



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

(MMUST)

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021 / 2022 ACADEMIC YEAR**

SECOND TRIMESTER EXAMINATIONS

**FOR THE DEGREE
OF**

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

COURSE CODE: HCM 437

COURSE TITLE: BASICS OF PHYSIOTHERAPY

DATE: FRIDAY 22ND APRIL 2022

TIME: 2:00-5:00 PM

INSTRUCTIONS TO CANDIDATES

Answer all Sections

Sec A: Multiple Choice Questions (MCQ) (20 Marks)

Sec B: Short Answer Questions (SAQ) (40 Marks)

Sec C: Long Answer Questions (LAQ) (40 Marks)

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating.

This Paper Consists of 4 Printed Pages. Please Turn Over.

SECTION A: MULTIPLE CHOICE QUESTIONS

(20 marks)

- All are types of ROM exercises except?
 - Super ROM
 - Active ROM
 - Active Assisted ROM
 - Passive ROM
- Ultrasound can be used as a treatment tool to treat what type of conditions?
 - Osteomyelitis
 - Soft Tissue Injuries
 - Open fractures
 - Pleurisy
- The interventions to improve impaired mobility include all of the following except?
 - Range of motion exercises
 - Joint mobilization exercises
 - Proprioception exercises
 - Stretching exercises
- Continuous passive motion apparatus is used to _____
 - Increase range of motion
 - Maintain range of motion
 - Strengthen knee muscles
 - Improve coordination
- Which of the following is not a type of physiotherapy?
 - Neurology
 - Cardiorespiratory
 - Ophthalmology
 - Orthopedics
- Using high-frequency sound waves to treat deep tissue injuries is also known as _____?
 - TENS
 - Ultrasound
 - Laser therapy
 - Shortwave Diathermy
- The form of physiotherapy that takes place in water is called _____
 - Thermotherapy
 - Biotherapy
 - Magnotherapy
 - Hydrotherapy
- Soft Tissue Manipulation increases which of the following?
 - Cortisol
 - Dopamine
 - Norepinephrine
 - Stress
- The choice of modality to treat painful joints of hands of a rheumatoid arthritic patient is:
 - Hot packs
 - Infrared ray
 - Microwave diathermy
 - Paraffin wax bath

10. Which of the following is the first symptom of osteoarthritis?
- A. Pain
 - B. Difficulty in weight-bearing activities
 - C. Swelling
 - D. Deformity
11. You want to prescribe physiotherapy for a patient who complains of radiculopathy to the Lt lower limb, you note he has a slapping foot gait. You perform a straight leg test which is indicated for which sign?
- A. Nerve root compression
 - B. Assess range
 - C. Assess muscle strength
 - D. Assess ligament strength
12. In the above scenario which electrotherapy modality will you expect the physiotherapist to use to reduce the neurological pain?
- A. Exercises
 - B. TENS
 - C. Warm bath
 - D. Laser
13. Elbow crutches are indicated for the persons with which type of presentation
- A. Weak upper extremities and weak trunk
 - B. Weak upper extremities and strong trunk
 - C. Strong upper extremities and weak trunk
 - D. Strong upper extremities and strong trunk
14. Basic activities of daily living do not involve which activities?
- A. Showering
 - B. Meditation
 - C. Oral hygiene
 - D. Toilet hygiene
15. A therapist provides preoperative training for a patient scheduled for thoracic surgery. Which activity would be most appropriate to deep vein thrombosis post-surgery?
- A. Deep breathing exercises
 - B. Incentive spirometry
 - C. Coughing
 - D. Ankle pumps
16. Which assistive device can you not prescribe to a weak patient due to the energy cost to use it?
- A. Cane
 - B. Crutches
 - C. Wheeled walker
 - D. Standard walker
17. Which of the following is not a function of thermal therapy?
- A. Reduce arthritis
 - B. Decreases blood supply
 - C. Relaxation of muscle
 - D. Relief of pain

18. In manual muscle testing grades, the grade of the full available range of motion, against gravity and moderate manual resistance is
- A. 3
 - B. 2
 - C. 4
 - D. 5
19. Making a patient lay on the abdomen with two pillows under the hip heals in drainage of the bronchial secretion from which lobes?
- A. Lateral segment of the middle lobe
 - B. Medial segment of the middle lobe
 - C. Superior segment of the lower lobe
 - D. Inferior segment of the lower lobe
20. Persons with unilateral hip problems lean to the affected side and you prescribe a walking stick. On which side should he use the stick?
- A. Affected side
 - B. Sound side
 - C. Either side
 - D. A single stick is not useful

SECTION B: SHORT ANSWER QUESTIONS

(40 MARKS)

- 1) You need to prescribe an orthotic appliance for your patient, what are your different options? 5 Marks
- 2) What are the goals of physiotherapy in geriatric care? 5 Marks
- 3) Differentiate the various types of cerebral palsy 5 Marks
- 4) During your assessment of a patient with a peroneal nerve injury you prescribe physiotherapy, which symptoms may be part of your findings in relation to the prescription? 5 Marks
- 5) Outline the application of PRICE therapy in soft tissue injury 5 Marks
- 6) Deliberate on the therapeutic effects of cryotherapy 5 Marks
- 7) Discuss the contraindications of exercises 5 Marks
- 8) Outline the different pathological gait patterns that will require rehabilitation intervention 5 Marks

SECTION C: LONG ANSWER QUESTIONS

(40 Marks)

1. **A 58-year-old man is admitted into the Intensive Care Unit with a differential diagnosis of right lobe pneumonia and respiratory distress. The client is intubated and ventilated. The laboratory values pH 7.38; PaCO₂ 60; PaO₂ 55; HCO₃ 30.**
 - a) What respiratory state is the patient exhibiting based on the laboratory values? (2 marks)
 - b) On the examination of the client and based on other tests and investigations discuss the findings that would constitute the diagnosis of right lower lobe pneumonia and consequently inform your decision to request for chest physiotherapy. (8 marks)
 - c) The patient stabilizes as extubated. Discuss the interventions that you would expect the physiotherapist to deploy in improving the client's ventilation. (10 marks)
2. **A 78-year-old man who lived with his wife had a cerebral vascular accident (CVA) resulting in left hemiplegia three weeks ago**
 - a) Reflect on the various types of functional assessment that the physiotherapist would assess in relation to the client (10 marks)
 - b) Validate the choices of exercises based on the functional assessment identified in the above (a) question. (10 marks)