

ATAL BIHARI VAJPAYEE MEDICAL UNIVERSITY, UTTAR PRADESH
BACHELOR OF PHYSIOTHERAPY (B.P.T)
THIRD SEMESTER EXAMINATION - MARCH 2026

Time: 3 Hours

Max Marks: 80 Marks

EXERCISE THERAPY - I
PAPER CODE : 2633110110

General instructions:

- All questions are compulsory.
- Explain with diagrams where required.
- Any attempt to use unfair means will result in disqualification.
- Please write the correct paper code.

LONG ESSAY QUESTIONS

2 X 20 = 40 Marks

- Q.1** Explain in detail the Principles, Aims, Indications, Limitations and Techniques of MMT. How to perform MMT for knee extensor muscles in human body?
- Q.2** Discuss the Manual and Mechanical resistance exercise, Isometric exercise, Dynamic exercise, Isokinetic exercise, Open-Chain and Closed-Chain exercise.

SHORT NOTE QUESTIONS

2 X 10 = 20 Marks

- Q.3** Define and explain the center of gravity, line of gravity, base of support, axis and planes.
- Q.4** Discuss the mechanical and neurophysiological properties of connective tissue in relation to stretching.

SHORT ANSWER QUESTIONS

5 X 4 = 20 Marks

- Q.5** What is stretching? Mention the types of stretching.
- Q.6** Explain effects of exercise on the cardiovascular.
- Q.7** What are the types of active movements?
- Q.8** Differentiate between fundamental positions & derived Positions.
- Q.9** What are the types of relaxation. Mention about Jacobson's relaxation.
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ELECTROTHERAPY - I
PAPER CODE : 2633110111

General instructions:

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LONG ESSAY QUESTIONS

2 X 20 = 40 Marks

- Q.1** Explain in detail the principles, indications, contraindications, and techniques of Faradic current and Galvanic current.
- Q.2** Discuss in detail Wax Therapy including method of application, physiological and therapeutic effects, dosages and precautions.

SHORT NOTE QUESTIONS

2 X 10 = 20 Marks

- Q.3** Describe the IRR including types of IR generators, Production of IR, Physiological & Therapeutic effects of IRR,
- Q.4** Discuss the principles, construction, working, and therapeutic applications of whirlpool baths.

SHORT ANSWER QUESTIONS

5 X 4 = 20 Marks

- Q.5** What is the importance of tDCS?
- Q.6** Describe the PUVA apparatus.
- Q.7** Explain the application method and indications of Iontophoresis.
- Q.8** What is Action Potential and Resting membrane potential?
- Q.9** Describe the Properties of magnets and Electromagnetic induction.
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BIOMECHANICS AND KINESIOLOGY II

PAPER CODE : 2633110112

General instructions:

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LONG ESSAY QUESTIONS

2 X 20 = 40 Marks

- Q.1** Discuss the normal mechanics of posture and gait in various planes and axis.
- Q.2** Explain the structure and function of the hip complex, including its integrated function in movement and stability.

SHORT NOTE QUESTIONS

2 X 10 = 20 Marks

- Q.3** Discuss the Structure and function of the elbow joint.
- Q.4** Explain the biomechanics of Pes Planus and Pes Cavus.

SHORT ANSWER QUESTIONS

5 X 4 = 20 Marks

- Q.5** Describe the general effects of aging on vertebral column.
- Q.6** Describe the component of shoulder complex.
- Q.7** Explain the differences between grips and pinches.
- Q.8** What is the importance of patellofemoral joint?
- Q.9** What is the structure and function of the plantar arches?
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MICROBIOLOGY
PAPER CODE : 2633110113

General instructions:

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- Explain with diagrams where required.
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- Please write the correct paper code.

LONG ESSAY QUESTIONS

2 X 20 = 40 Marks

- Q.1** Discuss the classification, morphology, pathogenicity, and laboratory diagnosis of Staphylococcus, Streptococcus, Pneumococcus, Neisseria bacteria.
- Q.2** Explain the pathogenesis, clinical features, diagnosis, and prevention of Polio virus.

SHORT NOTE QUESTIONS

2 X 10 = 20 Marks

- Q.3** Discuss the pathogenesis and laboratory diagnosis of Parasitology.
- Q.4** Discuss Malaria and its microbial causes, clinical features, and treatment.

SHORT ANSWER QUESTIONS

5 X 4 = 20 Marks

- Q.5** Differentiate between Culture and sensitivity tests.
- Q.6** What is disinfection?
- Q.7** What do you understand by Immune Response? Explain briefly.
- Q.8** List five Immunodeficiency Diseases with their causative agents.
- Q.9** What is Hospital acquired infections?
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