



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

Bachelor of Physiotherapy, Second Year Semester-III

April 2023 Examination.

TIME - 3 HRS

MAX MARKS: 100

EXERCISE THERAPY

Q.P. CODE: B3060

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

LONG ESSAY (Answer any Two)

2 X 10 = 20 Marks

1. What are the indications and principles of massage, Describe in detail physiological and therapeutic uses of manipulations in massage.
2. Explain the tests of coordination. Describe the frenkles exercise program for lower limbs in co ordination
3. Define Proprioceptive neuromuscular facilitation, explain neurophysiological principles of PNF, Enumerate strengthening and stretching techniques.

SHORT ESSAY(Answer any Ten)

10X 5 = 50 Marks

4. Write the procedure for measurement of limb length
5. Describe Delorme's technique with example.
6. Discuss the indications and contraindications of hydrotherapy
7. Explain the types of suspension therapy
8. Explain the physiological response to aerobic exercise.
9. Write about the indications and various types of stretching technique.
10. Write the causes for in co ordination and what exercises should be given.
11. Write the principles and training with Walking aids
12. Write the Classification and uses of active exercises
13. What are the Indications and contraindications of massage
14. Describe circuit weight training with example
15. Define and compare jacobson's & mitchel' relaxation technique

SHORT ANSWER (Answer any Ten)

10 X 3 = 30 Marks

16. Define endurance and its types
17. Write any six determinants of resistance exercise
18. What is isometric vs isotonic exercises.
19. Define flexibility
20. Define1 Repetition maximum
21. Define Muscle tone
22. What is stretching?
23. Define contract relax.
24. Give the uses of Pulleys
25. Define V02 Max.
26. What is active vs inactive posture.
27. Define Petrissage

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**Bachelor of Physiotherapy, Second Year Semester-III,
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TIME – 2.30 Hrs.

MAX MARKS: 80

Pathology & Microbiology

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary.

Section - A

Pathology (40 marks)

QP Code : B3076

(Use Separate answer booklet for Section A & B)

LONG ESSAY

1 X 10 = 10 marks

1. Classify lung tumours. Add a note on bronchogenic carcinoma

SHORT ESSAYS (ANSWER ANY THREE)

3 X 5 = 15 marks

2. Osteoarthritis
3. Secondary Syphilis
4. Pathogenesis Disseminated intravascular coagulation
5. Define Peptic ulcer. Mention the etiology of peptic ulcer.

SHORT ANSWERS (ANSWER ANY FIVE)

5 X 3 = 15 marks

6. Add a note on Blood components
7. What is Buffy coat?
8. Types of leprosy
9. Examples of structural disorder
10. Types of shock
11. Define Gangrene and discuss the types of gangrene.

Section - B

Microbiology (40 marks)

QP Code : B3075

LONG ESSAY

1 X 10 = 10 marks

1. Draw a neat labelled diagram of bacterial cell. Describe the structure, types, functions and demonstration methods of flagella. (3+2+2+1+2)

SHORT ESSAYS (ANSWER ANY THREE)

3 X 5 = 15 marks

2. Describe the principle, holding time, uses of Hot Air Oven and add a note on the controls used
3. Describe the structure and biological functions of Immunoglobulin M
4. Describe the modes of transmission, clinical features and preventive measures of HIV infection
5. Describe the diseases caused by Candida albicans

SHORT ANSWERS (ANSWER ANY FIVE)

5 X 3 = 15 marks

6. Define sterilization and disinfectants
7. Define passive immunity with examples
8. Enumerate three autoimmune diseases
9. Enumerate the types of fungal infections
10. Name four types of Hypersensitivity
11. Enumerate three intestinal nematodes

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MAX MARKS: 80

Research Methodology and Biostatistics

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Draw neat labelled diagrams wherever necessary.

Section - A

Research Methodology (40 marks)

QP Code : B3085

(Use Separate answer booklet for Section A & B)

LONG ESSAY

1X 10 = 10 Marks

1. Enumerate various types of Reports. Explain Steps in writing a Research report.

SHORT ESSAY (Answer any Three)

3X 5 = 15 Marks

2. Explain characteristics of Good Research.
3. Explain ethical issues in Research.
4. Enumerate various types of Sample Design.
5. Explain role of Computer in Research.

SHORT ANSWER (Answer any Five)

5X 3 = 15 Marks

6. Sources of Primary data.
7. Difference between Case Control & Cohort study.
8. Applied Research.
9. Editing of data during data processing.
10. Sample Size.
11. FINER Criteria.

Section – B

Biostatistics (40 Marks)

QP Code : B3086

(Use separate answer booklet for section B)

LONG ESSAY

1X 10 = 10 Marks

1. Define variation. Mention 3 measures of variation. Calculate standard deviation for the data on age of patients 58, 62, 60, 55, 65

SHORT ESSAY (Answer any Three)

3X 5 = 15 Marks

2. Graphical presentation of data
3. Explain procedure of Simple Random Sampling
4. Measures of dispersion
5. Paired t test

SHORT ANSWER (Answer any Five)

5X 3 = 15 Marks

6. Skewness and Kurtosis
7. Stratified random sampling advantages and disadvantages
8. Interval scale of measurement
9. Types of variables.
10. Methods of data collection
11. Bar diagrams



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[Max. Marks: 80]

EXERCISE THERAPY

Q.P Code: B3310

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Define hydrotherapy and explain the properties of water. List the indications and contraindications. (2+3+5)
2. Enumerate and explain PNF treatment principles. (2+8)

SHORT ESSAY

6 x 5 = 30 Marks

3. Explain the principles of giving passive movements.
4. Describe the re-education of the patient from supine to prone position.
5. Define massage and write the benefits of effleurage. (3+2)
6. Write a note on the determinants of aerobic exercise.
7. Explain the manual muscle test for supraspinatus muscle from grade 2.
8. Explain the test for coordination in the lower limb.

SHORT NOTES

10 x 3 = 30 marks

9. Describe Delorme technique
10. List the Benefits of suspension therapy
11. Explain any one test of sensation.
12. Define balance.
13. Explain crawling.
14. Define postural tone and muscle tone.
15. List contraindications of stretching.
16. Describe Kaltenborn's grade of mobilization
17. List the Benefits of group exercise
18. List the Indications of passive movements



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Pathology & Microbiology

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Section - A

Pathology (40 marks)

QP Code : 3325

(Use Separate answer booklet for Section A & B)

LONG ESSAY

1 X 10 = 10 marks

1. Define Oedema and describe the pathogenesis of Oedema.

SHORT ESSAYS

3 X 5 = 15 marks

2. Pathology of Turners Syndrome.
3. Enumerate differences between Benign & Malignant tumours
4. Discuss pathogenesis of Vitamin D deficiency.

SHORT ANSWERS

5 X 3 = 15 marks

5. Rickets
6. Types of inflammation with examples.
7. List the causes of Vitamin B 12 deficiency
8. List 4 examples of dysplasia
9. Mention 4 causes of Diabetes Mellitus.

Section - B

Microbiology (40 marks)

QP Code : B3326

LONG ESSAY

1 X 10 = 10 marks

1. Describe the source, modes of transmission, clinical diseases, samples to be collected & diagnostic methods for Tuberculosis and add a note on its prophylaxis (1+1+4+2+1+1)

SHORT ESSAYS

3 X 5 = 15 marks

2. Describe the principle, biological mediators and clinical significance of Type 1 Hypersensitivity
3. Describe the clinical features and samples collected in infection due to *Candida albicans*
4. Describe the mechanisms of autoimmunity.

SHORT ANSWERS

5 X 3 = 15 marks

5. List three opportunistic fungi
6. Enumerate the standard precautions followed in hospital settings
7. Name any three disinfectants used in hospital
8. Define the term artificial passive immunity with examples
9. Mention the modes of transmission of HIV.



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Research Methodology and Biostatistics

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Section - A

Research Methodology (40 marks)

QP Code : B3335

(Use Separate answer booklet for Section A & B)

LONG ESSAY

1 X 10 = 10 Marks

1. Define sampling. Explain the types of sampling with example (2+8)

SHORT ESSAY

3 x 5 = 15 Marks

2. Explain the measures of central tendency
3. Define the rights of research
4. Explain the uses of computers in different phases of research

SHORT NOTES

5 x 3 = 15 marks

5. List out the criteria of good research.
6. Define ethics.
7. List out the objectives of research.
8. Explain before and after without control study design.
9. Explain randomized controlled trial.

Section – B

Biostatistics (40 Marks)

QP Code : B3336

(Use separate answer booklet for section B)

LONG ESSAY

1 X 10 = 10 Marks

1. Define statistics. Explain in detail about descriptive and inferential statistics and list the importance of statistics in physiotherapy.

SHORT ESSAY

3 x 5 = 15 Marks

2. Find the mean and variance of the given data.

6	7	10	12	13	4	8	12
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3. Explain parametric and non-Parametric tests.
4. Describe Types of Sampling and List the criteria for good sample.

SHORT NOTES

5 x 3 = 15 marks

5. Explain skewness.
6. Explain standard error
7. Explain Mode
8. Explain Ordinal and nominal scale
9. Explain Graphical Representation of data