

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

**Bachelor of Physiotherapy (CBCS), Second Year Semester-III**  
**July / August – 2019 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. Describe the principles of Manual Muscle Testing (MMT). Explain the grading of quadriceps from grade 2 onwards.
2. Explain the tests of coordination. Describe the frenkles exercise program for lower limbs in co Ordination.
3. List the types of posture. Explain the principles of postural re-education.

**SHORT ESSAY (Answer any Ten)**

**10X 5 = 50 Marks**

4. Write principle and technique of measuring ankle joint ROM.
5. Describe Delorme's technique with example.
6. Discuss the indications and contraindications of hydrotherapy.
7. Describe the PNF technique for mobility & stability.
8. Write the technique for Hand muscle strengthening.
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. Discuss the examination of impaired balance.
15. Define and comparejacobson's & mitchel' relaxation technique.

**SHORT ANSWER (Answer any Ten)**

**10 X 3 = 30 Marks**

16. Define endurance and its types.
17. Compare Tightness and contracture.
18. Define Petrissage.
19. Define flexibility.
20. Define Repetition maximum.
21. Define Muscle tone.
22. What is stretching?
23. What is bosu ball.
24. Give the uses of Pulleys.
25. Define V02 Max.
26. What is active vs inactive posture.
27. What are isometric vs isotonic exercises.

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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. Define neoplasia. Discuss the difference between benign and malignant tumors.

**SHORT ESSAY ( answer any three )**

**3 X 5 = 15 marks**

2. Coagulative Necrosis.
3. Hypothyroidism.
4. Metaplasia.
5. Acute Inflammation.

**SHORT ANSWERS ( answer any five )**

**5 X 3 = 15 marks**

6. List different types of Meningitis .
7. List clinical signs of Marasmus.
8. List THREE causes of Normocytic Normochromic Anemia .
9. List THREE causes for Neutrophilia.
10. Mention THREE complication of TB osteomyelitis
11. List THREE main types of Shock

**Section - B**

**Microbiology ( 40 marks )**

**QP Code : B3075**

*(Use Separate answer booklet for Section B)*

**LONG ESSAY**

**1 X 10 = 10 marks**

1. Define & Classify Sterilization. Draw a neat labeled diagram of the Autoclave and describe its principle, , uses , controls used ( 2+2+2+1+2+1)

**SHORT ESSAYS (answer any three)**

**3 X 5 = 15 marks**

2. Flagella : Structure and types
3. Acquired immunity: Types with examples
4. Map the lesions of *Staphylococcus aureus* on Human body
5. Map the lesions of Dermatophytes on Human body

**SHORT ANSWERS (answer any five)**

**5 X 3 = 15 marks**

6. List three complications of Plasmodium falciparum.
7. Enumerate 3 opportunistic fungi.
8. Modes of transmission of hepatitis B virus
9. List any three diseases caused by Streptococcus pyogenes
10. Name any 3 zoonotic infections.
11. Structure and functions of Immunoglobulin M.

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**TIME – 2.30 HRS.**

**MAX MARKS: 80**

**Research Methodology and Biostatistics**

*Your answers should be specific to questions asked.*

*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**

**1 X 10 = 10 Marks**

1. Define 'Research'. List the types of Research approaches. Discuss about the problems faced by researchers in India.

(1+3+6)

**SHORT ESSAY (Answer any Three)**

**3 X 5 = 15 Marks**

2. Classify study designs used in research.
3. List the principles of health care practice with example.
4. List the characteristics of Normal Distribution with help of a diagram.
5. Differentiate between questionnaire and schedule.

**SHORT ANSWER (Answer any Five)**

**5 X 3 = 15 Marks**

6. Define 'Binary System' with example.
7. List the sources for 'Secondary Data'.
8. SMART criteria.
9. List the criteria for good research.
10. List the characteristics of good sample.
11. Define correlation. List types of correlation.

**Section – B**

**Biostatistics (40 Marks)**

**QP Code : B3086**

*(Use separate answer booklet for section B)*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Mobility scores of two groups of patients who have undergone 2 types of physiotherapy are given below. Compare the variability  
Physiotherapy A: 20, 22,24,20,24  
Physiotherapy B: 20, 28,30,28,34

**SHORT ESSAY (Answer any Three)**

**3 X 5 = 15 Marks**

2. Methods of data presentation
3. Chi-square test
4. Role of statistics in Physiotherapy research
5. Arithmetic mean an ideal average 'Justify'

**SHORT ANSWER (Answer any Five)**

**5 X 3 = 15 Marks**

6. Cluster sampling
7. Paired t test
8. Skewed distribution
9. Pie diagrams
10. Sources of health data
11. Null hypothesis.

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**Section - A**

**Research Methodology ( 40 marks )**

**QP Code : P108A**

*(Use Separate answer booklet for Section A & B)*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Define 'Research'. List the types of Research approaches. Discuss about the problems faced by researchers in India. (1+3+6)

**SHORT ESSAY (Answer any Three)**

**3 X 5 = 15 Marks**

2. Classify study designs used in research.
3. List the principles of health care practice with example.
4. List the characteristics of Normal Distribution with help of a diagram.
5. Differentiate between questionnaire and schedule.

**SHORT ANSWER (Answer any Five)**

**5 X 3 = 15 Marks**

6. Define 'Binary System' with example.
7. List the sources for 'Secondary Data'.
8. SMART criteria.
9. List the criteria for good research.
10. List the characteristics of good sample.
11. Define correlation. List types of correlation.

**Section – B**

**Biostatistics (40 Marks)**

**QP Code : P108B**

*(Use separate answer booklet for section B)*

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Mobility scores of two groups of patients who have undergone 2 types of physiotherapy are given below. Compare the variability  
Physiotherapy A: 20, 22, 24, 20, 24  
Physiotherapy B: 20, 28, 30, 28, 34

**SHORT ESSAY (Answer any Three)**

**3 X 5 = 15 Marks**

2. Methods of data presentation
3. Chi-square test
4. Role of statistics in Physiotherapy research
5. Arithmetic mean an ideal average 'Justify'

**SHORT ANSWER (Answer any Five)**

**5 X 3 = 15 Marks**

6. Cluster sampling
7. Paired t test
8. Skewed distribution
9. Pie diagrams
10. Sources of health data
11. Null hypothesis.

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