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**KENYA MEDICAL TRAINING COLLEGE**

**DEPARTMENT: ORTHOPAEDICS AND TRAUMA MEDICINE**

**CERTIFICATE IN ORTHOPAEDIC PLASTER TECHNOLOGY**

**SPECIAL EXAMINATION**

**PAPER:** Orthopedics

**DURATION:** 2 Hours

**TIME:** 9 a.m. – 12 Noon

**DATE:** 27 SEPTEMBER, 2019

**INSTRUCTIONS**

1. Write your examination number on answer book/sheet provided
2. Section one: MCQs – choose single best response
3. Section two: mark T(True) or F(False) for each response
4. Section three: Short structured questions – **Answer all**
5. Section four: Long Essay questions – **Choose one**
6. Do not cheat
7. Use legible handwriting

**SECTION ONE: MCQS (30 MARKS)**

**1. Talipes equinovarus is**

1. Equinus, Inversion, abduction
2. Equinus,Inversion,adduction
3. Equinus,eversion,abduction
4. Equinus, eversion, abduction.

**2. Which movement at shoulder gets restricted when supraspinatus torn?**

* 1. Flexion
  2. Adduction
  3. Abduction
  4. Rotation only \

**3. Tuberculous Arthritis in advanced cases leads to:**

1. Bony ankylosis
2. Fibrous ankylosis
3. Loose joints
4. Charcots disease

**4. Arthritis of tertiary syphilis mostly involves?**

1. Shoulder joint
2. Elbow joint
3. Knee joint
4. Hip joint

**5. Tennis elbow is:**

* 1. Olecranon bursitis
  2. Pain over the medial epicondyle
  3. Pain over the lateral epicondyle
  4. Myositis ossificans

**6. Trigger finger is**

* 1. A feature of carpal tunnel syndrome
  2. Injury of fingers while operating a gun
  3. Stenosis tenovaginitis of flexor tendon or affected finger
  4. Any of the above

**7. Cervical spondylosis**

* + 1. Most frequently results from an incidence of acute trauma
    2. Causes compression of nerve roots to produce an upper motor neuron lesion in the lower limbs
    3. Produces pain and Parasthesia over the lateral aspect of the forearm and thumb when affecting the 6th cervical nerve
    4. Most frequently affects the upper cervical vertebrate

**8. Earliest radiological sign of the osteoarthritis is**

* 1. Narrowing of joint space
  2. Osteophyte formation
  3. Cystic lesion in cancellous bone
  4. Sclerosis in subchondral bone

**9. The earliest manifestation of Alkaptonuria is**

* 1. Ankylosis of lumbodorsal spine
  2. Ochronotic arthritis
  3. Prostatic calculi
  4. Pigmentation of tympanic membrane

**10. Swan neck deformity is a feature of**

* 1. Syphilitic arthritis
  2. Gouty arthritis
  3. Rheumatoid arthritis
  4. Osteo arthritis

**11. Terminal inter phalangeal joints of hands are commonly involved in**

* 1. Psoriatic athropathy
  2. Rheumatoid arthritis
  3. Still’s disease
  4. Ankylosing spondylitis

**12. Charcot’s joints have all of the following characteristics except**

* 1. Copious effusion in the joint
  2. Painful limitation of joint movements
  3. Hypermobility of joint
  4. Osteophyte

**13. Pseudogout has crystals of**

* 1. Sodium pyrophosphate
  2. Monosodium urate
  3. Calcium pyrophosphate
  4. Sodium urate

**14 .Congenital dislocation of hip is usually due to**

* 1. Short femur neck
  2. Small femur head
  3. Displacement of capital epiphysis
  4. Large acetabulum

**15. The most common arthritis that affects the wrist is**

* 1. Osteoarthritis
  2. Tuberculosis arthritis
  3. Rheumatoid arthritis
  4. Gout

**16. Periosteal reaction is not common in**

* 1. Syphilis
  2. Gout
  3. Osteomyelitis
  4. Tuberculous dactylitis

**17. Erosive arthritis is not noted in**

* 1. Amyloidosis
  2. Hyperparathyroidism
  3. Psoriasis
  4. Sickle- cell disorder

**18. Joint least affected by Neuropathy**

* 1. Shoulder
  2. Hip
  3. Wrist
  4. Elbow

**19. Haemarthrosis with prolonged bleeding time is seen in**

* 1. Haemophilia
  2. Christmas disease
  3. Von Willebrand’s disease
  4. All of the above

**20. Ankylosing spondylitis, the joint least commonly involved is**

* 1. Elbow
  2. Sacroiliac
  3. Ankle
  4. Spinal

**21. All are true about gouty arthritis except**

* 1. Arthritis is manifested after long attack of hyperuricemia
  2. There is good correlation between level of uric acid and severity of gouty arthritis
  3. Synovial analysis is diagnostic
  4. Allopurinol is treatment of choice in acute gout

**22. All of the following are well known features of Rheumatoid arthritis except**

* 1. Bilateral hip arthritis
  2. Erosion of distal interphalangeal joints
  3. Pleural effusion
  4. Hypocomplementemia

**23. Which of the following structures prevent by perextension of hip?**

* 1. Bio femoral ligament
  2. Ischiofemoral ligament
  3. Pubofemoral ligament
  4. Ouboischial ligament

**24. Which of the following is not characterized by bony lesions?**

* 1. Gout
  2. Psoriasis
  3. SEF
  4. Rh Arthritis

**25. The most common cause of Neuropathic joints is**

* 1. Leprosy
  2. Diabetes
  3. Rheumatoid arthritis
  4. Syphilis

**26 .All of the following are well known features of Rheumatoid arthritis except**

* 1. Bilateral hip arthritis
  2. Erosion of distal interphalangeal joints
  3. Pleural effusion
  4. Hypocomplementemia

**27. Tertiary syphilitic arthritis most frequently involves**

* 1. Spine
  2. Hip
  3. Ankle
  4. Knee

**28. One of the following is to be considered as differential diagnosis for foreign body in plain X-ray of knee joint:**

* 1. Abscess
  2. Calcified bursa
  3. Patella
  4. Chondromatosis

**29. In a gouty arthritis, the characteristics X-ray findings includes;**

* 1. Osteoporosis
  2. Erosion of joint
  3. Soft tissue calcification
  4. Narrowing of joint space

**30. Hyperextension of PIP joints and hyperflexion of DIP joint is known as:**

* 1. Diabetes
  2. Syphilis
  3. Leprosy
  4. Rheumatoid

**SECTION TWO: TRUE/FALSE QUESTIONS (30 MARKS)**

**1. The most commonly involved joint in pseudo gout**

1. Knee
2. Great toe
3. Hip
4. Elbow
5. Vertebra

**2. Clinical features of T.B spine include**

1. Loss of lordosis
2. Night sweats
3. Weight gain
4. Evening rise of temperature
5. Decreased appetite

**3. An 18 year old boy presented in OPD with left mono articular knee pain. Possible diagnosis is**

1. Gout
2. Osteoarthritis
3. Raters disease
4. Gonococcal arthritis
5. Pseudo arthritis

4. **In monoplegia,**

1. Half of the body is paralyzed.
2. Lower extremities are paralyzed
3. Half of lower extremity is paralyzed
4. Upper and lower extremities are paralyzed
5. The whole body is paralyzed.

5. **Leg-Calve-Perthes disease is commonly seen in the age group**

* 1. 1-3 years
  2. 3-10 years
  3. 10-20 years
  4. 20 -30 years
  5. 40 years and above

**6. Commonest benign tumor of the bone is:**

* 1. Osteoma
  2. Osteochondroma
  3. Osteoid osteoma
  4. Chondroma
  5. Osteosarcoma

**SECTION THREE: SHORT ANSWER QUESTIONS (20 MARKS)**

1. (a) Define a compartment **(1mark)**

(b)Name the four compartments found in the leg  **(4 marks)**

|  |
| --- |
| * Anterior compartment   + muscular     - tibialis anterior [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10079/tibialis-anterior-l5)     - extensor hallucis longus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10081/extensor-hallucis-longus-l5)     - extensor digitorum longus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10080/extensor-digitorum-longus-l5)     - peroneus tertius [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10082/peroneus-tertius)   + neurovascular     - deep peroneal nerve     - anterior tibial vessels * Lateral compartment   + muscular     - peroneus longus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10083/peroneus-longus-s1)     - peroneus brevis [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10084/peroneus-brevis-s1)   + neurovascular     - superficial peroneal nerve * Superficial posterior compartment   + muscular     - gastrocnemius [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10085/gastrocnemius-s1)     - plantaris [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10087/plantaris-s1)     - soleus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10086/soleus-s1)   + neurovascular     - sural nerve * Deep posterior compartment   + muscular     - tibialis posterior [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10089/tibialis-posterior-l5)     - flexor hallucis longus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10091/flexor-hallucis-longus-fhl)     - flexor digitorum longus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10090/flexor-digitorum-longus-s2)     - popliteus [https://img.orthobullets.com/images/topic.png](https://www.orthobullets.com/anatomy/10088/popliteus-l5)   + neurovascular     - tibial nerve     - posterior tibial vessels |

|  |  |
| --- | --- |
|  |  |

(c)List five indicators of compartment syndrome **(5marks)**

(d)Name 5 complications of compartment syndrome (**10marks)**

As swelling increases and muscle loses its blood supply, cells eventually die and muscle necrosis occurs. Complications include:

* muscle scarring, contracture and loss of function of the limb;
* infection;
* amputation;
* permanent nerve damage; and/or
* rhabdomyolysis (muscle breakdown) and kidney damage.

Complications due to chronic or exercise induced compartment syndrome are rare but may include any of the above, especially if the person requires surgery to alleviate the chronic condition.

**SECTION FOUR:** **LONG ESSAY QUESTIONS (20 MARKS)**

1. **Discuss rickets under the following headings:**
2. Definition
3. Causes
4. Clinical presentation
5. Management
6. Complications

2. **Discuss CTEV under the following:**

1. Definition
2. Causes
3. Clinical presentation
4. Management
5. Complications.