

# Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.P.T. Degree Examination – APRIL-2019

Time: 3 Hours

Max. Marks: 40 Marks

## Pathology (RS-5)

Q.P. Code: 2737

Your answers should be specific to the questions asked.

Draw neat labeled diagrams wherever necessary

**(Note : Both OP Codes 2737 and 2738 are to be answered within total duration of 3 hours)**

### LONG ESSAYS (Answer any One)

1 x 10 = 10 Marks

1. Define and classify Shock. Describe the pathogenesis, clinical features and stages of hypovolumic shock.
2. Classify Bone tumors. Describe the clinical features, radiological features, gross and microscopy of Osteosarcoma.

### SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

3. Fat embolism
4. Clinical features of Vitamin D deficiency
5. Laboratory investigations and clinical features of Hemophilia
6. Ghon's complex
7. Gross and microscopy of Pleomorphic adenoma

### SHORT ANSWERS

5 x 2 = 10Marks

8. Mention 4 secondary causes of diabetes mellitus.
9. Mention the events of acute inflammation.
10. Give 4 causes of thrombocytopenia.
11. Enlist 4 tumor markers.
12. Mention 2 differences between Wet and Dry Gangrene.

\*\*\*\*\*



NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY

Rajiv Gandhi University of Health Sciences, Karnataka  
II Year B.P.T. Degree Examination - APRIL-2019

Time: 3 Hours

Max. Marks: 40 Marks

**Pathology**  
**Q.P. Code : 2708**

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

**(Note : Both QP Codes 2708 and 2709 are to be answered within total duration of 3 hours)**

**LONG ESSAYS (Answer any One)**

**1 x 10 = 10 Marks**

1. Define neoplasia. Mention the differences between benign and malignant tumours with examples. Add a note on viral carcinogenesis
2. Define hypersensitivity. Discuss the various types of hypersensitivity with examples

**SHORT ESSAYS (Answer any Four)**

**4 x 5 = 20 Marks**

3. Fatty liver
4. Hypertrophy
5. Osteoarthritis
6. Diabetes mellitus
7. Cholelithiasis (Gall stone)

**SHORT ANSWERS**

**5 x 2 = 10 Marks**

8. Cross matching
9. Fate of thrombus
10. Types of reed Sternberg cell
11. Exudates
12. Hyaline change

\*\*\*\*\*



**NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY**

# Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.P.T. Degree Examination – APRIL-2019

Time: 3 Hours

Max. Marks: 40 Marks

## Microbiology (RS-5)

Q.P. Code: 2738

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

**(Note : Both OP Codes 2737 and 2738 are to be answered within total duration of 3 hours)**

### LONG ESSAYS (Answer any One)

1 x 10 = 10 Marks

1. Define the terms sterilization and disinfection. Describe in detail chemical methods of sterilization.
2. Define and classify immunity. Describe in detail mechanisms of innate immunity.

### SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

3. Antimicrobial susceptibility testing
4. Meningitis-etiological agents and laboratory diagnosis
5. Laboratory diagnosis of malaria
6. Non suppurative complications of streptococcus pyogenes
7. Laboratory diagnosis of fungal infections

### SHORT ANSWERS

5 x 2 = 10Marks

8. Name four opportunistic infection in HIV.
9. Name four Zoonotic diseases.
10. Significant bacteruria
11. Prophylaxis of hepatitis B
12. Structure of HIV virus

\*\*\*\*\*



NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY

# Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.P.T. Degree Examination - APRIL-2019

Time: 3 Hours

Max. Marks: 40 Marks

## Microbiology

**Q.P. Code : 2709**

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

**(Note : Both QP Codes 2708 and 2709 are to be answered within total duration of 3 hours)**

### **LONG ESSAYS (Answer any One)**

**1 x 10 = 10 Marks**

1. Classify antigen-antibody reactions & describe agglutination tests
2. Describe the pathogenesis, lab diagnosis and prophylaxis of tuberculosis

### **SHORT ESSAYS (Answer any Four)**

**4 x 5 = 20 Marks**

3. Anaphylaxis
4. Polio immunization
5. Tetanus
6. Describe the basic structure of viruses
7. ELISA

### **SHORT ANSWERS**

**5 x 2 = 10 Marks**

8. Hepatitis 'B' markers
9. Bacillary dysentery
10. Lab diagnosis of anthrax
11. Prevention of HIV transmission
12. Cholera

\*\*\*\*\*



**NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY**

Rajiv Gandhi University of Health Sciences, Karnataka  
II Year B.P.T. Degree Examination – APRIL-2019

Time: Three Hours

Max. Marks: 80 Marks

**Pharmacology (RS-5)**  
**Q.P. CODE: 2739**

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. Enumerate different routes of drug administration. Discuss merits and demerits of oral and intravenous routes of drug administration.
2. Classify antiepileptic drugs. Write the mechanism of action, therapeutic uses and adverse effects of phenytoin sodium.
3. Classify antihypertensive drugs. Mention the therapeutic uses and adverse effects of ACE inhibitors.

**SHORT ESSAYS (Answer any Eight)**

**8 x 5 = 40 Marks**

4. Biotransformation of a drug
5. Drug therapy of Parkinson's disease
6. Prokinetic drugs
7. Therapeutic uses and adverse effects of  $\beta_2$  agonists
8. Explain briefly the pharmacokinetic changes in the geriatric population.
9. Thiazide diuretics
10. Proton pump inhibitors
11. Prazosin
12. Prednisolone
13. Nitrates

**SHORT ANSWERS**

**10 x 2 = 20 Marks**

14. What is a Teratogenicity? Mention two teratogenic drugs.
15. Write two differences between benzodiazepines and barbiturates.
16. Name four oral hypoglycemic drugs.
17. Treatment of organophosphorus compound poisoning
18. Write two skeletal muscle relaxants and their uses.
19. Drugs used in prevention and treatment of osteoarthritis
20. Define a Placebo and mention its uses.
21. Mention four uses of  $\beta$  blockers.
22. List two calcium channel blockers and their therapeutic uses.
23. List two hypolipidemic drugs and their therapeutic uses.

\*\*\*\*\*



**NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY**

# Rajiv Gandhi University of Health Sciences, Karnataka

## II Year B.P.T. Degree Examination – APRIL-2019

**Time: Three Hours**

**Max. Marks: 80 Marks**

### Pharmacology (RS - 3 & RS - 4) Q.P. CODE: 2710

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. Classify Skeletal Muscle relaxants. Discuss the mechanism of action, clinical uses and adverse effects of Pancuronium.
2. Classify the antihypertensive drugs. Add a note on ACE inhibitors.
3. Classify the analgesics. Write the actions, uses and adverse effects of aspirin.

#### SHORT ESSAYS (Answer any Eight)

**8 x 5 = 40 Marks**

4. Mention the various sources of drugs with examples for each.
5. Advantages and disadvantages of Intravenous route.
6. Drug antagonism.
7. Reversible anticholinesterases.
8. Phenytoin sodium.
9. Name the Tricyclic antidepressants. Write their adverse effects?
10. Streptokinase.
11. Classify different routes of drug administration.
12. Name the H<sub>2</sub> receptor antagonists. Write their uses?
13. Clinical uses of Prednisolone.

#### SHORT ANSWERS

**10 x 2 = 20 Marks**

14. First pass metabolism.
15. Mention two drug induced diseases with suitable examples.
16. Name two nasal decongestants.
17. Name two drugs used in Anaphylactic shock.
18. Mention two uses of Chlorpromazine.
19. Mention two laxatives. Write one use?
20. Write two advantages of Benzodiazapines over Barbiturates.
21. Name one oral hypoglycemic drug and mention its mechanisms of action.
22. Mention two drugs producing Parkinsonism.
23. Why drug dosage should be reduced in elderly people?

\*\*\*\*\*



**NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY**

# Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.P.T Degree Examination – APRIL-2019

Time: Three Hours

Max. Marks: 100 Marks

## Exercise Therapy (RS-5)

Q.P. CODE: 2740

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 passive movements. Classify passive movements and explain the principles of passive movements in detail.
2. Define massage; explain the physiological and therapeutic effects of massage.
3. Explain the techniques of strengthening quadriceps from grade 1 to grade 5.

### SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Explain the muscle work in kneeling.
5. Describe the merits and demerits of group exercise.
6. Describe techniques of management of Axillary crutches.
7. What is suspension therapy? Explain various types of suspension therapy.
8. Explain various principles of relaxation.
9. Define manual muscle testing, mention the limitations of MMT.
10. Enumerate the type of breathing exercise. Describe any one in detail.
11. Define functional mat exercise and mention the stages from sitting to standing.
12. Describe stretching techniques for hamstring tightness.
13. Write short notes on warm up and cool down exercises.
14. Explain the principles of hydrotherapy.
15. Write about frenkels exercise for lower limb.
16. Define mobilization. What are the indications and contraindication of mobilization?
17. Discuss the adaptation of muscles and connective tissue to resistance exercise.

### SHORT ANSWERS

10 x 2 = 20 Marks

18. What is 10 RM?
19. Define flexibility.
20. Define contracture.
21. What is cadence?
22. Give two examples of isometric exercise.
23. Muscle work in ideal standing
24. Define strength and endurance.
25. Give two uses of parallel bar.
26. Define PNF.
27. Define power grip.

\*\*\*\*\*



NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY

# Rajiv Gandhi University of Health Sciences, Karnataka

## II Year B.P.T. Degree Examination - APRIL-2019

Time: Three Hours

Max. Marks: 100 Marks

### Exercise Therapy (RS-3 & RS-4)

**Q.P. CODE: 2711**

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 principles of proprioceptive neuromuscular facilitation, elaborate the techniques of facilitation used for strengthening.
2. Define suspension therapy. Explain in detail the different types, techniques of suspension therapy for lower limb.
3. Establish a therapeutic exercise program to strengthen lumbar extensor muscles.

#### SHORT ESSAYS (Answer any Twelve)

**12 x 5 = 60 Marks**

4. Benefits of CPM.
5. Precautions and contraindication for resistance exercise.
6. Principle of isokinetic exercise and mention its advantages.
7. Describe the cardiovascular changes to aerobic exercise.
8. Write in brief about frenkles exercise.
9. Explain any two techniques of massage applicable for back.
10. Write the purpose of Pulmonary function test.
11. Difference between delorme and oxford technique.
12. Draw a picture of structure of skeletal muscle.
13. Explain the principles of mobilization.
14. What are the components of balance and significance?
15. Explain non equilibrium tests.
16. Mention the causes of decreased muscle performance.
17. What are the derived position used in therapeutic exercise?

#### SHORT ANSWERS

**10 x 2 = 20 Marks**

18. Define endurance.
19. Write any two methods to estimate maximal oxygen consumption.
20. Mention any two precautions need to be taken while teaching exercise to osteoporotic patient.
21. What is muscle setting exercise? Mention any four of muscle setting exercise.
22. Any 2 contra indication to stretching and why it is contra indicated.
23. Benefits of pranayama.
24. Define fatigue.
25. Write any four indications for stretching.
26. What is motor unit?
27. Label the parts of goniometer.



**NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY**



# Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.P.T Degree Examination – APRIL-2019

Time: Three Hours

Max. Marks: 100 Marks

## Electrotherapy (RS-5)

Q.P. CODE: 2741

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 UVR. Explain the types of UVR generators and write its physiological and therapeutic effects.
2. Write the types of LASERS and explain the construction and working of any one type of LASER in detail.
3. Explain the principles of production of IFT. Write its physiological and therapeutic effects.

### SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Classification of LASER.
5. Define shock and explain its types.
6. Anodal galvanism
7. Write note on hydrocollator packs.
8. Method of application of contrast both
9. Whirlpool bath
10. Physiological and therapeutic effects of faradic currents
11. Define iontophoresis and enumerate its application.
12. Calculation of E1, E2, E3 and E4 dosages of UVR
13. Types of electrodes in electrotherapy
14. Physiological and therapeutic effects Cyclotherm
15. Define electrode tissue interface and its influence on transmission of currents.
16. Types of infrared generators
17. Define PEME and explain its principles and uses.

### SHORT ANSWERS

10 x 2 = 20 Marks

18. Ohm's law
19. Chronaxie and Rheobase
20. Piezoelectric effect
21. PUVA (Psoralen Ultra Violet A)
22. Tissue impedance
23. Duty cycle
24. Latent heat of fusion
25. Phonophoresis and its agents
26. FUSE
27. Name four sensitizers used in UVR

\*\*\*\*\*



NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY

# Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.P.T. Degree Examination - APRIL-2019

Time: Three Hours

Max. Marks: 100 Marks

## Electrotherapy (RS-3 & RS-4) Q.P. Code: 2712

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 Medium Frequency Currents, Explain in detail about Static and Dynamic Interference system, therapeutic effects of Interferential therapy.
2. Discuss about the production of Micro Wave Diathermy (MWD) and the physiological effect of MWD.
3. What is shock? Explain about earthing techniques, electric shock, its safety precautions and its management.

### SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Define Ionization and explain the effects of various ions used in medical ionization.
5. Describe condenser field method of Short-wave diathermy.
6. Explain in brief about Electromagnetic Spectrum and its properties.
7. What is electrical burn and give its management.
8. Write about paraffin wax bath, uses and indications.
9. Explain about FG test and its uses.
10. State the method of plotting Strength-Duration Curve and explain the Characteristic of partially and completely denervated muscle.
11. Give a brief note on Non-thermal effects of Ultrasound.
12. Explain about types of LASER.
13. What is Moist Heat therapy? Explain in brief about Hydrocollator pack application.
14. Enlist the indications and contra indications of infrared radiation.
15. What is Lewis Hunting Response and give its therapeutic significance.
16. Give the physiological effects of Transcutaneous Electrical Nerve-Stimulation.
17. Describe physiological effects of Faradic Current.

### SHORT ANSWERS

10 x 2 = 20 Marks

18. Define fuse and state two uses.
19. What is Electromagnetic Induction?
20. What is Peizoelectric effect and how it is used in electro therapy?
21. What is Nerve Conduction Velocity?
22. What is PUVA?
23. What is Rebox type current?
24. Mention methods of indirect application of ultra sound.
25. Define fluidotherapy.
26. Mention the properties of LASER.
27. Define Axonotemesis.

\*\*\*\*\*



NAVODAYA  
COLLEGE OF  
PHYSIOTHERAPY