ischiorectal Fossa
5. Describe the Microscopic structure of Ovary.
6. Development of Testis and its descent
7. Trigone of Urinary Bladder
8. Gene
9. Adductor Canal
10. Lobes of Prostate Gland
11. Ligaments of Hip Joint
12. Common Peroneal Nerve

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

13. Plicae Circulares
14. Draw a neat labelled diagram of Microscopic structure of Fallopian Tube.
15. Prostatic urethra
16. Perineal body
17. Intestinal glands
18. Profunda Femoris Artery and its branches
19. Posterior relations of Left Kidney
20. Pampiniform Plexus of Veins
21. Pyramidalis
22. Processes Vaginalis

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Rajiv Gandhi University of Health Sciences

M.B.B.S. PHASE - I Degree Examination – DECEMBER 2015

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

PHYSIOLOGY - I (RS2 & RS3)

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 cardiac cycle and describe the mechanical changes during a cardiac cycle.
2. Explain oxygen transport from the lungs to the tissues.

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

3. Functions of plasma proteins
4. Describe the fate of haemoglobin following haemolysis.
5. Explain the second stage of deglutition.
6. Describe the actions of bile salts. Name the effects of bile duct obstruction.
7. Cholecystokinin – pancreozymin
8. Define glomerular filtration rate and describe the factors affecting it.
9. Sinoaortic reflex
10. QRS complex
11. Briefly describe the changes occurring during acclimatization to high altitude.
12. Explain the role of inspiratory and expiratory muscles in normal respiration.

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

13. Name the methods of measurement of cardiac output.
14. Three functions of saliva
15. Functions of collecting duct
16. Explain the role of 'Vasa recta' in renal functioning.
17. Differences between pulmonary and systemic circulation
18. Axon reflex
19. Intercellular communication
20. Physiological dead space
21. Cross matching
22. Important features of iron deficiency anaemia

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Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – I Degree Examination - DECEMBER 2015

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

Physiology – Paper II (RS2 & RS3)

Q.P. CODE: 1078

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

LONG ESSAYS

2 x 10 = 20 Marks

1. Describe the origin, course, termination and functions of pyramidal tract with the help of a diagram. What is hemiplegia and paraplegia?
2. Describe the source, physiological actions and regulation of secretion of thyroxine. Add a note on Myxoedema.

SHORT ESSAYS

10 x 5 = 50 Marks

3. Functions of middle ear
4. Visual pathway and its lesions at various levels
5. Color blindness
6. Functions of insulin
7. Endometrial changes during Menstrual cycle
8. Hormones regulating lactation
9. Mechanism of skeletal muscle contraction
10. Functions of cerebellum
11. What is the cause, clinical features and treatment of Parkinsonism?
12. Functional properties of smooth muscle

SHORT ANSWERS

10 x 3 = 30 Marks

13. Draw and label Organ of Corti.
14. List the differences between pituitary dwarf and a cretin.
15. List the features of Hypocalcemic tetany.
16. Draw and label Milk ejection reflex.
17. Wallerian degeneration
18. Draw and label taste pathway.
19. List the features of Thalamic syndrome.
20. List three differences between REM sleep and Slow wave sleep.
21. What is Renshaw cell inhibition?
22. What is Quantal summation?

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – DECEMBER 2015

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

BIOCHEMISTRY (RS2 & RS3)

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

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

Use separate answer books for section A and Section B

1 x 10 = 10 Marks

LONG ESSAYS

1. Classify enzymes giving an example with the reaction catalysed.

5 x 5 = 25 Marks

SHORT ESSAYS

2. Describe the digestion and absorption of lipids.
3. Discuss phenylketonuria under i) enzyme defect. ii) Manifestation. iii) Diagnostic test.
4. What are mucopolysaccharides. Give their importance with examples.
5. Coenzyme form of Vitamin B_{12} and its biochemical functions
6. Describe one carbon metabolism. What is its significance?

5 x 3 = 15 Marks

SHORT ANSWERS

7. Compare and contrast Starch and Glycogen.
8. Essential fatty acids
9. Transport across cell membrane.
10. Melatonin.
11. Polyamines.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – DECEMBER 2015

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

BIOCHEMISTRY (RS2 & RS3)

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

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

Use separate answer books for section A and Section B

LONG ESSAYS **1 x 10 = 10 Marks**

1. Describe the synthesis of DNA.Write a note on replication of DNA.

SHORT ESSAYS **5 x 5 = 25 Marks**

2. What is the difference between endonuclease and restriction endonuclease? Give **two** examples for endonuclease.
3. What are oncogenes? Discuss two tumor markers and their clinical application.
4. Diagnostic enzymes used in the assessment of different liver functions.
5. Respiratory alkalosis
6. How is uric acid formed in the body? What is Gout? What is the treatment? Explain the basis for the treatment.

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

7. Serum electrophoresis.
8. Tumour markers
9. Hb as buffering agent.
10. Vitamin K functions and requirement
11. Point Mutation with 2 examples.

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