Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – September 2014

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. Describe the extra ocular muscles of the eye ball under the following headings:
   a) Origin b) Insertion c) Nerve supply d) Action
2. Describe the median nerve under the following headings:
   a) Origin, course, termination b) Branches c) Applied anatomy
3. Describe the popiteal fossa under the following headings:
   a) Boundaries b) Roof c) Floor d) Contents

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

4. Gluteus maximus
5. Superolateral surface of the cerebral hemisphere
6. Trapezius
7. Flexor retinaculam of hand
8. Cubital fossa
9. Superior mediastinum
10. Major opening of the diaphragm
11. Coronary arteries
12. Describe the intervertebral disc
13. Classification of bones
14. Describe pleura and its recesses
15. Describe the triceps surae
16. Features of typical rib
17. Menisci of knee joint

SHORT ANSWERS **10 x 2 = 20 Marks**

18. Name the paranasal air sinus and its location
19. What is styloid apparatus? Name the parts
20. Dupuytren's contracture
21. Name the parts of pancreas.
22. Name 4 muscles of the tongue. Give their nerve supply
23. Name 4 muscles of the facial expression. Give their nerve supply
24. What are fibrous joints? Give two examples
25. What is myotome?
26. Name the parts of the neural tube
27. Name the muscles, which cause inversion and eversion of the foot. At which joint do the movements take place

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – September 2014

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. With the graph of pressure changes explain the mechanics of ventilation
2. Give the formation, circulation and functions of CSF. Add a note on lumbar puncture
3. Define motor unit. Describe its relation to muscle contraction

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

4. Explain the functions of saliva
5. Briefly describe the regulation of GFR by the kidney
6. Describe the features of motor homunculus
7. Discuss the factors regulating erythropoiesis
8. Enumerate the functions of bile
9. Discuss the physiological action of thyroid hormone
10. Draw and label the normal ECG waves. Write the cause for each wave
11. Describe the functions of thrombocytes
12. Explain the phases in the regulation of gastric juice secretion
13. Enumerate the posterior pituitary hormones. Write the functions of oxytocin
14. Define puberty. Enumerate secondary sexual characteristics in female
15. Trace the pathway for fine touch
16. What is sleep? Differentiate between REM and NREM sleep
17. Describe the mechanisms by which the body adjusts to cold environment

SHORT ANSWERS **10 x 2 = 20 Marks**

18. Hormonal basis for ovulation
19. What are anti – coagulants. List four anti coagulants
20. What is acclimatization
21. Functions of oligodendrocytes
22. Draw a neuron and label its parts
23. Define jaundice. List the types of jaundice
24. Define a sarcomere
25. What is referred pain? Give two examples
26. Define shock. Name the types of shock
27. Functions of (a) Ribosomes (b) Mitochondria

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – September 2014

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. Name the fat-soluble vitamins. Describe the formation of active form of Vitamin D, its biochemical functions and deficiency manifestations.
2. Enumerate Renal function tests. Define clearance test and add a note on Creatinine clearance test and its importance.
3. Describe urea cycle and name two inborn errors associated with this cycle.

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

4. Biochemical functions of Vitamin C.
5. Fluid mosaic model of cell membrane
6. Metabolic acidosis
7. Functions and deficiency manifestations of Thiamine
8. Describe the synthesis of ketone bodies and mention two causes of ketosis.
9. Name the plasma lipoproteins and describe their functions.
10. Define Basal Metabolic Rate (BMR). Write its normal values and explain the factors affecting it.
11. Structure and functions of DNA
12. Describe the factors affecting the enzymes action.
13. Mucopolysaccharides

SHORT ANSWERS **10 x 2 = 20 Marks**

14. Mention two metabolic functions of mitochondria.
15. Mention two enzymes of diagnostic importance in myocardial infarction.
16. Coenzyme forms of Riboflavin and Niacin.
17. Mention two causes of obstructive jaundice.
18. Give the normal values of a) Serum total bilirubin b) Serum Urea
19. Phenylketonuria
20. Transamination
21. Van den Bergh reaction
22. Name primary and secondary bile acids.
23. Give the normal values of a) Serum total cholesterol b) Serum Creatinine.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – September 2014

Time: Three Hours **Max. Marks: 80 Marks**

BIOMECHANICS (RS-3)

Q.P. CODE: 2704

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. Define gait and gait cycle. Describe the kinetics of stance phase of gait.
2. Discuss in detail dynamic stability of Gleno-humeral joint.
3. Write in detail the formation of arches in hand with its functions.

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

4. Define Equilibrium? Discuss types of equilibrium with examples
5. Explain in detail the mechanism of muscle contraction
6. Define Joint? Classify with examples & add a note on features of the synovial joints
7. Explain the orders of lever with examples in human body and also role of levers in physiotherapy
8. Explain the structure of typical lumbar vertebrae. Add a note on function of the lumbar spine.
9. Write extensor mechanism of hand and add a note on its function
10. Brief out weight bearing of hip joint & Explain the muscle function in unilateral stance with example.
11. Describe the biomechanics of elbow joint.
12. Write in detail the extensor mechanism of knee? Mention the ligaments of the knee.
13. Define therapeutic gymnasium. Explain the mechanical principles of
    a) Shoulder Wheel b) Treadmill

SHORT ANSWERS **10 x 2 = 20 Marks**

14. What is index plus minus foot
15. What is tonic & phasic muscle
16. What is equilibrium?
17. Moment arm of force
18. Carpal tunnel syndrome
19. What are force systems?
20. Carrying angle & its importance
21. Gluteus medius gait
22. Define and give example for concurrent system of force
23. Anatomical pulley

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – September 2014

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. Describe the role of heredity and environment in physical and psychological development.
2. What is emotion? Explain the theories of emotion.

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

3. Psychology and physiotherapy
4. Explain the principles of organization of perception
5. Types of conflicts
6. Explain insight learning theory
7. Describe development of attitude

SHORT ANSWERS **5 x 2 = 10Marks**

8. Rationalization
9. Observation
10. Problem solving
11. Mental retardation
12. Frustration

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – September 2014

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 stages of socialization.
2. Define social change. Explain the factors of social change.

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

3. Social problems and disabled
4. Differences between primary and secondary group
5. Characteristics of rural community
6. Culture and health
7. Agencies of socialization

SHORT ANSWERS **5 x 2 = 10Marks**

8. MSW
9. Juvenile delinquency
10. Population explosion
11. Social security
12. Alcoholism

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - September 2014

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. Describe in detail about static and dynamic stability of shoulder joint.
2. Enumerate the classification of joints and explain in detail with examples.
3. Describe in detail about mechanism of muscle contraction, and add a note on different types of muscle contraction.

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

4. Screw home mechanism of knee joint
5. Mention in brief about concurrent force systems.
6. Define gait and explain about phases of gait cycle.
7. Musculoskeletal changes in pregnancy
8. Explain in detail about functional position of wrist and hand.
9. Define lever and explain in detail about II order lever with example in human body.
10. Length tension relationship of a muscle
11. Structure and function of Temperomandibular joint
12. Mention in detail about muscles responsible for normal ventilation.
13. Enumerate the deviations occurring at Ankle joint.
14. Lumbo pelvic rhythm
15. Explain the concept of stability in Hip joint.
16. Outline the general properties of connective tissue.
17. Explain in brief about kinetics and kinematics with examples.

SHORT ANSWERS **10 x 2 = 20 Marks**

18. Define Moment arm of force.
19. Spurt and shunt muscle
20. What is Gait cycle?
21. Define axis and plane.
22. Explain good and bad posture.
23. What is concentric and eccentric contraction?
24. Stress strain curve
25. Name the ligaments of Hip joint.
26. Anteversion and Retroversion
27. Define COG and LOG.

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