

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – Sep 2012

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 origin, course, relations and branches of radial nerve till it reaches elbow
2. Discuss the lymphatic drainage of lower limb
3. Write about the adductor pollicis and describe the 1st carpometacarpal joint

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Describe the superficial palmar arch its formation and branches
5. Lower end of femur
6. Classify muscles with examples
7. Floor of the IV ventricle
8. Splenic artery and its branches
9. Muscles of tongue
10. Deltoid muscle
11. Write briefly about median nerve in the forearm
12. Discuss about blood supply to the cerebrum
13. Discuss the origin, course and relation of the axillary artery with its branches
14. Bronchopulmonary segments of right lung
15. Great saphenous vein
16. Femoral triangle
17. Describe right atrium of heart

SHORT ANSWERS

10 x 2 = 20 Marks

18. Name six structures passing through foramen magnum
19. Mention the joints where inversion and eversion take place
20. Name the ear ossicles
21. Attachments of sternocleidomastoid muscle
22. Name the parts of hip bone
23. Function of gall bladder
24. Femoral artery and its branches
25. Boundaries of cubital fossa
26. Mention the structure passing through Foramen ovale
27. Name the nuclei present in cerebellum

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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. Define cardiac output. Describe the factors that regulate cardiac output
2. With a well labeled graph discuss the ionic basis of action potential
3. Name the respiratory centres. Explain the neural regulation of respiration

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Enumerate the functions of saliva
5. Briefly describe the regulation of GFR by the kidney
6. Define hypoxia. Differentiate the types of hypoxia
7. Describe the features of sensory homunculus
8. Enumerate the functions of liver
9. Briefly outline the contraction cycle of a skeletal muscle
10. Explain the functions of middle ear
11. Draw and label the normal ECG waves. Enumerate its uses
12. With the help of strength – duration curve, explain rheobase and chronaxie
13. Explain the phases of gastric juice secretion
14. List the functions of plasma proteins
15. Define menopause. Enumerate its important features
16. What is Landsteiner's law? Explain its applications in the ABO and Rh system
17. Discuss the physiological action of cortisol

SHORT ANSWERS

10 x 2 = 20 Marks

18. Name 4 contraceptive methods in male
19. What are anti – coagulants. List any four anti – coagulants
20. List the primary taste sensations. Locate their area on the tongue
21. Define saltatory conduction in a nerve fibre
22. What is myasthenia gravis
23. What is apex beat? Mention its clinical significance.
24. Define a muscle tone
25. What is referred pain? Give two examples
26. Define shock. Name the types of shock
27. Define physiological dead space

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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. Explain hormonal regulation of blood glucose. Add a note on glycosuria
2. Describe the sources, RDA, Absorption, Metabolic functions and deficiency symptoms of calcium
3. Describe beta oxidation of palmitic acid. How many ATPs are produced by the complete oxidation

SHORT ESSAYS (Answer any Eight)

8 x 5 = 40 Marks

4. Denaturation of proteins
5. Glycogenolysis
6. Structure and functions of cholesterol
7. Transamination
8. Nitrogen balance
9. Functions of proteins
10. Digestion and absorption of carbohydrates
11. Specific dynamic action
12. Structure and functions of collagens
13. Dietary fibers

SHORT ANSWERS

10 x 2 = 20 Marks

14. Epimers
15. Zwitter ions
16. Essential fatty acids
17. Isoenzymes
18. Respiratory acidosis
19. Role of aldosterone in electrolyte balance
20. What are provitamins, give examples
21. Normal levels of blood urea and cholesterol
22. Name one reducing and one non reducing disaccharides
23. Rotheras test

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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. Discuss the biomechanics of ankle joint
2. What is a lever? Explain the various types of levers with examples and add a note on application of levers in physiotherapy
3. Define posture. Discuss postural reflex and explain the various postural deviations of spine

SHORT ESSAYS (Answer any Eight)

8 x 5 = 40 Marks

4. Explain the Newton's laws of motion with examples
5. What is mechanical advantage? Explain mechanical advantage in relation to pulleys
6. What are the factors affecting muscle function? Add a note on shunt and spurt muscles
7. Define centre of gravity, base of support, line of gravity
8. Define active insufficiency. Explain in detail with appropriate examples
9. Write a note on open and closed kinematic chain exercises with appropriate examples
10. List out various gait deviations. Discuss any two in detail
11. Explain the mechanics of rib cage movement during inspiration
12. Explain the gleno-humeral rhythm
13. Describe the various walking aids used in rehabilitation

SHORT ANSWERS

10 x 2 = 20 Marks

14. Pes cavus
15. Define torque
16. Ground reaction force
17. Carrying angle
18. Angle of pull
19. Young's modulus
20. Q-Angle
21. Isometric exercises
22. Flat back posture
23. Scoliosis

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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 the knee complex and locking mechanism of knee.
2. List the ligaments attached in vertebral column and the importance of stability and mobility of the vertebral column.
3. Explain about the scapulo humeral rhythm during elevation through abduction of shoulder complex.

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Define lever. Explain the different types of levers, citing examples in relation to human body.
5. Static stabilization of shoulder joint.
6. Define active insufficiency. Explain it with examples.
7. Explain Anatomic pulley with example.
8. Write a note on radio ulnar joint?
9. Explain kinematics of chest wall.
10. Discuss the supination and pronation twist.
11. What is stress and strain? Explain load deformation curve.
12. Explain concurrent force system with example.
13. Explain the Newton's laws of motion with examples
14. Mobility of hip joint.
15. Classify diarthrodial joints with examples.
16. Structure and function of Sacroiliac joint.
17. Patella femoral joint movement.

SHORT ANSWERS

10 x 2 = 20 Marks

18. What are osteokinematics and arthrokinematics?
19. What is angle of pull?
20. Write muscle work in hook grip?
21. Functional significance of palmar arches.
22. What is creep?
23. Define work and energy.
24. Define angle of inclination of femur.
25. What is grasshopper eyed patella?
26. Good and Bad Posture.
27. At which range of elbow, the torque created by biceps is greater? Why?

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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 learning? Explain Pavlov's classical conditioning
2. What is perception? Explain various principles of perception

SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

3. Clinical psychology
4. Development and growth of Behavior during infancy and childhood
5. Physiological changes during Emotion
6. Effective ways of learning
7. Classification of personality

SHORT ANSWERS

5 x 2 = 10Marks

8. Schools of Psychology
9. Independent and dependent variables
10. Thirst motive
11. Psychological needs
12. Feeling and Emotion

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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. Define sociology? Describe the importance of sociology with special reference to health care professionals
2. Explain the problems due to over population

SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

3. In groups and out groups
4. Modern family
5. Technological factors of social change
6. Advantages and disadvantages of joint family system
7. Social survey method

SHORT ANSWERS

5 x 2 = 10Marks

8. Urbanization
9. Monogamy
10. Two ill effects of alcoholism
11. Causes of poverty
12. Unemployment
