General Pathology Tutorial (1) – 19/02/2018
Group D (2.15 - 3.15pm)
Group C (3.15 - 4.15pm)

Question 1

A 42 year old man presents with pain, swelling, redness and warmth around his left ankle joint of 5 days duration following an insect bite. His swelling is caused by increased vascular permeability leading to the collection of fluid in the extravascular space.

1.1 Describe the mechanisms that lead to an increase in vascular permeability. 10 marks

1.2 Name the type of oedema fluid that forms. 10 marks

1.3 List the components of this fluid. 10 marks

1.4 List **(2) two** advantages and (2) **two** disadvantages of oedema formation in this patient. 10 marks

The patient developed fever and body aches. His **ESR** level was **80** mm in the **1st hour**.

1.5 Explain the pathophysiological basis of his fever. 20 marks

1.6 Explain the basis for his raised ESR. 20 marks

1.7 Name **(2) two** laboratory investigation that would be abnormal in this patient. 10 marks

His swelling subsided in 2 weeks.

1.8 State the mechanisms involved in this process. 10 marks

Question 2

"A cell is able to handle normal physiological demands and maintain a steady state. More severe physiological stress and pathological stimuli lead to cellular adaptation."

2.1 List and define **three (3)** cellular adaptive changes. 15 marks

2.2 Compare and contrast **two (2)** of the adaptive changes that you have mentioned in 1.1 above. 20 marks

"Heavy cigarette smoking too, results in several adaptive changes in the respiratory tract. The worst outcome of smoking is neoplasia preceded by dysplasia."

2.3 Define dysplasia. 10 marks

2.4 Describe the microscopic features of dysplasia. 20 marks

2.5 Name the major carcinogenic agent in cigarette smoke that is responsible for dysplastic and neoplastic change. 20 marks

2.6 Classify the **laboratory methods** of diagnosing neoplasia, using the lung as an example. (Exclude clinical and radiological methods) 15 marks

Question 3

3.1 A 55-year-old man with peripheral vascular disease, presents with an ulcer in the foot.

3.1.1 Sate the pathophysiological basis of ulcer formation in this patient 10 marks

3.1.2 Describe the mechanisms of cellular injury occurring at the ulcer site. 30 marks

3.2 A malignant tumor is removed from the abdomen of a 60-year-old man at surgery. A tumor marker is used in the follow up of this patient.

Explain the pathophysiological basis for the use of a tumor maker in the follow up of this patient. 30 marks

3.3 Pyloric stenosis is known to follow the healing of a chronic peptic ulcer in the antropyloric region. Explain the pathophysiological basis of the above. 30 marks