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. What is fatty change? Explain etiopathogenesis and pathology of fatty liver. (2+4+4)
- 2. Define rheumatic fever. Describe the etiopathogenesis and pathology of rheumatic heart disease. (2+4+4)

#### SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

- 3. Enumerate the stages in the evolution of lobar pneumonia.
- 4. Write bone marrow findings in Megaloblastic anemia.
- 5. Morphological features in Rickets
- 6. Etiopathogenesis and morphology of squamous cell carcinoma
- 7. Sequence of events in phagocytosis

#### SHORT ANSWERS

5 x 2 = 10Marks

- 8. Mention four etiology of leukemia.
- 9. Microscopic features of Warthin's tumor
- 10. Name the genetic defect in Down's syndrome with three clinical presentations.
- 11. Morphology of Chronic venous congestion (CVC) liver
- 12. Give four examples for Type I hypersensitivity reaction.



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Time: 3 Hours

Max. Marks: 40 Marks

## Microbiology (RS-5) O.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 and classify sterilization. Give a detailed account of moist heat methods of sterilization.
- 2. Define and classify immunity. Describe acquired immunity in detail.

#### SHORT ESSAYS (Answer any Four)

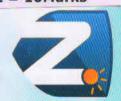
4 x 5 = 20 Marks

- 3. Antiviral agents
- 4. Laboratory diagnosis of enteric fever
- 5. Prophylaxis against poliomyelitis
- 6. Normal flora of human body
- 7. Life cycle of filarial parasite

#### SHORT ANSWERS

- 8. DPT vaccine
- 9. Quellung reaction
- 10. Classification of fungi
- 11. Name four disinfectants used in the hospital
- 12. Significant bacteruria

 $5 \times 2 = 10 Marks$ 



NAVODAYA COLLEGE OF PHYSIOTHERAPY

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

- Classify Nonsteroidal anti-inflammatory drugs. Write the therapeutic uses and adverse effects and contraindications of aspirin.
- 2. Classify anti Cholinergic drugs. Explain therapeutic uses and adverse effects of atropine.
- Classify diuretics. Explain the mechanism of action, therapeutic uses and adverse effects of furosemide.

#### SHORT ESSAYS (Answer any Eight)

8 x 5 = 40 Marks

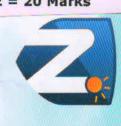
- 4. Drug antagonism
- 5. Cardioselective beta blockers
- 6. Succinylcholine
- 7. Bisphosphonates
- 8. Proton pump inhibitors
- 9. Insulin preparations
- 10. Nifedipine
- 11. Lithium
- 12. Angiotensin converting enzyme inhibitors
- 13. Spasmolytic drugs

#### SHORT ANSWERS

10 x 2 = 20 Marks

- 14. What is a prodrug? Give two examples of prodrugs.
- 15. List four atypical antipsychotic drugs
- 16. Mention two clinical uses and adverse effects of sodium valproate.
- 17. Mention the antidote for heparin and Warfarin overdose.
- 18. Mention two merits and two demerits of sublingual route of drug administration.
- 19. Mention four disease modifying antirheumatic drugs.
- 20. List four drugs for epilepsy.
- 21. Why carbidopa is co-administered with L-Dopa?
- 22. List four drugs used in bronchial asthma.
- 23. Mention two therapeutic uses and two adverse effects of corticosteroids.

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NAVODAYA COLLEGE OF PHYSIOTHERAPY

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

**Time: Three Hours** 

Max. Marks: 100 Marks

## Exercise Therapy (RS-5) O.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

- Explain in detail principles, types and uses of goniometry.
- 2. Principles of Proprioceptive neuromuscular facilitation.
- 3. Define balance. Write any two tests of balance. Treatment for balance retraining for patients with balance dysfunction.

### SHORT ESSAYS (Answer any Twelve)

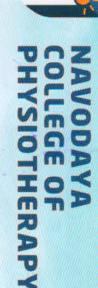
 $12 \times 5 = 60 \text{ Marks}$ 

- 4. Grades of mobilization
- 5. Types of suspension therapy
- 6. Rhythmic stabilization and Rhythmic initiation
- 7. Indications and Limitations of manual muscle testing
- 8. Physiological changes during aerobic exercises
- 9. Jacobson's techniques of relaxation
- 10. Mention different types of endurance tests.
- 11. Define limb length discrepancy and types of limb length discrepancies.
- 12. Sensory evaluation
- 13. Explain derived position from kneeling and mention advantages and disadvantage for the same.
- 14. Effects and uses of hydrotherapy
- 15. Factors contributing to a poor posture
- 16. Types of muscle work
- 17. Principles of manual muscle testing

#### SHORT ANSWERS

10 x 2 = 20 Marks

- 18. Three point gait
- 19. Kneading
- 20. Hold relax technique
- 21. Self stretching
- 22. Name two principles of aerobic exercises
- 23. Two merits of hydrotherapy
- 24. Define PNF.
- 25. Define co-ordination.
- 26. What is a motor unit?
- 27. Isometric contraction



II Year B.P.T Degree Examination - OCT-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

- Define pain. Explain the modulation of pain through pain gate control theory. Add a note on modulation of pain by IFT.
- Define Ultra Sound. Explain the production and its thermal effects in detail.
- 3. Define Faradic current. Write in detail about the Physiological and Therapeutic effects of faradic current.

### SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

- 4. Explain indications and contraindications of SWD.
- 5. Define Burns its prevention and management.
- 6. Explain the procedure for training intrinsic foot muscles with faradic foot bath.
- 7. Anodal Galvonism
- 8. Explain production of UVR.
- Explain indications and contraindications of IDC.
- Whirlpool bath
- 11. Moist heat therapy
- Define Ionization its principles and techniques of Ionization:
- 13. HVPGS and its Parameters
- 14. Explain Neuromuscular junction in detail.
- 15. Explain physiological effects of Sinusoidal currents.
- 16. Explain Physiological effects of cryotherapy.
- 17. Write a note on Transformers.

#### SHORT ANSWERS

- Testing of SWD apparatus
- Uses of PEME
- 20. Define Latent heat.
- 21. What is PUVA?
- 22. Classify pain fibers.
- 23. Mention the properties of LASER.
- 24. Accommodation
- 25. Write any two uses of Biofeedback in Physiotherapy.
- 26. Define Rebox type current.
- 27. Define electromagnetic spectrum.

10 x 2 = 20 Marks



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

Time: 3 Hours

Max. Marks: 40 Marks

Pathology - (RS4) 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

- Define and classify Shock. Describe the pathogenesis, clinical features and stages of Hypovolumic Shock.
- Classify Bone tumors. Describe the clinical features, radiological features, gross and microscopy of Osteosarcoma.

#### SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

- 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

- 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.

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5 x 2 = 10 Marks



NAVODAYA
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Time: Three 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

- Name the organisms causing meningitis. Discuss the morphology, pathogenicity and laboratory diagnosis of Streptococcus pneumonia.
- 2. Define Pyrexia of unknown origin. Enumerate the organisms causing it. Discuss the laboratory diagnosis of typhoid fever.

### SHORT ESSAYS (Answer any Four)

 $4 \times 5 = 20 \text{ Marks}$ 

- 3. Microfilaria
- 4. Prophylaxis of polio
- 5. Laboratory diagnosis of fungal infections
- 6. Mechanisms of innate immunity
- 7. Laboratory diagnosis of urinary tract infections

#### SHORT ANSWERS

- 8. Name four organism causing gastroenteritis.
- 9. Name four opportunistic infections
- 10. Name two differential staining methods.
- 11. Mantoux test
- 12. Name four sexually transmitted diseases.



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

**Time: Three Hours** 

Max. Marks: 80 Marks

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

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

#### LONG ESSAYS (Answer any Two)

 $2 \times 10 = 20 \text{ Marks}$ 

- Classify Glucocorticoids. Describe the actions, adverse effects and uses of these drugs.
- 2. Classify Anti-Hypertensive. Describe the actions, adverse effects and uses ACE inhibitors.
- Classify drugs used in Peptic ulcer. Describe the actions, adverse effects and uses of H<sub>2</sub>Receptor blockers.

#### SHORT ESSAYS (Answer any Eight)

 $8 \times 5 = 40 \text{ Marks}$ 

- 4. Metformin.
- 5. Drug Antagonism.
- 6. Classify Non-steroidal Anti-inflammatory drugs and mention the clinical uses.
- 7. Write a note on Biotransformation?
- 8. Write the adverse effects and uses of Phenytoin.
- 9. Write a note on Methotrexate?
- 10. Write a note on Digoxin?
- 11. Write a note on Methylxanthines?
- 12. Write a note on Nitrates?
- 13. Write a note on Heparin?

#### SHORT ANSWERS

10 x 2 = 20 Marks

- 14. Name two antithrombotic drugs and mention the adverse effect of each.
- 15. Adverse effects of L-dopa.
- 16. Sublingual route.
- 17. List four lipid lowering drugs.
- 18. Name one loop diuretic and mention three uses.
- 19. Write the adverse effects of Benzodiazpines?
- 20. Name two drugs used in GOUT and mention the adverse effect of any one.
- 21. Mention any two purgatives. Give their mechanism of action.
- 22. Ipratropium bromide.
- 23. Idiosyncrasy.

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NAVODAYA COLLEGE OF PHYSIOTHERAPY

**Time: Three Hours** 

Max. Marks: 100 Marks

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

- Define PNF. Explain the basic neurophysiological principles of PNF. Add a note on techniques
  of facilitation.
- Write in detail about principles and techniques of mobilization of shoulder joint. What is biomechanical basis of mobilization?
- 3. Define massage. List the various techniques in massage with therapeutic effects for each.

#### SHORT ESSAYS (Answer any Twelve)

 $12 \times 5 = 60 \text{ Marks}$ 

- 4. Define coordination. Explain uses and techniques of frenkles exercises.
- 5. What is Pranayama? Explain the principles and techniques
- 6. What are the types of balance retraining?
- 7. Explain the postural mechanism and write any two corrective exercises for scoliosis
- 8. Explain the properties of water and clinical significance of them in hydrotherapy
- 9. Describe about the components of aerobic exercise program
- 10. Define suspension therapy. Explain the principles and uses and types of suspension
- 11. What is MMT? List out the principles and merits of MMT
- 12. Classify passive movement. Explain the techniques of passive movements
- Explain principles, effects and use of free exercises. Write any four exercises for knee joint in FWB
- 14. What is PRE? List out the techniques and explain any one in detail
- 15. Describe the advantages and disadvantages of group exercises
- 16. Principles and uses of mat exercises
- 17. Define crutch gait. Write about partial weight bearing crutch gait

#### SHORT ANSWERS

10 x 2 = 20 Marks

- 18. What do you mean by Trendelenberg gait?
- 19. List out the effects of De-conditioning on the musculo skeletal system.
- 20. What is Repetition maximum?
- 21. Hyperplasia and hypertrophy
- 22. Valsalva maneuver
- 23. Karovnen's formula
- 24. Romberg sign
- 25. Concave convex role
- 26. Sherrington's law of reciprocal innervations
- 27. Mention any two derived positions of kneeling



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**Time: Three Hours** 

Max. Marks: 100 Marks

(RS-3 & RS-4) O.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

12 x 5 = 60 Marks

- Describe the methods of production heat by short wave diathermy
- Write in detail the principles of production of interferential currents
- 3. Describe the various methods of pain modulation

## SHORT ESSAYS (Answer any Twelve)

- 4. Construction and types of condensers
- 5. Physiological effects of faradic current
- 6. Therapeutic uses of wax therapy
- 7. Cathodal galvanism
- 8. Mechanical effects of ultrasound
- Methods of application of electrodes in TENS
- 10. Dangers of ultra violet radiation
- 11. Contraindications for Cryotherapy
- 12. Ionotophoresis for the treatment of hyperhydrosis
- 13. Types of infra red radiation lamps
- 14. Properties of LASER
- 15. Indications and contraindications for whirlpool bath
- 16. Physiological effects of microwave diathermy
- 17. Faradic Galvanic test

#### SHORT ANSWERS

10 x 2 = 20 Marks

- 18. Define Ohm's law
- 19. Define motor point
- 20. Mention any four absolute contraindications for neuromuscular electrical stimulation
- 21. Define phonophoresis
- 22. Define rheobase and chronaxie
- 23. Direct Piezo electric effect
- 24. Define burst TENS
- 25. Define first degree erythema with application of ultra violet radiation
- 26. Parameters of pulsed electromagnetic energy
- 27. Parameters of diphase fixe

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NAVODAYA COLLEGE OF PHYSIOTHERAPY

**Time: Three Hours** 

Max. Marks: 80 Marks

# RESEARCH METHODOLOGY & BIOSTATISTICS (RS-3 & RS-4)

Q.P. CODE: 2713

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

- Define research. Explain objectives and criteria for a good research.
- 2. Define biostatistics. Explain characteristics of biostatistics.
- Explain scales of measurement.

### SHORT ESSAYS (Answer any Eight)

8 x 5 = 40 Marks

- 4. Measures of central tendency
- 5. Criteria for good sampling
- Difference between questionnaire and schedule
- 7. Stratified sampling
- 8. Chi-square test
- 9. Skewness and kurtosis
- 10. Explain steps involved in the processing of data
- 11. Describe basic concept concerning testing of hypotheses
- 12. Analysis of variance and covariance (ANOVA&ANACOVA)
- 13. Difference between descriptive and inferential statistics.

#### SHORT ANSWERS

- 14. Define mode
- 15. Ranking scale
- 16. Coding
- 17. Distinguish between primary and secondary data
- 18. Frequency polygon
- 19. Case-control study
- 20. Define statistics
- 21. Standard deviation
- 22. Type I and Type II error
- 23. Define research design

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10 x 2 = 20 Marks

