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2054_2008_1_S12

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination - March / April 2008

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 different parts of computer with neat block diagram
2. Define electric shock. Describe the effects, treatment and prevention of shock
3. Give the classification of amplifiers and explain the functioning of RC coupled amplifier
4. Explain the principle of operation of microwave diathermy with necessary diagram
5. What are low frequency currents? Describe their uses

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

6. Write note on Wheatstone's bridge
7. Give five principles of programming
8. Write a note on printers
9. Write a note on computer virus
10. Explain the role of computers in CT scanners
11. What are the uses of LASERS in physiotherapy?
12. What precautions to be taken to avoid electric shock?
13. Explain the terms frequency. Amplitude and phase of a sine wave
14. Differentiate between RAM and ROM and give their applications
15. Explain any one method of analog to digital converter

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

16. What is potential difference?
17. What is latent heat?
18. What is meant by inductothermy?
19. Explain any two input devices
20. How are transducers classified?
21. What is nerve conduction velocity?
22. Define operating system
23. What is data processing?
24. What is a register? Mention two types of registers
25. What is an opto coupler?

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2055_2008_1_S12

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – March / April 2008

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. Explain instrumental conditioning with phenomenon
2. Define emotion. Explain the physiological and psychological changes that take place during emotion
3. Define psychology. Explain the scope of psychology

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

4. Explain the principles of perception
5. Describe the subjective factors influencing attention
6. Explain the influence of heredity on behaviour
7. Explain any two intelligence tests
8. Trail and error learning

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

9. Twins
10. Genes and chromosomes
11. Telepathy
12. Concepts
13. Observation method

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 sociology. Explain its scope
2. Explain the general functions of family
3. Explain the features of social group

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

4. Distinguish between questionnaire method and interview method
5. What are the main health hazards of alcohol?
6. Explain the health hazards of ruralities
7. Factors responsible for the disintegration of joint family
8. Explain the features of joint family

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

9. Social security measure
10. Medical social work
11. Filiocentric family
12. Agricultural unemployment
13. Observation method

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – March / April 2008

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 brachial plexus in detail
2. Describe the internal capsule in detail
3. Describe hamstrings in detail
4. Name the parts of the small intestine. Describe in detail Duodenum
5. Define and classify bones. Explain in detail upper end of tibia

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

6. Flexor retinaculum of hand
7. Spermatogenesis
8. Urinary bladder
9. Epiphysis
10. Spleen
11. Axis vertebra
12. Inter-vertebral disc
13. Pancreas
14. Deltoid ligament
15. Biceps brachii

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

16. Name the structures piercing clavipectoral fascia
17. Branches of external carotid artery
18. Carpal tunnel syndrome
19. Functions of gall bladder
20. Patella
21. Bare areas of liver
22. Parts of corpus callosum
23. Dermatomes
24. Parts of a rib
25. Pleural recesses

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2152_2008_1_S02

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – March / April 2008

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 a neuromuscular function. Describe the transmission of nerve impulse to the muscle
2. Describe various physiological functions of paraharmone
3. Describe various errors of refraction along with their correction

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

4. Describe briefly different stages of spermatogenesis
5. Describe properties of synaptic transmission
6. Describe normal changes occurring during severe exercise
7. Describe changes occurring in females at puberty
8. Describe briefly actions of growth hormone on physical growth

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

9. Mention any four functions of platelets
10. Mention normal values of lung volumes and capacities
11. What is reaction of degeneration?
12. What is phantom limb phenomenon?
13. Mention any three features of Parkinsonism

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

Use separate answer book

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

1. What is normal blood pH? Describe the role of blood buffers and kidney in maintenance of acid-base balance
2. Classify proteins with examples. Describe the functions of proteins in human body?
3. Describe the sources, daily requirement, biochemical functions and deficiency manifestations of Vitamin C

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

4. Phospholipids and their functions
5. Role of hormones in regulation of blood glucose
6. Polysaccharides
7. Renal function tests
8. Mucopolysaccharides

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

9. Calorific value of foods
10. Coenzyme form and deficiency disease of thiamine
11. Detoxification by conjugation
12. Lactose
13. Kwashiorkar

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2154_2008_1_S42

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – March / April 2008

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 the low frequency currents? Describe their uses
2. Classify different types of computers
3. Explain the terms volatile and non-volatile. Differentiate between RAM and ROM and give their applications

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

4. Write a short note on earthing
5. Write a note on computer virus
6. Explain the terms frequency, amplitude and phase of sine wave
7. Write a note on computer networks
8. Write briefly on magnetron
9. What are the principles of programming?
10. Using a neat labeled diagram described the working of an electric traction unit
11. List the uses of infra red and ultraviolet therapy in physiotherapy
12. Describe the production of eddy current s
13. Classify computers in terms of memory capacity

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

14. What is potential difference?
15. State Lenz's Law
16. Define the term faradic current
17. What is a register? Mention two types of registers
18. Explain the term operating system
19. Define laser
20. Define the term EMF
21. How are transducers classified?
22. Define nerve conduction velocity
23. Distinguish between information from data

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2155_2008_1_S01

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T Degree Examination – March / April 2008

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 and examine its Branches
2. Define learning. Compare classical learning with operant learning

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

3. Methods in psychology
4. Sources of frustration
5. Physiological changes in emotions
6. Principles of perception
7. Leadership qualities

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

8. Creative thinking
9. Intelligence Tests
10. Queshtionaires
11. Define Attention
12. Heridity

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 role of family in health and illness
2. Discuss urban health problems

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

3. Types of family
4. Stages of socialization
5. Technological factors & social change
6. Social factors of health and illness
7. Secondary groups

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

8. Case study method
9. Health consequences of Alcoholism
10. Primary groups
11. Filocentric family
12. Tribal community

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2157_2008_1_S11

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T Degree Examination – March / April 2008

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

BIO-MECHANICS OF HUMAN MOTION

(0S, 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. Define lever and lever parameters. Explain about the orders of lever with suitable mechanical and anatomical examples
2. Explain in detail about bio-mechanics of cervical spine
3. Explain the mechanics of hip joint during unilateral and bilateral stance
4. List out the joints forming shoulder complex. Explain the kinematics and ligaments controlling them in each joint
5. Write about various walking aids with their principles. Add a note on mechanical criteria for selection of the walking aids

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

6. Describe Newton's Laws of Motion with suitable examples
7. Write about resolution of force
8. Write about the factors affecting muscle function
9. Describe the equipments used to improve balance
10. Describe the bio-mechanics of sacroiliac joint
11. Explain the role of intrinsic muscles of hand
12. Mobility of elbow joint
13. Define various parameters of GAIT
14. Describe the role of anterior cruciate ligament in the knee joint
15. Discuss about supination and pronation twist in the foot

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

16. Angle of pull of muscle
17. List out the clinical methods used to reduce the effect of weight on body
18. Importance of positioning during goniometry
19. Motion of upper extremity during GAIT
20. State concave convex rule in Arthro Kinematic of a joint
21. Name any four accessory muscles involved in ventilation
22. Functional significance of palmar arches
23. What is patella alta?
24. Describe the functional position of wrist and hand
25. Types of muscles fibers and their importance

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – March / April 2008

Time: Three Hours | Max. Marks: 100 Marks

ANATOMY (RS-3)

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 Three) **3 x 10 = 30 Marks**

1. Classify the joints with examples. Describe the ligaments, movements and muscles responsible for the movements of shoulder joint
2. Right kidney add a note on its structure; blood supply and its nerve supply
3. Describe the position, relations, blood supply and nerve supply of parotid gland
4. Describe the arches of foot. Its applied aspects

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

1. Mention the course and relation of radial artery in the forearm
2. Add a note on rectus abdominals muscle its attachments and action
3. Derivatives of ectoderm
4. Mention the site of injury, nerve roots involved muscles paralyzed, disability in case of Erbs paralysis
5. Write a note about fertilization
6. Define bronchopulmonary segments give its diagrammatical representation and clinical significance
7. Curvatures of vertebral column
8. Arrangements of structures in the hilum of right and left lungs
9. Thyroid gland its relation and blood supply
10. Mention the attachment of extensor retinaculum in the hand and its contents

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

1. Hyaline cartilage
2. Draw and label a neuron
3. Function of bursa
4. Classification of bones
5. Function of gall bladder
6. Name parts of hind-brain
7. Name the coverings of eyeball
8. Name the branches of coeliac artery
9. Mention the parts of sphenoid bone
10. Function meninges

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2702_2008_1_S

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – March / April 2008

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

HUMAN PHYSIOLOGY (RS-3)

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 Three) **3 x 10 = 30 Mark**

1. Draw and describe the oxygen dissociation curve of adult haemoglobin. Explain the factors influencing the shift to the right and to the left
2. Describe the sliding – filament theory of muscle contraction
3. Define a reflex arc. Enumerate the properties of reflexes and give its clinical significance
4. Define venous return. Explain the factors affecting venous return

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

5. Define anemia. Explain the clinical classification of anemia
6. List the sequence of events at the neuromuscular junction. Name 3 neuro-muscular blockers
7. Describe briefly the conducting system of the heart
8. Define intrapleural pressure. Explain how it varies during the respiratory cycle
9. List the composition of saliva and mention its functions
10. Explain briefly the importance of counter-current system in renal function
11. Explain the mechanism of spermatogenesis. List the three factors influencing it
12. Outline the steps in the synthesis of thyroid hormone. What is myxedema?
13. Trace the taste pathway
14. Describe the features of sensory homunculus

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

15. List the functions of plasma proteins
16. Draw an oesinophil and mention its functions
17. Describe the secondary active transport mechanism
18. List the functions of Ribosomes and Lysosomes
19. List the GI hormones with their functions
20. Enumerate the functions of skin
21. Explain impedence matching
22. What is sex determination and sex differentiation?
23. What is babinski sign?
24. Enumerate the functions of growth hormone

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – March / April 2008

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

BIO-CHEMISTRY (RS-3)

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 gluconeogenesis. Add a note on Cori's cycle
2. Describe the source, RDA, digestion, absorption, biochemical functions and deficiency symptoms of Vitamin D
3. Definition, classification and functions of lipoproteins

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Respiratory acidosis
5. Watson and Crick's model of DNA
6. Collagen
7. Competitive inhibition
8. Glycogen chemistry
9. Nutritional importance of protein
10. NIDDM
11. Fatty liver

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

12. Mitochondria
13. Gout
15. Essential fatty acids
14. Phospholipids
16. c AMP
17. Respiratory quotient
18. Tests for reducing sugars
19. a-helical structure of proteins
20. Active site of enzyme
21. Absorption of iron

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – March / April 2008

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

BIO-MECHANICS OF HUMAN MOTION
(Revised Scheme - 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. What is the difference between osteokinematics and arthrokinematics? Describe the arthrokinematics and osteokinematics at the elbow joint
2. Name the distance and time variables of gait. Describe the kinematics and kinetics of swing phase of gait cycle
3. What is Isotonic, Isokinetic and Isoinertial contraction? Describe isotonic contraction in detail with suitable examples

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Explain the kinematic chains with examples
5. Name the fundamental starting positions. Analyze any one fundamental position
6. Write a note on ankle joint function
7. What are the types of force systems? Explain resolution of forces giving example in relation to human body
8. Explain the Young's Modulus of elasticity with an example
9. What is mechanical advantage (MA)? Explain MA in relation to pulleys
10. What are factors affecting muscle function? Write a note on two-joint muscle
11. Describe the scapulothoracic joint

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

12. Write any three differences between slow twitch and fast twitch muscle fibre
13. Define work, power and energy
15. Mechanical principle and uses of suspension apparatus
14. What is functional position of hand?
16. What are the factors which maintain posterior stability at knee joint?
17. Explain unstable equilibrium in relation to human body
18. Movements at the temporomandibular joint
19. Classify synovial joints
20. What is spurt and shunt muscles?
21. Importance of recreational activities

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Rajiv Gandhi University of Health Sciences, Karnataka

B.Sc. (Physiotherapy) Degree Examination – March / April 2008

Hours

Max. Marks: 80 Marks

GENERAL PSYCHOLOGY & SOCIOLOGY
(Revised Scheme - 3)

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. What is emotion? Explain theories of emotions in detail
2. Define psychology. Briefly discuss about methods of psychology

SHORT ESSAYS (Answer any Three) — **3 x 5 = 15 Marks**

3. Personality assessment
4. Factors effecting learning
5. Sources of frustration
6. Determinants of attention
7. Abraham Maslow's theory of motivation

SHORT ANSWERS — **5 x 3 = 15 Marks**

8. Conflict
9. Stress
10. Intelligence
11. Rating scale
12. Defense mechanism

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

Use separate answer book

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

1. Differentiate between primary and secondary groups
2. Elucidate the meaning and features of rural community

SHORT ESSAYS (Answer any Three) — **3 x 5 = 15 Marks**

3. Explain meaning and definitions of family
4. "Social change" leads to stress – Discuss
5. Explain the health effects of industrialization
6. Bring out the relationship of sociology and psychology
7. Role of MSW

SHORT ANSWERS — **5 x 3 = 15 Marks**

8. Give any three reasons of health hazards in the tribal community
9. What is anticipatory socialization?
10. Mention three functions of a medical social worker
11. Mention any six features of joint family
12. Define a) Sociology b) Social Psychology

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2054_2008_2_S41

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – Sept / Oct 2008

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 the terms volatile and non-volatile. Differentiate between RAM and ROM and give their applications
2. Classify different types of computers
3. What are the low frequency currents? Describe their uses
4. Write a short note on: a) Earthing b) Switches c) Safety Devices
5. State Ohm's law. Explain the combinations of resistance in series and in parallel

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

6. Classify computers in terms of memory capacity
7. Write a short note on earthing
8. Write a note on computer virus
9. Explain the terms frequency, amplitude and phase of sine wave
10. Write a note on computer networks
11. List the uses of infra red and ultraviolet therapy in physiotherapy
12. Write briefly on magnetron
13. What are the principles of programming?
14. Using a neat labeled diagram describe the working of an electric traction unit
15. Describe the production of Eddy currents

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

16. Define nerve conduction velocity
17. What is potential difference?
18. State Lenz's law
19. Define the term Faradic current
20. What is register? Mention two types of registers
21. Define laser
22. Distinguish between information from Data
23. Define the term EMF
24. Explain the term operating system
25. How are transducers classified?

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Sept / Oct 2008

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 psychology. Explain any two methods of psychology
2. What is emotion? Explain the factors and changes of emotion
3. Define learning. Explain the laws of learning

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

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

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

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

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 family. Explain the functions of family
2. Differentiate between primary and secondary groups
3. Explain any four factors of social change

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

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

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

9. Ethics
10. Anthropology
11. Social deviance
12. Sociometry
13. Society

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2152_2008_2_S42

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination - Sept / Oct 2008

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. Describe cardio-respiratory changes during muscular exercise
2. Explain neural regulation of respiration
3. Describe muscle tone and stretch reflex. What happens to them in lesion of upper motor neuron?

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

4. Name the plasma proteins and mention their functions
5. Describe the functions of mineralo corticoid hormones and regulation of mineralo corticoid hormone secretion
6. Explain wallerian degenerative and regenerative changes in the nerve fibre
7. What is ovulation? Describe ovarian changes that occur during a menstrual cycle
8. Describe the composition and functions of pancreatic juice

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

9. Write a neat labelled diagram of sarcomere
10. Define glomerular filteration rate. Give the normal value
11 List any four functions of cell membrane
12 What is presbyopia?
13. Name the movements of small intestine

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

Use separate answer book

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

1. Describe the sources, daily requirements, chemistry, functions and deficiency manifestations of vitamin D
2. Define Carbohydrates. Classify them giving suitable examples
3. Explain the role of insulin on Carbohydrate metabolism

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

4. Essential aminoacids
5. What is competitive inhibition? What is its clinical application?
6. How are lipoproteins classified? What are their functions?
7. Name clearance tests used to assess kidney functions. Explain the clinical significance of clearance tests
8. Explain the role of the kidney in acid base balance

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

9. What are buffers? Write the importance of bicarbonate buffer system
10. Write short note on enzyme assays for liver function
11 Protein energy malnutrition
12 What is chromatography? Write the use
13. Mitochondria

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A 36

2154_2008_2_S45

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Sept / Oct 2008

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. Draw the circuit diagram of SWD. Explain the phenomenon of heat generation
2. Define electric shock, its effects, treatment and prevention
3. Explain the basic anatomy of computer and its classification

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

4. What is the importance of computers in the field of education?
5. What are the characteristics of information?
6. Explain how can you classify viruses
7. Compare computer connected to network against stand-alone computer
8. Mention the different types of storage devices used
9. Describe the production of eddy cunents?
10. Write short note on earthing
11. Explain the principles of bebulizer
12. Write notes on integrated circuits
13. Write note on multimeter

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

14. What is a flow chart? When is it used?
15. What is an application software? Mention two types
16. What is memory? What are different types of memory?
17. Describe any two output devices
18. What measures are taken to secure data?
19. Explain the term electromagnetic radiation
20. Define insulators
21. State Ohm's law
22. What is chemical effect of electric current?
23. Define impulse

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2155_2008_2_S41

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T Degree Examination – Sept / Oct 2008

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. Explain the physiological changes that take place during emotion
2. Explain branches of psychology

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

3. Explain method of introspection
4. Explain affiliation and achievement motive
5. Explain the subjective factors influencing attention
6. Define learning. Explain trial and error learning
7. Explain creative thinking

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

8. Hallucination
9. Perception
10. Attitudes
11. Telepathy
12. Frustration

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 difference between primary and secondary groups
2. Explain the causes for the disintegration of joint family system

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

3. Sociology and health care professionals
4. Bring out the stages of socialization
5. Factors of social changes
6. Problems of women in employment
7. Medical social work in rudia

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

8. Anthropology and sociology
9. In-groups out groups
10. Filocentic family
11. Juvenile delinquency
12. Tribal community

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2157_2008_2_S102

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T Degree Examination – Sept / Oct 2008

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

BIO-MECHANICS OF HUMAN MOTION
(0S, 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. Define levers. Explain about the orders of lever with suitable mechanical and anatomical examples
2. Explain the biomechanics of shoulder complex. Add a note on dynamic stability of the shoulder joint
3. Describe the position of all the joints and spine in an optimal erect posture. Add a note on position of line of gravity in the sagital plane
4. Explain the phases of Gait cycle in detail. Compare between the traditional and RLA terminologies
5. Explain the structure and function of metatarsophalangeal (MTP) joints. Add a note on the influence of metatarsal break and plantar aponeurosis on the function of MTP joint

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

6. What is base of support? Add a note on role of relocation of centre of gravity in the human body with respect to various movements
7. Explain in detail Lumbo-pelvic rhythm
8. Explain the movements of the rib cage during respiration
9. Explain Torque? Describe how it is determined using an example in the human body
10. What are the types of crutches used? Explain the different gait patterns using them
11. What are the lines of muscle action? Explain with example
12. What is anatomic pulley? Give its advantages and disadvantages with example
13. What are the dynamic stabilizers of the knee? What is its contribution to stability?
14. What is active and passive insufficiency? Explain with examples
15. Describe the power grips. Emphasize the role of thumb musculature in these grips

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

16. Define Hooke's law
17. What is close packed and loose packed joint position?
18. Define kinetics and kinematics
19. Two advantages of equilibrium boards
20. State concave – convex rule
21. What is creep?
22. Principles of quadriceps table
23. Define fiction
24. Function of menisci
25. Describe carrying angle

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2702_2008_2_S101

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – Sept / Oct 2008

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. Explain the role of various hormones in calcium homeostasis. Add a note on rickets
2. Classify receptors and describe their properties
3. Define cardiac cycle. Describe the mechanical events taking place during each cardiac cycle

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

4. Mention the various actions of aldosterone
5. Describe the short-term regulation arterial blood pressure
6. Trace the pathway of pyramidal tract
7. Describe the phases of menstrual cycle in the uterus
8. Differentiate between intra-alveolar pressure and intra-pleural pressure
9. Classify the leucocytes and describe the phagocytic action of neutrophils
10. Describe the functions of basal ganglia
11. Describe the functions of middle ear
12. Describe the composition and functions of saliva
13. Explain the ionic basis of an action potential in a nerve
14. Explain the oxygen transport in blood and the factors affecting the oxygen dissociation curve
15. Enumerate any three GI hormones with their actions
16. Describe the structure and features of Juxta-glomerular apparatus with a neat diagram
17. Briefly describe the functions of skin

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

18. Differentiate between first and second heart sounds
19. Adiadochokinesia
20. Pregnanacy diagnostic test
21. Define hypoxia
22. List two functions of pancreatic juice
23. What are anticoagulants? Give one example
24. QRS complex
25. Residual volume
26. Give an examples of neuro-endocrine reflex
27. List two functions of testosterone

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2703_2008_2_S41

Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – Sept / Oct 2008

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 citric acid cycle. Add a note on energetics
2. Describe the β – oxidation of fatty acids
3. Describe the sources, RDA, metabolic functions, digestion and absorption of Vit C

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

4. Contractile proteins
5. Role of Renin-Angiotensin system in maintaining electrolyte balance
6. Urea cycle
7. Cell membrane
8. Ribosomes
9. Functions of calcium
10. Lipoproteins
11. Buffer systems of the body to maintain the p^H of the blood
12. Metabolic acidosis
13. Neurotransmitters

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

14. BMR
15. Mucopolysaccharides
16. Name the fat soluble vitamins
17. Diagnostic significance of Creatine Kinase
18. Essential fatty acids
19. Name the disease manifested in the deficiency of a) Vit. A b) Vit. D
20. Lactose intolerance
21. Diabetes mellitus
22. Normal serum level of a) Uric acid b) Creatinine
23. mRNA

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination – Sept / Oct 2008

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 posture. List out the types of posture and explain the various abnormal postures
2. What is a lever? Explain the various types of levers with examples and add a note on application of levers in physiotherapy
3. Describe the mechanical of normal breathing

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

4. Movement analysis of squatting
5. Explain the use of springs and pulleys in physiotherapy
6. What is equilibrium? Discuss the types of equilibrium with examples
7. Discuss the various types of muscle contraction with examples
8. Enumerate the differences between fast twitch and slow twitch muscle fibers
9. Role of patella in knee joint
10. Define Axis, and plane and give the axis and planes for all hip joint movements
11. Explain stress and strain with respect to Hooke's law
12. Explain the gleno-humeral rhythm
13. Describe the various walking aids used in rehabilitation

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

14. Any two effects of occupation on posture
15. Any two effects of immobilization on muscle
16. Define ideal posture
17. Kyphosis
18. Circumductory gait
19. Concentric exercise
20. Functional significance of palmar arches
21. Double support
22. Types of Friction
23. Two examples for closed kinematic chain exercises of upper limb

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.Sc. (Physiotherapy) Degree Examination – Sept / Oct 2008

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. Explain the importance of heredity and environment and their role in relation to physical and psychological characteristics
2. Define personality. Describe the methods of assessing personality

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

3. What is intelligence? Describe the test of intelligence
4. What are psychological motives?
5. Describe the different kinds of conflicts
6. Define leadership. What are the types of leadership?
7. Describe the schools of psychology

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

8. What is an illusion?
9. Clinical psychology
10. What is rationalization
11. Define emotion
12. What is mnemonic's

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

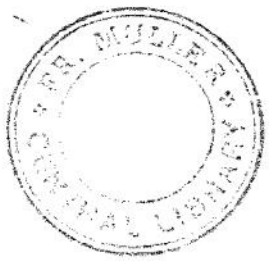
Use separate answer book

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

1. Define social groups. Explain its features
2. Define sociology. Explain its scope and importance

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

3. Explain the factors of social change
4. Secondary functions of family
5. India is over populated – Explain the cause
6. Explain the forms of social security
7. Importance of primary group



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

8. Write any two features of urban community
9. Role of medical social worker
10. What is socialization?
11. Causes of alcoholism
12. What is the meaning of Juvenile Delinquency?

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Rajiv Gandhi University of Health Sciences, Karnataka

First year B.P.T. Degree Examination - Sept / Oct 2008

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 the knee complex and explain screw home mechanism
2. List out the prehension activities. Write in detail
3. Classify and explain lever systems with anatomical examples of each

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

4. Describe Newton's law of motion with suitable examples
5. Explain the open and closed joint position
6. Define passive insufficiency. Explain with one example
7. Describe temporal mandibular joint motions
8. Describe biomechanics of sterno clavicular joint
9. Explain the role of intervertebral disc
10. Define various parameters of gait
11. Analyse the muscle, work during kneeling
12. Analysis of fundamental position of hanging with its muscle work
13. Explain the lumbo pelvic rhythm
14. Describe the subtalar joint motions
15. What is stress and strain? Explain the load / deformation curve give one example
16. Mention the ligaments of vertebral column. Explain the role of anterior vertebral ligament.
17. Describe the extensor mechanism of finger in detail

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

18. Define angle of pull
19. What is Q angle?
20. Define equilibrium
21. List out the functions of plantar aponeurosis
22. State concavo-convex rule
23. Define LOG and COG
24. Define degree of toe out
25. Define power and energy
26. What is ground reaction force?
27. Define posture

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