



(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

SECOND YEAR, THIRD TRIMESTER EXAMINATION

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN PHYSIOTHERAPY
MAIN PAPER**

COURSE CODE: BSP 234

COURSE TITLE: CLINICAL METHODS II

DATE: THURSDAY 18TH AUGUST 2022

TIME: 8:00 - 11:00 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: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This paper has 5 pages

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ) 20 MARKS

1. When auscultating the lungs of a client with asthma, the nurse hears high pitched, shrill breath sounds on expiration. Which of these nursing interventions is appropriate based on the assessment data?
 - a) Chest physiotherapy
 - b) Postural drainage
 - c) A nebulizer treatment
 - d) Increase the oxygen
2. A client states, " I never feel as though I'm getting enough air" The client has a 20-year history of COPD and is hospitalized with pneumonia. His respiratory rate is 40 breaths per minute and shallow. Bilateral coarse crackles in the upper lung lobes are auscultated by the nurse. The client has a dry cough and is restless. Which of these nursing diagnoses would the nurse choose to plan care for the client?
 - a) Impaired gas exchange
 - b) Insufficient airway clearance
 - c) Ineffective breathing pattern
 - d) Risk for aspiration
3. A 70-year-old man has a stroke which causes him to have the following findings on neurological exam: right/left confusion and difficulty subtracting serial 7's. Where is the stroke and what other findings might he have on examination?
 - a) Dominant parietal lobe: agraphia.
 - b) Nondominant parietal lobe: constructional apraxia.
 - c) Dominant frontal lobe: anomia.
 - d) Nondominant frontal lobe: impaired working memory.
 - e) Dominant temporal lobe: prosopagnosia.
4. A patient has the sudden onset of inability to talk. He understands what is said to him but can only say "if only" and "oh no." Where is the lesion?
 - a) Left superior temporal gyrus.
 - b) Left parietal lobe - angular gyrus of the parietal lobe.
 - c) Left inferior frontal gyrus.
 - d) Both the superior temporal gyrus and inferior frontal gyrus on the left.

5. When conducting an examination, it is best practice to include tests and measures that reflect all domains of the International Classification of Functioning (ICF). Which of the following tools is designed to measure the ICF classification of Body Structure/Function in infants?
- Alberta Infant Motor Scale (AIMS)
 - Peabody Developmental Motor Scale – 2 (PDMS-2)
 - Pediatric Quality of Life Inventory
 - Reflex testing
6. Which of the following categories of pediatric outcome tools would be the BEST option to compare to typically developing children in determining eligibility for PT services?
- Criterion-referenced:
 - Criterion-referenced: Predictive
 - Norm-referenced: Discriminative
 - Norm-referenced: Predictive:
7. You have been asked to evaluate a 3-year old's gross motor skills who was recently diagnosed with developmental delay. Which of the following gross motor skills would you expect to observe a child this age to perform?
- Ascending stairs without upper extremity support, alternating feet:
 - Galloping
 - Running:
 - A and B
 - A and C
8. An individual with a spinal cord injury has intact anal sensation and the following ASIA motor findings: C5: Right 5/5, Left 5/5, C6: Right 5/5, Left 5/5, C7: Right 4/5, Left 4/5, C8: Right 3/5, Left 3/5, T1: Right 1/5, Left 1/5, T2: Right 1/5, Left 1/5, L2: Right 1/5, Left 1/5, L3-S1: Right 0/5, Left 0/5. Based upon the findings, the zone of partial preservation is
- Right and left C7, C8, T1, and L2
 - The zone of partial preservation does not apply to this case
 - Right and left C8, T1, and L2
 - Right and left T1 and L2
9. According to the ASIA scale, for an individual to be classified with a C7 SCI, the person must exhibit which of the following MMT patterns?

- a) 2/5 triceps (C7) and 5/5 extensor carpi radialis (C6)
- b) 3/5 triceps (C7) and 5/5 extensor carpi radialis (C6)
- c) 3/5 triceps (C7) and 3/5 flexor digitorum profundus (C8)
- d) 5/5 triceps (C7) and 3/5 flexor digitorum profundus (C8)

10. What is the definition of oscillopsia?

- a) Dizziness provoked by full field repetitive or moving visual environments or visual patterns (such as watching a train pass or walking on a patterned carpet), usually occurs with central vestibular dysfunction.
- b) Illusion of movement of the self or environment (i.e., Spinning) due to sudden imbalance of neural activity.
- c) Feeling faint or like passing out, usually related to momentarily decreased blood flow to the brain.
- d) Subjective illusion of visual motion, object bouncing in visual field (like a bad video recording), usually caused by bilateral vestibular loss.

11. A patient presents with delayed saccadic movement. What is the most likely cause of this observation?

- a) Central Vestibular Dysfunction
- b) BPPV
- c) Peripheral Vestibular Dysfunction
- d) Visual Acuity Deficit

12. What does geotropic nystagmus lasting less than 60 seconds indicate?

- a) Anterior Canal Dysfunction
- b) Horizontal Canal Cupulolithiasis
- c) Horizontal Canal Canalithiasis
- d) Posterior Canal Dysfunction

13. A client presents with right buttock, groin and posterior thigh pain following a recent fall on her right buttock. She reports that 3 months ago she was successfully treated with lumbar spine mobilization for right lumbosacral, buttock and leg pain to the medial ankle. What should the physiotherapist do initially?

- a) Recommend acupuncture treatments.
- b) Refer client to her family physician.

- c) Assess the right sacroiliac joint.
- d) Apply mechanical traction

14. What are the biomechanical consequences of tightness in the tensor fascia Lata muscle in gait?

- a) An increase in medial rotation of the hip and ipsilateral inferior movement of the pelvis
- b) Reduced lateral distractive forces on the patella, with internal rotation of the tibia
- c) An increase in hip adduction and external rotation on the weight-bearing side
- d) An inability to close pack the knee at heel strike

15. A patient presents with left moderate genu valgum, ipsilateral hip drop and bilateral foot pronation. The left knee joint is moderately swollen and thickened'. The pain is described as 'achy', and a grating noise occurs when climbing stairs. Which one of the following would be used to describe the pathology of this presentation?

- a) Bucket-handle, radial meniscal tears
- b) Rheumatoid arthritis, elevated sedimentation rate
- c) Bleeding into the joint and muscle
- d) Cartilage fibrillation, joint laxity, and osteophytes

15. A patient presents with a positive hip flexion/adduction quadrant test. Combined with this finding, which one of the following would lead the therapist to suspect a tear of the acetabular labrum?

- a) Pain on palpation iliopsoas
- b) Capsular pattern hip
- c) Morning stiffness
- d) Subjective history of clicking and catching

16. A 55-year-old client reports left anterolateral neck pain extending into the arm and forearm when he is cross-country skiing. Upper quadrant scanning exam and biomechanical assessment fail to reproduce his symptoms or relevant signs. What should the physiotherapist do?

- a) Have the client jog on the treadmill until symptoms reoccur.
- b) Ask client to simulate the arm activity in cross-country skiing.
- c) Teach client upper extremity pre-activity warm-up exercises.
- d) Refer to the family physician for further investigation

17. A client reports a fall onto the outstretched arm with glenohumeral compression in abduction, extension, and external rotation. There is an intact long head of the biceps. The client reports vague deep pain, apprehension and painful clicking on movement, and a "dead arm" feeling.

What is the most likely cause of these manifestations?

- a) Partial tear of the supraspinatus muscle
- b) Severe impingement below the coracoacromial arch
- c) Type 1 SLAP lesion
- d) Multidirectional instability

A 28-year-old man is admitted to the Intensive Care Unit with a differential diagnosis of right lower lobe pneumonia and respiratory distress. The client is intubated and ventilated. The lab values are pH 7.38; PaCO₂ 60; PaO₂ 55; HCO₃ 30.

18. These laboratory values are most likely to be associated with which of the following conditions?

- a) Respiratory acidosis with metabolic compensation.
- b) Respiratory alkalosis without metabolic compensation.
- c) Metabolic acidosis with respiratory compensation.
- d) Metabolic alkalosis without respiratory compensation.

19. On examination of the client, which of the following findings would be most consistent with the diagnosis of right lower lobe (RLL) pneumonia?

- a) Hyperresonance on percussion of the RLL.
- b) Decreased tactile fremitus over the RLL
- c) Increased chest wall mobility on right side.
- d) Bronchial breath sounds over the RLL.

20. After the client has been extubated, what treatment would most likely improve the client's ventilation?

- a) Breathing exercises and positioning.
- b) Mechanical vibrations.
- c) Resisted expiratory muscle training.

d) Humidification

SECTION B: SHORT ANSWER QUESTIONS (SAQ)

40 MARKS

ANSWER ALL QUESTIONS.

1. Describe the steps for ASIA classification for spinal cord injury (5 marks)
2. Describe your intervention plan for a person demonstrating freezing of gait (5 marks)
3. What are the seating principles to consider when prescribing a wheelchair to a patient? (5 marks)
4. Describe upper limb tension test for median nerve (5 marks)
5. Outline the components in cervical joint mobility assessment (5 marks)
6. Ouma complains of low back pain with anterior pelvic tilt. You suspect the hip flexors are tight. Describe test to rule in tightness of the hip flexors
7. Describe exercises with their criteria for progression for stabilizing quadratus lumborum and oblique abdominals (5 marks)
8. State 5 contraindications for postural drainage (5 marks)

SECTION C: LONG ANSWER QUESTIONS (LAQS)

40 MARKS

ANSWER ALL QUESTIONS EACH ONE IS 20 MARKS

3. Paul Monari is a 68-year-old male recently discharged from the hospital (post-operative day 1.83-year-old gentleman was diagnosed with Parkinson's disease 10 years ago. Two months ago, he started experiencing difficulties with transfers particularly sit to stand and getting out of bed. Wife is finding it difficult to cope and they are both worried they may need to move into residential care. He can walk independently indoors with a festinating gait and slouched posture with freezing noted at doorways but requires wheelchair outside. He rarely leaves the house since there is no ramped access and wife cannot manage wheelchair.
 - a) What problems can be identified for this gentleman? (4 marks)
 - b) What treatment priorities would you establish? (4 marks)
 - c) Why does he not experience difficulties when climbing stairs? (4 marks)

- d) What outcome measures may be appropriate to evaluate treatment intervention? (4 marks)
- e) Are there any immediate actions you can take to address this family's current situation? (4 marks)
2. 32-year-old male accountant noticed onset of left lower cervical and interscapular pain at the end of the day. On waking the next morning pain had spread to the posterior aspect of the arm and forearm as far as the middle three finger. Medical history includes High cholesterol, overweight, sedentary lifestyle Minor neck complaints that usually settled within 2 or 3 days. Aggravating factors: Sitting for more than 10 minutes increases neck pain. More than 30 minutes increases arm pain Looking up or to the left increases neck and arm pain Lifting briefcase with left hand aggravates neck and interscapular pain. Easing factors: Neck pain relieved by lying supine Arm pain relieved by lying supine with left arm above head. On observation he sits with a forward head posture, cervical ROM Extension reproduces pain in the neck and left arm at 30 degrees. Increased tone and tenderness noted in the left paraspinal muscles (cervical and upper thoracic) and left scalene muscles. Generalized stiffness noted with PA pressures in the mid and upper thoracic regions
- a) What is the most likely source of the patient's arm pain? (1 mark)
- b) What is the most likely source of the patient's neck and interscapular pain? (1 mark)
- c) What are other possible symptoms sources? (5 marks)
- d) What would an appropriate initial physiotherapy treatment involve? (5 marks)
- e) What would a longer-term management programme include? (5 marks)
- f) What is the likely prognosis? (2 marks)
- g) Is referral to other health professionals warranted? (1 mark)