

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

**Term-End Examination**

00061

**June, 2011**

**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. The drug of choice for systemic hypertension in a patient with benign hypertrophy of Prostate is :  
(1) Metoprolol      (2) Doxazosin      (3) Amlodipine      (4) Thiazide
  
2. All of the following antihypertensive drugs reduce LV hypertrophy except :-  
(1) ACE inhibitor      (2) Ca channel blocker  
(3) Thiazide      (4) Direct Vasodilator
  
3. Which of the following antihypertensive drugs can cause gout ?  
(1) Beta blocker      (2) Ca channel blocker  
(3) Thiazide      (4) ACE inhibitor
  
4. Which of the following antihypertensive is contraindicated in pregnancy ?  
(1) Ramipril      (2) Amlodipine  
(3) Methyldopa      (4) Hydralazine
  
5. Systemic hypertension may lead to all of the following complication except :  
(1) Renal failure  
(2) Aortic regurgitation  
(3) Cerebral thrombosis  
(4) GI haemorrhage
  
6. In a 10 year old boy with a upper limb BP of 180/90 mm Hg and lower limb BP of 150/90 mm Hg, which of the following will you suspect ?  
(1) Renal artery stenosis      (2) Coarctation of aorta  
(3) Renal Parenchymal disease      (4) Aortoarteritis
  
7. Dominant coronary artery :  
(1) Gives rise to septal artery  
(2) Gives rise to posterior descending artery  
(3) Gives rise to acute marginal artery  
(4) Gives rise to obtuse marginal artery



14. According to current guidelines, all of the following about AICD are correct except :
- (1) AICD should not be implanted if there is non sustained ventricular tachycardia even if there is inducible VT, not suppressible by antiarrhythmic drugs during EP study.
  - (2) AICD should be implanted if LVEF is less than 30% and the Patient is in functional Class I.
  - (3) AICD should be implanted if LVEF is less than 35% and the Patient is in functional Class II.
  - (4) AICD should be implanted if there is sustained ventricular tachycardia in structurally abnormal heart.
15. Which of the following carries high mortality risk ?
- (1) Inferior wall MI with CHB
  - (2) Anterior wall MI with CHB
  - (3) Anterior wall MI with accelerated idioventricular rhythm
  - (4) 50% resolution of ST elevation is anterior wall MI following thrombolytic therapy
16. All of the following is true about hypertensive emergency except :
- (1) Acute severe increase in BP with target organ damage.
  - (2) Requires immediate hospitalization and IV antihypertensive therapy.
  - (3) Can be managed with oral antihypertensive drugs.
  - (4) Hypertensive encephalopathy is a form of hypertensive emergency.
17. Which creative kinase iso-enzyme is relatively specific for heart ?
- (1) CK MM            (2) CK BB            (3) CK MB            (4) All of the above
18. After ST elevation MI, how many days it takes for the Trop T level to come back to the normal range ?
- (1) 1 to 2 days        (2) 3 to 4 days        (3) 5 to 14 days        (4) 15 to 30 days

19. A 50 years male staying in a remote village developed severe chest pain. ECG showed anterior wall ST elevation. Nearest town having cath lab facility is 100 km away.
- Which of the following is the most appropriate strategy ?
- (1) Consider fibrinolytic therapy in the absence of contraindication to it.
  - (2) Rush him to the cath lab.
  - (3) Wait and repeat ECG after 1 hour.
  - (4) Start IV fluid and administer nonsteroid analgesics.
20. The optimal Hb A<sub>1c</sub> level for a diabetic patient is :
- (1) < 9
  - (2) < 8
  - (3) < 7
  - (4) < 6
21. All of the following lead to high output heart failure except :
- (1) Anemia
  - (2) AV fistula
  - (3) Thyrotoxicosis
  - (4) Mitral stenosis
22. In a known case of Rheumatic Heart Disease being followed up as isolated mitral regurgitation, all of the following points to significant mitral regurgitation except :
- (1) Cardiomegaly
  - (2) Long systolic murmur
  - (3) Middiastolic murmur
  - (4) Left ventricular S<sub>3</sub>
23. Which of the following ECG sign may suggest the culprit vessel in a case of MI to be proximal or mid RCA ?
- (1) ST segment elevation in lead III exceeding that of lead II combined with ST elevation in V<sub>1</sub>.
  - (2) ST segment elevation in lead II exceeding that of lead III
  - (3) ST segment elevation in lead I and lead av L
  - (4) ST segment elevation in lead V<sub>7</sub> to V<sub>9</sub>.
24. Tall R in V<sub>1</sub> can be caused by all except :
- (1) Posterior MI
  - (2) Right sided accessory pathway with preexcitation
  - (3) Right ventricular hypertrophy
  - (4) Dichenne muscular dystrophy

25. Platypnea orthodeoxia refers to :
- (1) Comfortable in lying position and dyspnea during sitting and /or standing position.
  - (2) Comfortable in standing position and dyspnea during lying down position.
  - (3) Dyspnea in both lying down and standing position
  - (4) None of the above
26. Angiotensin converting enzyme reduces the level of :
- (1) Renin
  - (2) Angiotensin I
  - (3) Angiotensin II
  - (4) Bradykinin
27. Each of the following therapy regarding heart failure is correct except :
- (1) Digoxin therapy reduces mortality
  - (2) Survival benefit by ACE inhibitors is more than combination of hydralazine and isosorbide dinitrate.
  - (3) Survival benefit of angiotensin II receptor blocker is similar to that of ACE inhibitor.
  - (4) Spironolactone reduces mortality in class III and IV patients.
28. All of the following is true about cardiac transplantation except :
- (1) Use of immuno suppressant drugs like cycloporine has improved the outcome.
  - (2) Younger patients without any commorbidity do better after transplant.
  - (3) Endomyocardial biopsy is the best way to detect transplant rejection.
  - (4) 5 year survival rate after cardiac transplant is less than 30%.
29. All of the following symptoms are most likely due to heart failure except :
- (1) Orthopnea
  - (2) Paroxysmal nocturnal dyspnea
  - (3) Bilateral pitting edema of the ankle
  - (4) Puffiness of the face
30. Which of the following auscultatory finding indicates systolic dysfunction in an elderly patient ?
- (1) S<sub>1</sub>
  - (2) S<sub>2</sub>
  - (3) S<sub>3</sub>
  - (4) S<sub>4</sub>
31. All of the following antihypertensive drugs are useful for patients in Heart failure except :
- (1) Diuretics
  - (2) Betablockers
  - (3) Calcium channel blocker
  - (4) ACE inhibitor

32. Which is not a feature in heart failure of acute origin ?
- (1) Cardiomegaly (2) Acute dyspnea  
(3) Tachycardia (4) Hypoxia
33. Which is the commonest cause of death in acute myocardial infarction ?
- (1) Cardiogenic shock (2) Heart failure  
(3) Malignant ventricular arrhythmia (4) Ventricular rupture
34. After 3 weeks of Myocardial infarction a patient develops a systolic and diastolic scratchy murmur of an precordium. Which is the most probable diagnosis !
- (1) VSD (2) Mitral regurgitation  
(3) Dressler syndrome (4) Pseudoaneurysm
35. JNC - 7 defines Prehypertension as :
- (1) Systolic BP 120 - 139, Diastolic BP 80 - 89  
(2) Systolic BP < 120, Diastolic BP < 80  
(3) Systolic BP 140 - 159, Diastolic BP 90 - 99  
(4) Systolic BP > 160, Diastolic BP > 100
36. Which is the antihypertensive drug of choice for diabetes and hypertension ?
- (1) ACE inhibitor (2) Alpha blocker  
(3) Diuretic (4) Calcium channel blocker
37. All of the following is true about digitalis toxicity except :
- (1) Lidocaine and Phenytoin are useful drugs to treat digitalis toxicity  
(2) Second and third degree heart block often respond to atropine  
(3) DC cardioversion may precipitate ventricular arrhythmia in patients with digitalis toxicity  
(4) Dialysis is very effective in cases of massive overdose
38. All of the following conditions are associated with high output heart failure except :
- (1) Iron overload (2) Hyperthyroidism  
(3) Paget's disease (4) Systemic A - V fistula

39. Digitalis is of Potential benefit in all of the following conditions except :-
- (1) Mitral stenosis with normal SR and normal LV and RV function
  - (2) Mitral stenosis with AF and normal RV function
  - (3) Dilated cardiomyopathy with LVEF < 25% and symptomatic heart failure.
  - (4) Hypertrophic cardiomyopathy with AF
40. Each of the following findings of heart failure is true except :
- (1) Pallor and coldness in extremity is due to increased adrenergic nervous system activity
  - (2) A positive hepatojugular reflex reflects hepatic congestion and inability of Right heart to accept increased venous return
  - (3) Hepatic tenderness is common in chronic right heart failure
  - (4) Protein losing enteropathy may occur in patients with visceral congestion
41. All of the following regarding arrhythmia is true except :
- (1) Prevalence of PVC increases with age
  - (2) PVC in the absence of structural heart disease has no impact on survival
  - (3) Class IC anti-arrhythmic drug are contraindicated for suppression of PVC following myocardial infarction
  - (4) Frequent PVC's is the best predictor of sudden death after a Myocardial infarction
42. Which of the following will least improve essential hypertension ?
- (1) Reducing alcohol consumption
  - (2) Reducing carbohydrate intake
  - (3) Stopping NSAIDS
  - (4) Reducing salt intake
43. Thiazide diuretics contribute to all except :
- (1) Hypouricemia
  - (2) Hypercalcemia
  - (3) Hypercholesterolaemia
  - (4) Hyponatraemia
44. Each of the following is a component of metabolic syndrome except :
- (1) Hyperglycemia
  - (2) Serum TG level > 150 ml/dL.
  - (3) Abdominal obesity
  - (4) Serum LDL level > 140 ml/dL.



45. Postulated mechanism of variant angina are all except :
- (1) Transient focal coronary artery spasm
  - (2) Vasospasm superimposed on fixed obstructive coronary artery disease
  - (3) Atherosclerotic plaque at site of spasm even with normal coronary angiogram
  - (4) Coronary Thrombosis
46. Which of the following drug combination should be used for treating hypertension with coronary artery disease and Past MI, LVEF of 40%.
- (1) ACE inhibitor and  $\beta$  - blocker
  - (2) Diuretic and calcium channel blocker
  - (3) Diuretic and vasodilator
  - (4) All of the above
47. The goal to achieve the blood pressure in a case of diabetes mellitus with hypertension is :
- (1) Less than 140/90 mm Hg
  - (2) Less than 160/90 mm Hg
  - (3) Less than 130/80 mm Hg
  - (4) Less than 140/80 mm Hg
48. Which of the following statement is false about hypertension ?
- (1) Renal parenchymal disease is the most common cause for hypertension in the pre-adolescent population.
  - (2) High salt intake, obesity, alcohol, physical inactiveness lead to BP rise.
  - (3) Renal artery stenosis, Renal Parenchymal disease, pregnancy, drugs, endocrine disorders account for majority of secondary hypertension.
  - (4) A cause for hypertension can be found in 95% of adults.
49. The work - up of a patient who is referred to you with established hypertension includes :
- (1) Thorough drugs history
  - (2) Urinalysis, Serum electrolytes and creatinine
  - (3) Assessment of Left Ventricular mass
  - (4) All of the above
50. Which of the following is related to development of plaque rupture ?
- (1) inflammation
  - (2) cholesterol content
  - (3) oxidized LDL
  - (4) All of the above

51. Which of the following does not characterize a vulnerable plaque ?
- (1) Soft lipid rich core
  - (2) Macrophage infiltration of the shoulder region
  - (3) Thick fibrous cap
  - (4) Few smooth muscle in the fibrous cap
52. Metabolic syndrome includes all except :-
- (1) Obesity
  - (2) Hyper triglyceredemia
  - (3) Hypothyroidism
  - (4) Fasting hyperglycemia
53. The comonest lipid abnormality in patients with established coronary artery disease is :
- (1) High LDL low HDL
  - (2) High total Chol, High LDL
  - (3) High LDL and Triglyceride
  - (4) High Triglyceride, low HDL
54. All play a role in development of acute coronary syndrome except :
- (1) Plaque erosion
  - (2) Plaque rupture
  - (3) Thrombosis
  - (4) Increased resistance of collagen cap
55. Which of the following is not true about the clinical aspect of acute coronary syndrome ?
- (1) Gradual arterial blockage is important
  - (2) The amount of myocardium at risk is an important factor
  - (3) Diabetes increases risk of CHF
  - (4) Low BNP levels worsen the situation
56. A 75 year old male developed inferior wall MI and got admitted to ICU. on 3<sup>rd</sup> day he developed hypotension, tachycardia and hypoxaemia. Auscultation revealed holosystolic murmur on left sternal border and basal rales. Which of the following is the likely diagnosis ?
- (1) Acute mitral regurgitation
  - (2) Severe Pericarditis
  - (3) RV myocardial infarction
  - (4) Free wall rupture



63. All of the followings have been shown to improve survival in a heart failure patients except
- (1) Beta-blocker
  - (2) ACE inhibitor
  - (3) Fruseamide
  - (4) Cardiac Resynchronization therapy in selected heart failure patients
64. All of the followings are usual cause for LV systolic dysfunction except :
- (1) Incessant tachycardia
  - (2) Anomalous origin of Left Coronary artery from Pulmonary artery
  - (3) Coronary artery disease with history of myocardial infarction
  - (4) Moderate size ventricular septal defect
65. All are true about amiodarone therapy except :
- (1) Hypothyroidism occurs fairly early
  - (2) Thyroid abnormalities depend on dose
  - (3) Mild rise in TSH is almost always present
  - (4) Treatment with amiodarone should be continued when severe hypothyroidism occurs
66. All of the followings suggest RV involvement in a case of myocardial infarction except :
- (1) Severe hypotension associated with inferior MI
  - (2) Presence of Kussmaul's sign in presence of inferior MI
  - (3) ST elevation in V<sub>4</sub>R (Right side Precordial lead at V<sub>4</sub> position)
  - (4) Depressed right ventricular filling pressures in the hemodynamic study
67. Most important digitalis mediated cardiac effect in CHF is :
- (1) Tachycardia
  - (2) Decreased AV conduction
  - (3) Improved renal perfusion
  - (4) Shift the force - velocity relationship upwards

68. Orthopnea refers to :
- (1) Comfortable on lying down
  - (2) Discomfort on recumbent position
  - (3) Comfortable on trendelenburg position
  - (4) Discomfort on sitting up
69. All of the followings are true except :
- (1) Amiodarone leads to increased mortality in patients with LV systolic dysfunction
  - (2) Implantable cardioverter defibrillator should be advised to all patients with NYHA Class II or Class III symptoms and LVEF less than 35%
  - (3) CRT is advised to a patient with LVEF < 35%, LBBB, QRS duration 180 ms and NYHA class III symptoms
  - (4) Amiodarone is not much different from placebo in terms of mortality when administered to patient with LV dysfunction
70. Which of the following does not cause elevated LA pressure ?
- (1) Mitral stenosis
  - (2) LV systolic dysfunction
  - (3) LV diastolic dysfunction
  - (4) Primary pulmonary hypertension
71. Which of the following feature suggests dyspnea more likely to be of respiratory origin ?
- (1) Elevated BNP
  - (2) Profuse sweating
  - (3) Bilateral rhonchi
  - (4) Orthopnea
72. Pulsus alternans is seen in :
- (1) Hypertrophic obstructive cardiomyopathy
  - (2) Severe AR
  - (3) Ventricular septal defect
  - (4) Advanced myocardial disease with systolic dysfunction
73. Which of the following is not true about Kerly B lines ?
- (1) It is seen due to interstitial pulmonary edema
  - (2) These are usually seen in lung basis
  - (3) It is seen when pulmonary venous pressure increases beyond 18 mm Hg
  - (4) It is commonly seen near the hilum

74. Vasodilators are helpful in congestive heart failure by :-
- (1) Increasing heart rate                      (2) Reducing afterload  
(3) Increasing preload                         (4) Promoting diuresis
75. A patient had myocardial infarction 1 year back. His LVEF is 35%. He is in symptomatic NYHA class II. Which stage of heart failure he belongs to :-
- (1) stage A                      (2) stage B                      (3) stage C                      (4) stage D
76. According to JNC - 7 which is the preferred first drug for treating hypertension unless there is compelling indication to use any specific drug ?
- (1) ACE inhibitor                                (2) Betablocker  
(3) Thiazide diuretics                         (4) Calcium channel blocker
77. Which of the following is associated with increased LV preload ?
- (1) Pulmonary embolism                      (2) RV infarction  
(3) Mitral Regurgitation                      (4) Dehydration
78. Each of the following statements about heart failure is true except :
- (1) Hydrothorax in heart failure is most commonly bilateral, but when it occurs unilaterally it is usually confined to right side.  
(2) The absence of pulmonary rales excludes presence of elevated pulmonary capillary pressure.  
(3) Hepatomegaly often precedes development of overt peripheral edema.  
(4) Peripheral edema may be absent with significant volume overload and systemic venous congestion.
79. All of the followings are correct about cardiac cycle except :
- (1) Third heart sound corresponds to the rapid early diastolic filling of the ventricle  
(2) The QRS complex in ECG corresponds to the isovolumetric contraction of the ventricle  
(3) The left atrial Y descent appears before the T wave in ECG  
(4) The mitral valve opens in diastole when the LV pressure falls below the LA pressure

80. All of the following statements about heart failure are true except :
- (1) Plasma norepinephrine level is usually elevated
  - (2) Serum B - type natriuretic peptide level is elevated
  - (3) Serum aldosterone level is elevated
  - (4) Cardiac beta adrenergic receptor density is increased
81. The following statement about IABP is correct except :
- (1) It should be promptly administered in patients with cardiogenic shock following aortic dissection and severe AR.
  - (2) Myocardial infarction with mechanical complications like MR and VSD benefit from use of IABP.
  - (3) The IABP should be timed to deflate during isovolumetric phase of LV contraction.
  - (4) Inflation of IABP should be timed to the aortic valve closure on the arterial pressure wave form.
82. With respect to renovascular disease all are correct except :
- (1) Worsening renal function with ACE - inhibitor therapy may suggest bilateral renal artery stenosis.
  - (2) Atherosclerotic disease most commonly involves proximal one third of renal artery.
  - (3) Incidence of renovascular disease falls with increased age.
  - (4) Patients with severe accelerated hypertension have the highest prevalence of renovascular disease.
83. Each of the following statements about hypertension is correct except :
- (1) Pure white coat hypertension is seen in 20 to 30% patients.
  - (2) While measuring BP, inappropriately small size cuff results in spuriously low systolic BP.
  - (3) Pseudohypertension may occur in patients with sclerotic brachial arteries.
  - (4) Chronic renal disease is the second most common cause of hypertension after essential hypertension.
84. All are true about LDL except :
- (1) LDL is the major cholesterol carrying component in plasma
  - (2) Apo 1 is the dominant Protein present in LDL
  - (3) LDL is formed from VLDL metabolism
  - (4) The major lipid component are triglyceride and esterified cholesterol

85. Following are treatment of Prinzmetal angina except :
- (1) Beta blocker
  - (2) Calcium channel blocker
  - (3) Nitrates
  - (4) Aspirin
86. Followings may be useful in advanced heart failure except :
- (1) Cardiac transplantation
  - (2) Cardiac resynchronisation therapy
  - (3) Dual chamber pacing
  - (4) Intermittent IV inotropic therapy
87. All are features of high output heart failure except :
- (1) Narrow Pulse pressure
  - (2) Tachycardia
  - (3) LV S<sub>3</sub>
  - (4) Raised JVP
88. All of the followings are true about cardiac rhythm disturbance except :
- (1) Inferior wall MI may be associated with CHB in initial stage which may recover later.
  - (2) Anterior wall MI, associated with Mobitz type II block has high mortality
  - (3) Anterior wall MI with Mobitz type II block is usually intranodal in nature
  - (4) Sinus bradycardia in MI often results from increased vagal tone
89. The drug of choice to treat hypertension in patients with coronary artery disease according to JNC - 7 is :
- (1) Betablocker
  - (2) Alpha blocker
  - (3) Diuretic
  - (4) Hydralazine
90. High fat intake causes which change in standard lipid profile :
- (1) Increases Triglycerides
  - (2) Decreases HDL
  - (3) Increases small dense LDL
  - (4) None of the above