Rajiv Gandhi University of Health Sciences, Karnataka

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

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

HUMAN ANATOMY (RS-5)
Q.P. CODE: 2731

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

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

1. Describe shoulder joint in detail under the following headings:
   a) Articular surfaces
   b) Ligaments
   c) Movements
   d) Applied Anatomy
2. Describe the Sulci and Gyri of superolateral surface cerebral hemisphere. Add a note on the functional areas.
3. Describe the arches of foot in detail.

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

4. Sternocleido mastoid
5. Great saphenous vein
6. Musculocutaneous nerve
7. Blood supply of spinal cord
8. Relations of kidneys
9. Hamstrings
10. Cubital fossa
11. Lumbricals
12. Spermatogenesis
13. Histology of T.S bone
14. Nerve supply of tongue
15. Bronchopulmonary segments
16. First rib
17. Digastrics triangle

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

18. Iliotibial tract
19. Parotid duct
20. Name the Nuclei of cerebellum
21. Name the carpal bones
22. Pleural recess
23. Branches of arch of aorta
24. Draw and label a neuron
25. Derivatives ectoderm
26. Name the components of extrahepatic biliary apparatus
27. Foot drop

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: Three Hours

Max. Marks: 100 Marks

ANATOMY (RS-3 & RS-4)
Q.P. CODE: 2701

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

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

1. Describe axillary artery in detail.
2. Describe the blood supply of the heart.
3. Describe the external features of cerebrum. Name the sulcus and gyrus present on supero-lateral surface.

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

4. Upper end of humerus
5. Pericardium
6. Lateral ventricle
7. Biceps brachii
8. Superficial palmar arch
9. Popliteal artery
10. Quadriceps femoris
11. Occulomotor nerve
12. Right kidney
13. Femoral triangle
14. External features of liver
15. Fertilization
16. Anterior Abdominal muscles
17. Typical rib

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

18. Parts of gall bladder
19. Branches of arch of aorta
20. Name the terminal branches of facial nerve.
21. Name the branches of posterior cord of brachial plexus.
22. Name the ligaments of hip joint.
23. Name the invertors of foot.
24. Parts of small intestine
25. Histology of Bone TS (only diagram)
26. Name four branches of lumbar plexus.
27. Nerve supply of the tongue

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Rajiv Gandhi University of Health Sciences, Karnataka

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

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

HUMAN PHYSIOLOGY (RS-5)
Q.P. CODE: 2732

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

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

1. Explain excitation contraction coupling in skeletal muscle.
2. Define hemostasis. Mention the stages of hemostasis. Describe the mechanism of blood coagulation.
3. Define Blood Pressure. Explain the Baroreceptor reflex mechanism of regulation of Blood Pressure.

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

4. Name the Refractive Errors of eye and its correction
5. Draw a labeled diagram of Juxta Glomerular Apparatus. Add a note on its functions.
6. Enumerate the functions of Oxytocin.
7. What is deglutition? Name the stages. Explain the second stage of deglutition.
8. Describe the different modes of oxygen transport in the body. Draw oxygen heamoglobin dissociation curve.
9. What is erythropoeis? Describe the stages of erythropoies with neat labeled diagram.
10. Describe neuro-muscular junction with a neat labeled diagram.
11. Enumerate the functions of Hypothalamus.
12. Explain the features of Diabetes mellitus.
13. Functions of Testosterone
14. Define synapse. Explain five properties of synapse.
15. Explain with example negative feedback mechanism.
16. Strength Duration Curve
17. Define cardiac output, Name the factors influencing the cardiac output

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

18. Draw a labeled diagram of ECG recording in lead 11. Give the normal value of PR Interval.
19. Define isotonic and isometric contraction. Give one example of each.
20. Functions of surfactant
21. Name the anterior pituitary Hormones.
22. Define Jaundice. Name the three types of jaundice.
23. Define GFR. What is its normal value?
24. Name 3 anticoagulants and explain its mechanism of action.
25. List the functions of saliva.
26. Enumerate difference between active and passive transport.
27. List the contraceptive methods used in females.

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Rajiv Gandhi University of Health Sciences, Karnataka

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

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

HUMAN PHYSIOLOGY (RS-3 & RS-4)
Q.P. CODE: 2702

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

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

1. Define arterial blood pressure. Explain the mechanisms involved in its regulation.

2. What is CSF? Enumerate its functions. Add a note on lumbar puncture.

3. Draw a labelled diagram of neuro-muscular junction and explain the steps involved in the transmission of impulses.

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

4. Describe the regulation of secretion of gastric juice in different phases of secretion.

5. Discuss the counter-current mechanism of renal system.

6. Briefly describe the stages of Erythropoiesis. Enumerate the non-dietary factors.

7. Describe the body mechanisms by which it tolerates hot environment.

8. List the properties of Cardiac muscle. Explain any two of them.

9. Give a brief account of chemical regulation of respiration.

10. Define chronaxie and rheobase. Draw a diagram of strength-duration curve.

11. Describe the immunological tests of pregnancy.

12. Enumerate the posterior pituitary hormones. Discuss the physiological action of each.

13. Draw a Spirogram. Explain Timed Vital Capacity and give its significance.

14. List the four functions of the middle ear. Explain any one.

15. What is a synapse? List the different types of synapse and discuss any four properties.

16. Enumerate the functions of basal ganglia.

17. What is color vision? How do you test it clinically? Classify color blindness.

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

18. Define the term renal clearance giving its formula.

19. Enumerate any four functions of liver.

20. Differentiate between Exocytosis and Endocytosis.

21. Define dead space. Define the types of dead space.

22. What is a motor unit? Draw a neat labelled diagram.

23. Functions of Nucleus and Microfilaments

24. Define peripheral resistance. Enumerate its factors.

25. Name any four neuro-muscular blockers.

26. What is MCV? Give its normal value.

27. What is the mechanism of actions of neurocrine, autocrine and endocrine?

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Rajiv Gandhi University of Health Sciences, Karnataka

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

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

BIOCHEMISTRY (RS-5)
Q.P. CODE: 2733

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

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

1. Describe B-oxidation. Calculate the energetics of palmitic acid oxidation.

2. What is normal pH of blood? How is it maintained?

3. Write in detail about glycogenesis and glycogenolysis.

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

4. Classify carbohydrates with suitable examples.

5. Describe digestion and absorption of proteins.

6. List out functions and deficiency symptoms vitamin D.

7. Name any five diagnostic enzymes and mention their clinical significance.

8. Describe the secondary structure of proteins.

9. Balanced diet

10. Blood glucose regulation

11. Classification and functions of lipids.

12. Draw tRNA and describe its functions

13. Name essential fatty acids. Describe its two functions and two deficiency symptoms.

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

14. Protein calorie malnutrition

15. cAMP

16. Metabolic alkalosis

17. Alkaptouria

18. Normal levels of blood urea and mention two causes of increased blood urea

19. Indications for GTT (Glucose tolerance test)

20. Describe Pinocytosis and phagocytosis.

21. Genetic code

22. Calorific value of carbohydrate, protein and lipids

23. Biochemical functions of Biotin

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Rajiv Gandhi University of Health Sciences, Karnataka

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

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

BIO-CHEMISTRY (RS-3 & RS-4)
Q.P. CODE: 2703

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

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

1.　Describe Gluconeogenesis and its regulation.

2.　Describe the chemistry, sources, RDA, biochemical functions and deficiency manifestations of Vitamin B_{12}.

3.　Describe the biologically important compounds formed from Phenyl alanine and Tyrosine.

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

4.　Glycogenolysis and its significance

5.　Creatinine clearance test

6.　Metabolic changes in Diabetes Mellitus.

7.　Metabolic Acidosis

8.　Name the ketone bodies and describe ketogenesis.

9.　Essential amino acids

10.　Dietary fibers

11.　Conjugated Proteins

12.　Biochemical functions of Phosphate.

13.　Regulation of water balance

SHORT ANSWERS　　　　　　　　　　　　　　　　　　　　　10 x 2 = 20 Marks

14.　Mitochondria

15.　Normal serum levels of Cholesterol and Triglyceride.

16.　Transfer RNA (tRNA).

17.　Name the sulphur containing amino acids.

18.　Rickets

19.　Adenosine Tri Phosphate (ATP).

20.　Elastin

21.　Bicarbonate Buffer

22.　Lipases

23.　Nitrogen Balance

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: Three Hours

Max. Marks: 100 Marks

BIO-MECHANICS (RS-5)
Q.P. CODE: 2734

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

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

1. Describe in detail about levers with examples.
2. Write in detail about Shoulder joint.
3. Explain Gait and its determinants.

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

4. Explain Newton's law with example.
5. Saggital plane analysis of posture
6. Explain goniometric measurement of ROM of elbow joint.
7. Movements and muscle actions of wrist joints
8. Properties of connective tissue
9. Movements of thorax and ribcage
10. Movement analysis of sitting to standing
11. Structure and function of plantar arches
12. Analysis the forces acting on hip joint during unilateral stance phase
13. Describe Tibiofemoral Meniscus.
14. Explain any two pathological gaits.
15. Write a note on static and dynamic posture.
16. Different types of muscle contraction
17. Scapula-humeral rhythm

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

18. Precision grip
19. Convex-Concave rule
20. Carrying angle
21. Diarthrodial joint
22. Hinge joint
23. Isotonic contraction
24. Patellar movements
25. Stress-strain curve
26. Types of Goniometer
27. Open kinematic chain

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: 3 Hours

Max. Marks: 40 Marks

Sociology (RS-5)
Q.P. Code: 2736

Your answers should be specific to the questions asked. Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

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

1. Define sociology and write its importance of sociology in physiotherapy profession.
2. Define Urban community. Describe the salient features and the health hazards in the urban community.

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

3. Social factors in health and illness
4. Alcoholism
5. Agencies of socialization
6. Difference between primary and secondary groups
7. Factors influencing social change

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

8. Poverty
9. Joint family
10. Culture
11. Social security
12. Prostitution

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: 3 Hours   **Max. Marks: 40 Marks**

Sociology
Q.P. Code: 2706

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

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

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

1. Define sociology. Explain the methods of Sociological investigations.

2. Influence of culture on health and illness

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

3. Agencies of socialization

4. Functions of types of family

5. Outline the differences between rural and urban community

6. Social security

7. Beggary

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

8. Case study

9. Social change and deviance

10. Concept of health

11. MSW

12. Population Explosion

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: 3 Hours　　　　　　　　　　　　　　　　　　　　　**Max. Marks: 40 Marks**

PSYCHOLOGY (RS – 5)
Q.P. Code: 2735

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

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

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

1. What is motivation? Explain Maslow's theory.

2. Define learning. Explain "Insightful" learning.

SHORT ESSAYS (Answer any Four)　　　　　　　　　　　**4 x 5 = 20 Marks**
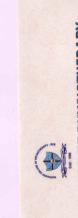
3. James-Lange theory of emotion

4. Define frustration and explain sources of frustration.

5. Explain modification of attitudes.

6. Types of thinking

7. Assessment of intelligence

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

8. Rationalization

9. Ego

10. Types of attention

11. Characteristics of a good leader

12. Hunger motives

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: 3 Hours **Max. Marks: 40 Marks**

General Psychology
Q.P. Code: 2705

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

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

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

1. Define Personality. Explain the methods of assessment of personality.

2. What is Leadership? Explain the different types of leaders.

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

3. Briefly discuss role of heredity and environment in physical and psychological development.

4. " Structuralism" School of psychology

5. Illusions and hallucinations

6. Motivation cycle

7. James-Lange theory of emotion

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

8. Types of conflicts

9. Incidental learning

10. Psychoanalysis

11. Repression and Regression

12. Creative thinking

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – AUG/SEP 2016

Time: Three Hours

Max. Marks: 100 Marks

HUMAN ANATOMY (RS-5)
Q.P. CODE: 2731

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

LONG ESSAYS (Answer any Two)

$2 \times 10 = 20$ Marks

1. Describe the origin, insertion, function, blood supply and nerve supply of quadriceps femoris muscle.
2. Discuss in detail external anatomy, internal structure, blood supply and relations of heart.
3. Describe the origin, course, termination and applied anatomy of radial nerve.

SHORT ESSAYS (Answer any Twelve)

$12 \times 5 = 60$ Marks

4. Ankle joint
5. Sternocleidomastoid muscle
6. Cubital fossa
7. Macroscopic structure and histology of long bone
8. Anatomy of kidney
9. Pituitary gland
10. Cross section of spinal cord
11. Uterus
12. Anatomy of lymph node
13. Carotid artery and their branches
14. Femur
15. Stratified squamous epithelium
16. Skin
17. Diaphragm

SHORT ANSWERS

$10 \times 2 = 20$ Marks

18. Structure of spermatozoa
19. Name tarsal bones
20. List cranial nerves in order
21. Coronary arteries
22. Types of tonsil
23. Enumerate sense organs
24. Lumbricals
25. Peritoneum
26. Structure passing through hilum of lung
27. Name the cells of bone

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – AUG/SEP 2016

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. Explain the extraocular muscles.

2. Explain the Hip Joint.

3. Name the superficial flexors of forearm. Write in detail the origin, insertion, nerve supply and action of any three muscles.

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

4. Cartilages of larynx
5. Histology of hyaline cartilage
6. Right kidney
7. Anterior cerebral artery
8. Inguinal canal
9. Broncho pulmonary segment of the right lung
10. Midbrain at the level of inferior colliculus
11. Dorsalis pedis artery
12. Deltoid
13. Adductor Magnus
14. Internal jugular vein
15. Extra cranial course of facial nerve
16. Carpo metacarpal joint of the thumb
17. Upper end of humerus

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

18. Name the structures in the roof of posterior triangle.
19. Name the muscles of middle ear.
20. Name the tributaries of inferior vena cava.
21. Name the parts of the upper end of femur.
22. Nerve supply of the tongue
23. Name the parts of thyroid gland.
24. Name the parts of pancreas.
25. Name the muscles of the anterior compartment of the arm.
26. Name the structures piercing clavipectoral fascia.
27. Name the recess of pleura

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP -2016

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. Discuss the mechanics of ventilation with a graph showing the pressure changes.
2. What is reflex and a reflex arc? Discuss the properties of reflexes.
3. Define Action Potential. With a well labeled graph explain the ionic basis of Action Potential

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Define GFR. Enumerate the factors affecting GFR and explain any two.
5. Explain the factors affecting erythropiesis
6. Enumerate the properties of cardiac muscle. Explain the property of refractory period
7. Discuss the neural regulation of respiration
8. Briefly describe the pharyngeal phase of deglutition
9. Differentiate between REM and NREM sleep
10. State Landsteiner's Law. Enumerate the uses of blood grouping
11. Trace the pathway for fine touch
12. Describe the body mechanisms by which it tolerates hot environment
13. Define arterial blood pressure. Discuss the immediate regulation of blood pressure.
14. Differentiate between Obligatory and Facultative processes of water reabsorption
15. What is myasthenia gravis? Describe its cause and characteristic features
16. Action of thyroid hormone
17. How is image formation altered in myopia and hypermetropia? How do you correct them?

SHORT ANSWERS

10 x 2 = 20 Marks

18. State Starling's law of force of contraction
19. Methods of contraception in males
20. Functions of ribosome
21. Write any two differences between rods and cones
22. List the actions of calcitonin
23. Surfactant
24. What is a sarcomere?
25. Define dead space. Mention the types of dead space
26. Draw and label the normal ECG waves
27. Define saltatory conduction

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP -2016

Time: Three Hours

Max. Marks: 100 Marks

HUMAN PHYSIOLOGY (RS-5)
Q.P. CODE: 2732

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

LONG ESSAYS (Answer any Two)

2 x 10 = 20 Marks

1. Define cardiac cycle. What is its normal duration? Describe the left ventricular pressure changes during one cardiac cycle.
2. Describe the neural regulation of respiration with neat labelled diagram. Add a note on Hering Breuer's reflex.
3. Explain the sliding filament theory of muscle contraction and list the contractile proteins of the skeletal muscle.

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Define and classify anemia. Give the cause and symptoms of Pernicious anemia.
5. Briefly describe the actions of Growth hormone.
6. Trace and explain the pathway for fine touch
7. Explain the hormonal regulation of normal blood calcium level.
8. Describe the mechanism of reabsorption of glucose in the renal tubule.
9. Give an account of circulation and functions of CSF.
10. Define Action Potential. Draw and label different phases of action potential giving ionic basis for each.
11. What is effective Filtration Pressure? Give its normal value. State how this value is achieved.
12. Name the types of Deafness and write the tests to differentiate them.
13. Give an account of different phases of regulation of gastric juice secretion.
14. Briefly describe the changes occurring in females at Puberty.
15. Differentiate cell mediated immunity from humoral immunity
16. Briefly explain the metabolic actions of Growth hormone.
17. Give an account of Micturition reflex in man

SHORT ANSWERS

10 x 2 = 20 Marks

18. Draw and label strength-duration curve.
19. Write the functions of Sertoli cells.
20. Write a note on Facilitated diffusion with example.
21. What is Cholegogue? Give an example.
22. What is Haemophilia? How it is caused?
23. Define and write the cause for Acromegaly.
24. Write a note entero-hepatic circulation.
25. What is Atonic bladder? How it is caused?
26. Draw and label Cystometrogram.
27. Give the cause and correction for Myopia.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP-2016

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

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

1. Define and classify proteins with suitable examples.

2. Describe – sources, RDA, biochemical functions and deficiency of Vitamin D.

3. Describe aminoacid classification and functions. Add a note on biological important peptides.

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

4. Glucose tolerance test

5. Phospholipids

6. Transport mechanism of cell membrane

7. Difference between RNA and DNA

8. Digestion and absorption of carbohydrates

9. Explain contractile proteins.

10. Classification of hormones

11. Respiratory acidosis

12. Types of jaundice, add a note on hemolytic jaundice.

13. Structure and functions of tRNA

SHORT ANSWERS   10 x 2 = 20 Marks

14. Co-enzymes form of Vitamin B6 and Folic acid

15. Epimers

16. Beri-beri

17. Basal metabolic rate

18. Active site of enzyme

19. Gout

20. Essential amino acids

21. Bad cholesterol

22. Name two glycogen storage disorders.

23. Hormones regulating blood glucose

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Rajiv Gandhi University of Health Sciences, Karnataka

06/09/16

I Year B.P.T. Degree Examination - SEP - 2016

Time: Three Hours

Max. Marks: 100 Marks

BIO-MECHANICS (Revised Scheme – 4)
Q.P. CODE: 2707

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

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

1. Define Gait. Mention the phases of gait cycle. Explain sagittal plane analysis of gait.
2. Discuss in detail kinetics and kinematics of thoracic rib cage.
3. Classify joints in detail with examples and neat diagrams.

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

4. Discuss in brief about length tension and force velocity relationship of a muscle.
5. Define anatomical pulley and explain in detail with an example in human body.
6. Define Lever and explain in detail about III order lever with example and neat diagram.
7. Explain the structure of Tempero mandibular joint.
8. Musculo skeletal changes following COPD
9. Classification of synovial joints in detail
10. Classify different types of joint lubrication in detail.
11. Time dependent and rate dependent properties of connective tissue
12. Energy expenditure of gait
13. Kinetics and kinematics of posture
14. Enumerate various pinches of hand complex.
15. Structure of shoulder complex
16. Mention in detail about various deviations occurring at knee joint.
17. Static stability of hip joint

SHORT ANSWERS   10 x 2 = 20 Marks

18. Good and bad posture
19. Name the ligaments of shoulder joint.
20. Functions of Meniscus
21. Clinical significance of plantar arches
22. Static and dynamic balance
23. Name the factors affecting muscle function.
24. COG and LOG
25. Kinetics and Kinematics
26. Angle of Inclination of Humerus
27. Active insufficiency

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP-2016

Time: Three Hours
Max. Marks: 80 Marks

BIOCHEMISTRY (RS-5)
Q.P. CODE: 2733

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

LONG ESSAYS (Answer any Two) $2 \times 10 = 20$ **Marks**

1. Classify carbohydrates with examples. write biological importance of any two.
2. Describe the chemistry, source, absorption, daily requirements, deficiency disorders and biochemical role of vitamin A.
3. Describe in detail the steps of Urea Cycle. Write the causes of Uremia.

SHORT ESSAYS (Answer any Eight) $8 \times 5 = 40$ **Marks**

4. What are mucopolysaccarides? Name the functions and composition of four mucopolysaccarides.
5. Structure and functions of DNA
6. Digestion and absorption of lipids. Mention the two causes of fatty stools
7. Describe protein structure.
8. Explain the functions and deficiency manifestation of Thiamine.
9. Gluconeogenesis
10. Biological important compounds derived from cholesterol
11. Blood buffers and their role in acid base balance
12. Formation and function of collagen
13. Functions of Iron

SHORT ANSWERS $10 \times 2 = 20$ **Marks**

14. Define Respiratory Quotient (RQ). Write the RQ values of carbohydrates, lipid and proteins.
15. Protein energy malnutrition
16. Functions of plasma membrane
17. Renal threshold for glucose and its significance
18. Sodium potassium pump
19. Define metabolic alkalosis and mention two causes
20. Mention the functions of cyclic AMP.
21. Normal blood Urea level. Mention two causes of Uremia
22. Alkaptonuria
23. Carnitine cycle

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – SEP - 2016

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

BIO-MECHANICS (RS-5)
Q.P. CODE: 2734

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

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

1. Explain the structure of shoulder joint. Write about the dynamic stabilizers of shoulder joint.

2. Write in detail the properties of connective tissues.

3. Name the ligaments of knee joint? Explain in detail the screw home mechanism in weight bearing and non-weight bearing positions of knee joint.

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

4. Load – deformation curve

5. Explain joint lubrication models.

6. What are the types of muscle contractions? Write a brief note on eccentric and concentric contraction.

7. Kinematics of rib cage during ventilation

8. Note on Lumbo-pelvic rhythm

9. Write in detail about concave – convex rule with example.

10. What are the types of grips? Write in brief about tip-to-tip prehension with example.

11. Analyze the forces acting on hip joint during unilateral stance

12. Write a note on tibiofemoral meniscus.

13. Explain Newton's law of motion with examples.

14. Write about structure and function of plantar arches.

15. Analyze an ideal posture from anterior and lateral directions

16. Define lever. Write the types of lever with examples.

17. Write a note on diarthrodial joints.

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

18. Carrying Angle

19. Movements of patella

20. Anatomical pulley with example

21. Types of posture

22. Write the names of muscle proteins

23. Odd facet

24. Angle of inclination

25. Patella plica

26. Planter aponeurosis

27. Two postural deviations in saggital plane

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Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – SEP 2016

Time: 3 Hours

Max. Marks: 40 Marks

Psychology (RS-5)
Q.P. Code: 2735

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

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

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

1. Define Emotion. Write in detail about the factors that affect the emotions of an individual.
2. Define Motivation. Describe Maglow's theory of hierarchical needs.

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

3. Causes of mental conflict
4. Factors affecting learning
5. Qualities of leadership
6. Characteristics of intelligent person
7. Observation method

SHORT ANSWERS
5 x 2 = 10Marks

8. Perception
9. Hunger motive
10. Stress
11. Rationalization
12. Reasoning

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP 2016

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 'leadership'? Explain the types of leaders.

2. What is 'emotion'? Explain 'James-Lange' theory of emotion.

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

3. What is meant by 'trial – error learning'?

4. How do attitudes develop?

5. What is 'Rorschach' test of personality?

6. What is 'achievement' motive?

7. Explain 'denial' as a defense mechanism.

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

8. 'Double approach' conflict

9. Frustration

10. Psychoanalysis

11. Thinking

12. 'Incentive motive'

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP 2016

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. Define family. Explain the functions of the family.

2. Define urban community. Discuss the health hazards of urban community.

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

3. Methods of sociological investigation

4. Social change and stress

5. Unemployment as a social problem

6. Role of medical social worker in hospital and rehabilitation setup

7. Agencies of socialization

SHORT ANSWERS   5 x 2 = 10 Marks

8. Polyandry

9. Social security

10. Social deviance

11. Cultural lag

12. Problems of the elderly

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP 2016

Time: 3 Hours

Max. Marks: 40 Marks

Sociology (RS5)
Q.P. Code: 2736

Your answers should be specific to the questions asked. Draw neat, labeled diagrams wherever necessa
(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One)

1 x 10 = 10 Mark

1. Define Culture. Discuss the cultural factors in health and disease.
2. Define Social Group. Explain in detail about the various social groups.

SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Mark

3. Social survey
4. Poverty related to health and disease
5. Problems of women in employment
6. Characteristics of rural community
7. Functions of family

SHORT ANSWERS

5 x 2 = 10Mark

8. Socialization
9. Medical social worker
10. Urbanization
11. Social change
12. Monogamy

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP-2017

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

HUMAN ANATOMY (RS - 5)
Q.P. CODE: 2731

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

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

1. Describe the carotid triangle under the following headings: boundaries, roof, floor, contents and applied anatomy.
2. Describe the origin, course, relations, branches and applied anatomy of sciatic nerve.
3. Describe the origin, termination, relations, branches and applied anatomy of axillary artery.

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

4. Parotid gland
5. Musculocutaneous nerve of arm
6. Lateral ventricle
7. Superior mediastinum
8. Stomach bed
9. Broncho pulmonary segment
10. Supports of uterus
11. Adductor canal
12. Sternal angle
13. Cubital fossa – boundaries, contents and applied anatomy
14. Blood supply of heart
15. External features of liver
16. Pituitary gland
17. Classify muscles with examples.

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

18. Mention the joints where inversion and eversion takes place.
19. Name the ear ossicles.
20. Draw the structure of neuron.
21. Waldeyer's ring
22. What is Morsion's and Dougla's pouch?
23. Name the nuclei present in cerebellum.
24. Name the layers of scrotum.
25. Name the muscles of anterior abdominal wall.
26. Name the bones forming ankle joint.
27. Draw the transverse section of spinal cord.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP-2017

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

HUMAN PHYSIOLOGY (RS - 5)
Q.P. CODE: 2732

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

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

1. Draw a labeled diagram of a synapse. Discuss the properties of a synapse.

2. Define arterial blood pressure. Explain the immediate and long term regulation of blood pressure.

3. Define a triad. Explain its role in muscle contraction.

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

4. Describe the body mechanisms by which it tolerates warm environment.

5. Outline the neural regulation of respiration.

6. State Landsteiner's law. Add a note on erythroblastosis foetalis.

7. Describe the functions of bile juice.

8. Tabulate the differences between I and II heart sounds.

9. Discuss the counter-current mechanism taking place in Juxta medullary nephrons.

10. Describe the cardio-vascular changes during muscular exercise.

11. Describe the events and hormonal basis of the different phases of menstrual cycle.

12. Explain accommodation reflex.

13. Describe in detail the structure and functioning of the muscle spindle.

14. Functions of cerebellum

15. Trace the dorsal column tracts and mention its functions.

16. Enumerate the hormones of calcium metabolism. Write the functions of each.

17. Functions of saliva

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

18. Differentiate between simple and facilitated diffusion.

19. What is GFR? Give its normal value.

20. Define dyspnoea.

21. List the functions of pulmonary surfactant.

22. Define sex determination.

23. Define compliance and give its normal value.

24. Define intrapleural pressure. Give its normal values and the values during respiratory cycle.

25. Differentiate between fast and slow muscles (any three).

26. Define immunity. Mention the types of immunity.

27. Enumerate any four clinical features of Parkinson's disease.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP-2017

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

BIOCHEMISTRY (RS-5)
Q.P. CODE: 2733

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

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

1. Describe the chemistry, source, absorption, daily requirement, deficiency disorders and biochemical role of vitamin D.
2. What is the normal PH of blood? Discuss the mechanism involved in its regulation.
3. Define enzyme, its structure and functions. Explain the mechanism of enzyme action. Add a note on inhibition of enzymes.

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

4. Bicarbonate buffer system of blood
5. Substrate level Phosphorylation
6. Functions of Niacin (Vitamin B3)
7. General mechanism of action of steroid hormones
8. What are co-enzymes? Illustrate their role in metabolism with four examples.
9. Biological active peptides
10. Mitochondrial structure and function
11. Chemical properties of carbohydrates
12. Describe the properties of lipids.
13. Name five enzymes of diagnostic significance with their normal serum level.

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

14. Transamination reactions
15. Name the metabolic products of Tyrosine.
16. Name the ketone bodies. Mention two causes of ketosis.
17. Kwarshiorkar
18. What are epimors? Give example.
19. Invert sugar
20. Distinguish between DNA and RNA
21. Write the coenzyme form of: 1. Thymine, 2. Riboflavin
22. Peptide bond
23. Chori's cycle

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – SEP-2017

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

BIO-MECHANICS (RS-5)
Q.P. CODE: 2734

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

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

1. Describe the structure of hip joint. Add a note on kinetics and kinematics.
2. Write in detail of Analysis of posture.
3. Explain biomechanics of thorax and chest wall.

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

4. Scapulo humeral rhythm
5. Locking and unlocking mechanism
6. Explain levers in detail.
7. Describe the types of joints.
8. Explain the parts of goniometric and its types.
9. Describe stress and strain.
10. Explain Newton law of motion.
11. Lumbo-pelvic rhythm
12. Properties of connective tissues
13. Compare and contrast different muscle contractions
14. Sitting to standing – movement analysis
15. Determinants of gait
16. Different types of grip
17. Describe joint lubrication model.

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

18. Carrying angle
19. Scoliosis
20. Concurrent force systems
21. Stair climbing
22. Patella Plica
23. Visco elasticity
24. Pes Planus and Pes Cavus
25. Pulleys
26. Open Kinematic chain
27. Palmar arches

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - SEP-2017

Time: 3 Hours   **Max. Marks: 40 Marks**

PSYCHOLOGY (RS – 5)
Q.P. Code: 2735

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

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

1. What is personality? Explain the assessment of personality.

2. What is psychology? Explain the methods of psychology.

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

3. Abraham Maslow's theory of need hierarchy

4. Distribution of intelligence

5. Formation of attitude

6. Trial and error of learning theory

7. Types of reasoning

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

8. Social psychology

9. Division attention

10. Genius

11. Incidental and intentional learning

12. Hallucination

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – SEP-2017

Time: 3 Hours   **Max. Marks: 40 Marks**

Sociology (RS5)
Q.P. Code: 2736

Your answers should be specific to the questions asked. Draw neat, labeled diagrams wherever necessary
(Note: Both QP Codes 2735 and 2736 are to be answered within total duration of 3 hours)

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

1. Define family. Describe the role of family in health and disease of an individual.

2. Write in detail about the social factors responsible for health and disease.

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

3. Unemployment

4. Difference between rural and urban community

5. Difference between anthropology and sociology

6. Anticipatory socialization

7. In group and out group

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

8. Crowd

9. Social rehabilitation

10. Juvenile home

11. Cultural lag

12. Medical social worker

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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 Ist 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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Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – Sep 2012

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. 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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Rajiv Gandhi University of Health Sciences, Karnataka

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

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, Metablioc 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. Transmination

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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Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – Sep 2012

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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Rajiv Gandhi University of Health Sciences, Karnataka

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

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 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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Rajiv Gandhi University of Health Sciences, Karnataka

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

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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Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – Sep 2012

Time: 3 Hours   **Max. Marks: 40 Marks**

<u>Sociology</u>
Q.P. Code : 2706

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

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

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

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – APRIL 2015

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 boundaries, roof, floor & contents of femoral triangle.
2. Enumerate the Dural venous sinuses. Add a note on cavernous sinus.
3. Describe the hip joint under following heading.
   a) Articular surface
   b) Ligaments
   c) Movements
   d) Relation
   e) Applied anatomy

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

4. Broncho pulmonary segment
5. Thyroid gland
6. Lower end of femur
7. Spleen
8. External features of Stomach
9. Supports of uterus
10. Right atrium
11. Internal jugular vein
12. Hamstring muscles
13. Musculocutaneous nerve
14. Trapezius muscle
15. Corpus callosum
16. Basal ganglia
17. Intervertebral disc

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

18. Classification of simple epithelium
19. Contents of Bicipital groove
20. Parts of pancreas
21. Name the sinuses of pericardium
22. Venous drainage of heart
23. Origin and termination of thoracic duct
24. Parts of mid brain
25. Branches of Posterior cord of Brachial plexus
26. Branches of Coeliac trunk
27. Contents of spermatic cord

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL 2015

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 sliding filament theory of contraction. State Starlings law of force of contraction.
2. Describe the cardio-vascular and respiratory changes during exercise.
3. Name the ascending pathways. Trace the pathway for pain and fine touch.

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

4. Explain the Wallerian degeneration
5. Define Anemia. Explain the clinical classification of Anemia
6. Explain the phases of cardiac cycle taking place during ventricular systole.
7. Draw a spirogram. Define the different lung volumes and write their normal values.
8. Functions of saliva
9. Differentiate between myelinated and non-myelinated nerve fibres
10. Define immunity. Briefly describe the types of immunity
11. Draw the structure of the Juxta glomerular apparatus. Write any three functions
12. Describe the body mechanisms by which it tolerates hot environment
13. List four methods of contraception in the males and females
14. Functions of cerebellum
15. Differentiate between Isotonic and Isometric contraction
16. Action of insulin
17. Explain the mechanism of impedence matching taking place in the middle ear

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

18. Define chronaxie and rheobase
19. Define Lymph. List two functions
20. Define secondary active transport mechanism
21. Trace the visual pathway
22. Action of ADH
23. Define chloride shift
24. Structure of muscle spindle
25. Define motor unit.
26. Source of energy for muscle contraction
27. Define arterial blood pressure. Write its normal value

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL 2015

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. Define enzymes. How enzymes are classified give examples for each class
2. Describe the chemistry, sources, RDA, metabolic functions and deficiency symptoms of vitamin C (Ascorbic acid)
3. Describe aerobic Glycolysis. Add a note on the bioenergetics of the pathway

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

4. Ketogenesis
5. Urea cycle
6. Classification of proteins based on functions
7. Basal metabolic rate
8. Mucopolysaccharides
9. Fluid mosaic model of cell membrane
10. Collagen
11. Structure and functions of DNA
12. Creatinine clearance test
13. Balanced diet

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

14. Essential fatty acids functions and deficiency
15. Kwashiorkar
16. **Essential amino acids**
17. Active site
18. Beri – beri
19. Functions of iron
20. Metabolic acidosis
21. Name the coenzymes of (A) Thiamine (B) Pyridoxine
22. Name any four physiological importance substances produced by tyrosine
23. Structure of tRNA

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Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – APRIL 2015

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 personality? Explain the assessment of personality.
2. What is psychology? Explain the scope of psychology.

SHORT ESSAYS (Answer any Four)   **4 x 5 = 20 Marks**
3. Abraham Maslow's theory of need hierarchy
4. Distribution of intelligence
5. Attitude change
6. Trial and error of learning theory
7. Types of learning

SHORT ANSWERS   **5 x 2 = 10Marks**
8. Introspective method
9. Attention
10. Genius
11. Incidental and intentional learning
12. Illusion

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL 2015

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. Define socialization and explain in detail about its types and agencies.

2. Define family and explain its influence on individual's health, family and Nutrition.

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

3. Explain the concept of culture and health.

4. Case study

5. Importance of sociology with reference to health care professionals

6. Define rural community and its health hazards.

7. Poverty and unemployment

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

8. Write any two features of urban community.

9. Social change and deviance

10. Nuclear family

11. Alcoholism

12. Difference between psychology and social psychology

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL -2015

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 biomechanics of abduction of shoulder joint with factors contributing for its stability.
2. What are the ligaments of hip joint? Explain bilateral and unilateral stance with examples.
3. What is the functional position of hand? Add note on power grips.

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

4. Describe the structure of a vertebra. Add a note on curves in the vertebral column with its articulations and functions.
5. Compare Lumbo pelvic rhythm with Scapula humeral rhythm.
6. What is biarticular muscle? Explain their property of active in sufficiency with an example.
7. Describe the order of levers with examples.
8. Biomechanics of ankle joint
9. Movements of ribcage during breathing – add a note on muscles of breathing.
10. Explain locking and unlocking of knee joint.
11. Movement analysis – lifting
12. Describe the structure and function of intervertebral disc.
13. Define posture. Explain the kinetics of posture.
14. What is lubrication? Explain the types of lubrication of synovial joint.
15. Biomechanics of cervical spine
16. Pronation twist
17. What is gait cycle? Describe the Energy expenditure during normal gait

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

18. Agonists
19. What is thumb opposition?
20. What are the factors that affect muscle function?
21. Role of menisci at knee
22. What is the characteristic of gluteus medius gait?
23. Spondylolisthesis
24. Acetabular ante-version
25. Ligaments of ankle joint
26. Index plus minus foot
27. Annular pulleys

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – April 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. Name the Cranial nerves in order. Explain facial Nerve in Detail
2. Describe the external features of Heart. Explain Right atrium in detail
3. Name the thenar and hypothenar muscles. Describe any one Thenar and hypothenar Muscle

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

4. External carotid artery
5. Constitution of Larynx
6. Lateral Ventricle
7. Openings in the Diaphragm
8. Femoral Artery
9. Oesophagus
10. Inguinal canal
11. Uterus
12. External features of liver
13. Axillary nerve
14. Upper end of femur
15. Evertors of the foot
16. Midbrain
17. External Features of right lung

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

18. Parts of Gall bladder
19. Name the recess of pleura
20. Name the attachments on greater tuberosity
21. Name the branches of medial cord of brachial plexus
22. Name the ligaments of elbow joint
23. Name the tarsal bones
24. Name the hamstring muscles
25. Parts of Corpus callosum
26. Name the nucleus of the cerebellum
27. Histology of Hyaline Cartilage (only diagram)

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – April 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. Define arterial blood pressure. Briefly explain the regulation of arterial blood pressure.
2. Draw the structure of a triad and describe its role in muscle contraction.
3. Define synapse. Discuss the properties of synapse.

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

4. Tabulate any three differences between skeletal muscle, cardiac muscle and smooth muscle
5. Describe the Intrinsic mechanism of coagulation
6. Define cardiac cycle. Explain the phases of cardiac cycle taking place in the ventricles
7. Explain stretch reflex with the help of a diagram
8. Discuss the different phases of menstrual cycle with their hormonal basis
9. Functions of hypothalamus
10. Briefly explain the oxygen dissociation curve
11. Trace the pathway for fine touch
12. Describe the countercurrent mechanism taking place in the renal medullary insterstitium
13. Enumerate the functions of plasma proteins
14. Phases of gastric juice secretion
15. Define anemia. Discuss the clinical classification of Anemia
16. Action of parathyroid hormone
17. Functions of middle ear

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

18. State Starling's law of force of contraction
19. List the functions of Juxta-glomerular apparatus
20. Define Osmosis
21. Name the neuroglial cells. What is function of astrocytes
22. Enumerate the functions of angiotensin II
23. Intrapulmonary pressure and its normal value
24. Name the contractile proteins
25. Define dead space. Mention the types of dead space
26. Draw an label the normal ECG waves
27. Define muscle tone.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – April 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. What is normal pH of the blood? Describe different mechanisms in the maintenance of acid base balance.
2. What is glycolysis? Describe its reactions and a note on its energetic.
3. Describe the sources, requirement, metabolic functions and deficiency manifestations of vitamin D.

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

4. Urea cycle
5. Functions of calcium
6. Respiratory acidosis
7. Fatty liver
8. Biochemical function and absorption of Iron
9. Dietary fibres
10. Specific dynamic action
11. Enzymes of diagnostic importance
12. Renal regulation of acid-base balance
13. Phospholipids

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

14. Name the co-enzymes of a) Niacin b) Folic acid
15. Cyclic –AMP
16. Transamination
17. Nucleotides of biological importance
18. Essential fatty acids
19. Phenyl Ketonuria
20. Proenzymes
21. Name the vitamin deficient in a) Beri-Beri b) Pellagra
22. Disaccharides
23. Ribosomes

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – April-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. What is difference between osteokinematics and arthrokinematics? Describe the arthrokinematics and osteokinematics at the shoulder joint
2. Explain various types of power and precision grips with muscle action and joint position
3. What are the temporal and spatial parameters of gait? Describe the kinematics and kinetics of stance phase of gait cycle

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 lever, discuss its application in physiotherapy
8. Define passive insufficiency. Explain in detail with appropriate examples
9. Write a note on open and closed kinematic chain exercises with appropriate examples
10. Define posture, discuss normal and abnormal postures
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 planus
15. Define torque
16. Ground reaction force
17. Carrying angle
18. Angle of pull
19. Define eleasticity
20. Q-angle
21. Isometric exercises
22. Hooke's law
23. Scoliosis

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Rajiv Gandhi University of Health Sciences, Karnataka

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

Time: 3 Hours　　　　　　　　　　　　　　　　　　　　　**Max. Marks: 40 Marks**

<u>General Psychology</u>

Q.P. Code : 2705

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

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

LONG ESSAYS (Answer any One)　　　　　　　　　　**1 x 10 = 10 Marks**
1. Define personality? Explain various methods of Assessing personality
2. What is instrumental Learning? Explain skinner's operant learning

SHORT ESSAYS (Answer any Four)　　　　　　　　　　**4 x 5 = 20 Marks**
3. Factors influencing perception
4. Personality Traits
5. Adolescence psychology
6. Psychological changes of emotion
7. Qualities of Leadership

SHORT ANSWERS　　　　　　　　　　　　　　　　　　**5 x 2 = 10Marks**
8. Psychological needs
9. Projection
10. Introspection
11. Industrial psychology
12. Motivation

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – April 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 factors of social change.

2. Characteristics of rural community

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

3. Classification of group

4. Stages of socialization

5. Types of family

6. Culture in health and illness

7. Social change and stress

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

8. Joint family

9. Social group

10. Interview

11. Poverty

12. Culture

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - April-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. Define gait and gait cycle. Explain in detail the determinants of gait.

2. Discuss in detail dynamic stability of Gleno-humeral joint.

3. Explain the structure of typical lumbar vertebrae. Add a note on function of the lumbar spine.

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

4. Define equilibrium. Discuss types of equilibrium with examples.

5. Write in detail the formation of arches in hand with its functions.

6. Define joint. Classify with examples and 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 in detail the mechanism of muscle contraction.

9. Write extensor mechanism of hand and add a note on its function.

10. Brief-out weight bearing of hip joint and explain the muscle function in unilateral stance with example.

11. Write a note on sterno-clavicular joint movements.

12. Write in detail the extensor mechanism of knee. Mention the ligaments of the knee.

13. Explain active insufficiency with an example.

14. What is the functional position of the hand? Explain biomechanics of grips with an example.

15. Kinetics of posture

16. Metatarsal break

17. Movement analysis – sitting to standing

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

18. Index of insall and salvitii

19. Function and control of disk of temporomandibular joint

20. Hystersis

21. Moment arm of force

22. Carpal tunnel syndrome

23. Nutation and counter Nutation

24. Carrying angle and its importance

25. DOMS

26. What are the changes occur in IVD under compression loading

27. Anatomical pulley

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T Degree Examination – Aug 2013

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. Explain the medial longitudinal arch of foot.

2. Explain the shoulder joint.

3. Explain the basal ganglia.

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

4. Femoral sheath
5. Ligaments of knee joint
6. Greater omentum
7. Diaphragm
8. Pericardium
9. External features of liver
10. Supports of the uterus
11. Histology of skeletal muscle
12. Upper end of humerus
13. Mastoid process
14. Trapezius muscle
15. External oblique muscle of abdomen
16. External jugular vein
17. Middle cerebral artery

SHORT ANSWERS   **10 x 2 = 20 Marks**
18. Histological diagram of large sized artery.
19. Name the arteries supplying suprarenal gland.
20. Name the deep flexors of forearm.
21. Name the parts of brain stem.
22. Name the bones of middle ear.
23. Name the intrinsic muscle groups of the tongue.
24. Name the nerve supply of extra ocular muscles.
25. Name the contents of cubital fossa.
26. *Parts of Parietal pleura*
27. Name the branches of the tibial nerve in popliteal fossa.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

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.   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

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

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

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

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

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

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. Define Glycolysis. Enumerate the steps of glycolysis and add a note on its energetics and regulation.
2. Define β – Oxidation. Describe the steps of β – Oxidation. Give the energetics for the oxidation of palmitic acid.
3. Write on sources, RDA, functions and deficiency manifestations of Vitamin A.

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

4. Functions of Lipoproteins

5. Define isoenzymes. Discuss on any two clinically important iosenzymes.

6. Describe the regulation of blood calcium.

7. Define and explain Creatinine test and add a note on its importance.

8. Describe Micelle formation.

9. Describe the structure of collagen.

10. Role of respiration in acid base balance

11. Glycogenesis and its regulation

12. Watson & Crick model of DNA.

13. Allosteric regulation of enzyme

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

14. Essential fatty acids

15. Glutathione

16. Functions of iron

17. Give the normal values of a) Serum sodium b) Serum Potassium

18. Albinism

19. Lactose

20. What is nitrogen balance? Give one example each for positive and negative nitrogen balance.

21. Name any four special compounds derived from Glycine.

22. Give the normal values of a) Serum AST b) Serum Phosphorus

23. Mention two biotin dependent carboxylation reactions.

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

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 kinetics and kinematics of motion with relation to the shoulder joint.
2. Enumerate the various types of joints. Explain in detail each type giving examples.
3. Analyze the various types of grips and pinches. Describe the movement occurring at the joints.

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

4. Explain Newton's 1st Law of motion with an example of from human body.
5. Describe the carrying angle and explain its importance for function of elbow and forearm.
6. Explain the phases of swing phase of a gait cycle.
7. Describe the movement of stair climbing.
8. Explain the joint movement that occurs during breathing.
9. *Analysis of movement from sitting to standing*
10. Explain the properties of bone tissue indicate the features that help maintain stability.
11. Describe the features of tonic and phasic muscles.
12. Define equilibrium; give the types with an example.
13. Describe the screw-home mechanism at the knee joint.
14. Explain the movements of facet joint of the vertebral column.
15. Explain passive insufficiency with examples.
16. Outline the various axis and planes of movement and give the movements that occur.
17. Explain the lever of 1st order and give an example of human movement.

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

18. Define arthrokinematics.
19. *Give 2 uses of plantar arches.*
20. Define step length and stride length.
21. *Define Mechanical Advantage with an example*
22. Explain good posture.
23. Where does line gravity pass through in the spine?
24. Define Hooke's law.
25. Give 2 functions of a connective tissue.
26. Explain Q angle.
27. What is a closed packed position?

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year BPT Degree Examination – Aug 2013

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

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

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. Explain the kinetics and Kinematics of gait

2. Discuss the biomechanics of cervical spine

3. Discuss the biomechanics of shoulder complex and explain the dynamic stability in detail

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

4. Discuss the plantar arches

5. Write a short on tonic and phasic muscles

6. Analyse the movement of pulling

7. Explain the movements of scapulothoracic joint

8. What is base of support? Explain it in relation to mobility and stability

9. Explain the structure and function of intervertebral disc

10. Explain lumbopelvic rhythm

11. Explain young's modulus in relation to stress and strain

12. Types of muscle contraction. Give example

13. Explain Length – tension relationship

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

14. Carrying angle

15. Pivot joint with example

16. Define Dynamic friction

17. Define Double support time

18. Prime movers

19. Scoliosis

20. Hallux valgus

21. Define energy

22. Explain tibial torsion

23. Define Inertia

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Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – Aug 2013

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 the psychology? Explain the scope of psychology?
2. What is motivation? Describe the classification of motives

SHORT ESSAYS (Answer any Four)   **4 x 5 = 20 Marks**
3. Explain the role of psychology in the field of physiotherapy
4. Describe the determinants of attention.
5. What is heredity? Explain the role of heredity in human development
6. Explain the assessment of intelligence
7. Write a note on classical conditioning theory of learning.

SHORT ANSWERS   **5 x 2 = 10Marks**
8. Stress
9. What is attitude?
10. Rationalization
11. Conflict
12. Illusion

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Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Aug 2013

Time: 3 Hours   **Max. Marks: 40 Marks**

<u>Sociology</u>

Q.P. Code : 2706

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

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

LONG ESSAYS (Answer any One)   **1 x 10 = 10 Marks**
1. *What are the causes of poverty and write the remedial measures*
2. Explain the merits and demerits of family system in India

SHORT ESSAYS (Answer any Four)   **4 x 5 = 20 Marks**
3. Health hazards of tribal community
4. Characteristics of secondary group
5. Education and social change
6. Characteristics of law
7. Write a note on unemployment

SHORT ANSWERS   **5 x 2 = 10Marks**
8. Re-socialization
9. Monogamy
10. Joint family
11. Alocentric family
12. Population explosion

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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**

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**

<u>Sociology</u>
Q.P. Code: 2706

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

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

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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