



(University of Choice)

**MASINDEMULIROUNIVERSITY OF
SCIENCE AND TECHNOLOGY**

(MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS

2022/2023 ACADEMIC YEAR

SECOND YEAR SECOND TRIMESTER EXAMINATIONS

(MAIN EXAMINATION)

FOR THE DEGREE

OF

BACHELOR OF SCIENCE IN PHYSIOTHERAPY

COURSE CODE: BSP 417

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

DATE: TUESDAY 11TH APRIL 2023 TIME: 2:00-4:00 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: 2 Hours

MMUST observes ZERO tolerance to examination cheating

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

6. In cases of neuromuscular injury, which method is used to rehabilitate?
- A. TENS.
 - B. Heat.
 - C. Acupuncture.
 - D. Massage.
7. Which of the following would not likely be needed for a child with physical impairments to learn in a regular classroom?
- A. Automatic page-turner.
 - B. Clock that tells out time louder when touched.
 - C. Book holders.
 - D. Adapted pencil grips.
8. Which of the following is not true about assistive devices?
- A. They help people with disabilities live independently.
 - B. Can help improve the quality of life for PWDS.
 - C. It's any tool that helps a person carry out normal ADLs.
 - D. One needs a prescription in order to use them.
9. Your grandmother has had hip replacement surgery. She is doing well and ambulating using a walker and will be going home tomorrow. The bathroom has a tub-shower combo. Which of the following devices would you most likely recommend?
- A. Clock with big numbers.
 - B. Light that flashes when the phone rings.
 - C. Tub transfer bench, grab bars, hand-held shower sprayers.
 - D. Motorized scooter.
10. How should a patient be oriented while doing a passive range of motion exercises?
- A. Lying flat on the back.
 - B. Sitting up.
 - C. Standing.
 - D. Lying on sides.
11. Mobility aids are used to improve the following except?

A. Ambulation.

B. Strength.

C. Balance and coordination.

D. Circulation.

12. Which of the following is not an example of an ambulatory device?

A. Wheelchair.

B. Corset.

C. Canes.

D. Parallel bars.

13. Which type of walking frame is best suited for children?

A. Standard walking frame.

B. Reciprocal walking frame.

C. Rollator walking frame.

D. Gutter frame.

14. Which type of crutch supports 80% of body weight?

A. Gutter.

B. Axillary.

C. Elbow.

15. What type of wheelchair would you prescribe for a paraplegic patient with a brachial plexus injury on one arm?

A. Paraplegic wheelchair.

B. Quadriplegic wheelchair.

C. Commode wheelchair.

D. Motor wheelchair.

16. A patient with a C7 burst fracture will use a cervical collar for how long?

A. 6 weeks.

B. 8 weeks.

C. 2 Weeks.

D. 1 month.

17. Which of the following ambulatory devices carries 80% of body weight?

- A. Wheelchair.
- B. Gutter crutch.
- C. Axillary crutch.
- D. Elbow crutch.

18. Which of the following is not an indication of an arm sling?

- A. Soft tissue injury.
- B. Shoulder dislocation.
- C. Shoulder fracture.
- D. Subluxation.

19. Which of the following would you prescribe for a patient with wrist drop?

- A. Thumb spiker.
- B. Cock-up splint.
- C. Basic wrist open.
- D. Combi wrist support.

20. The SWASH orthosis is indicated for:

- A. Dislocated hip.
- B. Fracture pelvis.
- C. Fixed hip contracture.
- D. Cerebral palsy.

SHORT ANSWER QUESTIONS. (40 MARKS)

1. Discuss 3 classifications of upper limb orthotic devices. (6 marks)
2. Outline the functions of ambulatory devices. (8 marks)
3. What are some of the factors that would make you prescribe a wheelchair for your patient? (8 marks)
4. State 5 indications of elbow orthosis. (5 marks)
5. A sacroiliac belt is used to restrict the movement of the sacroiliac joint. What are its indications? (5 marks)
6. While prescribing spinal orthosis for your patients, what factors do you consider? (8 marks)

MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. Rehabilitative devices are used for cases involving;
 - A. trauma, palsy, geriatric population, sports injuries, post-surgical cases.
 - B. Trauma, palsy, amputation, cardiac arrest.
 - C. Geriatric population, cancer patients, post-surgery, amputation.
 - D. Trauma, fever, illiterate people, post-surgery.
2. After a simple fracture, what is the recommended period of rest?
 - A. 1 week.
 - B. 2 weeks.
 - C months.
 - D. 2 months.
3. Why should wheelchairs be avoided by young people?
 - A. Damages the neural system of the body.
 - B. Causes inflammation of the GI tract.
 - C. Causes low blood pressure.
 - D. Damages bones and skeletal muscles.
4. Match the following devices with their categories;

| DEVICE | TYPE |
|--------------------|-----------------------------|
| Prosthetic leg(PL) | Assistive device(AD) |
| Calipers (C) | Rehabilitative device. (RD) |
| Knee brace(KB) | Substitutive device(SD) |

- A. PL-SD, C-RD, KB-AD.
 - B. PL-AD, C-SD, KB-RD.
 - C. PL-SD, C-AD, KB-RD.
 - D. PL-AD, C-RD, KB-SD.
5. What can be done to a patient with a foot drop?
 - A. Wear a brace in form of socks or shoes.
 - B. Surgical amputation.
 - C. Releasing tendon.
 - D. Use calipers.

LONG ANSWER QUESTIONS. (40 MARKS)

1. Discuss the different types of spinal orthoses. (10 marks)
2. Discuss the vice universal shoulder brace stating its indications, contra-indications, and its effects on long-term use. (10 marks)
3. Christine a 24-year-old patient was involved in an RTA and sustained a mid-shaft tibia-fibular fracture. She is on day 3 post-ORIF and is due for discharge in the next 3 days. She will definitely need crutches for ambulation. Discuss in detail the 5 types of crutch gait that you would teach her before she goes home. (20 marks)