

**POST GRADUATE DIPLOMA IN CLINICAL
CARDIOLOGY (PGDCC)**

Term-End Examination

00661

December, 2013

MCC-003 : COMMON CARDIOVASCULAR DISEASES - I

Time : 2 hours

Maximum Marks : 60

Note :

- (i) *There will be multiple choice type of questions in this examination which are to be answered in OMR Answer Sheet.*
- (ii) *All questions are **compulsory**.*
- (iii) *Each question will have four options and only one of them is correct. Answers have to be marked in figures in the appropriate rectangular boxes corresponding to what is the correct answer and then blacken the circle for the same number in that column by using HB or lead pencil and not by ball pen in OMR Answer Sheet.*
- (iv) *If any candidate marks more than one option it will be taken as the wrong answer and no marks will be awarded for this.*
- (v) *Erase completely any error or unintended marks.*
- (vi) *There will be **90** questions in this paper and each question carries **equal** marks.*
- (vii) *There will be no negative marking for wrong answers.*
- (viii) *No candidate shall leave the examination hall at least for one hour after the commencement of the examination.*

1. According to JNC 7 report pre-hypertension is defined as :
 - (1) SBP \geq 160 DBP \geq 100mmHg.
 - (2) SBP 120 - 139 DBP 80 - 89mmHg.
 - (3) SBP 140 - 159 DBP 90 - 99mmHg
 - (4) SBP < 120 DBP < 80mmHg.

2. Which is the commonest cause for secondary hypertension ?
 - (1) Renal parenchymal disease.
 - (2) Pheochromocytoma.
 - (3) Primary aldosteronism.
 - (4) Cushing syndrome.

3. Target blood pressure in diabetes mellitus patient is :
 - (1) < 110/80mmHg.
 - (2) < 140/90mmHg.
 - (3) < 120/80mmHg.
 - (4) < 130/80mmHg.

4. Which of the following test has high sensitivity to detect pulmonary embolism ?
 - (1) MRI.
 - (2) MDCT pulmonary angiography.
 - (3) Ventilation perfusion scan.
 - (4) D-Dimer more than 500/micrograms.

5. The optimal HBA₁C level for a diabetic patient is :
 - (1) < 6
 - (2) < 7
 - (3) < 8
 - (4) < 9

6. Which is not a feature in heart failure of acute origin ?
 - (1) Hypoxia.
 - (2) Tachycardia.
 - (3) Acute dyspnea.
 - (4) Cardiomegaly.

7. Which of the following is related to development of plaque rupture ?
 - (1) Cholesterol content.
 - (2) Inflammation.
 - (3) Oxidised LDL.
 - (4) All of the above.

8. True statements about ACS include all except :
 - (1) Patients with first time Q wave and non Q-wave MIs have similar prognosis.
 - (2) Q-wave develops in > 95% of patients with STEMI.
 - (3) Occlusion coronary thrombosis result in STEMI.
 - (4) Non occlusive coronary thrombosis typically results in ST depression or T-wave inversions.

9. BP levels of 150/80mmHg can be classified as :
- (1) Pre-hypertension. (2) Stage I Hypertension.
(3) Stage II Hypertension. (4) Isolated systolic Hypertension.
10. All are secondary preventive trials except :
- (1) CARE (2) LIPID (3) HPS (4) 4S
11. Best drug to treat very high Triglyceride :
- (1) Ezetemibe. (2) Atrovastatin.
(3) Fenofibrate. (4) Bile acid sequestrantes.
12. Killip classification denotes prognosis in :
- (1) Heart failure. (2) Acute MI.
(3) Arrhythmias. (4) Pulmonary Thromboembolism.
13. All are indicated in pregnancy induced hypertension except :
- (1) Calcium channel blockers. (2) Diuretics.
(3) ACE inhibitors. (4) Beta blockers.
14. After Balloon mitral valvotomy, a patient suddenly went into gross hypotension. On examination he had tachycardia pulsus paradoxus and elevated JVP, with a further rise in inspiration. The immediate treatment of choice will be :
- (1) IABP. (2) I. V. Inotropes.
(3) Pericardiocentesis. (4) None of the above.
15. A 40 years man presented to the emergency with severe angina of 3 hours duration. His ECG showed tall " T " waves. The blood test that can help in diagnosis in this case is :
- (1) Myoglobin. (2) CK-MB. (3) Troponin-I. (4) Troponin-T.
16. Features of cardiac tamponade are the following except :
- (1) Decrease in B. P during inspiration.
(2) Decrease in JVP during inspiration.
(3) Dyspnoea.
(4) Sinus tachycardia.

17. Systolic blood pressure due to anxiety white coat hypertension can go by :
- (1) 7 to 17mm of Hg. (2) 17 to 27mm of Hg.
(3) 27 to 37mm of Hg. (4) 1mm to 7mm of Hg.
18. A patient with constrictive pericarditis presented with heart failure. He is likely to have all except :
- (1) Pedal edema. (2) Tender hepatomegaly.
(3) Anorexia and nausea. (4) Prominent bilateral basal crepitations.
19. A patient who underwent angioplasty with stenting to LAD was discharged on 80mg of Atorvastatin. He came back after 3 weeks with complaints of pain in the legs. The blood test to be done in this case is :
- (1) CPK. (2) Creatinine. (3) SGOT. (4) SGPT.
20. Standard equipment used for measuring blood pressure :
- (1) Thermometer. (2) Defibrillator.
(3) Glucometer. (4) Sphygmomanometer.
21. Non-pharmacological management for hypertension includes following except :
- (1) Lowering body weight. (2) Restriction of dietary sodium.
(3) Cessation of smoking. (4) Calcium channel blocker.
22. First choice found to retard the progression of diabetic nephropathy and reduce albuminuria are :
- (1) Antibiotics. (2) Antihistaminics.
(3) Proton pump inhibitors. (4) ACEI and ARBS.
23. Side effects potassium sparing diuretics except :
- (1) Hypokalemia. (2) Hyperkalemia.
(3) Gynaecomastia. (4) Gastrointestinal symptoms.
24. Torsemide is :
- (1) Calcium channel blocker. (2) ACEI.
(3) Beta - Blocker. (4) Diuretic.

25. This agent that inhibits cholesterol absorption by the enterocytes.
- (1) Ezetimibe. (2) Niacin.
(3) Atorvastatin. (4) None of the above.
26. Which of these following drug belongs to type III Phosphodiesterase inhibitors ?
- (1) Sodium nitropruside. (2) Milrinone.
(3) Levosiniendone. (4) Sildenafil.
27. All are true about auscultatory gap except :
- (1) Does not effect measurement of Diastolic B. P.
(2) Elevate cuff pressure high beyond disappearance of brachial pulse.
(3) It's the difference of BP between first appearance of Korot Koff sounds and the one at lower levels.
(4) Mistakenly high B.P is measured.
28. All are features of cardiogenic shock except :
- (1) Cold clammy peripheries.
(2) Systolic BP less than 80mmHg.
(3) Cardiac index less than 1.8 L/mt/m².
(4) PCWP less than 18mmHg.
29. All are true about management of cyanotic spell except :
- (1) IV digoxin. (2) Knee chest position.
(3) Subcutaneous morphine. (4) Oxygen inhalation.
30. What should be avoided in case of RVMI ?
- (1) IV fluid.
(2) Inotropes.
(3) β -blockers.
(4) Preload reducing drugs.
31. Which of the following thrombolytic agent is administered as a single bolus dose ?
- (1) Streptokinase.
(2) Urokinase.
(3) Tenecteplase.
(4) Reteplase.

32. All of the followings are features of unstable angina except :
- (1) Angina at rest.
 - (2) Crescendo angina.
 - (3) Angina on exertion of last 1 year duration.
 - (4) Dynamic ST changes at rest associated with chest pain.
33. Orthopnea refers to :
- (1) Comfortable on lying down.
 - (2) Discomfort on recumbent position.
 - (3) Comfortable on sitting up.
 - (4) Comfortable on trendelenburg position.
34. Following are treatments of Prinzmetal angina except :
- (1) Aspirin.
 - (2) Nitrates.
 - (3) Calcium channel blocker.
 - (4) Beta blocker.
35. In heart failure due to Beri Beri therapy is :
- (1) Digitalis alone.
 - (2) Thiamine alone.
 - (3) Digitalis + diuretics.
 - (4) Thiamine + digitalis + diuretics.
36. ECG features of pulmonary thromboembolism are all of the following except :
- (1) RBBB.
 - (2) S₁Q₃T₃ Pattern.
 - (3) Ventricular arrhythmias.
 - (4) ST-T changes in anterior and inferior leads.
37. Which of the following drug belongs to thiazide group of Diuretics ?
- (1) Torsamide.
 - (2) Eplerenone.
 - (3) Indapamide.
 - (4) Amiloride.
38. In untreated hypertension patients what percentage of patients die with coronary artery disease :
- (1) 15%
 - (2) 33%
 - (3) 50%
 - (4) 26%
39. Which of the following drug has both alpha and beta blocker effect :
- (1) Bisoprolol.
 - (2) Acebutolol.
 - (3) Carvedilol.
 - (4) Metoprolol.
40. Commonest cause of death in India :
- (1) CAD.
 - (2) Accidents.
 - (3) Cancers.
 - (4) Cerebrovascular disease.

41. ST elevation in ECG in leads V¹ to V² denotes :
- (1) Antero septal MI. (2) Lateral or apical MI.
(3) Extensive anterior wall MI. (4) Inferior wall MI.
42. All are absolute contra indication for thrombolysis in acute MI except :
- (1) In a prior intracranial bleed. (2) Ischaemic stroke three months.
(3) Active peptic ulcer. (4) Presence of intracranial tumors.
43. Largest endocrine organ in the body :
- (1) Pituitary gland. (2) Pancreas. (3) Liver. (4) Endothelium.
44. Following class of drugs has proved to have mortality benefit in chronic heart failure patients :
- (1) ACE inhibitors. (2) IV Frusemide.
(3) Oral Digoxin. (4) Intermittent inotropic support.
45. Dopamine and dobutamine are :
- (1) Beta adrenergic agonists. (2) Synthetic catecholamine.
(3) Phosphodiesterase inhibitor. (4) Pure alpha agonists.
46. All are complications of long standing uncontrolled hypertension except :
- (1) S3/S4 gallop. (2) LVH. (3) Heart failure (4) Aortic stenosis.
47. Symptoms of heart failure includes all except :
- (1) PND. (2) Cough/haemoptysis.
(3) Anasarca. (4) Dyspnoea.
48. Morbid obesity is defined in men and women respectively at what BMI levels :
- (1) 31.1 and 32.3 (2) 35.3 and 38.3 (3) 30.1 and 31.3 (4) 28.1 and 31.3
49. Correct position of V₃ chest lead while taking ECG :
- (1) Between V₂ and V₄ chest leads.
(2) Left fifth intercostals space mid clavicular line.
(3) Left fourth parasternal space.
(4) Left fourth inter costal space in mid clavicular line.

50. The drug of choice for systemic hypertension in a patient with benign hypertrophy of prostate :
- (1) Metoprolol. (2) Doxazosin. (3) Amlodipine. (4) Thiazide.
51. Which of the following carries high mortality risk :
- (1) Inferior wall MI with CHB.
 (2) Anterior wall MI with CHB.
 (3) 50% resolution of ST elevation is anterior wall MI following thrombolytic therapy.
 (4) Anterior wall MI with accelerated idio ventricular rhythm.
52. Which creatine - Kinase iso-enzyme is relatively specific for heart ?
- (1) CK - MM (2) CK - BB (3) CK - MB (4) All of the above
53. Tall R in V_1 can be caused by :
- (1) Duchenne muscular dystrophy.
 (2) RVH.
 (3) Posterior MI.
 (4) Rt. Sided accessory pathway with pre excitation.
54. Which of the following auscultatory finding indicates systolic dysfunction in an elderly patient ?
- (1) S_4 (2) S_1 (3) S_2 (4) S_3
55. Which of the following does not characterize a vulnerable plaque ?
- (1) Few smooth muscle in the fibrous cap.
 (2) Thick fibrous cap.
 (3) Soft lipid rich core.
 (4) Macrophage infiltration of the shoulder region.
56. Which of the following is considered as coronary artery disease equivalent ?
- (1) Diabetes mellitus. (2) Smoking.
 (3) Systemic hypertension. (4) Dyslipidemia.
57. Following statements about milrinone are true except :
- (1) It has positive inotropic effect on the heart.
 (2) It is a potent vasoconstrictor.
 (3) It reduces left ventricular filling pressure in patients with heart failure.
 (4) It is phosphodiesterase inhibitor.

58. In coronary circulation, following are referred as resistance vessels :
- (1) Kogel's artery. (2) Mural artery.
(3) Intramyocardial arterioles. (4) Epicardial coronary artery.
59. In chest X-ray: alveolar edema suggests pulmonary venous pressure is likely to be :
- (1) 12 to 18mmHg (2) 19 to 24mmHg (3) 25 to 34mmHg (4) \geq 35mmHg
60. A 60 yrs old hypertensive patient has come to the OPD for routine check-up. He gives a history of rise in blood pressure during OPD visits regularly, though the pressure remains well controlled otherwise. The most likely diagnosis is :
- (1) Renal hypertension. (2) White coat hypertension.
(3) Both of the above. (4) None of the above.
61. Calcification is earliest sign of :
- (1) Tuberculosis. (2) Coronary artery disease.
(3) Hypertension. (4) Diabetes.
62. A long distance runner suddenly found himself breathless in walking up three flights of stairs. He is in NYHA class :
- (1) I (2) II (3) III (4) IV
63. A patient suddenly collapsed in the emergency. The monitor showed a wide QRS tachycardia at a rate of 170 bpm. The most appropriate treatment will be :
- (1) Defibrillation. (2) Ventilation.
(3) Chest compression. (4) I. V amiodarone.
64. A patient with dilated cardiomyopathy had a blood pressure of 80/40mmHg. His biventricular pacing is planned after 48 hrs. The inotrope to be used in this case is :
- (1) Dopamine. (2) Epinephrine. (3) Dobutamine. (4) Nor epinephrine.
65. Clinical characteristics of hypertensive crisis include all except :
- (1) Renal findings - oliguria, azotemia.
(2) Blood pressure usually $>$ 110mmHg systolic.
(3) Haematological findings - micro angiopathic hemolysis.
(4) Fundus changes - hemorrhage exudates papilla edema.

66. Which of the following is likely to precipitate symptomatic heart failure in patients with previously compensated LV contractile dysfunction ?
- (1) AF (2) A-V dissociation.
 (3) Marked sinus bradycardia. (4) All of the above.
67. The following are true regarding ventricular septal rupture during acute MI except :
- (1) The diagnosis is confirmed by angiography.
 (2) Occurs with almost equal frequency in anterior and inferior wall myocardial infarction.
 (3) Majority occurs in 1st week.
 (4) Is characterized by sudden clinical deterioration and appearance of a new systolic murmur in the left parasternal region.
68. Radiological features of heart failure include all the following except :
- (1) Kerley - B lines appear once pulmonary venous pressure exceeds 14mmHg.
 (2) Increased cardiothoracic ratio.
 (3) Cephalisation once pulmonary venous pressure exceeds 12mmHg.
 (4) Interstitial oedema appears once pulmonary venous pressure exceeds 12mmHg.
69. After 3 weeks of myocardial infarction a patient develops a systolic and diastolic scratchy murmur of a pericardium. Which is the most probable diagnosis ?
- (1) Mitral regurgitation. (2) VSD.
 (3) Pseudoaneurysm. (4) Dressler syndrome.
70. Rare approach for coronary angiogram :
- (1) Right radial. (2) Left femoral. (3) Right femoral. (4) Left radial.
71. In adults in basic life support what is ratio of chest compression to artificial breath :
- (1) 15 : 2 (2) 30 : 1 (3) 10 : 5 (4) 1 : 1
72. Advanced cardiac life support is best done in :
- (1) Home. (2) Road. (3) Hospital. (4) School
73. What is the electrical energy level used for defibrillation ?
- (1) 200 Joules - 200 Joules - 360 Joules.
 (2) 50 Joules - 100 Joules - 150 Joules.
 (3) 360 Joules - 200 Joules - 100 Joules.
 (4) 100 Joules - 200 Joules - 300 Joules.

74. What is the commonest rhythm seen during cardiac arrest ?
(1) Atrial fibrillation. (2) Ventricular fibrillation.
(3) Ventricular tachycardia. (4) Sinus rhythm
75. What is the key treatment for success of V. F. ?
(1) Chest compression. (2) O₂ inhalation.
(3) Electrical defibrillation. (4) IV fluid.
76. Mention any two drugs used in acute pulmonary edema and route :
(1) Serenace and Paracetamol intramuscularly.
(2) Morphine and Frusemide subcutaneously.
(3) Morphine and Frusemide intravenously.
(4) Lorazepan and Heparin intravenously.
77. In cardiac tamponade most important investigation is :
(1) ECG. (2) Echocardiography.
(3) CK - MB. (4) None of the above.
78. Coronary bypass surgery reduces mortality in :
(1) Two vessel disease with normal LV function.
(2) Single vessel disease with LV dysfunction.
(3) Triple vessel disease with LV dysfunction.
(4) Patients with chronic stable angina.
79. New York Heart association classification for heart failure class IV is :
(1) Ordinary physical activity does not cause any symptoms.
(2) Marked limitation of physical activity.
(3) Inability to carry out any physical activity without symptoms. Symptoms even at rest.
(4) Slight limitation of physical activity.
80. Name one condition that can impose a pressure overload on the Heart.
(1) Hypertension. (2) Diabetes.
(3) Aortic regurgitation. (4) Ventricular septal defect.
81. Major criterias includes the following in Framingham criteria for diagnosis of heart failure :
(1) Paroxysmal nocturnal dyspnoea. (2) Neck vein distension.
(3) Bilateral ankle edema. (4) Acute pulmonary edema.

82. Non pharmacological measures include all in heart failure except :
- (1) Oxygen administration. (2) Weight loss.
(3) Diuretic therapy. (4) Dietary salt restriction.
83. What is the best position for the patient in managing acute pulmonary edema ?
- (1) Supine. (2) Prone. (3) Propped up. (4) Left lateral.
84. Loop diuretic :
- (1) Amiloride (2) Triameterine. (3) Bumetanide. (4) Eplerenone.
85. Keith - Wagner classification describes :
- (1) Grade of proteinuria in HTN nephropathy.
(2) Doppler signs in reno vascular HTN patient.
(3) Atherosclerotic changes in ascending aorta in hypertension patients.
(4) Retinal changes in HTN patients.
86. Most favoured drug in ventricular Tachycardia :
- (1) IV Sotalol. (2) IV Lignocaine.
(3) IV Procainamide. (4) IV Amiodarone.
87. All are routine drugs that are used during immediate post MI period except :
- (1) ACE inhibitors. (2) Beta blockers.
(3) Calcium channel blockers. (4) Statins.
88. Roughly how many percentage of untreated hypertensives die of renal failure ?
- (1) 1% (2) 50% (3) 15% (4) 30%
89. In inferior wall MI ST elevation in seen is all except :
- (1) II lead. (2) III lead. (3) I lead (4) aVF.
90. Central alpha 2 agonists are all the following except :
- (1) Clonidine. (2) Methyldopa. (3) Metoprolol (4) Reserpine.

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