

# 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-S)

**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. Sternocleidomastoid
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. Digastric 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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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 ESSAY** {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. Oculomotor 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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I Year B.P.T. Degree Examination — SEP-2018

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**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 hemoglobin dissociation curve.
9. What is erythropoiesis? Describe the stages of erythropoiesis 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 II. 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.**

# 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.

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### 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: 100 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  $\beta$ -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. Alkaptonuria
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<sub>12</sub>.
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

# 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 ROIS 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 l'teniscus. \*
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 harks**

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: 2750

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

Note: Both OP 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 OP 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 OP 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 10 Marks

8. Rationalization
9. |2go
10. Types of attention
11. Characteristics of a good leader
12. Hunger motives

# 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 OP Codes 2705 and 270G 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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