

DEPARTMENT OF MEDICINE
BLOCK O CARDIORESPIRATORY MODULE MCQS FINAL YEAR 2023
AYUB MEDICAL TEACHING INSTITUTE

NAME: [REDACTED] ROLL NUMBER: [REDACTED]

Please read the questions carefully.

Choose only one option.

Please encircle the alphabet at the beginning of the option

Use blue or black indelible ink or ball point

Do not use pencils

Uninterpretable or repeated cutting crossing shall not be accepted

Talking during the exam shall result in confiscation of the paper.

Time 2 hours.

Q.1 A 19 years old student presented to your clinic with repeated episodes of productive cough and occasional hemoptysis since early childhood. On further Inquiry he reported passing unformed stools and retarded growth of his body. There is no history of any skin rash or night fever. On examination, his weight is 35 kg, height 155cm. On auscultation crepitations are heard all over his chest bilaterally. His Random Blood Sugar is 220 mg/dl. CT Scan of chest shows bronchiectasis in upper lobes bilaterally.

What is the most likely diagnosis?

- A. Ciliary dysfunction
- ☒ B. Cystic fibrosis
- C. Hypogammaglobulinemia
- D. Primary TB
- E. Post measles bronchiectasis

Q2. A 20 years college student came to your clinic with history of recurrent cough, dyspnea and chest tightness for the last six months. On further inquiry he tells that his symptoms worsen after walking in his garden. There is no history of fever.

Examination revealed pulse 85 /min, Respiratory rate :17 /min, BP : 115 / 75 mm Hg and bilateral wheeze were heard all over the chest.

What is the most likely diagnosis?

- A. Allergic bronchopulmonary aspergillosis
- ☒ B. Asthma
- C. Chronic obstructive pulmonary disease
- ☒ D. Hypersensitivity pneumonitis
- E. Recurrent pulmonary embolism

Q3. A 50 Years old businessman came to Emergency Room with history of sudden onset dyspnea and chest pain for the last two hours. He has been smoking one pack of cigarettes daily for the last 15 years. On examination his pulse rate is 105/min BP 90/60 Respiratory rate of 24/ min, resonant percussion notes & diminished breath sounds on right side of his chest.

What is the most appropriate Investigation for the diagnosis of this patient ?

- A. Arterial Blood Gases
- ☒ B. Chest X-ray
- C. Electrocardiogram
- D. Serum D-Dimers
- E. Spirometry

Q4. The Gold standard to diagnose Pulmonary Embolism is

- A. Ventilation scan.
- B. D Dimer Test
- ☒ C. Perfusion Scan
- ☒ D. Pulmonary Angiogram
- E. Ultrasound Of Pulmonary Arteries

Q5. MDR TB is resistance to

- A. Rifampicine, Ethambutol, Pyrazinamide, Isoniazid
- ☒ B. Isoniazid, Ethambutol, Pyrazinamide
- ☒ C. Rifampicine, & Isoniazid
- D. Levofloxacin, Strptomycin, Rifampicine, Pyrazinamide
- E. None of the above

Q6. A 3 years old child has been diagnosed with cystic fibrosis. What are the earliest chest x ray changes present in this patient?

- ☒ A. Hyperinflation
- ☒ B. Bronchiectasis
- C. Peribronchial cuffing
- D. Pleural effusion
- E. Pneumothorax

Q7. Sweat chloride test was performed on a patient suspected of having Cystic Fibrosis. The result of chloride content was 45 meq/L. What information does this result convey?

- A. Patient is not having Cystic Fibrosis
- ☒ B. There is a high probability that patient is having CF
- C. There is a low probability that patient is having CF
- ☒ D. The test is inconclusive.
- E. None of the above.

Q8. Pulmonary function tests were performed on a child recently diagnosed with Cystic Fibrosis. What is the first lung-function abnormality seen in CF children?

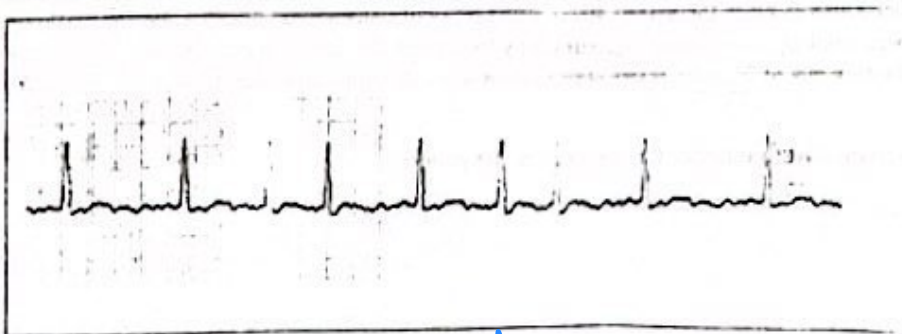
- A. Decreased forced vital capacity (FVC)
- B. Decreased Forced expiratory volume (FEV1)
- C. Increased mid maximal flow rate (MMFR)
- D. Decreased Total lung capacity (TLC)
- ☒ E. Increased Residual volume (RV) & Functional Residual capacity (FRC)

Q9. Ahmad 21 years old came to hospital, because he had productive cough for last 8 months, also he is smoker. We did sputum culture, we found macrophages full of carbon, and a lot of neutrophils.

What is the diagnosis?

- ☒ A. Chronic bronchitis
- ☒ B. Emphysema
- C. Chronic asthma
- D. Bronchiectasis
- E. Pneumonia

Q10. This is a rhythm strip from a 53 year old Lady with shortness of breath. What does it show?



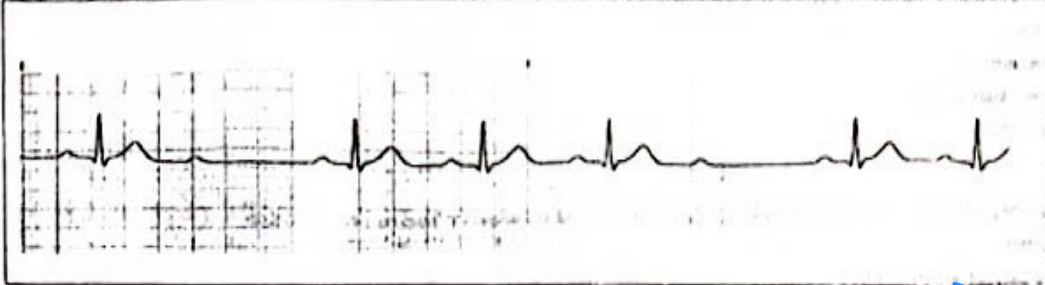
- ☒ A. Atrial Flutter
- B. Atrial Ectopics
- ☒ C. Atrial Fibrillation
- D. Sinus Tachycardia
- E. SVT

*rhythm
irregularly
irregular*

Q11. A 38 Year Old Woman presents with shortness of breath. Examination reveals a Blood pressure of 150/90 mm of Hg. Pulse rate of 102 beats/min. Her JVP is not raised. There is no ankle edema. She has a Pan systolic Murmur best heard at the Apex. She has mild bilateral Basal Crackles. What is the diagnosis?

- A. Aortic Stenosis.
- B. Mitral Stenosis.
- C. Tricuspid Regurgitation.
- D. Mitral Regurgitation
- E. Aortic Regurgitation.

Q12 This is a Rhythm strip from a 78 year old man with recurrent attacks of Syncope. What is the ECG diagnosis?



- A. Atrial Ectopics
- B. 3rd degree Heart Block
- C. 1st DEGREE Heart Block
- D. Mobitz II 2nd Degree Heart Block
- E. Mobitz I 2nd Degree Heart Block

progressive
prolong

(cant appreciate properly)

Q13. The Most common cause of primary Mitral Regurgitation is which one of the following?

- A. Rheumatic Heart Disease.
- B. Mitral Valve Prolapse.
- C. Infective Endocarditis.
- D. Left Ventricular Failure.
- E. Congenital Heart Disease.

Q14. A 56 years old male presented to ER department with history of chest pain for last 06 hours. His ECG shows ST elevation in leads II, III and aVF. He was given IV Morphine, Aspirin and Clopidogrel. What is the next most appropriate step to ensure revascularization in this patient?

- A. IV Heparin.
- B. Enoxaparin
- C. Warfarin
- D. Angiography & PCI.
- E. IV Streptokinase.

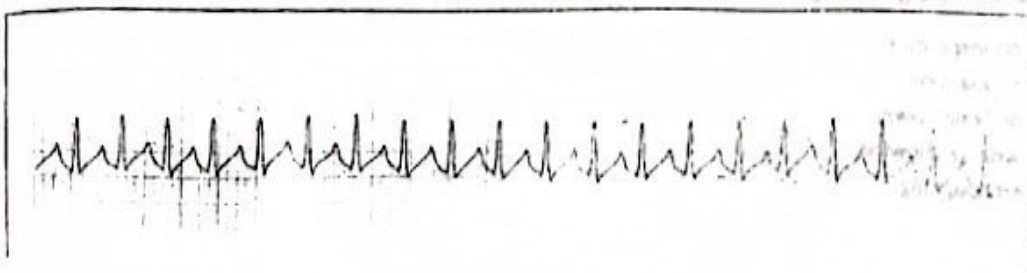
Q15. A 16 years old boy presents to you with BP 180/100 and exertional shortness of breath. His 2D Echo shows post ductal coarctation of aorta. Which of the following is associated with this condition?

- A. Mitral Valve prolapse
- B. Aortic Stenosis

- C. Bicuspid Aortic Valve
- D. Atrial Septal Defect

preductal

Q16. A 24 YEAR OLD MSc Chemistry Student presents to ED with Palpitations. The following is her Rhythm Strip. What does it show?



A. Atrial Flutter.

B. Atrial Fibrillation.

☒ C. Supraventricular Tachycardia

D. Sinus Tachycardia

E. Ventricular Tachycardia

Q17.1. Spirometry testing reveals results below:

FEV: 87% predicted

FEV1: 84% predicted

FEV1/FVC: 80%

FEF25%-75%: 80% predicted

With which of the following are these values the most consistent?

A. Acute asthma

☒ B. Normal lung function

C. Small airway obstruction

D. Pulmonary fibrosis.

E. COPD

Q18. The majority of cases of bronchiolitis in children are caused by which virus?

A. Influenza virus

☒ B. Respiratory syncytial virus (RSV)

C. Adeno virus

D. Corona virus

E. Rota virus

Q19. Which diagnostic test is commonly used to confirm pneumonia in children?

☒ A. Chest X-ray

B. Blood culture

C. Throat swab

D. Urine analysis

E. Complete Blood Count (CBC) & CRP

Q20. What is the most appropriate treatment for viral pneumonia in children?

A. Antibiotics

B. Antiviral medications

C. Bronchodilators

☒ D. Fluids and supportive care

E. Cough suppressants

Q21. Which of the following is a preventive measure for reducing the risk of bronchiolitis in children?

☒ A. Annual influenza vaccination

B. Avoiding exposure to secondhand smoke

C. Frequent hand washing

D. Avoid over-crowding

☒ E. All of the above

Q22. Which statement about pneumonia in children is true?

A. Pneumonia is a self-limiting condition and does not require treatment.

☒ B. Pneumonia can be prevented by routine childhood vaccinations.

C. Pneumonia is more common in adolescents than in infants.

D. Pneumonia is always caused by bacterial infection.

E. Pneumonia is always caused by viral infection.

Q23. A 53 year old man presents with chest pain. Which of the following features in history of present illness would be most consistent with Angina Pectoris?

A. Chest pain on inspiration.

☒ B. Chest pain on exertion.

C. Chest pain on lying down.

D. Chest pain with swallowing.

E. Chest pain on coughing.

Q24. Which of the following features would indicate a severe or very severe disease in a child with cough, according to IMNCI?

- A. Vomit every thing
- B. Cyanosis
- C. Inability to breastfeed or drink
- D. Stridor

☒ E. All of the above

Q25. A 55 year old man comes to a Cardiology clinic for a check up. He is concerned that his brother who is 2 years younger than him has had a heart attack. He is a bank manager by profession. He has a sedentary life style and weighs 120 kgs. He is a smoker. His blood pressure is 160/100 mm of Hg. He says that a year ago he was diagnosed with high blood pressure and was prescribed medications which he never bothered to take. What do you think should be your systolic blood pressure goal with treatment?

☒ A. Less than 140.

- B. 120-130
- C. 130
- D. 150
- E. 100.

Q26. What is the duration of cough that is considered "persistent" in IMNCI?

- A. More than 3 days
- ☒ B. More than 7 days

☒ C. More than 14 days → chronic

- D. More than 21 days
- E. More than one month

Q27. A 55 year old Woman comes to the Emergency Department with Altered Consciousness. Her Blood pressure is 180/120 mm of Hg. Her worried husband says that she had a generalized seizure at home. She has a background of hypertension and a minor stroke 3 years ago. What is the most likely diagnosis?

- A. Epilepsy.
- B. Stroke

☒ C. Hypertensive Encephalopathy

- D. Hypertensive Urgency
- E. Hepatic Encephalopathy

Q28. What is the most common viral cause of croup?

- A. Respiratory syncytial virus (RSV)
- B. Influenza virus

☒ C. Parainfluenza virus

- D. Rhinovirus
- E. Rota Virus

Q28. Croup is a respiratory condition that primarily affects which part of the body?

- A. Lungs
- B. Bronchi

☒ C. Larynx and trachea

- D. Nasal passages
- E. Epiglottitis

29. What is the hallmark symptom of croup?

- A. High fever
- B. Productive cough

☒ C. Inspiratory Stridor

- D. Wheezing
- E. Flu

Q30. A 65 year old lady was brought to the emergency department by her husband after she had a fight with her neighbor. She had been well until now and did not have any documented history of Hypertension, Diabetes Mellitus, or Ischemic Heart disease. The husband told you that she became short of breath at home. On the way to the hospital however she had gradually started to feel better. Her Blood pressure was 170/100. Her Pulse was 110 per minute. Her Spo2 was 99% on room air. What should be the best approach in this situation?

- A. Sublingual Nifedipine.
- B. Sublingual Captopril.

C. Injection Furosemide

☒ B. Recheck Blood pressure after 15 minutes.

C. Inj Metoprolol 5 mg STAT.

Q31A 70 year old man was referred by his GP to the Cardiology clinic with shortness of breath on exertion. On examination his blood pressure is 140/80. Pulse is 65 BPM. Examination of the precordium reveals that his Apex beat is in the 5th intercostal space with a forceful character. The second heart sound is soft. There is an ejection systolic murmur at the second intercostal space at the right of the sternum. What other symptom should you specifically ask for?

A. Orthopnea

☒ B. Chest pain on inspiration.

☒ C. Exertional syncope

D. Cough

E. Palpitations

X → chest pain on exertion (angina MC)

Q32 A 6 year boy presented with history of mild cyanosis and dyspnea on exertion. On examination he has Oxygen saturations of 85%. Pulses are normal, CVS examination shows abnormal rhythm and a systolic murmur. CXR shows severe cardiomegaly, almost wall to wall heart. What is your diagnosis?

☒ A. Tetralogy of Fallot.

B. ASD.

C. Large VSD.

☒ D. Ebstein Anomaly

E. Large PDA.

Q33 A 10 year old girl presented with fever and shortness of breath for 1 week, pain in right knee joint for 6 days and right ankle for last 3 days. On examination she is febrile, pale and sick looking. Both ankle and knee joints are swollen and tender. Her ESR is 70mm, And ASOT is 350IU. What is best treatment option according to your diagnosis.

☒ A. IV Ceftriaxone

B. IV Methylprednisone.

☒ C. IM Benzathine Penicillin

D. Oral Paracetamol

E. IV Paracetamol

Q34. With regards to the modern principles of pharmacological treatment of heart failure what are the goals of treatment of heart failure.

☒ A. Relieving symptoms

B. Preventing Death

C. Preventing Hospitalization

D. Improving functional status

☒ E. All of the above

Q35 A 35 year old woman is sent by her GP for evaluation of shortness of breath on exertion and palpitations. On enquiry she states that she has become progressively short of breath over the last 1 year and now cannot walk without getting short of breath from her bed to the bathroom. Her blood pressure is 130/80 mm of Hg. Her pulse is 120 beats per minute and is irregularly irregular. Auscultation of her precordium reveals a diastolic murmur. Her ECG shows atrial fibrillation. What diagnostic test would you order?

A. Arterial Blood Gases

B. Chest X Ray

C. D Dimers

D. Cardiac Troponins

☒ E. Echocardiography

Q36. A newborn presented with severe cyanosis, CXR shows small egg shaped heart. What is your diagnosis?

A. Tetralogy of Fallot

☒ B. TGA

C. TAPVR

D. Large VSD

☒ E. PDA

DEPARTMENT OF MEDICINE

Q37. A newborn presented with severe cyanosis. With oxygen saturations of 55%. There is no murmur audible. What is the emergency procedure that is indicated in this patient?

- A. Intubation & Ventilation
- B. Balloon Atrial Septostomy
- C. PDA Stenting
- D. BT Shunt
- E. Atrial Switch procedure

TGA

→ Definitive TOC

Q38. A 3 month old baby presents with a history of irritability, increased sweatiness and facial puffiness for 5 days. He has tachycardia, tachypnea and a gallop rhythm with hepatomegaly on examination. What is the diagnosis?

- A. Large VSD
- B. Lobar Pneumonia
- C. Acute Myocarditis
- D. Nephrotic Syndrome
- E. Cardiomyopathy

Q39. A 3 month old baby presents with a history of upper respiratory tract infections, now presents with signs and symptoms of CCF. What is the diagnosis?

- A. Large VSD
- B. Lobar Pneumonia
- C. Acute Myocarditis
- D. Nephrotic Syndrome
- E. Cardiomyopathy

Q40. A 1 month old baby presents with pallor and irritability and hepatomegaly on examination. ECG shows narrow QRS complexes with no visible P waves and heart rate of 220/min. What is the diagnosis?

- A. Acute Myocarditis
- B. Supraventricular Tachycardia
- C. Ventricular Tachycardia
- D. Cardiomyopathy
- E. Sinus Tachycardia

Q41. A 1 month old baby presents with pallor and irritability. His pulse is feeble and BP is not recordable. He has hepatomegaly. ECG shows narrow QRS complexes with no visible P waves and heart rate of 220/min. What is the treatment in this child?

- A. Adenosine IM
- B. Synchronized DC Cardioversion
- C. Adenosine IV
- D. IV Lignocaine
- E. IV Flecainide

Q42. A 6 days old baby presents with cyanosis since birth. His oxygen saturations are 78%. Pulses are good volume, there is a systolic murmur 3/6 at left lower sternal border. CXR shows wide upper mediastinum giving appearance of a figure of 8. What is your diagnosis?

- A. Tetralogy of Fallot
- B. TAPVR
- C. Large VSD
- D. Ebstein Anomaly
- E. Large PDA

Q43. A newborn presents with severe cyanosis and respiratory distress. He has low volume pulses and a harsh systolic murmur at lower left sternal border. Echocardiography shows no pulmonary veins opening into left atrium. There is right to left shunt at the large ASD. What is your diagnosis?

- A. Tetralogy of Fallot
- B. ASD
- C. Large VSD
- D. Ebstein Anomaly
- E. TAPVR

Q44. A 2 months old baby presents with severe respiratory distress, and oxygen sats of 87% at room air. Echocardiography shows only one large vessels originating from heart. What is the diagnosis?

A. Tetralogy Of Fallot

B. ASD

C. Large VSD.

☒ D. Truncus Arteriosus

E. Large PDA

Q45. A 2 days old baby presents with severe cyanosis. He is baby of a diabetic mother. There is no murmur audible and CXR shows egg on a string heart. What is best complete treatment option in the baby?

A. Atrial septostomy.

☒ B. Prostaglandin infusion

C. Atrial Switch operation

D. Senning operation

E. Pulmonary Artery Banding

Q46. A 57 year Old Diabetic was recently Discharged from Hospital. His Discharge slip mentions the diagnoses of Congestive Heart Failure Secondary to Coronary Artery Disease. His Blood Pressure is 130/80 mm of Hg. His pulse is 70 BPM. He has no signs of Congestion. He claims he has no Shortness of Breath on Activities of Daily Living. His medications include Aspirin, Enalapril 10mg, Atrovastatin 40mg, Furosemide 40mg twice a day. What is the most appropriate medication to add to his drugs at this stage?

A. Spironolactone

B. Digoxin.

☒ C. Sacubitril/Valsartan

D. Ivabridine

E. Bisoprolol

Q47. A 60 year Old Gentleman comes back for a followup visit to the cardiology OPD. He claims that he has no shortness of breath. He sleeps well. His only complaint is unilateral Breast enlargement. Which one of his medications would you like to stop.

A. Bisoprolol

B. Lisinopril.

C. Furosemide

D. Empagliflozin

☒ E. Spironolactone

Q48. A 70 year old Hypertensive, Diabetic presents to the cardiology Outpatients with Shortness of Breath, Orthopnea. Her Blood pressure is 160/90 mm of Hg. Pulse is 90 BPM. Her JVP is raised upto the angle of the jaw. She has edema upto her ankles. She has mild bilateral basal crepitations. She undergoes an Echocardiogram which is reported as Concentric Left Ventricular Hypertrophy with ejection fraction of 55%. Normal Mitral and Aortic Valves. What is the best description of her condition?

A. Heart Failure.

☒ B. Uncontrolled Hypertension.

C. Systolic Heart Failure.

D. Right sided Heart Failure.

E. Heart Failure with Preserved ejection fraction.

Q49. A 50 year old man is brought to the Emergency with a Blood pressure of 180/140 in his Left Arm. He complains of severe chest pain for the last 4 hours. He has a background history of Hypertension for the last 4 years but has been non-compliant with medications. On examination He seems to be in agony. His blood pressure in the right arm is 150/90. His Radial Pulse on the Right side is low volume. His ECG is normal. What do you think is number 1 in the Differential Diagnosis?

A. Coarctation of Aorta.

B. Acute Myocardial Infarction.

C. Uncontrolled Hypertension

☒ D. Dissection of Aorta

E. Right Subclavian Artery stenosis.

Q50. A 35 year Old Man presents to the ED with productive cough. On routine examination his blood pressure is found to be 145/95. What would you do?

- A. Start him Lisinopril 5mg Once a Day and follow him in 2 weeks with renal function tests.
- B. Start Bisoprolol 5mg Once a day and follow him with fasting sugar and lipid profile.
- C. Ignore the BP since this was just an incidental finding.
- D. Take a history to screen for end organ damage, cardiovascular risk factors and exclude or otherwise secondary hypertension.
- E. Start a low dose Diuretic and follow up with uric acid levels in 2 weeks.

Q51. A 65 years old female patient with history of Diabetes Mellitus & Hypertension presented with 2 hours history of Central chest pain, radiating to both arms, associated with sweating. what would be most relevant initial investigation for diagnosis?

- A. Blood Sugar
- B. Cardiac Biomarkers/ Troponins
- C. Chest Xrays
- D. ECG (Electrocardiogram)
- E. Full Blood Count

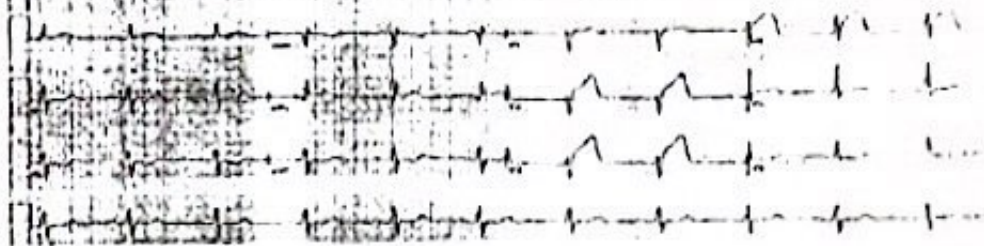
most?

Q52. A 25 years old male presented with 3 days history of left sided pleuritic chest pain. What statement would be most relevant in this case:

- A. Chest pain Increases on Lying down
- B. Chest pain Decreases on leaning forward
- C. Presence of Pericardial Friction Rub
- D. Recent Viral Illness
- E. All of the above

diagnostic
all are relevant

Q53. A 55 years old chronic smoker patient presented with 1 hour history of Central chest pain, radiating to both arms associated with sweating. 12 leads ECG done in ED as shown below.



What is most relevant statement in this scenario?

- A. Diagnosis is Unstable Angina & management involves Primary PCI
- B. Diagnosis is Non-ST elevation MI & management involves Primary PCI
- C. Diagnosis is ST-Elevation MI (STEMI) & management involves Primary PCI
- D. Diagnosis is acute Pericarditis management involves Primary PCI
- E. Diagnosis is acute Myocarditis & management involves Primary PCI

Not clear

Q54. A 20 years old male presented with hypertension with BP of 170/100mmHg. His 2D echo showed increased gradient across thoracic aorta. Which one of the following is a pathognomonic radiographic feature of this disease?

- A. Hilar prominence
- B. Rib notching
- C. Prominent pulmonary vasculature
- D. Upper lobe diversion
- E. Air bronchogram

Q55. A 73 years old male known case of ischemic cardiomyopathy with LV EF 30% presented to ER with shortness of breath and orthopnea. What is the most sensitive sign to diagnose acute LVF (left ventricular failure) in this case.

- A. Bibasilar crepitations in lung fields
- B. Raised JVP
- C. Dependent edema
- D. Third heart sound (S3)
- E. Pansystolic murmur

Q56. A 54 years old male known case of chronic kidney disease showed atrial fibrillation with fast ventricular response. His BP is 90/60mmHg. Which one of the following is the most appropriate treatment for rate control of this patient?

A. ACE inhibitors

B. ARBs

☒ C. Calcium channel blockers

D. Digoxin

E. Aspirin

→ 1st line or β -blockers
→ 2nd line

Q57. A 23 years old man presented with recurrent pneumothorax. He was treated with chest tube placement. During his hospital stay his lung expanded and there is no residual pneumothorax on CXR. What among the following procedures will yield better results in order to prevent the recurrence of pneumothorax in future?

A. Chemical pleurodesis via chest tube

☒ B. Chemical pleurodesis via thoracoscopy

C. Pleural abrasion via thoracoscopy

D. Thoracotomy with Pleurectomy

☒ E. Indwelling pleural catheter placement

Q58. A 30 year old male patient with asthma presented in emergency room with acute asthma attack. Which medication will you give for acute relief of his symptoms?

A. Salmeterol inhaler

☒ B. Beclomethasone inhaler

C. Montelukast tablets

D. Doxofylline syrup

☒ E. Salbutamol inhaler

Q59. Saleem, a 55 year old male, who works as a teacher, presents to his GP. He has progressive shortness of breath on exercise, a dry cough and has lost some weight recently. He is a previous smoker of 10/day for 29 years. On examination the ends of his fingers appear rounded and there are inspiratory crackles on auscultation. PEFR was normal. A chest X ray is organised, which shows no obvious mass, however there appears to be some haziness at both lung bases. What is the most likely cause of the above presentation?

A. COPD

B. LUNG CANCER

☒ C. Idiopathic pulmonary fibrosis

D. TB

E. Coal worker pneumoconiosis

Q60. Sultan is a 64yr old gentleman who saw his GP with SOB and a productive cough. He has attended the practice multiple times in the last few years for similar problems, particularly in winter. He explains he normally coughs a lot, bringing up a small amount of white sputum but currently is much more SOB and producing large volumes of green sputum. He is an ex-smoker with a 20 pack year history. His GP treats him with a course of antibiotics for a chest infection, which is very effective. The results of his PFTs post bronchodilation are as follows: FVC: 3.58 (predicted value 3.76 litres) 95% FEV1: 1.9 (predicted value 2.94 litres) 65% FEV1/FVC ratio: 0.53. What is this pattern consistent with?

A. Normal lung function

☒ B. Restrictive disease

C. Obstructive disease

D. Mixed disease

E. Severe COPD with limited response to bronchodilators.