

UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For the following qualifications :-

B.Sc.

Health Sciences HSC25: Basis of Medicine (1)

COURSE CODE : **HESC0025**

UNIT VALUE : **1.00**

DATE : **02-MAY-02**

TIME : **10.00**

TIME ALLOWED : **3 hours**

02-C0682-3-50

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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 The contribution of epidemiology to our understanding of cardiovascular diseases
- 2 The concept of risk versus benefit in the treatment of disease.
- 3 The skin as an immunological site
- 4 Allergic (type I) mediated immune injury (hypersensitivity)
- 5 Management of needle stick injuries
- 6 Classification of burns
- 7 Coagulation disorders
- 8 The neuropathological features of Alzheimer's disease
- 9 Neuropathological conditions affecting the major nerves that supply the foot.
- 10 Factors that might prevent fracture healing
- 11 Differential diagnosis of muscle weakness
- 12 The definition of, and differences between, the terms hyperplasia, dysplasia and neoplasia.
- 13 The biochemical and pathological features of gout.
- 14 Investigation of fungal infections of the foot
- 15 Pathological features of tuberculosis involving bone

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SECTION B

Answer **THREE** of the following seven questions:

(Spend about 30 minutes on each answer)

- 1 A 2 year old child is admitted to hospital with a history of abdominal pain for 48 hours. A diagnosis of acute appendicitis is made.
 - a) Briefly outline the vascular events that have occurred during the acute inflammatory process in this patient.
 - b) How do phagocytic cells handle the bacteria in the inflammatory site?
 - c) What features would imply that the inflammation has become chronic?

- 2 A 70 year old female patient is admitted to hospital unconscious and diagnosed as having had a cerebrovascular accident (stroke).
 - a) What are the possible causes of a “cerebrovascular accident”?
 - b) Describe the pathological changes that are seen in the carotid arteries in atherosclerosis.
 - c) Discuss the possible ways that the foot might be affected in this patient if she recovers.

- 3 A 35 year old woman attends the ante-natal clinic in the 33rd week of pregnancy and complains of pain and swelling of her left foot.
 - a) What differential diagnosis would you consider for 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?

- 4 A 24 year old woman with multiple sclerosis is unsteady on her feet and describes herself as walking like a “drunk”. The symptoms are worse in the dark.
 - a) How would you describe this gait abnormality? What clinical test would you perform to confirm your diagnosis?
 - b) What are the histopathological features of the lesions that cause this gait abnormality?
 - c) What have epidemiological studies taught us about this condition?

- 5 A 42 year old man presents to your clinic with a pigmented mole on the sole of his foot, which his wife says was not there six months previously.
 - a) What clinical features suggest a diagnosis of malignant melanoma?
 - b) What are the possible modes of spread?
 - c) What are the factors that affect your assessment of the prognosis?

- 6 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?

CONTINUE

7 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?

END OF PAPER