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MASINDEMULIROUNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

SECOND YEAR TRIMESTER TWO EXAMINATIONS

FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN PHYSIOTHERAPY

COURSE CODE: BSP 226

COURSE TITLE: ORTHOPAEDICS AND TRAUMATOLOGY

DATE: 31/7/2018 **TIME:** 9:00AM 12:00PM

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

OK

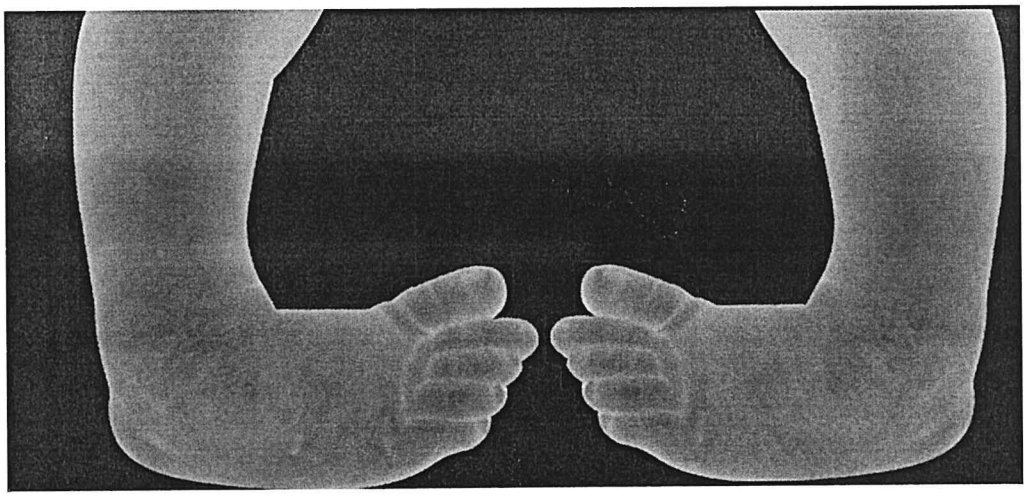
MMUST observes ZERO tolerance to examination cheating

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

moderated 8/7/2018

Section A: Multiple Choice Questions (MCQ) **20 Marks.**

1. Traumatology denotes all **apart** from;
   A. The study of wounds and injuries caused by accidents or violence to a person
   B. Surgical therapy and repair of the damage.
   C. Physical activity
   D. Often a sub-specialty to orthopedic surgery
2. Major types of trauma include all apart from;
   A. Emotional Abuse
   B. War Related Trauma. ...
   C. Medical Trauma. ...
   D. Traumatic Loss
3. Branches of traumatology include
   A. Medical and psychological traumatology.
   B. Future physical therapy
   C. Threat to one's sense of security and survival
   D. The size of the wound in length
4. Factors in the assessment of wounds:
   A. The nature of the wound, whether it is a laceration, abrasion, bruise or burn
   B. The history of the wound in length, width and depth
   C. The temperature of the overall area of tissue damage caused by the impact of a mechanical force
   D. The compatibility to chemical agents in, for example, fires or exposure to caustic substances
5. Which of the following statements about head injuries is/are false?
   A. Majority of deaths from auto accidents are due to head injuries.
   B. Head injury alone often produces shock.
   C. Rapid and complete neurologic examination is part of the initial evaluation of trauma in patients.
   D. Optimizing arterial oxygenation is part of initial therapy.
6. Which clinical sign is not consistent in a newborn with talipes equinovarus?
   A. Adduction of the foot
   B. Heel inversion
   C. Plantar flexion of the foot
   D. Foot eversion
7. Immediately after delivery, a midwife observes the feet of a newborn seen in the image below. What is true about this disorder? Select all that apply.



   A. It is also known as talipes equinovarus

B. It is associated with pes cavus
C. The cause remains unknown
D. The treatment is amputation of the feet

8.
Clubfoot (talipes equinovarus) is a general term used to describe a range of unusual positions of the foot. Each of the following characteristics may be present, and each may vary from mild to severe:
Which of the following statement is incorrect

A. The foot (especially the heel) is usually smaller than normal.
B. The foot may point upward.
C. The front of the foot may be rotated toward the other foot.
D. The foot may turn in (inversion), and in extreme cases the bottom of the foot can point up.

9. Which is the commonest site of spinal injuries?
A. Thoraco-lumbar segment
B. Lower cervical spine
C. Upper cervical spine
D. Sacral spine

10. All of the following are true about spinal injuries **except**
A. About 80% of spinal injuries result in neurological deficit
B. Thoracolumbar spine injury may result in paraplegia
C. Cervical spine injury may result in Quadriplegia
D. Any lesion to the spinal cord above T5 causes hypotension

11. Most common chronic arthritis which degenerates joints is
A. Osteoporosis
B. Arthritis
C. Cleft palate
D. Osteoarthritis

12. Complete paralysis of all 4 extremities and trunk is known as:
A. Tetraplegia
B. Paraplegia
C. Hemiplegia
D. Quadriplegia

13. The ability to walk along a straight line is most often impaired with:
A. Cerebellar dysfunction
B. Parietal lobe damage
C. Temporal lobe damage
D. Ocular motor disturbances

14. Hemiplegia, hemianesthesia & hemianopia develop together with disease in the:
A. Spinal cord
B. Internal capsule
C. Thalamus
D. Brain

15. Which of the following statements is not correct regarding the prognosis of traumatic brain injury
A. duration of post-traumatic amnesia is a good indicator
B. one or both non-reactive pupillary light reflexes is associated with a poorer outcome
C. combined severe musculo-skeletal injuries predict worse outcomes
D. findings on CT scan of the brain are more sensitive compared to MRI as good predictor of outcome following severe traumatic brain injury

16. What initial action should one take for a paraplegic patient suddenly presenting with increased spasticity?

A. Intensify rehabilitation
B. Rapidly increase the dose of anti-spastic medication
C. Diminish the ambient temperature of the patient's room
D. Measure the alkaline phosphatase

17. Paralysis is a
A. Nervous disorder
B. Functional disorder
C. Vascular disorder
D. Psychological disorder

18. A complete loss of function by one or more muscle groups is called
A. Functional disorder
B. Epilepsy
C. Vascular disorder
D. Paralysis

19. Abnormal and excessive discharge of nerve impulses in a traumatized brain is called
A. Paralysis
B. Epilepsy
C. Stroke
D. Nervous disorder

20. Burns are classified by degrees from first to third. Which of these describes a third-degree burn?
A. Burned area is larger than 5 inches across
B. Burned area is on the face
C. Burned area covers 10% of the body
D. Burn extends through all the skin layers and tissue

21. Which of the following statements about head injuries is/are false?

Section B: Short Answer Questions (SAQ's) **40 Marks.**

Q1.Explain the following concepts as used in orthopaedics and traumatology
a) Orthopedics (5Marks)
b) Disability (5 Marks)

Q2.Describe guidelines for essential trauma care (10 Marks)

Q3 Describe guidelines for psychological trauma care (10 Marks)

Q4.Explain the role of rehabilitation in orthopaedics (10 Marks)

Section C: Long Answer Questions (SAQ) **40 Marks.**

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Q1. Discuss Gustilo Classification as used in management of traumatic conditions **(20 Marks)**

Q2. Discuss Congenital Talipes Equinovarus as a congenital disorder **(20 Marks)**

BSP 226 ORTHOPAEDICS AND TRAUMATOLOGY I

Purpose of the Course
This course is intended to provide the knowledge about Orthopedic conditions the therapist would encounter in their practice.

Expected Learning Outcomes
The student will be able to demonstrate an understanding of orthopaedic conditions causing disability.
List the aetiology, clinical features and methods of investigations and management.
Be familiar with the radiological and imaging techniques in Orthopeadics.
Be familiar with methods of handling fractures and dislocations.

Course Content:
Introduction
Introduction to orthopaedics: Clinical examination in an orthopaedic patient. Common investigative procedures. Radiological and Imaging techniques in orthopaedics. Inflammation and repair, soft tissue healing.

Traumatology
Fracture; definition, types, signs and symptoms; Fracture healing; Complications of fractures. Conservative and surgical approaches. Principles of management – reduction (open/closed, immobilization etc). Subluxation / dislocation – definition, signs and symptoms, management (conservative and operative).

Fractures and Dislocations of Upper Limb
Fractures of Upper Limb – causes, clinical features, mechanism of injury, complications, conservative and surgical management of the following fractures: Fractures of clavicle and scapula. Fractures of greater tuberosity and neck of humerus. Fracture of shaft of humerus. Supracondylar fracture of humerus. Fractures of capitulum, radial head, olecranon, coronoid, and epicondyles. Side swipe injury of elbow. Both bone fractures of ulna and radius. Fracture of forearm – montggia, galaezzi fracture – dislocation. Chauffer's fracture. Colle's fracture. Smith's fracture. Scaphoid fracture. Fracture of the metacarpals. Bennett's fracture. Fracture of the phalanges (Proximal and middle).

Dislocations of Upper Limb Anterior dislocation of shoulder – mechanism of injury, clinical features, complications, conservative management (Kocher's and Hippocrates maneuver), surgical management (Putti plat, bankart's) etc: Recurrent dislocation of shoulder. Posterior dislocation of shoulder – mechanism of injury, clinical features and management. Posterior dislocation of elbow-mechanism of injury, clinical feature, complications and management.

Fracture of Spine
Fracture of Cervical Spine – Mechanism of injury, clinical feature, complications (quadriplegia); Management – immobilization (collar, cast, brace, traction); Management for stabilization, management of complication (bladder and bowel, quadriplegia). Clay Shoveller's fracture, Hangman's fracture. Fracture of odontoid. Fracture of atlas.
Fracture of Thoracic and Lumbar regions – Mechanism of injury, clinical features, management – conservative and surgical of common fractures around thoracic and lumbar regions, Fracture of coccyx. Fracture of Rib Cage – Mechanism of injury, clinical features, management for fracture Ribs, Fracture of Sternum.

Fracture and Dislocation of Lower Limbs
Fracture of Pelvis and Lower Limb – causes, clinical features, management of injury, complications, conservative and surgical management of the following fractures:
Fracture of Pelvis, Fracture neck of femur – classification, clinical features, complications, management – conservative and surgical. Fractures of trchanters. Fracture of shaft of femur – clinical features, mechanism of injury, complications, management – conservative and surgical. Supracondylar fracture of femur, Fracture of condyles of femur, Fracture of patella. Fracture of tibial condyles. Both tibia and fibula. Dupuytren's fracture. Maisonneuve's fracture. Pott's fracture – mechanism of injury, management. Biomalleolar fracture, Trimalleolar fracture, Fracture of mechanism of injury, clinical features, complications, management of the following dislocations of lower limb. Anterior location of hip. Posterior dislocation of hip. Central dislocation of hip. Dislocation of patella, Recurrent dislocation of patella.

Soft Tissue Injuries
Define such terms as sprains, strains, contusion, tendinitis, rupture, tenosynovitis, tendinitis, bursitis. Mechanism of injury of each, clinical features, managements – conservative and surgical of the following soft tissue injuries: Meniscal injuries of knee. Cruciate injuries of knee. Medial and latera collateral injuries of knee. Lateral ligament of ankle. Wrist sprains. Strains – quadriceps, hamstrings, calf, biceps, triceps etc. Contusion – quadriceps, gluteal, calf, deltoid etc.
Tendon ruptures – Achilles, rotator cuff muscles, biceps pectoralis etc

Hand injuries – Mechanism of injury, clinical features, and management of the following: Crush injuries. Flexor and extensor injuries. Burn injuries of hand. Amputations – Definition, levels of amputation of lower and upper limbs, indications, complications. Traumatic Spinal Cord Injuries – clinical features, complications, medical and surgical management of paraplegia and quadriplegia. Deformities – Clinical features, complications, medical and surgical management of the following congenital and Acquired deformities: Congenital Deformities – CTEV. CDH, Torticollis, Scoliosis. Flat foot. Vertical talus. Hand anomalies – syndactyly and polydactyl. Arthrogryposis multiplex congenital (amyoplasis congenital). Limb deficiencies – Amelia and Phocomelia. Klippel feil syndrome. Osteogenesis imperfect (fragile ossium). Cervical rib. Acquired Deformities – Acquired torticollis, Scoliosis, Kyphosis, Lordosis, Genu varum. Genu valgum, Genu recurvatum, Coxa vara, Hallux rigidus, Hallux valgus. Hammer toe. Metatarsalgia.

Disease of Bones and Joints – Causes, clinical features, complications, management – medical and surgical of the following: Infective conditions: Osteomyelitis (Acute / chronic). Brodie's abscess. TB spine and major joints like shoulder, hip, ankle, elbow etc. Arthritic conditions: Plygenic arthritis, septic arthritis, syphilitic infection of joints. Bone Tumours: Classification, clinical features, management, - medical and surgical of the following tumours. Multiple myeloma. Metastatic tumours. Perthes disease, Slipped Capital Femoral Epophysical and A vascular Necrosis. Metabolic Bond diseases: Rickets diseases: Rickets, Osteomalacia, Osteopenia, Osteoporosis.

Mode of Delivery
Lectures
Tutorial
Theatre Observation

Instructional Material

Field visits
Audiovisuals equipment
Flip charts
Chalkboards
Handouts

Course Assessment
Written Examination 70%
Continuous Examination 30%

Core Reading Materials
Outline of Fracture – John Crawford Adams
Appley's Orthopaedics