~~38~~ 44

2151_2011_1_S224

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – Feb/March 2011

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

## ANATOMY
(OS, RS & RS2)

## Q.P. CODE: 2151

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

**LONG ESSAYS (Answer any Four)** **4 x 10 = 40 Marks**

1. Describe the tongue under the following headings
   a) Gross anatomy (b) Muscles (c) Nerve supply (d) Applied anatomy
2. Describe rectus abdominis muscle, its attachments, actions and nerve supply
3. Describe shoulder joint under following headings (a) Bones forming the joint (b) Ligaments (c) Muscles & movement of the joint (d) Applied anatomy
4. Describe origin, course and distribution of facial nerve
5. Describe the arches of foot and its applied aspects

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

6. Pleura
7. Histology of elastic cartilage
8. Right kidney
9. Corpus striatum
10. Femoral triangle – boundaries and contents
11. Oculomotor nerve
12. Characteristics of typical rib
13. Boundaries and contents of axilla
14. Arch of aorta
15. Stomach bed

K.R. MUKER'S CENTRAL LIBRARY

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

16. Name the muscles attached to posterior surface of radius
17. Name any two difference between small intestine and large intestine
18. Femoral canal
19. Mention any four derivatives of ectoderm
20. Four tributaries of saphenous vein
21. Enumerate the parts of fallopian tube
22. Draw and label blastocyst
23. Deltoid ligament
24. Name the parts of gall bladder
25. Name the tarsal bone

*****

37 45

2152_2011_1_S222

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination –Feb/March 2011

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

## PHYSIOLOGY, THERAPEUTIC PHYSIOLOGY AND BIOCHEMISTRY (OS, RS & RS2)

## Q.P. CODE: 2152 & 2153

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**

### Q.P. Code: 2152 – Section 'A' (50 Marks)

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

1. Draw and label the oxygen dissociation curve. Explain the curve
2. Trace the pain pathway
3. With neat labeled diagram explain neuro – muscular transmission

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

4. State landsteiner's law? List the importance of blood grouping
5. Describe the regulation of secretion of gastric juice
6. Explain the functions of parathyroid hormone
7. Trace the taste pathway
8. Enumerate the functions of cerebrum

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

9. Define jaundice. Enumerate the three types of jaundice
10. Enumerate any four functions of saliva
11 Differentiate between mitosis and meiosis
12 Define myopia. How is it corrected
13. Define GFR and give its normal value

### Q.P. Code: 2153 – Section 'B' (50 Marks)

**Use separate answer book**

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

1. Define and classify carbohydrates with examples. Add a note on the functions of carbohydrates
2. Describe sources RDA, functions and deficiency symptoms of vitamin A
3. Define enzymes. Explain the various factors affecting enzyme activity

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

4. Write a note on fluid mosaic model of cell membrane
5. Explain respiratory acidosis and alkalosis
6. Nitrogen balance
7. Isoenzymes with examples
8. Protein energy malnutrition (PEN)

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

9. Pellagra
10. Epimers
11 Essential aminoacids with examples
12 Conjugated proteins with examples
13. Name one reducing and one non reducing disaccharide

*****

42

2054_2011_1_S123

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – Feb/March 2011

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

## MEDICAL ELECTRONICS AND COMPUTER APPLICATIONS
(Old Scheme)

## Q.P. CODE: 2054

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

**LONG ESSAYS (Answer any Four)** **4 x 10 = 40 Marks**

1. Explain management and Electro magnetic Induction
2. Explain the different types of A C meter
3. Explain short wave diathermy
4. Explain the CPU block diagram and the architecture of computer
5. Explain the different networking concept of CPU

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

6. Write a short note on vacuum diode
7. Write a note on transforms
8. Write a note on Lenz's Law
9. Write a not on Rheostat application in physiotherapy
10. Write a note on Charges
11. Write a note on computer application
12. Write a note on storage devices
13. Write a note on precaution against viruses
14. Write a note on printers
15. write a note Data Security

FR. MULLER CENTRAL LIBRARY

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

16. Define D.C current & A c current
17. Define semiconductor
18. Define a capacitor
19. Define light emitting diode
20. Define integrated circuits
21. What is memory?
22. What is disk?
23. What is a flow chart?
24. What is Resister?
25. What are 2 output devices?

*****

~~36~~ 46

2154_2011_1_S223

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

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

## MEDICAL ELECTRONICS AND COMPUTER APPLICATIONS (OS, RS & RS2)

## Q.P. CODE: 2154

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. What are microwaves? Explain with the help of diagram the circuit of MWD
2. What is the general importance of computer the field of physiotherapy? What are the advantages of computerization in EMG. Exercise testing equipment and laser device
3. Explain the basic anatomy of computer. How can you classify computers

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

4. Testing of an electric simulator
5. Explain usage of computer in museum and libray
6. What is memory? What are different types of memory
7. What is the importance of computers in field of education
8. Using a neat labelled diagram. Describe the working of an electric traction unit
9. What is an output device? Describe the different types of output device
10. Draw and explain an ultrasonic generator
11. Distinguish between information form data
12. Describe functions and types of capacitor
13. Describe production of eddy currents

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

14. Write a note on super computer
15. Define impulse
16. Differentiate between 8 Bit and 16 Bit microprocessors
17. State kirchhoff's current law
18. Explain the term conductors
19. What is neuromuscular junction
20. What is the function of nebulizer
21. Mention two types of printers
22. What is RMS value of sine wave
23. What is the thermal effect of electronic current

*****

39 43

2055_2011_1_S103

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

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

## GENERAL PSYCHOLOGY & SOCIOLOGY (Old Scheme)

## Q.P. CODE: 2055 & 2056

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**

### Q.P. Code: 2055 – Section 'A' – General Psychology (50 Marks)

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

1. Describe classical conditioning model of learning
2. Explain the developmental factors of personality
3. Explain the principle of heredity

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

4. Errors of perception
5. Insightful learning
6. Causes of frustration
7. Rationalization
8. Characteristics of personality

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

9. Attention
10. Abnormal psychology
11. Illusion
12. Interview
13. Education psychology

### Q.P. Code: 2056 – Section 'B' – Sociology (50 Marks)

**Use separate answer book**

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

1. Write a note on dowry system with suitable solutions
2. Explain the merits and demerits of social change
3. Explain the factor responsible for the disintegration of joint family

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

4. Health hazards of tribal community
5. Characteristics of secondary group
6. Education and social change
7. Characteristics of social group
8. Write a note on unemployment

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

9. Re-socialization
10. Crowd
11. Joint family
12. Anthropology
13. Population explosion

*****

35 47

2155_2011_1_S43

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T Degree Examination – Feb/March 2011

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

## PSYCHOLOGY AND SOCIOLOGY
(OS, RS & RS2)

## Q.P. CODE: 2155 & 2156

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**

### Q.P. Code: 2155 – Section 'A' Psychology (40 Marks)

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

1. Define psychology. Explain the scope of psychology
2. Define personality. Explain Erickson's theory of personality development

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

3. Field investigation and case study method
4. Illusion and hallucination
5. Wechslers adult intelligence scale
6. Nature and characteristics of attitudes
7. Creative thinking

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

8. Mention traites of a leader
9. Genes and chromosomes
10. Adolescence
11. Secondary motives
12. Conflicts

### Q.P. Code: 2156 – Section 'B' Sociology (40 Marks)

**Use separate answer book**

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

1. Explain the socio-economic factors of health and illness
2. Describe the role of family in health and illness

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

3. Bring out the agencies of socialization
4. Explain the various types of family
5. Write in brief the difference between rural and urban community
6. Explain the influence of culture on health and illness
7. Write the health consciences of alcoholism

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

8. Define social change
9. Case study method
10. Social security in India
11. Problem of the senior citizens
12. Types of beggary

*****

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

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

## EXERCISE THERAPY (OS, RS & RS -2)

## Q.P. CODE: 2157

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

**LONG ESSAYS (Answer any Four)** **4 x 10 = 40 Marks**

1. Mention the principles used in hydrotherapy. Describe the application for exercise in water
2. Describe the shoulder complex and explain scapulo – humeral rhythm in detail
3. Analyse the activity of squatting to standing
4. Bio mechanics of respiration
5. What is equilibrium? Discuss the types of equilibrium with examples

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

6. Lumbo pelvic rhythm
7. Explain axis and plane with reference to shoulder joint
8. What are Newtons laws? Explain any one law in detail
9. What is Active insufficiency? Explain with one example
10. Classify Levers? Explain first order lever with anatomical example
11. What is power grip? Explain anyone power grip
12. Principles of Goniometry
13. Spurt and shunt muscles. Explain with examples
14. Describe the muscle work in tempero mandibular joint motions
15. Closed link and open linked exercises. Give appropriate examples




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

16. Carrying angle
17. Suspension therapy – uses
18. Kinetic energy
19. Define Friction
20. Hooke's law
21. Concavo Convex rule
22. Treadmill – uses
23. Balance board
24. Angle of pull
25. Define posture

*********

33 49

2701_2011_1_S41

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T Degree Examination – Feb/March 2011

**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 popleteal fossa under following headings
   a) Boundaries b) Roof & floor c) Contents d) Applied anatomy
2. Describe brachial plexus under following headings
   a) Formation b) Branches c) Applied anatomy
3. Describe in detail origin, insertion, nerve supply & action of muscles of mastication

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

4. Histology of transverse section of compact bone
5. Hamstri group of muscles
6. Kidney – relations
7. Lateral ventricle of brain
8. Arterial supply of heart
9. Extensor retinaculam of foot
10. Cubital fossa
11. Supinators of forearm
12. Fascia lata and its modifications
13. Ramus of mandible
14. Great saphenous vein
15. Menisci of the knee
16. Abdominal aorta
17. Quadriceps muscles

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

15. Components of basal ganglia
16. Structures passing through jugular foramen
17. Parts of Intervertebral disc
18. Ligaments of hip joint
19. Attachment to greater tubercle of humerus
20. Histology of hyaline cartilage
21. Blood supply of heart
22. Parts of uterus
23. Pelvic diaphragm
24. Parts of brain stem

*****

50

2702_2011_1_S224

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

**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

**2 x 10 = 20 Marks**

**LONG ESSAYS (Answer any Two)**

1. Name four ascending tracts of the spinal cord. Trace the pathway for fine touch
2. Describe in detail the properties of cardiac muscle
3. With a labelled diagram explain the neuro – muscular transmission

**12 x 5 = 60 Marks**

**SHORT ESSAYS (Answer any Twelve)**

4. Describe triple response
5. Enumerate the stages of erythropoiesis and describe the factors affecting them
6. Discuss the functions of bile salts
7. Describe the respiratory changes during muscular exercise
8. Discuss briefly the chemical regulation of respiration
9. Explain the refractive errors of the eye
10. What is a synapse? Draw and label the components of the synapse
11. Discuss the physiological actions of aldosterone
12. Explain the mechanism of spermatogenesis
13. With a neat diagram explain micturition reflex
14. Enumerate the functions of skin
15. Describe the events of the different phases of menstrual cycle with their hormonal basis
16. Describe the events in second phase of deglutition
17. Explain Flexion withdrawal reflex with a diagram

**10 x 2 = 20 Marks**

**SHORT ANSWERS**

18. Name two mechanisms by which the body tolerates cold environment
19. State starling's law of muscle contraction
20. Enumerate the functions of placental hormones
21. What is facilitatory water reabsorption
22. Define isotonic and isometric contraction in skeletal muscle
23. Draw a cystometrogram
24. Note the action of ADH on kidney
25. List the GI hormones
26. Structure of a taste bud
27. Define jaundice

*****

31 51

2703_2011_1_S105

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

**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 chemistry, sources, requirement, metabolic functions and deficiency manifestations of Thiamine (Vitamin $B_1$)
2. Describe the metabolism of glycogen and its regulation
3. Describe the metabolism of Tyrosine

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

4. Describe the biochemical functions, dietary requirements and absorption of calcium
5. Competitive inhibition of enzymes
6. Describe the types, characteristics and metabolism of lipoproteins
7. Mucopolysaccharides
8. Liver function tests
9. Describe the role of blood buffers in the acid base balance
10. Describe the structure of DNA
11. Reactions of β – oxidation of fatty acid
12. Protein energy malnutrition
13. Functions of calcium

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

14. Diabetes mellitus
15. Diagnostic important enzymes
16. Balance diet
17. Rancidity
18. Semi-essential amino acids
19. Collagen
20. Bile pigments
21. Wilson's disease
22. Cyclic – AMP
23. Lipotropic factors

*****

18 64

2704_2011_1_S159

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

**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. Describe biomechanics of shoulder joint.
2. Explain the movements analysis from sitting to standing.
3. Describe the biomechanics of rib cage.

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

4. Describe the Contractile and Non Contractile elements of muscle.
5. Describe the motions in the upper and lower joints during the mouth opening and closing.
6. Describe the role of rhomboids in elevation of the arm.
7. Describe the various precision functions.
8. Describe Trendelenburg gait.
9. Analyse standing posture anterior view.
10. Define levers. Explain with examples from human body of second order levers.
11. Discuss effects of posture on age.
12. Describe the biomechanics of elbow joint.
13. Describe motion of pelvis on femur.

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

14. Define endurance.
15. What are synergists?
16. Q-angle.
17. Postural sway.
18. Syndesmosis.
19. Types of muscles fibres.
20. Motor unit.
21. Active insufficiency.
22. Coxa valga.
23. Kyphosis.

*****

30 52

2705_2011_1_S103

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Feb/March 2011

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

## GENERAL PSYCHOLOGY & SOCIOLOGY
## (RS-3 & RS-4)

# Q.P. CODE: 2705 & 2706

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**

### Q.P. Code: 2705 – Section 'A' - General Psychology (40 Marks)

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

1. Define Psychology. Explain any two methods of psychology
2. What is Emotion? Explain the factors and changes of emotion

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

3. Trial and error learning
4. Psychoanalysis
5. Sources of frustration
6. Concept of I.Q
7. Features of emotion

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

8. Infancy
9. Twins
10. Motive
11. Genetic psychology
12. Stress

### Q.P. Code: 2706 – Section 'B' - Sociology (40 Marks)

**Use separate answer book**

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

1. Define family. Explain the functions of family
2. Differentiate between primary and secondary groups

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

3. Features of tribal community
4. Causes of over population
5. How does nuclear family differ from joint family
6. Urban problems
7. Bring out the relation between the psychology and sociology

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

8. Ethics
9. Anthropology
10. Social deviance
11. Audience
12. Society

*****

65

2707_2011_1_S103

# Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination - Feb/March 2011

**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. List out the joints forming shoulder complex. Explain the kinematics and ligaments controlling them in each joint
2. Write in detail about analysis of posture in sagittal plane and write the deviation from the normal posture
3. Explain in detail about the biomechanics of cervical spine

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

4. Write about kinematic chain
5. Describe passive insufficiency with examples
6. Describe kinematics of chest wall
7. Mobility of elbow joint
8. Explain the role of intrinsic muscles of hand
9. Explain the locking and unlocking mechanism of knee
10. Describe temporo mandibular joint motions
11. Define various parameters of gait
12. Discuss about the supination and pronation twist in foot
13. Analyses of muscle work during stair climbing
14. Discuss the extensor mechanism of knee
15. Explain Newton's law of motion with examples
16. Analyze the muscle forces at hip during unilateral stance
17. Explain chest wall motions during normal breathing

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

18. Define angle of pull
19. Force of friction
20. Concave – convex rule in arthrokinematics of joint
21. Mentions any two functions of arches of foot
22. Define Q angle
23. Write muscle work in cylindrical grasp
24. What is metatarsal break?
25. What is Young's modulus?
26. What is mechanical energy?
27. Define balance

*****

27 55 43

2152_2011_1_S261

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Physiotherapy) Degree Examination – Aug / Sep 2011

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

## PHYSIOLOGY, THERAPEUTIC PHYSIOLOGY AND BIOCHEMISTRY (OS, RS & RS2)

## Q.P. CODE: 2152 & 2153

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**

### Q.P. Code: 2152 – Section 'A' (50 Marks)

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

1. Define arterial blood pressure and describe it's regulation in the body
2. Define synapse. Draw a labeled structure of the synapse and discuss any four properties
3. Explain the sliding filament mechanism of skeletal muscle contraction

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

4. Trace the optic pathway
5. Describe the action of insulin on target cells
6. Explain the mechanism of spermatogenesis. List three factors influencing it
7. Explain the factors affecting cardiac output
8. Explain with a labeled diagram the defecation reflex

FR. MULLER CENTRAL LIBRARY

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

9. Define salutatory conduction
10. Function of Neutrophil
11. List the hormones of anterior pituitary
12. Draw a labeled diagram of a neuron
13. Define a muscle traid

### Q.P. Code: 2153 – Section 'B' (50 Marks)

**Use separate answer book**

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

1. Discuss the sources, RDA, biochemical functions and deficiency manifestations of vitamin A
2. Classify enzymes with examples. Discuss factors effecting enzyme activity
3. Discuss the structural organization of proteins

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

4. Mucopolysaccharides
5. Phospholipids
6. Detoxification by conjugation
7. Nitrogen balance
8. Clearance tests

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

9. Mitochondria
10. Beri beri
11. Essential fatty acids
12. Benedict's test
13. Metabolic alkalosis

*****

29 53

2054_2011_1_S125

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.Sc. (Physiotherapy) Degree Examination – Aug / Sep 2011

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

## MEDICAL ELECTRONICS AND COMPUTER APPLICATIONS

(Old Scheme)

## Q.P. CODE: 2054

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

**LONG ESSAYS (Answer any Four)** **4 x 10 = 40 Marks**

1. Explain capacitance charging and discharging of a capacitor
2. What is the difference between Faradic current and galvanic current?
3. Explain AC and DC meters with its applications
4. Explain Data processing
5. Explain hardware and software

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

6. Write a note on safety devices
7. Write a note on shunt ohmmeter
8. Write a short note on ultrasonic applications
9. Write a difference between intrinsic and extrinsic semiconductor
10. Write a note on dipole theory
11. What is E.M.F? Write a note on it
12. Write a short note on step down transformer
13. Write a short note on principles of programming in medicine
14. Write a short note an storage devices
15. Classify computers based on Architecture and feature

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

16. Define Lenz's Law
17. Define Triode valve
18. Define Whitestone bridge
19. Define Frequency wave length Amplitude
20. Define Ohm's Law
21. What is virus?
22. What is inkjet printer?
23. Define memory
24. What are the functions of CPU?
25. What is program? Give examples

*****

~~28~~ 54

2055_2011_1_S262

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B.P.T. Degree Examination – Aug / Sep 2011

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

GENERAL PSYCHOLOGY & SOCIOLOGY (Old Scheme)

## Q.P. CODE: 2055 & 2056

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**

### Q.P. Code: 2055 – Section 'A' – General Psychology (50 Marks)

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

1. Define learning? Explain the classical conditioning theory of learning
2. Explain growth and development in adolescence
3. Explain the principles of perception

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

4. Explain the laws of learning
5. Types of thinking
6. Sources of frustration
7. Factors of attention
8. Defence mechanism

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

9. Illusion
10. Intelligence
11. T A T (thematic apperception test)
12. Emotion
13. Humanistic psychology

### Q.P. Code: 2056 – Section 'B' – Sociology (50 Marks)

**Use separate answer book**

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

1. Define social change? Explain the factors of social change
2. Explain the characteristics of rural community
3. Explain the role of cultural health and illness

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

4. Explain any two methods of social investigations
5. Agencies of socialization
6. Changes in the family system
7. Problem of working women
8. Differences between sociology and anthropology

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

9. Social psychology
10. Interview method
11. Poverty
12. Social group
13. M S W

*****

~~26~~ 56

2154_2011_1_S262

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug / Sep 2011

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

## MEDICAL ELECTRONICS AND COMPUTER APPLICATIONS (OS, RS & RS2)

## Q.P. CODE: 2154

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 the production of short wave diathermy
2. Describe the architecture of central processing unit
3. Describe in detail production of low frequency currents

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

4. Describe the properties of magnetic line of force
5. Discuss the various devices used for regulation of current
6. What is memory? What are its different types?
7. Mention the characteristics of triode valve
8. Write a note on full wave rectification
9. Write a note on classification of ventilators
10. Electromagnetic spectrum
11. Testing of ultrasound machine
12. Types of transformer
13. Types of infrared generators

DR. MULLER CENTRAL LIBRARY

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

14. Define the term length and its unit
15. Types of plug
16. Define the term resistance
17. What is macro shock?
18. Define joule's law
19. Difference between hardware and software
20. What is the purpose of wheatstone bridge?
21. Define ohms law
22. What are the characteristics of faradic current?
23. What are the uses of LASER?

*****

57

2155_2011_1_S123

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug / Sep 2011

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

PSYCHOLOGY AND SOCIOLOGY
(OS, RS & RS2)

## Q.P. CODE: 2155 & 2156

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**

### Q.P. Code: 2155 – Section 'A' Psychology (40 Marks)

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

1. Define emotion. Discuss the physiological and psychological aspects in emotion
2. Define psychology. Describe the methods of psychology

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

3. Stages of growth and development
4. What are projective Tests?
5. Stress management
6. Explain steps in problem solving
7. Explain heredity and environment

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

8. Types of Sensations
9. Psychoanalysis
10. What is IQ?
11. Serial VS Free Recall
12. What is defence Mechanism?

### Q.P. Code: 2156 – Section 'B' Sociology (40 Marks)

**Use separate answer book**

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

1. Discuss the role of family in health and diseases
2. Analysis the factors of social change

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

3. Characteristics of rural community
4. Define Beggary and explain the causes of Beggary
5. Explain the problems of working women
6. Secondary groups
7. Explain the types and causes for unemployment

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

8. Opinion poll method
9. What is socialization?
10. What are in groups and out groups?
11. What is urban community?
12. Causes of Juvenile delinquency

*****

2702_2011_1_S225

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug / Sep 2011

**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. Draw a labelled diagram of the pyramidal pathway. Enumerate their functions
2. What are chemoreceptors? Explain their role in the regulation of respiration
3. Draw and explain a sarcomere. Describe excitation-contraction coupling of a skeletal muscle

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

4. Briefly describe counter –current mechanism by the kidney
5. Define anemia. Explain the clinical classification of anemia
6. What is CSF? Enumerate its functions
7. Briefly explain wallerian degeneration
8. Explain the three phases involved in deglutition
9. Name the different GI movement. Explain the role of any one
10. Explain the gate theory of pain
11. Draw and label the normal ECG waves. Write the cause for each wave
12. Explain the propagation of the nerve impulse in a myelinated nerve and non – myelinated nerve
13. Explain the regulation of gastric juice secretion
14. Outline the functions of cerebellum
15. Describe the events of the different phases of menstrual cycle with their hormonal basis
16. Discuss the functions of lymph
17. Explain the action of parathyroid hormone

FR. MULLER CENTRAL LIBRARY

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

18. Name 4 contraceptive methods in female
19. Define PCV. State its significance and factors affecting it
20. List the primary taste sensations. Locate their area on the tongue
21. What is the function of ependymal cells
22. Name the contractile proteins
23. Define motor unit
24. Define muscle tone
25. Define stroke volume. Give its normal value
26. Bhor's effect
27. State starling's law of force of contraction

*****

23 59

2703_2011_1_S43

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug / Sep 2011

**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 source, RDA, biochemical functions and deficiency symptoms of folic acid
2. Describe glycolysis. Add a note on energetics
3. Write a note on different types of enzyme inhibition and their significance

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

4. Digestion and absorption of lipids
5. Ketone bodies and their significance
6. Substrate level phosphorylation
7. Respiratory alkalosis
8. Creatine metabolism
9. Glycosuria
10. Isoenzymes
11. Describe the classification of carbohydrates with suitable examples
12. Explain the difference between DNA and RNA
13. Structure and functions of mitochondria

M.R. MULLER CENTRAL LIBRARY

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

14. Name the B-complex vitamins
15. Sources of energy for muscle contraction
16. Normal values of a) Blood urea b) Blood glucose
17. Deficiency symptoms of Vitamin K
18. Intracellular receptors (Cytoplasmic receptors)
19. Peptide bond
20. Anomerism
21. Deficiency symptoms of calcium
22. β-pleated sheets
23. Cholesterol and atherosclerosis

*****

2704_2011_1_S202

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year BPT Degree Examination – Aug / Sep 2011

**Max. Marks: 80 Marks**

**Time: Three Hours**

## BIO-MECHANICS
## (RS-3)
## Q.P. CODE: 2704

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

**2 x 10 = 20 Marks**

**LONG ESSAYS (Answer any Two)**

1. Describe biomechanics of lumbar spine in detail
2. Explain all the prehension activities in detail
3. Discuss the biomechanics of knee complex. Add a note on Screw home mechanism in detail

**8 x 5 = 40 Marks**

**SHORT ESSAYS (Answer any Eight)**

4. Explain open and closed joint positions
5. Agonists and antagonists. Discuss with examples
6. Discuss the movements of tempero mandibular joint
7. Mention the ligaments of the vertebral column. Explain the role of anterior longitudinal ligament
8. Describe the movements of subtalar joint
9. Movement analysis of stand to SM position
10. Explain scapulohumeral rhythm
11. Define axis and plane? Explain axes and planes in relation to hip movements
12. Discuss various parameters of gait
13. Biomechanics of sacroiliac joint

**10 x 2 = 20 Marks**

**SHORT ANSWERS**

14. Functional position of wrist and hand
15. Genu varum and genu valgum
16. Angle of pull
17. Role of mechanical advantage in levers
18. Define Hooke's law
19. Types of posture
20. Circumductory gait
21. Define osteokinematics and arthro kinematics
22. Lordosis
23. Volar intercalated segment instability

*****

22 60

2705_2011_1_S105

# Rajiv Gandhi University of Health Sciences, Karnataka

## I Year B.P.T. Degree Examination – Aug / Sep 2011

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

## GENERAL PSYCHOLOGY & SOCIOLOGY
## (RS-3 & RS-4)

# Q.P. CODE: 2705 & 2706

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**

### Q.P. Code: 2705 – Section 'A' - General Psychology (40 Marks)

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

1. Define personality. Explain the assessment of personality
2. Define motivation. Explain types of motivation

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

3. Structuralism
4. Operant conditioning of learning
5. Types of attention
6. Explain how attitudes can be changed
7. Emotion in health and illness




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

8. Thinking
9. Anaesthesia
10. Self confidence
11. Anxiety
12. Primary motives

### Q.P. Code: 2706 – Section 'B' - Sociology (40 Marks)

**Use separate answer book**

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

1. Define family. Explain the types of family
2. Explain the measures taken for the eradication of poverty

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

3. Conflict theory of social change
4. Explain the features of joint family
5. Characteristics of primary group
6. Differences between anthropology and sociology
7. Characteristics of urban community

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

8. Observation method
9. Mass media
10. Family planning
11. Primary group
12. Public opinion

*****

61

2157_2011_1_S263

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – Aug / Sep 2011

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

## BIO-MECHANICS OF HUMAN MOTION
(OS, RS & RS2)

## Q.P. CODE: 2157

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

**LONG ESSAYS (Answer any Four)** **4 x 10 = 40 Marks**

1. Describe the static and dynamic stability of the Glenohumeral joint
2. Explain the arthokinematics and osteokinematics of knee complex
3. Write the kinetics and kinematics of Gait
4. Discuss the various types of prehension
5. Enumerate the biomechanics of chest wall

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

6. Composition of forces
7. Mechanical advantage
8. Force components
9. Arthrokinematics of acromioclavicular joint
10. Scapulohumeral rhythm
11. Extemsor mechanism of hand
12. Pelvic tilt
13. Uniltateral and bilateral stance in Hip
14. Pathological Gait
15. Biomechanics of subtalar joint

DR. MULLER'S CENTRAL LIBRARY

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

16. Angle of torsion
17. Angle of inclination
18. Rotator interval capsule
19. Cubitus valgus
20. Bunnell's sign
21. Lumbar pelvic rhythm
22. Coxa vara
23. Angle
24. Metatarsal break
25. Walking velocity

*****

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year BPT Degree Examination – Aug / Sep 2011

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

## BIO-MECHANICS

(RS - 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. Discuss in detail about the biomechanics of thoracic spine
2. Define force? Classify force systems and explain concurrent force system using appropriate examples
3. Discuss the biomechanics of the wrist joint. Explain the muscle work and movements in detail

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

4. Analyse pull ups
5. Discuss scapulo humeral rhythm
6. Explain prime movers and stabilizers with examples
7. What is prehension grip? Explain lateral prehension with one example
8. Static and dynamic posture
9. Discuss the Dynamic stabilizers of shoulder joint
10. Use of cane in Hip joint when given on the contralateral side
11. Movements of rib cage during respiration
12. Describe the arches of hand
13. Locking mechanism of the knee joint
14. Describe the sub talar joint movements
15. Explain the load deformation curve with one example
16. Describe the role of patella in the mobility of the knee joint
17. Define Equilibrium? Classify with suitable examples

K.R. MULLER CENTRAL LIBRARY

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

18. Angle of inclination
19. Newton's third law
20. Stress and strain
21. Define step length and stride length
22. Acetabular labrum
23. Hysteresis
24. Q angle
25. Concave – Convex rule
26. Kinetics and kinematics
27. Saddle joint with example

*****