



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

**UNIVERSITY EXAMINATIONS  
2023/2024 ACADEMIC YEAR**

**THIRD YEAR, FIRST TRIMESTER, EXAMINATION**

**FOR  
THE  
DEGREE IN BSC.SCIENCE IN PHYSIOTHERAPY**

**COURSE CODE: BSP 417**

**COURSE TITLE: ASSISTIVE DEVICE AND ORTHOTIC IN  
PHYSIOTHERAPY**

**DATE: Monday 5<sup>th</sup> December 2023**

**TIME: 8:00 - 10:00 Am**

**INSTRUCTIONS TO CANDIDATES**

Answer All Questions

Section A: Multiple Choice Questions (MCQ)

20 Marks.

Section B: Short Answer Questions (SAQ)

40 Marks.

Section C: Long Answer Question (LAQ)

40 Marks

**TIME: 2 Hours**

MMUST observes ZERO tolerance to examination cheating

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

## MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. Which of the following is not an example of an ambulatory device?
  - A. Parallel bars.
  - B. Walking frame.
  - C. Tilt board.
  - D. Cane.
2. Parallel bars are used for all of the following except?
  - A. Coordination exercises.
  - B. General conditioning.
  - C. Gait training.
  - D. Postural drainage.
3. Which type of a cane is suitable for a hemiplegic patient.
  - A. Standard cane.
  - B. Tripod cane.
  - C. Quad cane.
  - D. Gutter cane.
4. Axillary crutches support upto what percentage of body weight?
  - A. 40%
  - B. 50%
  - C. 80%
  - D. 10%
5. Which of the following is not an indication of a CAM walker boot
  - A. Ankle sprain
  - B. Fracture proximal tibia fibula.
  - C. Metatarsal stress fracture.
  - D. Fracture distal tibia fibula.
7. A single sugar tong splint is indicated for,
  - A. Lateral epicondylitis.
  - B. Medial epicondylitis.
  - C. Fracture radio- ulnar.
  - D. Shoulder dislocation.
8. Which elbow brace is hinged and can take JROM measurements.
  - A. Elbow roll offcast.
  - B. Articulated elbow brace.
  - C. Posterior elbow splint.
  - D. Cuff and collar sling.
9. A knitted wrist brace is indicated for the following except,
  - A. Discomfort.
  - B. Weakness.
  - C. Minor injuries of the wrist.
  - D. Reduced anatomical snuff box.
10. Which assistive devices would you use on a patient with carpal tunnel syndrome.
  - A. Cock up
  - B. Easy wrist.
  - C. Combi wrist
  - D. Roylan dorsal wrist splint.

11. Under which of the following circumstances would you use a dynamic splint.
- A. Joint stiffness.
  - B. Rheumatoid arthritis.
  - C. Muscle wasting.
  - D. Pain.
12. Which of the following is suitable for chronic hip pain
- A. Hip abduction and adduction orthosis.
  - B. Standing, walking and sitting orthosis.
  - C. Sacroiliac belt.
  - D. Hernia belt.
13. Which splint is indicated for both leg calves perthes disease and congenital dislocation of the hip?
- A. Scottish Rite Orthoses.
  - B. Frejka splint.
  - C. Parapodium.
  - D. Toronto orthosis.
14. General classification of spinal orthosis in terms of rigidity includes all of the following except,
- A. Flexible.
  - B. Semi rigid.
  - C. Rigid.
  - D. Adjustable.
15. Philadelphia is a type of,
- A. Cervical thoracic orthosis.
  - B. Cervical orthosis.
  - C. Cervical thoracolumbar orthosis.
  - D. Sacral orthosis.
16. What would you use on a patient with a suspected anterior cervical fusion.
- A. Malibu collar
  - B. Hard collar.
  - C. Soft collar.
  - D. Miami J collar.
17. Which of the following is a flexion control brace.
- A. Jewett Hyperextension brace.
  - B. Taylor brace.
  - C. Knight TLSO.
  - B. Custom moulded body jacket.
18. Mobility aids are used to improve the following except,
- A. Ambulation.
  - B. Strength.
  - C. Balance.
  - D. Circulation.
19. What is the recommended period of use of a cervical collar following a C7 fracture.
- A. 6 weeks.
  - B. 7 weeks.
  - C. 4 weeks.
  - D. 8 weeks.

20. Which of the following is not an indication of an arm sling.
- A. STI.
  - B. Shoulder dislocation.
  - C. Subluxation.
  - D. Shoulder fracture.

**SHORT ANSWER QUESTIONS.**

1. Discuss the indications of ambulatory assistive devices (5 marks)
2. Outline the factors to consider while selecting ambulatory devices for a patient.(5 marks)
3. Patients ability to use crutches depends on (5 marks).
4. What are the indications for hip orthotic devices ( 5 marks)
5. Discuss different types of spinal orthosis (5 marks)
6. What are the components of a hip knee ankle foot orthosis.(5 marks)
7. Discuss the indications of a vice shoulder brace.( 5 marks)
8. What are some of the long term effects of using assistive devices (5 marks)

**LONG ANSWER QUESTIONS.**

1. Discuss the various types of orthosis that can be used in the rehabilitation of a hemiplegic patient and state how they can be used.(20 marks)
2. Cole a 28 year old man got involved in an RTA and sustained a T4 burst fracture with complete spinal cord transection.
  - a) What are some of the assistive devices he might need during his hospital and post hospital period.(12marks)
  - b) What are some of the factors that would make you prescribe a wheelchair for your patient? (8 marks)