****

**KENYA MEDICAL TRAINING COLLEGE**

**DEPARTMENT: ORTHOPAEDICS AND TRAUMA MEDICINE**

 **CERTIFICATE IN ORTHOPAEDIC PLASTER TECHNOLOGY**

**FINAL QUALIFYING EXAMINATION**

**PAPER:** TRACTION

**DURATION:** 3 Hours

**TIME:** 9 a.m. – 12 Noon

**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: answer all questions.
5. Section four: answer one question.
6. Do not cheat
7. Use legible handwriting

**SECTION ONE: MCQ [30 MARKS]**

1. **Traction splints are applied to which bone of the body**
2. Calcaneus
3. Fibula
4. Tibia
5. Talus
6. **At least how many people are required to apply traction properly?**
7. Two
8. Three
9. Five
10. One
11. **Before traction is applied, one should check for circulation on the injured leg. Where should a person feel for pulse?**
12. On top of the thigh
13. On the knee cap
14. On the inner part of the ankle joint
15. Top of shin
16. **The following are pathologies commonly treated with traction. Which one is not?**
17. Nerve impeachment
18. Disc herniation
19. Muscle spasms
20. Muscle tear
21. **Which one of the following is not a cause of nerve pressure?**
22. Ligamentous strain
23. Bulging disc material
24. Bone spurs
25. Narrowed intervertebral foramen
26. **Unrelieved pressure on a nerve cannot cause one of the following**
27. Pain
28. Numbness
29. Motor weakness
30. Nerve union
31. **Which one of the following is not an indication for cervical traction?**
32. Ligamentous sprain
33. Compression fracture
34. Herniated disc
35. Spondylolisthesis
36. **Complete escape of annulus fibrosis on the vertebral column is called**
37. Protrusion
38. Sequestration
39. Prolapse
40. Extrusion
41. **One of the following is not a sign of compartmental syndrome in traction**
42. Paralysis
43. Painlessness
44. Pulselessness
45. Paresthesia
46. **Perkin’s skeletal traction is indicated for?**
47. Fracture distal femur.
48. Fracture upper femur
49. Supracondylar fracture femur
50. Fracture neck femur
51. **Which one of the following is not an indication for skin traction?**
52. Fracture femur in children.
53. Fracture femur in elderly.
54. Fractures of vertebral column.
55. Hip joint dislocation.
56. **The approximated weight for an adult human head is?**
57. 8-12 lbs
58. 5-7 lbs
59. 20-25 lbs
60. 15-20lbs
61. **The following are the roles of physiotherapy in traction. Which one is not?**
62. Patient injection
63. Patient ambulation
64. Patient exercises
65. Patient comfort
66. **The following are indications of fracture union in traction. Which one is not?**
67. Ability to bear weight
68. Loss of abnormal limb movements
69. Calcification in the X-ray radiographs
70. Painful exercises
71. **One of the following is not a method of inserting Steinmann pin.**
72. Chiseling
73. Ball-pen hammer
74. Manual drill
75. Electronic drill
76. **What is the role of an orthopaedic plaster technician after the application of skeletal traction to the patient?**
77. Discharge the patient home
78. Give antibiotics
79. Train the patient on how to use the crutches
80. Check whether the patient’s traction is in situ
81. **Thomas splint is used for the following except:**
82. Splinting fractures
83. Carrying patients
84. Elevating the fractured limb
85. Stabilizing spinal fractures
86. **One of the following is not a purpose of Russel’s traction technique**
87. Fracture neck femur
88. Fracture-dislocation of the hip joint
89. Control bleeding of fracture femur
90. Fracture proximal third femur.
91. **Below are traction techniques used in the management of fractures, which of the following is not skin traction technique**
92. Perkins traction
93. Russell’s traction
94. bucks traction
95. gallows traction
96. **Which of the following is not a site for skeletal traction application?**
97. Temporal bones
98. Olecranon process
99. Mid-shaft femur
100. 2-3rd metacarpal bones
101. **Which of the following is not a procedure in manual traction?**
102. Grasping of fragments in the skin
103. Dis-impaction of fragments in the skin
104. Stabilization of fragments in the skin
105. Application of weight on the traction
106. **Why should the lateral skin traction tape, applied to a patient being placed in a Thomas splint for treatment of a fractured femur, be placed more posteriorly than the medial one?**
107. To correct external rotation of the limb
108. It will give more traction in that position
109. There will be less skin irritation
110. The groin ring pressure will be lessened
111. **Which is the suitable site for the insertion of the Kirschner wire in skeletal traction technique?**
112. tibia plateau
113. distal radius
114. distal metal carpal bone
115. all of the above
116. **What is the most indication for head halter traction?**
117. fracture lumber
118. neck fractures
119. clavicle fracture
120. none of the above
121. **One of the following is not an improvisation of weight in traction**
122. Air bags
123. Sand bags
124. Water bags
125. Wooden pieces
126. **Which of the following is not an indication for cervical spine traction?**
127. Fracture of the skull bones
128. Sub-axial cervical fractures that are mal-aligned
129. Sub-axial cervical facet dislocations
130. Odontoid fractures
131. **The following are complications of the skull traction except**
132. Skull perforation
133. Paraplegia
134. Pin migration
135. Injury to temporalis muscle
136. **Which of these is not a contraindication for cervical traction**
137. Acute inflammation
138. Joint pain
139. Inability of the patient to relax
140. Unresponsive patient
141. **One of the following is not a complication of skeletal traction**
142. Anxiety
143. Fracture union
144. Constipation
145. Paresthesia
146. **Which type of pelvic traction could be used for several hours?**
147. Sustained traction
148. Continuous mechanical traction.
149. Intermittent traction
150. Manual traction

**SECTION TWO: TRUE/FALSE QUESTIONS [30 MARKS]**

1. **The following are disadvantages of Halter traction.**
2. Discomfort
3. Temporal-mandibular pain
4. Contra-indicated in mandible fractures
5. Causes skull perforations
6. Indicated for neck injuries only
7. **The following are aspects of cone calipers.**
8. Avoid masseter muscle
9. Give local anaesthesia
10. Open reduction
11. Shave the area
12. Give general anaesthesia
13. **The following are disadvantages of Bryant’s traction**
14. Toiletry
15. Feeding
16. Verbal communication
17. Infections
18. Medications
19. **Complications of definitive skeletal traction are:**
20. Constipation.
21. Delayed union.
22. Anxiety.
23. Muscle atrophy.
24. Circulatory catastrophe.
25. **The following are requirements for skull traction**
26. Spanner
27. Calipers
28. Weight
29. Adhesive crape bandage
30. Pulleys
31. **The following conditions can be managed by pelvic traction**
32. PID of the lumber
33. Dislocations at L4-L5 vertebra
34. OA of the lumber region
35. Fractures of the lower spinal column
36. Fracture-dislocations of the cervical spine

**SECTION THREE: SHORT ESSAY QUESTIONS [20 MARKS]**

1. List three (3) major components of orthopaedic traction bed. [3 marks]
2. Outline four (4) indications of continuous mechanical traction. [8 marks]
3. Highlight (3) factors to consider when applying traction. [3 marks]
4. Outline six (6) principles of traction. [6 marks]

**SECTION FOUR: LONG ESSAY QUESTIONS [20 MARKS]**

**Answer only one question.**

1. Discuss in details the procedure of applying skeletal traction [20 marks]
2. Describe the advantages of elevating the foot of the bed after application of traction on a patient with proximal fracture of femur [20 marks]