**KMTC/QP-08/EPS**

**KENYA MEDICAL TRAINING COLLEGE**

**DEPARTMENT: ORTHOPAEDICS AND TRAUMA MEDICINE**

**CERTIFICATE IN ORTHOPAEDICS AND TRAUMA MEDICINE**

**Y1 SEMESTER 2 CAT**

**PAPER: CASTING AND SPLINTING TECHNIQUES**

**DURATION: 2 HOURS**

**INSTRUCTIONS**

1. Write your examination number on answer book/sheet provided
2. Section one: MCQs – choose single best response
3. Section two: answer **all** questions
4. Do not **cheat**
5. Use **legible** handwriting

**SECTION ONE: MULTIPLE CHOICE QUESTIONS**

1. Long arm POSTERIOR back slab begins at the mid of the arm and extends to the?
2. Base of the metarphalingeals joints
3. Base of the wrist joint
4. Mid part of the fingers
5. Mid-point of the forearm

2. Among the following factors, which one affects setting time of plaster of Paris casts.

1. Colour of the plaster.
2. Length of the cast.
3. Alignment of the bone fragments.

D. Impurities.

3. One of the following is the expected outcome of cast application that the ortho-trauma officer evaluates is

1. Skin irritation at the cast edge
2. Decreased capillary refill
3. Paleness of the digits
4. Slight edema, limitation of range of motion.

4. During application of plaster casts, which of the following is a consideration

* 1. Color of the plaster of Paris
  2. Stockinette and wool must be always be used
  3. Covering bonny prominences which soft ban
  4. Circular cast is advisable in posterior slab where no swelling of the limb is expected

5.c most important factor of bone healing

1. Casts
2. Splinting
3. Immobilization
4. Analgesics

6. A lady presents with swelling of hands with shiny skin. She had a history of fracture of radius and kept on P.O.P cast for 4 weeks. The most likely diagnosis is?

A. Compartmental syndrome

B. Myositis ossificans progressiva

C. Reflex sympathetic syndrome

D. Rupture of extensor pollicis longus tendon

7. Which of the following is not an advantage of fiber glass cast?

1. Fiber glass cast will not expand to accommodate swelling
2. Fiber glass cast comes in many colours
3. Its good radiolucent
4. Its light in weight compared to other casting materials

8. Thumb spica casts are used for management of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fracture

1. Carpal bone
2. Scaphoid
3. Lunate
4. Tarsal

9. Which of the following splints can be used to manage radial palsy

1. Buddy tapping
2. Cock up splint
3. Dorsal extension-block splint
4. Knuckle bender splint

10. During removal of POP cats, the following can cause injury to the skin except?

1. Dragging the blade up and down motions
2. Blood stained casts
3. Due to edema
4. Resin based materials
5. During physical examination of a patient before casting the following clinical methods are observed except
   1. Mode of injury
   2. Radiographic investigations
   3. History
   4. Immobilization
6. The Dennis Browne splint is used in the treatment of:
   1. Torticollis
   2. Clubfeet
   3. Springel’s deformity
   4. Brachial palsy.

13. Among the following is an exclusion of features of arterial obstruction in a casted limb:

1. Paresthesia of the limb.
2. Pallor of the skin.
3. Ability to flex and extend the limb.
4. Severe pain at the fracture site.

14. In which situation would a cast be the treatment of choice on the day of injury

1. A patient with a closed, non-displaced fracture
2. A patient with a displaced fracture requiring reduction
3. A patient with an open fracture
4. A patient with a compound fracture requiring surgery

15. Which of the following is the best rationale for applying P.O.P cast diagonally?

1. To have a firm cast.
2. To prevent cast breakages.
3. To avoid tourniqueting the limb
4. To increase the strength of the cast.

16. Appropriate technique for an ortho-trauma technician to implement for the client who is being casted is to?

1. Apply ice on top of the cast
2. Monitor clinical changes at the finger/toe tips
3. Maintain the extremity below the level of the heart
4. Handle the wet cast with finger tips

17. When teaching cast care, the ortho-trauma officer instructs the patient to

1. Report changes in the sensation or mobility to the injured area
2. Blow dry the wet cast on hot setting
3. Use only soft objects to slide down the cast for scratching
4. Cut away edges of the cast if the skin becomes irritated

18. The following are injuries for which a posterior or stirrup splint would likely NOT be the best treatment of choice

1. Ankle sprains
2. Fracture distal phalanges 5th  toe
3. Swollen fractures of the lateral malleolus
4. Tendon Achille’s tear

19. Properties of POP include all of the following except?

1. It soaks rapidly
2. Its creamy
3. Sets very fast
4. It produces bubbles when immersed in water

20. Duration of the cast is determined by

1. Age of the patient
2. Thickness of the cast
3. Type of gypsona
4. The temperature of water used

**SECTION TWO: SHORT ESSAY QUESTIONS.**

1. State five (5) characteristics of plaster of Paris. [ 5 marks]
2. State five qualities of dynacats [ 5marks]
3. Outline five DONT’S given to the patients after application of POP casts [5 marks]
4. State in point form what is recorded in trauma patients’ card [ 5 marks]