**KENYA MEDICAL TRAINING COLLEGE – NYAMIRA**

**END OF BLOCK FOUR (4) EXAMINATION**

**MARCH 2012 KRCHN CLASS (PRE-SERVICE)**

**ORTHOPAEDIC NURSING EXAMINATION**

DATE:1/4/2015 TIME:8.30 – 11.30pm

**INSTRUCTIONS**

1. Enter your examination number and question number on each page used.
2. ALL questions are compulsory.
3. For part 1 (MCQs), write the answer in the spaces provided on the answer booklet.
4. For Part 2 (SHORT ANSWER QUESTIONS), answer the questions following each other.
5. For Part 3 (LONG ANSWER QUESTIONS), answer to each question MUST start on a separate page.
6. Omission of and or wrong numbering of a question or part of the question will result in 10% deduction of the marks scored from the relevant part.
7. Do NOT use a pencil.
8. Mobile phones are NOT allowed in the examination hall.

For Examiner:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MCQS** | **SAQS** | **LAQS 1** | **LAQS 2** | **TOTAL** |
|  |  |  |  |  |

**PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) ORTHOPAEDIC NURSING – 10 MARKS**

Q.1. A male neonate who was delivered vaginally at term one hour ago has a deformity of the right foot. On physical examination, planter flexion of the ankle, inversion of the subcalar joint, and medial sublaxation of the tolacalcaneal and calneocuboidal joints are noted. The position of the foot cannot be passively corrected. Which of the following disorders is most likely diagnosis:

1. Calcaneovalgus.
2. Congenitalvalgus.
3. Metatarsus adductus.
4. Tarsal planus.

Q.2. When rheumatoid arthritis affects several joints at the same time, it is referred to as:

1. Autoimmune.
2. Infective arthritis.
3. Polyarthritis.
4. Symmetrical arthritis.

Q.3. What is the mode of action for non-steroidal anti-inflammatory drugs (NSAID) and corticosteroids in the treatment of rheumatoid arthritis?

1. They have mild anti-inflammatory properties and analgesic effect.
2. They block or reduce the production of destructive cytokines and enzymes from the cells of the rheumatoid synovium.
3. They produce good relief and are applicable at any stage of the disease.
4. They block pain receptors in the brain hence relief pain and slows down the inflammatory process and preserves articular cartilage in an affected joint.

Q.4. The fracture which is not well reduced with its fragments not perfectly aligned leads to:

1. Osteomalacia.
2. Poor anatomical bone alignment.
3. Deformity.
4. Retarded epiphyseal growth.

Q.5. Genu valgum (knock kneel):

1. Is the disorder that is due to endocrine disturbances.
2. Is any disturbance of the growing epiphyseal cartilage.
3. Is a crushing fracture involving the epiphyseal growth blade.
4. Is the consequence of compression fractures of the lateral condyle of the tibia and the cubitus valgus.

Q.6. The overall major cause of congenital dislocation of the hip is:

1. Ligament relaxing hormone (relaxin).
2. Genetically determined joint laxity.
3. Ligamentous laxity.
4. Hormonal joint laxity.

**PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) ORTHOPAEDIC NURSING – 10 MARKS**

Q.7. Which of the following are types of immobilization methods?

1. Skin traction, skeletal traction.
2. Skin traction, Steinmann pins.
3. Krishna wire, skeletal traction.
4. Fixed skeletal traction, bucks traction and Steinmann’s pins.

Q.8. Which substance is secreted by osteoblasts, which when deposited into the area of a fracture results in the formation of callus:

1. Osteoid.
2. Plasma.
3. Collagen.
4. Fibroblast.

Q.9. A 72 year old man comes to your clinic for follow up examination eight weeks after he underwent total arthroplasty on the right hip. The patient’s rehabilitation had been progressing fairly well until approximately 5 days ago when worsening pains developed in the hips. The patient says the pains are aggravated by walking and persist during sleeping hours even after he takes tablets DF118 or acetaminophen. Infection in the prosthetic joint is suspected. Which of the following is the mostly likely causative organism?

1. Pneumococcus.
2. Escherichia coli (E-coli).
3. Group A beta-haemolytic streptococcus.
4. Staphylococcus.

Q.10. Chondrosarcoma is a malignant tumour derived from cartilage cells. If it develops upon the surface of a bone, it is called:

1. Central chondrosarcoma.
2. Peripheral chondrosarcoma.
3. Chondrosarcoma of bone.
4. Endothelial sarcoma of bone.

**PART TWO: SHORT ANSWER QUESTIONS – ORTHOPAEDIC NURSING – 20 MARKS**

Q.1. Osteosarcoma (osteogenic sarcoma) is predominantly a tumour of childhood and adolescents, and if it occurs in later life, it is often a complication of Paget’s disease (Osteitis deformans). Briefly explain the pathology of osteosarcoma. 2 marks

Q.2. (a) State four (4) purposes of plaster of Paris in patients with orthopaedic problems.2 marks

(b) Mary Ochwago, a form two student, fractured her ulna bone following a fall

during rainy season. The bone did not unite well and so it is out of its normal anatomical alignment. State three (3) main causes of bone deformities. 6 marks

Q.3. Mukami who is fifteen years, had a fracture of femur as they were playing along the road.

1. Draw a well labelled diagram (posterior view) of the femur. 4 marks
2. Name, giving examples, the two (2) types of bones. 2 marks
3. List the four (4) functions of bones. 1 mark
4. Explain the stages of development of a long bone. 4 marks

**PART THREE: LONG ANSWER QUESTIONS ORTHOPAEDIC NURSING – 20 MARKS**

Q.1. Peterson, 70 years old, accidentally fall down in his house while he was going to sit on a chair. He now complains of pain on the right thigh and unable to walk even with support or assistance from his grandson. On examination, while in the hospital clinic, he had a complete closed fracture of femur. This was confirmed by radiological investigation.

1. Name three (3) main problems associated with fractures of the shaft of the

long bone. 1 ½ mark

1. Describe the five (5) stages of the healing process of a fractured bone. 5 marks
2. Explain any three (3) methods of treatment of fracture sustained by Peterson. 3 marks
3. State two (2) complications of fractures. 1 mark

Q.2. Mary has been brought to your ward (female surgical) after being diagnosed as

having gangrenous toes. She is diabetic with uncontrolled sugars. Her random

blood sugar at that time was 16mmol/L. She also complains of blurred vision and generalized body numbness. She has been admitted for transmpetatarsal amputation.

1. (i) Name any other two types of amputation. 1 mark

(ii) Give two (2) indications of amputation. 1 mark

1. (i) Describe five (5) specific areas of pre-operative preparations that will be

carried out for Mary. 5 marks

(ii) List any four (4) complications of amputation. 2 marks

1. Define the following terms:
2. Flagilitus Ossium. ½ mark
3. Differentiate between arthrodesis and arthoplasty. ½ mark