

Specialty Certificate in Respiratory Medicine

Sample Questions

Question: 1

A 30-year-old man presented to the chest clinic with a chronic productive cough and increasing breathlessness. He gave a history of recurrent chest infections since childhood. He and his partner had recently been referred for fertility treatment.

On examination, he had finger clubbing and scattered crackles throughout both lung fields.

What is the most likely diagnosis?

- A bronchiectasis
- B cystic fibrosis
- C primary ciliary dyskinesia
- D pulmonary fibrosis
- E pulmonary tuberculosis

Question: 2

A 60-year-old man, with type 2 diabetes mellitus, was admitted with a 4-day history of cough, chest pain and loss of diabetic control.

Investigations showed a right-sided empyema.

What is the most likely infecting organism?

- A Bacteroides sp.
- B Enterobacteriaceae
- C Staphylococcus aureus
- D Streptococcus milleri
- E Streptococcus pneumoniae

Question: 3

A 45-year-old man presented with a 1-year history of snoring and unrefreshing sleep. There was a history of witnessed apnoeic episodes. His Epworth sleepiness score was 7/24. His body mass index was 29 kg/m^2 (18–25).

His overnight sleep study demonstrated a 4% desaturation index of seven events per hour.

Which management option is most likely to improve his sleep quality?

- A continuous positive airway pressure
- B mandibular repositioning splint
- C non-invasive ventilation
- D uvuloplasty
- E weight reduction advice

Question: 4

A 56-year-old man presented with shortness of breath.

Investigations:

	actual	SR*
forced expired volume in 1 s (FEV ₁) (L)	0.96	-2.9
forced vital capacity (FVC) (L)	2.24	-0.6
residual volume (RV) (L)	3.52	+3.9
total lung capacity (TLC) (L)	5.89	+1.3
transfer factor for CO (TL _{CO}) (mmol/min/kPa)	4.25	-2.5
transfer coefficient (K _{CO}) (mmol/min/kPa/L)	1.0	-2.8

*SR is the standardised residual and represents the number of standard deviations the actual value is from the predicted value. The normal range for the SR of all lung function parameters is -1.64 to +1.64.

What is the most likely diagnosis?

- A atrial septal defect with a left-to-right shunt
- B emphysema
- C pulmonary haemorrhage
- D pulmonary vasculitis
- E usual interstitial pneumonitis

Question 5

A 65-year-old smoker attended the outpatient clinic with a 2-week history of "pressure in the head". On examination, he had clinical signs of superior vena caval obstruction.

A CT scan of the chest showed that the superior vena cava was compressed by a tumour in the right upper lobe of the lung, and there was also evidence of a clot within the vessel. A bronchoscopy showed a tumour in the right upper lobe bronchus and biopsies confirmed that this was a small cell carcinoma of the bronchus.

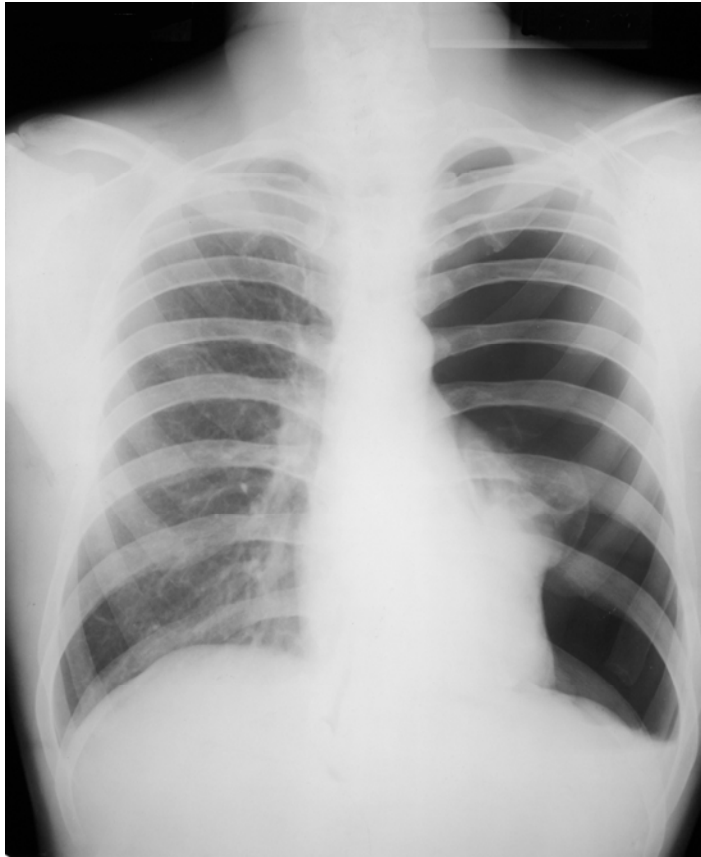
What is the most appropriate management?

- A anticoagulation
- B chemotherapy
- C high-dose corticosteroids
- D radiotherapy to the mediastinum
- E stenting of the superior vena cava

Question 6

A 34-year-old man was admitted to hospital with a history of sudden onset of chest pain and severe breathlessness. He was a lifelong non-smoker.

A chest X-ray was performed (see image).



According to British Thoracic Society guidelines, what is the most appropriate next management step?

- A chest tube insertion
- B high-flow oxygen
- C non-invasive ventilation
- D simple aspiration
- E thoracic surgery

Question 7

A 30-year-old man presented with erythema nodosum. Clinical examination of the chest was unremarkable.

Which feature on high-resolution CT scan would favour a diagnosis of sarcoidosis?

- A centrilobular nodules along bronchovascular structures with an upper zonal predominance
- B diffuse ground-glass change with soft centrilobular nodules throughout lung
- C patchy ground-glass shadowing with no zonal predominance
- D peripheral consolidation with an upper zonal predominance
- E subpleural honeycombing with a lower zonal predominance

Question 8

A 55-year-old woman with scleroderma presented with a 3-month history of increasing shortness of breath.

Which feature on high-resolution CT scan would favour a histological diagnosis of non-specific interstitial pneumonia?

- A centrilobular nodules along bronchovascular structures with an upper zonal predominance
- B diffuse ground-glass change with soft centrilobular nodules throughout lung
- C patchy ground-glass shadowing with no zonal predominance
- D peripheral consolidation with an upper zonal predominance
- E subpleural honeycombing with a lower zonal predominance

Question 9

A 66-year-old woman presented with a 4-week history of progressive breathlessness and discomfort over the right chest. Thirty years previously, she had undergone mantle radiotherapy for Hodgkin's lymphoma. She had never smoked.

Clinical examination showed evidence of radiotherapy change to the skin and signs of a right pleural effusion. Breast examination was normal.

A chest X-ray confirmed the presence of a large right pleural effusion. Aspiration yielded straw-coloured fluid, with a protein content of 45 g/L and cytology revealed some atypical cells and lymphocytes.

What is the most likely cause of the effusion?

- A adenocarcinoma of the lung
- B breast cancer
- C Meigs' syndrome
- D mesothelioma
- E recurrent lymphoma

Answers:

1. B
2. D
3. B
4. B
5. B
6. D
7. A
8. C
9. A