1. a. What are the parasitic causes of thoracic disease?  
b. How do you manage a case of hydatid disease of lung?  

2. a. Enumerate pulmonary complication of acute pancreatitis.  
b. Discuss the management of important complications.  

3. A 26 years old married lady on 3rd generation oral contraceptives presents with acute onset of breathlessness and hypertension. Discuss approach to diagnosis and management.  

4. a. Enumerate various extra-pulmonary manifestation of Sarcoidosis?  
b. How do you manage a case of Sarcoidosis?  

5. a. What are the common side effects of oral corticosteroid therapy?  
b. How will you prevent and manage common complications?  

6. Describe briefly the clinical presentation of TB in HIV and AIDS. What is IRIS? How do you manage IRIS?  

7. a. Enumerate the common causes of metabolic acidosis.  
b. What is anion gap?  
c. What is Delta gap?  
d. What is urine anion gap?  

8. a. What is PET scan?  
b. What are the uses of PET scan in various respiratory diseases?  

9. a. Enumerate common causes of hypercapnia.  
b. How will you manage a case of CO₂ narcosis?  

10. A 50 years old man with BMI of 42 Kg/m² presents with un-refreshing sleep, lack of concentration, early morning headaches and sleepiness while driving. What is the likely cause of his symptoms? Discuss briefly the approach and likely cardiopulmonary adverse effects.
1. a. What is DOTS-PLUS? 2+3+5
   b. What are the main difficulties in the implementation of the strategy?
   c. What are the strategies adopted to overcome these problems?

2. A 70 years old COPD patient presents with shortness of breath MRC IV with marked muscle wasting and depression in spite of optimum medical treatment. What strategy will you like to follow to reduce his symptoms, improve exercise capacity and Quality of Life (QOL)? Briefly discuss the components of the strategy.

3. a. How will you define COPD? 3+7
   b. Discuss the prevalence of morbidity and mortality due to COPD?

   b. Discuss in brief various preventive methods of lung cancer.

5. a. Enumerate newer diagnostic techniques for tuberculosis? 5+5
   b. Mention at least two merits and two demerits of such techniques.

6. Define solitary pulmonary nodule? Enumerate important causes. How will you evaluate a case of solitary pulmonary nodule? 3+3+4

7. a. What is domiciliary oxygen therapy? 2+3+5
   b. What are the indications of home oxygen therapy?
   c. What are the different methods, devices and conservative approaches?

8. a. How do you define and classify the types of Interstitial Lung Diseases (ILO)? 5+5
   b. List the common causes and their epidemiological characteristics.

9. a. What are the different approaches available for smoking cessation? 3+2+5
   b. What is 5-A strategy?
   c. Briefly describe the pharmacological management?
10. a. Define Quality of Life (QOL).
   b. What are the different methods/ scales used to measure QOL in lung cancer?
   c. What is the importance of measurement of QOL?
1. A 20 years old young adult presents with high grade fever, chest pain, breathlessness, hypotension and tachycardia. Chest X-ray demonstrates consolidation. What is the likely diagnosis? What are the organisms responsible? How will you assess the severity and manage the patient.

2. a. What is allergic broncho-pulmonary aspergillosis (ABPA)?
   b. What are the commonly used diagnostic criteria?
   c. How will you evaluate and manage a case of ABPA?

3. A 24 years old lady, known asthmatic, presents with acute worsening of her symptoms after a viral infection needing hospitalization. Briefly discuss the assessment of severity of asthma (severe acute asthma) and its stepwise management including indications for ventilation.

4. a. How will you evaluate a case of acute exacerbation of COPD?
   b. Discuss briefly the important component of its management.

5. a. Discuss the pre-operative evaluation for lung resection in lung cancer.
   b. What are the indications of surgery and common surgical techniques used?

6. What is CPAP? How does it work in various conditions? Discuss briefly its indications in respiratory diseases and pitfalls in its application in long term care.

7. Discuss briefly the recent advances in the management of interstitial pulmonary fibrosis.

8. a. What are the indications of lung transplantation?
   b. Briefly discuss the immune suppressive therapy for lung transplantation.
   c. What are its immediate and long term complications?
9. A 40 years old cirrhotic patient presents with pleural effusion on left side. Discuss approach to diagnosis and management.

10. An 18 years old boy with marfanoid habitus presents with sudden onset breathlessness and right sided chest pain after an air travel of 1 hour. There was a history of similar episode once on the left side 1 year ago, which got relieved after aspiration. Discuss the likely diagnosis and approach to subsequent management.
1. Discuss briefly the TNM staging of lung cancer.

2. a. What are aerosols?
   b. Discuss the properties of aerosols that are important in inhalational therapy.
   c. Enumerate the common inhalation devices with their important characteristics.

3. a. Describe the important features of flow volume loops using illustration.
   b. How are they useful in differentiating airway obstruction at different levels?

4. What is interventional bronchoscopy? Discuss briefly various interventions used through bronchoscopy?

5. a. What is Polysomnography?
   b. What are its indications?
   c. Describe briefly its various components and about its procedures.

6. a. What are the common mechanisms by which gram negative bacteria acquire drug resistance?
   b. Enumerate the important measures which can prevent development of drug resistance.

7. a. Define Systemic Inflammatory Response Syndrome (SIRS) and Sepsis.
   b. Describe briefly the important components of sepsis bundles.
   c. Discuss the role of activated protein C in the management of severe sepsis.

8. a. What are the physiological changes in the lung during pregnancy?
   b. How does it impact on the management of critically ill pregnant patients?
9. Discuss briefly the emerging role of ultrasonography in evaluation of:
   a. Chest wall disorders
   b. Pleural disorders
   c. Pulmonary disorders

10. A young army officer posted at Siachen becomes breathless during the night after trekking throughout the day to reach base camp. What is the likely cause? Discuss its patho-physiology and management principles.