Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Dec 2013 13

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 interior of right atrium of heart with its development.
2. Describe the origin, insertion, nerve supply and action of muscles of mastication.

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

3. Walls of middle ear
4. Microscopic anatomy of lung
5. Corpus callosum
6. Draw a neat labeled diagram of medulla oblongata at the level of pyramidal decussation
7. Superficial palmar arch
8. Azygos vein
9. Implantation
10. Pectoralis minor
11. Oblique sinus of pericardium
12. Deltoid muscle

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

13. Nasolacrimal duct
14. Moderator band
15. Median nerve in Carpal tunnel
16. Cephalic vein
17. Dermatome
18. Accommodation reflex
19. Sternal angle
20. Spiral septum
21. External jugular vein
22. Draw a neat labeled diagram of histology of the cross section of compact bone

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Dec 2013

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

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 ESSAYS **2 x 10 = 20 Marks**

1. Describe the boundaries, contents and applied anatomy of ischiorectal fossa.
2. Describe the coverings, microstructure (diagram only) and development of kidney.

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

3. Microscopic anatomy of duodenum
4. Rectouterine pouch of Doughlas
5. Inferior mesenteric artery
6. Uterine tube
7. Development of testis
8. Great saphenous vein
9. Popliteus
10. Cutaneous nerve supply of dorsum of foot
11. Types of chromosomes
12. Transpyloric plane

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

13. Formation and fate of paramesonephric duct
14. Pyramidalis
15. Enumerate the branches of internal iliac artery
16. Anal sphincters
17. Sural nerve
18. Draw a neat labeled diagram of microscopic anatomy of uterus
19. Sacral hiatus
20. Trigone of urinary bladder
21. Anomalies of development of uterus
22. Quadriceps femoris

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Dec 2013

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 in detail the classification, characteristic features of 'hypoxia'.
2. Describe cardiac output. Give its normal resting value. How is it regulated?

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

3. Define facilitated diffusion and describe the factors affecting it
4. List the functions of upper respiratory tract
5. Define 'innate immunity'. Mention the factors that contribute to the same
6. Explain the consequences of mismatched blood transfusion.
7. Describe the factors which regulate Glomerular Filtration Rate
8. Juxtaglomerular apparatus.
9. Briefly outline the regulation of salivary secretion.
10. Describe the regulation of secretion of hydrochloric acid in stomach.
11. Mention the ionic basis of 'pacemaker potential'
12. Define 'mean arterial pressure' and explain the importance of maintaining it.

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

13. Name two anti coagulants explaining the mechanism of action of any one.
14. Give the representative values of blood indices in person with iron deficiency anemia.
15. Secretin.
16. Briefly explain'enterohepatic circulation' & its functional importance.
17. Outline the differences in the reabsorption of water in PCT from that of DCT.
18. Draw a labeled diagram of 'micturition reflex' in an adult
19. State Mary's Law
20. List the effects of vagal stimulation on heart
21. Define functional residual capacity. State its importance.
22. Give the nerve supply & functional importance of diaphragm.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Dec 2013

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

PHSIOLOGY-PAPER II
(RS2 & RS3 SCHEME)
QP 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. Draw a neat labeled diagram of 'fast pain' pathway from left lower limb. Explain 'referred pain'.
2. Describe the physiological actions & regulation of secretion of insulin.

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

3. Give the principal connections & functions of 'cerebro cerebellum'.
4. Explain how human ear discriminates different intensities of sound
5. List the features of 'Kluver-Bucy syndrome'
6. Give the source, target organ/s and actions of 'calcitriol'
7. Draw the pathway for 'indirect light reflex'
8. List the functions of prefrontal lobe.
9. Explain the role of hypothalamus as an endocrine organ
10. With example/s explain 'positive feedback' control of hormone/s
11. Neural pathway & the physiological role of olfaction.
12. Explain how the epinephrine secretion is regulated.

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

13. Enumerate retinal receptors and give their functions.
14. Explain the basis of polyuria in diabetes insipidus
15. Contraceptive measures in a female.
16. Draw an audiogram of a normal individual and compare it with that of a person with 'conduction deafness'
17. Explain the effect of individual sex steroids on mammary gland development
18. Klinefelter's syndrome
19. Physiological mechanisms of heat loss
20. Explain the physiological basis of any ONE test to investigate the cause of infertility in a male
21. Features of acromegaly.
22. Microglia

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Dec 2013 /7

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

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

1. Describe the citric acid cycle. How is it regulated? Write about its energetic and amphibolic nature.

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

2. Describe the fate and functions of methionine.
3. What are the reactions of HMP pathway? What is the significance of this pathway?
4. Clinical importance of enzymes in assessment of cardiac disease & liver function
5. Outline the de novo synthesis of fatty acid. What are the advantages of having a multifunctional enzyme complex?
6. How is urea synthesized in the body? Give the reactions. What is the significance of urea cycle?

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

7. Phospholipids.
8. Coenzymes.
9. Secondary structure of proteins.
10. Prostaglandins.
11. Transamination

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Dec 2013 /8

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 and breakdown of haemoglobin. Write a note on haemoglobinopathies.

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

2. Explain the structure of tRNA with diagram and mention its function.
3. Define BMR. How do you calculate BMR? Discuss **four** factors that effect BMR.
4. Describe with an example regulation of gene expression.
5. What do you mean by gene therapy? Discuss its application in medicine.
6. Describe the catabolism of purine nucleotide. Add a note on Gout.

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

7. Anticancer agents
8. Plasmids and oncogenes
9. Obstructive jaundice and its diagnosis
10. Abnormal constituents of urine
11. Radio isotopes.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – June 2013 19

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 Thyroid gland under following headings: relations, blood supply and applied anatomy.
2. Describe the sulci, gyri and areas present on cerebral hemispheres.

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

3. Ciliary ganglion
4. Transverse sinus of heart
5. Microscopic anatomy of tongue
6. Clavipectoral fascia
7. Notochord
8. Inferior cerebellar peduncle
9. Draw a neat labeled diagram of midbrain at the level of superior colliculus
10. Interossei of hand
11. Orbicularis oculi
12. Thoracic duct

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

13. Erbs point
14. Draw a neat labeled diagram of lymph node
15. Facial artery
16. Classify synovial joint with examples of each type
17. Cutaneous nerve supply of face
18. Palmar aponeurosis
19. Cephalic vein
20. Suprapleural membrane
21. Development of Interatrial septum
22. Name the carpal bones

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – Jun 2013

20

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

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 ESSAYS **2 x 10 = 20 Marks**

1. Describe the extent, openings, boundaries, contents and applied anatomy of inguinal canal.
2. Describe the boundaries and contents of femoral triangle.

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

3. Microscopic anatomy of ovary
4. Prostate gland
5. Pelvic diaphragm
6. Meckel's diverticulum
7. Development of external genital organs
8. Patella
9. Down's syndrome
10. Blood supply of large intestine
11. Epiploic foramen
12. Caecum

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

13. Dorsalis pedis artery
14. Draw a neat labeled diagram of structures under cover of gluteus maximus
15. Sartorius
16. Capsule of knee joint
17. Lumbosacral trunk
18. Segments of liver
19. Vagina
20. Uterosacral ligament
21. Splenic circulation
22. Hilton's line

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – June 2013

21

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. Explain the types of movements in different parts of gastrointestinal tract.
2. Explain the principle, method of recording, waves and intervals of electrocardiogram.

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

3. Jugular venous pulse
4. Heart sounds and murmurs
5. Oxygen uptake at lungs.
6. Spirogram
7. Role of renal tubular buffers.
8. Calculation of net filtration pressure at glomerulus .
9. Regulation of pancreatic exocrine secretion.
10. Bilirubin metabolism
11. Macrophage system
12. Exocytosis and endocytosis

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

13. Pacemaker potential
14. Venous return
15. Fetal hemoglobin
16. Carbon monoxide poisoning
17. Cystometrogram.
18. Sodium reabsorption in proximal convoluted tube
19. Thrombocytopenic purpura
20. Functions of gall bladder
21. Homeostasis
22. Differences between extracellular fluid and intracellular fluid

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – June 2013

22

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

PHSIOLOGY-PAPER II
(RS2 & RS3 SCHEME)
QP 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. 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 ESSAYS **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 Norepinephrine and Epinephrine

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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, Karnataka

First Phase MBBS Degree Examination – June 2013

23

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

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

1. What are enzymes? Classify enzymes with one example each. Explain any four factors that affect enzyme activity.

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

2. Define gluconeogenesis. How is alanine converted to glucose?
3. What is substrate level phosphorylation? Give **two** examples with complete reaction.
4. Classify lipoproteins and write the functions of each lipoprotein.
5. What are transamination reactions? Giving **two** examples discuss the importance of these reactions.
6. Classify proteins based on their function giving an example for each class.

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

7. High energy compounds
8. Glycogen storage disorders.
9. Km of an enzyme
10. FIGLU excretion test
11. Mitochondrial shuttle systems.

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Rajiv Gandhi University of Health Sciences, Karnataka

First Phase MBBS Degree Examination – June 2013

24

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

1 x 10 = 10 Marks

LONG ESSAYS

1. What are sources of C & N atoms of purine? Describe the biosynthesis of purine and add a note on its regulation.

5 x 5 = 25 Marks

SHORT ESSAYS

2. Name the different types RNA. Write their salient features. Mention their function.
3. What are buffers? Discuss any **two** buffer system of the body.
4. Give the biochemical functions of niacin with examples and manifestation of its deficiency.
5. What is a restriction endonuclease? Explain their role in recombinant DNA technology.
6. Give an account of phosphorus metabolism.

5 x 3 = 15 Marks

SHORT ANSWERS

7. Translation and post translational modifications
8. Base pairing rule and Wobble hypothesis.
9. Biochemical defect in Thalassemia.
10. Cause of Scurvy and pellagra.
11. Creatinine clearance test.

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