

UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:--

B.Sc.

Health Sciences HSC25: Basis of Medicine (1)

COURSE CODE : HESC0025

UNIT VALUE : 1.00

DATE : 28-APR-05

TIME : 10.00

TIME ALLOWED : 3 Hours

Health Sciences HSC25: Basis of Medicine (I)

NOTES TO CANDIDATES

- MARKS ALLOCATED TO SECTION A WILL BE 150/300
- MARKS ALLOCATED TO SECTION B WILL BE 150/300

SECTION A

Write short notes on **SIX** of the following topics:

(Spend about 15 minutes on each answer).

1. Methods used to diagnose viral infections
2. Which organisms would you suspect in a patient with acute osteomyelitis, and how would you look for them?
3. Predisposing factors for secondary immunodeficiency.
4. Allergic (type I) mediated immune injury (hypersensitivity)
5. What are the features of a granuloma? Describe what would lead you to decide that a granuloma is due to tuberculosis.
6. The steps involved in phagocytosis and subsequent killing of micro-organisms
7. Control of microbiological infection in out patient clinics.
8. Investigation of possible fungal infections.
9. Causes of a low platelet count
10. Deficiency anaemias
11. Features of ankylosing spondylitis
12. Draw a flow chart depicting the pathogenesis of cancer.
13. Medical negligence
14. Classification of muscle diseases.
15. Differential diagnosis of septic arthritis and gout.

TURN OVER

Health Sciences HSC25: Basis of Medicine (I)

SECTION B

Answer **THREE** of the following six questions.

(Spend about 30 minutes on each answer).

1. A 25 year old man arrives at the Accident and Emergency Department with a high fever. Chest x ray shows pneumonia, possibly due to an "opportunistic infection". While you are taking blood samples from him inadvertently you stick the needle into your finger.
 - a. What are the risks that you need to consider?
 - b. What action should be taken immediately?
 - c. What is meant by the term "opportunistic infection"? What patients are at risk for this?

2. A 65 year old man presents with pain in his left leg following exercise, and is found to have absent peripheral pulses in his left foot. Angiography shows "severe atheroma in his left common iliac artery".
 - a. Outline the pathological sequence of events which lead to the formation of "atheroma".
 - b. What are the risk factors which pre-dispose to this condition?
 - c. What are the possible complications of atheroma at this site?

3. A 65 year old woman complains of increasing discomfort and pain in her right hip.
 - a. What are the clinical and pathological features that would support a diagnosis of osteoarthritis?
 - b. What are the important features that distinguish this condition from rheumatoid arthritis?
 - c. Is this patient at risk for osteoporosis? How would you investigate for this?

4. A 65 year old woman presents with an ulcer on her left foot. She gives a history of weight gain, severe thirst, and of passing increased amounts of urine over the past six months.
 - a. What is your provisional diagnosis that would lead to these symptoms? How would you confirm the diagnosis?
 - b. Why should this diagnosis be associated with a foot ulcer?
 - c. What are the other potential complications of her condition?

CONTINUED

Health Sciences HSC25: Basis of Medicine (I)

5. A 12 year old girl is brought to hospital with a history that she had jumped from a height of three metres on to a tow path next to a river because she was late for swimming practice. Radiological examination shows a fracture of her tibia.
 - a. Describe the different stages of the normal fracture healing process that you would expect to see in this patient.
 - b. What are the systemic and local factors that influence the healing of fractures?
 - c. What is meant by the term "pathological fracture"? Why do you think it is unlikely to be applicable in this situation?

6. A 28 year old woman attends the antenatal clinic in her 33rd week of pregnancy and complains of pain and swelling of her left foot.
 - a. What differential diagnosis would you consider with someone with this presentation
 - b. What investigations would you suggest
 - c. What important complication(s) of this condition would you be concerned about, and what treatment(s) would you consider initiating as a preventive measure?

END OF PAPER