Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – APRIL-2018

Time: Three Hours | Max. Marks: 100 Marks

ANATOMY (RS-3 & RS-4)

Q.P. CODE: 2701

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

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

1. Discuss the Axillary artery in detail
2. Describe Hip joint under type, articulating surfaces, ligaments, movements and applied anatomy
3. Classify white matter of the brain. Describe internal capsule in detail

SHORT ESSAYS (Answer any Twelve) — 12 x 5 = 60 Marks

4. Dorsalis Pedis artery
5. Extra- Ocular Muscles and its nerve supply
6. Third Ventricle
7. Sterno Cleido Mastoid
8. Pelvic Floor Muscles
9. Duodenum
10. Arterial Supply of the Heart
11. Testes
12. Arterial Supply of stomach
13. Femoral Nerve
14. Sternum
15. Hamstring muscles
16. Cerebellum
17. External Features of Left Lung

SHORT ANSWERS — 10 x 2 = 20 Marks

18. Parts of uterus
19. Name the sinuses of pericardium
20. Attachments on Bicipital groove
21. Name the branches of posterior cord of brachial plexus
22. Name Four ligaments of Wrist joint
23. Name the Parts of vertebrae
24. Name the Pronators and supinators of the forearm
25. Parts of corpus striatum
26. Classify Simple Epithelium
27. Name the Cells of the bone

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL-2018

Time: Three Hours | Max. Marks: 100 Marks

HUMAN PHYSIOLOGY (RS-3 & RS-4)

Q.P. CODE: 2702

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

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

1. Trace the pyramidal pathways. Differentiate between UMNL and LMNL.
2. Define a triad. Explain its role in skeletal muscle contraction.
3. Define blood pressure. Explain the short term and long term mechanisms of its regulations

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. Describe the intrapleural and intrapulmonary pressure changes during different phases of respiration
5. Explain the composition and functions of gastric juice
6. Explain the structure and function of juxta-glomerular apparatus
7. Tabulate the differences between I and II heart sounds.
8. Trace the taste pathway
9. Enumerate the actions of Thyroxine
10. Describe the different stages of spermatogenesis and the factors influencing it
11. Explain the functions of hypothalamus
12. Explain the intrinsic mechanism of blood clotting
13. What is resting membrane potential? Explain its ionic basis
14. Trace the pain pathway
15. Discuss the counter-current mechanism.
16. List the function of stomach
17. Describe the functions of surfactant.

SHORT ANSWERS 10 x 2 = 20 Marks

18. Classify the different fluid compartments of the body giving their normal values
19. List three methods of contraception in the male
20. List three functions of bile
21. List three clinical features of Cushing's syndrome
22. Define cardiac output. Name its determinants.
23. Define vital capacity and give its normal values
24. List any three functions of thalamus
25. What is erythroblastosis fetalis?
26. Enumerate the disorders of colour vision
27. List the types of neuroglia and their functions

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL 2018

Time: Three Hours | Max. Marks: 80 Marks

BIO-CHEMISTRY (RS-3 & RS-4)

Q.P. CODE: 2703

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

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

1. Describe the digestion and absorption of lipids.
2. Define jaundice. Enumerate Liver function tests. Add a note on Van den Bergh reaction.
3. Define and explain blood glucose homeostasis. Add a note on Glucose tolerance test.

SHORT ESSAYS (Answer any Eight) 8 x 5 = 40 Marks

4. Functions of Vitamin D
5. Functions of phospholipids
6. Regulation of water balance
7. Wald's visual cycle
8. Define and classify carbohydrates with suitable examples.
9. Structure and functions of t RNA (transfer RNA)
10. Renal mechanisms in acid base balance
11. Classify proteins based on their functions.
12. Define and classify enzymes.
13. Competitive inhibition

SHORT ANSWERS 10 x 2 = 20 Marks

14. Essential amino acids
15. Primary structure of proteins
16. Active site
17. Give the normal values of
    a) fasting Blood Sugar b) Serum Uric acid
18. Alkaptonuria
19. Homopolysaccharides
20. Specific dynamic action (SDA)
21. Name any four special compounds derived from tyrosine.
22. Give the normal values of a) Serum triglycerides b) serum calcium
23. Derivatives of cholesterol

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – ARPIL 2018

Time: 3 Hours | Max. Marks: 40 Marks

General Psychology

Q.P. Code: 2705

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 2705 and 2706 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. What is 'intelligence'? Explain verbal and non-verbal tests of intelligence with examples.
2. Explain any two theories of emotion.

SHORT ESSAYS (Answer any Four) 4 x 5 = 20 Marks

3. What is T A T?
4. What is 'parapsychology'?
5. What are the traits of creative people?
6. Explain 'persecutory delusion'.
7. List the causes of stress.

SHORT ANSWERS 5 x 2 = 10 Marks

8. Behaviorism
9. Adolescence
10. Hydrocephaly
11. Sleep as a biological motive
12. Super ego

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – ARPIL 2018

Time: 3 Hours | Max. Marks: 40 Marks

Sociology

Q.P. Code: 2706

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 2705 and 2706 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Explain the factors of social change. Write a note on health programme.
2. Define family, its functions, types and its importance to Physiotherapy.

SHORT ESSAYS (Answer any Four) 4 x 5 = 20 Marks

3. Influence of formal and informal groups on health and sickness – discuss.
4. Health hazards of rural community
5. Difference between primary and secondary group
6. Juvenile delinquency
7. Social change and stress

SHORT ANSWERS 5 x 2 = 10 Marks

8. Social psychology
9. Poverty and unemployment
10. Social survey
11. Role of Medical Social Worker
12. Nuclear family

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - APRIL-2018

Time: Three Hours | Max. Marks: 100 Marks

BIO-MECHANICS (Revised Scheme – 4)

Q.P. CODE: 2707

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. Define force and its components and describe in detail about parallel force systems and concurrent force systems.
2. Describe in detail about sliding filament theory of muscle contraction with neat diagram.
3. Define stability of knee joint and explain about locking and unlocking mechanism of knee joint.

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. Define friction and classify different types of friction.
5. Mention in brief about axis and planes.
6. Define Lever and explain in detail about second order lever with example and neat diagram.
7. Explain the structure of sarcomere with neat diagram.
8. Describe arches of foot.
9. Classification of joints in detail
10. Bucket handle and pump handle movement of ribs
11. Stress strain curve
12. Sagittal plane analysis of gait
13. Closed kinematic chain and open kinematic chain with examples
14. Enumerate various grips of hand.
15. Structure of Humeroradial and Humeroulnar articulation
16. Mention in detail about various deviations occurring at ankle joint.
17. Static stability of shoulder joint

SHORT ANSWERS 10 x 2 = 20 Marks

18. Name only the determinants of gait.
19. Glenoid labrum
20. Define cubitus valgus and varus.
21. Thoracolumbar fascia
22. Patella alta
23. Spurt and shunt muscle
24. Anatomical pulley
25. Pronation and Supination twist
26. Significance of palmar arches
27. Closed packed and open packed position

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL-2018

Time: Three Hours | Max. Marks: 100 Marks

HUMAN ANATOMY (RS - 5)

Q.P. CODE: 2731

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 cranial nerves in order and explain facial nerve in detail.
2. Describe the external features of heart and explain right atrium in detail.
3. Describe the hip joint – articular surface, ligaments, movements, relations and applied anatomy.

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. Cubital fossa – boundaries, content and applied anatomy
5. Great saphenous vein
6. Superficial palmar arch – formation and branches
7. Floor of fourth ventricle
8. Tongue – muscles and nerve supply
9. Describe the second part of duodenum, relations and interior structure.
10. Thoracic duct – origin, course and termination
11. Prostate gland – situation, ligaments and age changes
12. Describe different types of cartilages.
13. Pelvic floor muscles
14. Foramen magnum
15. Spermatogenesis
16. Mediastinal surface of right lung
17. Synovial joint classification with two examples.

SHORT ANSWERS 10 x 2 = 20 Marks

18. Carpal tunnel syndrome
19. Parts of small intestine
20. Name the lymphoid organs.
21. Anatomical position
22. Draw the relations of 1st rib.
23. Name the ventricles of brain.
24. Arch of aorta branches
25. Paranasal air sinuses
26. Name the branches of facial nerve.
27. Bare area of liver

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL-2018

Time: Three Hours | Max. Marks: 100 Marks

HUMAN PHYSIOLOGY (RS - 5)

Q.P. CODE: 2732

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 the sliding – filament theory of muscle contraction.
2. Define reflexes. Draw a neat labeled reflex arc. Discuss the properties of reflexes.
3. Draw the O2 dissociation curve. List the factors causing the shift of the curve to the right and left.

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. Explain the phases of regulation of gastric juice secretion.
5. Enumerate the function of skin.
6. Describe triple response.
7. Enumerate the secondary sexual characteristics in a female.
8. Functions of CSF
9. Describe the role of platelets in haemostasis. What is thrombocytopenic purpura?
10. Explain the physiological action of thyroid hormone.
11. Define cardiac output. Explain the factors regulating venous return.
12. Draw a labeled diagram of the pyramidal pathway. List their functions.
13. Define REM and NREM sleep. Differentiate the features of REM and NREM sleep.
14. Discuss the refractive errors of the eye. Make a note on its correction.
15. Enumerate the properties of a neuron. Explain the property of refractory period.
16. Briefly describe the mechanism of micturition reflex with the help of a diagram.
17. Outline the ionic basis of Action potential.

SHORT ANSWERS 10 x 2 = 20 Marks

18. Functions of Mitochondria and Endoplasmic reticulum.
19. Draw the waves of ECG. Write the cause for each.
20. Define Muscle tone. List the higher centres controlling it.
21. Define the terms “transport maximum” and “renal threshold”.
22. Tabulate any three differences between isometric and isotonic contraction.
23. List functions of Aldosterone.
24. Define puberty. Enumerate the features of puberty.
25. Name the different GI movements. Define Peristalsis.
26. Draw a neat labeled spirogram.
27. Enumerate the properties of Synapse.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL 2018

Time: Three Hours | Max. Marks: 80 Marks

BIOCHEMISTRY (RS-5)

Q.P. CODE: 2733

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 Glycolysis and calculate its energetics.
2. Describe source, daily requirements, biochemical functions and deficiency symptoms of vitamin C.
3. What are normal serum calcium levels? How is it regulated?

SHORT ESSAYS (Answer any Eight) 8 x 5 = 40 Marks

4. Classify proteins according to their functions.
5. Digestion and absorption of carbohydrates
6. Structure and function of messenger RNA and transfer RNA
7. Functions and deficiency manifestations of vitamin A
8. Explain the role of kidney in maintaining Acid-base balance.
9. Structure and functions of collagen
10. Functions of Lipoproteins
11. Regulation of blood glucose
12. Transamination
13. Competitive inhibition

SHORT ANSWERS 10 x 2 = 20 Marks

14. Von-gierks disease
15. Cori's cycle
16. Effect of temperature on enzyme reaction
17. Normal levels of blood urea and cholesterol
18. Functions of Carnitine
19. Phenylketonuria
20. Golgi apparatus
21. Pyruvate dehydrogenase complex
22. Four derivations of cholesterol
23. Define Basal Metabolic Rate (BMR) and mention two factors affecting it.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL-2018

Time: Three Hours | Max. Marks: 100 Marks

BIO-MECHANICS (RS - 5)

Q.P. CODE: 2734

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. Define Gait. Enumerate various determinants of gait and add a note on any two pathological gaits.
2. Describe the structure of shoulder joint in detail and explain in brief about static stability of shoulder joint.
3. Define force. Explain the components of force and add a note on concurrent force systems.

SHORT ESSAYS (Answer any Twelve) 12 x 5 = 60 Marks

4. Describe the structure of lumbar vertebra.
5. Enumerate various power grips of hand.
6. Muscular activity in bilateral stance
7. Rate dependent properties of connective tissue
8. Movement analysis of sit to stand activity
9. Postural control
10. Define Lever and explain about III order lever with suitable examples.
11. Classify fibrous and cartilaginous joints in detail.
12. Define Goniometer and its principles and measurement of Ankle range of motion.
13. Briefly describe the mechanics of ventilation.
14. Locking and unlocking mechanism of knee joint.
15. Discuss the structure of temperomandibular joint in detail.
16. Palmar arches of hand and its significance
17. Enumerate distance and temporal variables of gait.

SHORT ANSWERS 10 x 2 = 20 Marks

18. Name the ligaments supporting spine.
19. Grass hopper eye patella
20. Name the muscles of mastication.
21. Centre of pressure and degree of toe out
22. Name the various methods to assess posture.
23. Classify various muscle fiber types.
24. Any two functions of Cruciate and collateral ligaments of knee.
25. Gluteus maximus gait and antalgic gait
26. Define force of friction and its types.
27. Enumerate various pathological gait deviations

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I Year B.P.T. Degree Examination - ARPIL 2018

Time: 3 Hours | Max. Marks: 40 Marks

PSYCHOLOGY (RS – 5)

Q.P. Code: 2735

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Define motivations. Explain biological motives.
2. What are defence mechanisms? List and explain atleast three defence mechanisms.

SHORT ESSAYS (Answer any Four) 4 x 5 = 20 Marks

3. Define attitudes. Factors influencing attitudes.
4. Explain Jung's classification of personality.
5. Types of conflicts
6. Classification of intelligence tests
7. Mnemonics

SHORT ANSWERS 5 x 2 = 10 Marks

8. Non-verbal test of intelligence
9. Superego
10. Reasoning
11. Uses of psychology
12. Stress

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I Year B.P.T. Degree Examination - ARPIL 2018

Time: 3 Hours | Max. Marks: 40 Marks

SOCIOLOGY (RS – 5)

Q.P. Code: 2736

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) 1 x 10 = 10 Marks

1. Define social change. Explain the factors of social change.
2. Influence of culture on health and illness

SHORT ESSAYS (Answer any Four) 4 x 5 = 20 Marks

3. Methods of sociological investigations
4. Characteristics of rural community
5. Agencies of socialization
6. Poverty and unemployment
7. Types of family

SHORT ANSWERS 5 x 2 = 10 Marks

8. Population explosion
9. Delinquency
10. Alcoholism
11. MSW
12. Urban community

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