UNIVERSITY COLLEGE LONDON

UNIVERSITY OF LONDON

EXAMINATION FOR INTERNAL STUDENTS

FOR THE FOLLOWING QUALIFICATIONS:

M.Sc.

M.Sc. Orthopaedics: Paper I (Trauma)

COURSE CODE : ORTH0001

DATE : 1 SEPT 05

TIME : 10.00

TIME ALLOWED : 3 Hours

05-N0002-4-30

TURN OVER

Answer **FOUR** questions out of **SIX**
(maximum of 20 marks for each answer)

Answer **EACH** question in a **SEPARATE** book

1. Regarding bone healing

   a) Explain the process of bone healing following long bone fracture in the adult

   b) Define the term 'strain'

   c) Explain how the strain applied across a fracture site is believed to effect bone healing

   d) Describe how fracture fixation can effect bone healing in terms of providing absolute or relative stability

2. A 6 year-old boy sustains an isolated fracture involving the growth plate of his distal femur

   a) Describe the Salter Harris classification of growth plate injuries

   b) What are the potential complications following fractures involving the growth plate

   c) What factors may make these complications more likely to occur

   d) Discuss the management of these injuries

3. A 48 year-old man falls off his horse and sustains a comminuted open distal tibial fracture. The primary and secondary surveys are carried out and reveal no other injuries

   a) Describe the accident and emergency room management of this patient

   b) The ipsilateral foot is subsequently noticed to be cold, pulseless and dusky. Describe any measures which should now be taken

   c) Describe the subsequent management of this patient's open fracture after leaving the emergency department, including the options for stabilisation and their relative benefits / drawbacks

TURN OVER

4. A 27 year-old male motorcyclist is involved in a road traffic accident with multiple casualties at the scene. He has an obvious head injury, a pulse of 114 bpm and a blood pressure of 95/50. He has a deformed, swollen thigh with a probable fracture of the femur and on the same side the foot is cool and pulseless with sluggish capillary return.

a) Discuss the order of priorities in the emergency room management of this patient, including the initial management of the femur fracture

b) What are the treatment options for a closed, extra-articular distal third of femur fracture

c) After stabilisation of the femoral fracture the patient becomes increasingly short of breath and hypoxic. Explain the most likely diagnosis and the pathological process behind it

5. Write short notes on **four** of the following six topics (5 marks each)

Initial assessment and management of acute spinal injuries

Avascular necrosis of the talus following trauma

Clinical assessment of acute nerve injuries

Tibial plateau fractures

Anterior shoulder dislocation

DVT

6. Define Compartment syndrome and outline the causes, progression, diagnosis and management

END OF PAPER