

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

Term-End Examination

00600

June, 2011

MCC-005 : COMMON CARDIOVASCULAR DISEASES-III

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 Sheets.*
- (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 Sheets.*
- (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. Mexiletine is in which Class of Vaghuen-Williams anti-arrhythmic drug classification ?
 (1) Class II (2) Class III (3) Class IB (4) Class IC

2. Which is the incorrect statement about Quinidine ?
 (1) Thrombocytopenia and hemolytic anemia are side effects.
 (2) In atrial Fibrillation it decreases the ventricular response.
 (3) It has wide spectrum activity on atrial and ventricular arrhythmias.
 (4) Torsade de pointes are also seen \bar{c} quinidine.

3. Disopyramide causes all the following side effects except :
 (1) Urinary retention. (2) Torsade de pointes.
 (3) Dry mouth. (4) Pulmonary Fibrosis.

4. Infective Endocarditis prophylaxis is indicated in the following conditions except :
 (1) Adenoidectomy. (2) Bronchoscopy.
 (3) Dental extraction. (4) Adjustment of orthodontic appliance.

5. Which is the most common organism for Native Valve Infective Endocarditis ?
 (1) Streptococci Viridans (2) Staphylococci
 (3) HACEK organisms. (4) Fungal.

6. Ross I operation is done for which of the following valve lesion ?
 (1) Severe Calcific Mitral stenosis. (2) Severe Mitral regurgitation.
 (3) Severe Aortic regurgitation. (4) Severe Pulmonary stenosis.

7. Potts shunt is the connection between which of the following vessels ?
 (1) Right pulmonary artery to Ascending Aorta.
 (2) Left pulmonary artery to Ascending Aorta.
 (3) Main pulmonary artery to descending Aorta.
 (4) Left pulmonary artery to descending Thoracic Aorta.

8. The murmur of patent ductus arteriosus present the following characteristic feature :
- (1) Crescendo-decrescendo systolic and decrescendo diastolic contour
 - (2) Crescendo systolic and decrescendo diastolic murmur enveloping S_2 .
 - (3) Crescendo diastolic and decrescendo systolic murmur enveloping S_1 .
 - (4) Plateau shaped systolic and diastolic murmur.
9. Ventricular septal defect may cause short rumbling mid diastolic murmur at apex. What is the genesis of such murmur ?
- (1) Concomitant mitral stenosis.
 - (2) Excessive diastolic flow across Mitral valve.
 - (3) Austin Flint murmur.
 - (4) Diastolic flow across defect.
10. A cyanotic patient with a continuous murmur is likely to have :
- (1) Severe Tetralogy of Fallots. (2) Ruptured Sinus of Valsalva.
 - (3) PDA with Eisenmenger reaction. (4) Cyanotic heart disease with collaterals.
11. 29 year old female, has Class III N_4H_4 symptoms and Atrial Fibrillation. Echo showed severe Calcific Mitral Stenosis with Mild Mitral Regurgitation with clot in CA. Which is the preferred treatment option ?
- (1) Closed Mitral Valvotomy
 - (2) Balloon Mitral Valvotomy
 - (3) Mitral Valve replacement + declotting
 - (4) Open Mitral Valvotomy
12. Which of the following conduits have long patency at Ten years in CABG ?
- (1) Radial artery (2) Internal Mammary artery
 - (3) Gastro Epiploic Artery (4) Vein grafts
13. Who introduced I.A.B.P. (Intra Aortic Balloon Pump) for Temporary Circulatory support ?
- (1) Carpenter Edwards (2) Kantrowitz
 - (3) Denton Cooley (4) John Lewis

14. Which of the following prosthetic valve has high effective orifice area (EOA) at mitral position ?
- (1) Starr-Edwards (2) St. Jude (Bileaflet Valve)
(3) Hetero graft (Mounted) (4) Free Homograft
15. Severe Tricuspid Stenosis is said to be present when the gradient across Tricuspid Valve is :
- (1) 1 - 3 mmHg (2) > 5 mmHg
(3) 3 - 4 mmHg (4) 4 - 5 mmHg
16. Which is the wrong statement regarding Lido Caine ?
- (1) Repolarization Time is unchanged.
(2) Lido Caine acts by inhibiting the fast Na⁺ channels.
(3) Prolongs QT interval.
(4) Preferred therapy for ventricular arrhythmias
17. Sotalol is used in all the following conditions except :
- (1) PSVT (2) WPW syndrome
(3) Atrial Flutter (4) Torsade de Pointes
18. Sicilien Gambit classification of antiarrhythmic drugs is based on which of the following ?
- (1) Repolarization Time (2) Action Potential Period
(3) Ionic Channels and receptors (4) All of the above
19. Digoxin is not indicated in all the following conditions except :
- (1) Hypertrophic Cardiomyopathy (2) Diastolic dysfunction
(3) Chronic atrial Fibrillation (4) Atrial Fibrillation with Thyro Toxicosis
20. Which of the following statement regarding Adenosine is incorrect ?
- (1) Adenosine should be given I.V. bolus rapidly.
(2) Adenosine acts on inward rectifier potassium channel.
(3) It can safely given in Atrial Flutter.
(4) It should not be given in Bronchial Asthma patients.

21. 51 year old policeman was diagnosed to have mild Aortic stenosis 11 years ago on regular medical check up. Presently he has chest discomfort on his official work and found to have Diabetes Mellitus. His Echo showed Moderate Aortic Stenosis. His coronary angiogram showed left main disease with significant LAD and RCA lesion. Which is the preferred treatment for him ?
- (1) CABG
 - (2) CABG with Aortic valve replacement
 - (3) PTCA with Balloon Aortic valvotomy
 - (4) CABG with Balloon Aortic valvotomy
22. 32 year old male gives history of Joint Pains during childhood. Present symptoms shortness of Breath, while going to Bathroom and with disturbed sleep with nocturnal cough. His Echocardiogram showed doming of AML with severe mitral stenosis. Wilkinson's score 5. NO/LA clot. Which is the treatment of choice ?
- (1) Digoxin, LASIX, Inj. Penidure
 - (2) Open Mitral Valvotomy
 - (3) Mitral Valve replacement
 - (4) Balloon Mitral Valvotomy
23. Amiodarone therapy causes all the following side effects except :
- (1) Pulmonary fibrosis
 - (2) Hypothyroidism
 - (3) Photosensitivity
 - (4) Platelet depletion
24. Cyanotic spells are seen in the following conditions except :
- (1) Single ventricle with P.S.
 - (2) Tetralogy of Fallots
 - (3) Tricuspid Atresia with P.S.
 - (4) Total anomalous pulmonary venous connection
25. All the following statements regarding saphenous vein grafts are correct except :
- (1) At the end of 10 years only 25 percent of saphenous vein grafts are patent.
 - (2) 50% have significant Athero sclerotic changes after 10 years.
 - (3) Strict control of Risk factors will improve long term patency of venous grafts.
 - (4) 16% patients had patency at 15 years.

33. Each of the following is an appropriate therapy for a patient with acute ST elevation myocardial Infarction and cardiogenic shock except :
- (1) IABP (Intra Aortic Balloon Pump)
 - (2) Fibrinolytic Therapy
 - (3) Urgent PTCA
 - (4) Vasopressor drugs
34. Which of the following devices can interfere with pacemakers except :
- (1) Shok wave lithotripsy
 - (2) Microwave oven
 - (3) MRI scanners
 - (4) Arc welding equipment
35. All the following statements regarding A.S.D. (Atrial Septal Defect) are correct except :
- (1) ASD < 8 mm likely to close spontaneously.
 - (2) Ostium Primum A.S.D do not close.
 - (3) Sinus venosus type A.S.D do close spontaneously.
 - (4) Fossa ovalis ASD have tendency to close.
36. In the management of Cyanotic spells all the following treatment is given except :
- (1) I.V. Propranolol 0.1 mg/kg
 - (2) I.M. Ketamine
 - (3) I.V. Sodo-Bicarbonate
 - (4) I.V. Magnesium
37. Which of the following drug can safely be given with W.P.W. syndrome with previous episode of arrhythmia ?
- (1) Verapamil
 - (2) Amiodarone
 - (3) Beta Blockade
 - (4) Digoxin
38. Which is newer antiarrhythmic drug for acute conversion of Atrial fibrillation to Sinus Rhythm ?
- (1) Dronedarone
 - (2) Vernakalant
 - (3) Tedisamil
 - (4) Propafenone

39. Which is best diagnostic tool for Aortic dissection :
- (1) Trans Oesophageal Echo Cardiography
 - (2) C-T angio
 - (3) Aortography
 - (4) IVUS
40. All the following statements about distinguishing Ventricular Tachycardia (VT) from SVT (Supra Ventricular Tachycardia) in patients with a wide complex rapid rhythm are true except :
- (1) The presence of fusion beats supports the diagnosis of V.T.
 - (2) Termination of the Tachycardia by vagal maneuvers is consistent with a SVT
 - (3) The presence of atrioventricular dissociation implies VT
 - (4) Hemodynamic instability is proof of V.T.
41. All the following congenital heart diseases cause Eisenmenger syndrome except :
- | | |
|------------------------------|--------------------------|
| (1) Aorto pulmonary window | (2) Truncus Arteriosus |
| (3) Patent ductus Arteriosus | (4) Tetralogy of Fallots |
42. In which of the following congenital heart disease cyanosis is not seen :
- (1) Eisenmenger syndrome
 - (2) Pulmonary Valve stenosis
 - (3) Total anomalous pulmonary venous return
 - (4) Ebstein's anomaly
43. Which of the following statement regarding GLENN shunt is wrong ?
- (1) Glenn shunt is between SVC to Ipsilateral pulmonary artery.
 - (2) Glenn shunt requires low pulmonary artery pressure.
 - (3) This shunt is associated with pulmonary AV fistulas.
 - (4) Glenn shunt requires high pulmonary artery pressure.

44. Which of the following conduction disturbances commonly complicates Ebstein's anomaly ?

- (1) Type B WPW syndrome
- (2) Intra Atrial Block
- (3) Complete AV Block
- (4) LBBB

45. In Rubella syndrome all the following abnormalities are seen except :

- (1) Mental retardation
- (2) Hearing loss
- (3) Cataracts
- (4) Hypertelorism

46. Incidence of P.D.A among all Congenital Heart disease :

- (1) 1 - 2 percent
- (2) 2 - 4 percent
- (3) 5 - 10 percent
- (4) 15 - 20 percent

47. All the following Cardiac lesions are commonly seen in Noonan Syndrome except :

- (1) Dysplastic pulmonary valve stenosis
- (2) Hypertrophic Cardiomyopathy
- (3) Supravalvular aortic stenosis
- (4) PDA

48. A diastolic rumble over the lower Left Parasternal area usually has which of the following reason in ASD child :

- (1) Tricuspid stenosis
- (2) Mitral stenosis
- (3) Left to Right shunt exceeding 2 : 1 ratio
- (4) Pulmonic regurgitation

49. Which of the following combination of lesions seen in Lutembacher's syndrome ?

- (1) PDA + Mitral stenosis
- (2) VSD + Mitral regurgitation
- (3) ASD + Mitral stenosis
- (4) ASD + Mitral regurgitation

50. Differential Cyanosis is seen in which condition ?
- (1) VSD with Eisenmenger's syndrome
 - (2) ASD with Eisenmenger's syndrome
 - (3) Truncus Arteriosus
 - (4) PDA with Eisenmengers syndrome
51. All the following congenital heart diseases depend on PDA either for systemic (or) pulmonary flow except :
- (1) Critical co-arcation
 - (2) Critical Aortic stenosis
 - (3) Pulmonary Atresia
 - (4) Total anomalous pulmonary venous connection
52. In which of the Congenital Heart disease Pulmonary Hypertension is not seen :
- (1) Hypoplastic Left heart
 - (2) Complete Transposition of great arteries
 - (3) DORV with pulmonary stenosis
 - (4) P.D.A.
53. Continuous murmur seen in acyanotic Congenital Heart diseases except :
- (1) PDA
 - (2) Systemic AV fistula
 - (3) Sinus of Valsalva to RA (or) R.V
 - (4) Lutembacher's syndrome
54. The frontal plane QRS axis at Birth is around :
- (1) $+60^\circ$
 - (2) $+120^\circ$
 - (3) $+90^\circ$
 - (4) $+30^\circ$
55. All the following clinical signs are seen in children with Left to Right shunts except :
- (1) Absence of cyanosis
 - (2) Frequent chest infections
 - (3) Pulmonary Plethora
 - (4) Normal sized heart
56. In all of the Congenital Heart Diseases congestive heart failure is seen at Birth except :
- (1) Ventricular septal defect
 - (2) Critical Aortic stenosis
 - (3) Critical Mitral stenosis
 - (4) Mitral Atresia

57. Which congenital heart disease is common in Downs syndrome ?
- (1) Coarctation of Aorta (2) Transposition great arteries
(3) Tetralogy of Fallots (4) A.V. Canal defect
58. 49 year old Bank manager was found to have severe Aortic regurgitation. His Echo cardiogram showed L.V. ejection Fraction 0.42. He was able to do his bank work without limitation. What is the preferred treatment ?
- (1) Digoxin and Diuretics (2) Long acting Nifedipine
(3) Digoxin and Ramipril (4) Aortic valve replacement
59. In a patient with Tricuspid Regurgitation all the following has the better long term results except :
- (1) Mechanical Prosthetic valve replacement
(2) De Vega annuloplasty
(3) Annuloplasty with a Ring
(4) Bio prosthetic valve
60. Coarctation of Aorta is associated with the following lesions except :
- (1) P.D.A (2) Bicuspid Aortic Valve
(3) VSD (4) Truncus Arteriosus
61. In patients with sinus node dysfunction, Aderson and colleagues demonstrated following differences in the group with AAI pacing and VVI pacing except :
- (1) Higher incidence of thromboembolism in the AAI group
(2) Less heart failure in AAI group
(3) Less incidence of Atrial Fibrillation in the AAI group
(4) Improved survival in AAI group
62. Normal DDD pacing functions can appear electrocardiographically as following except :
- (1) Normal sinus rhythm (2) Atrial pacing only
(3) A-V sequential pacing (4) VVI pacing

63. During exercise in normal person, one liter increase in ventilatory oxygen consumption elicits an approximately following increase in cardiac output :
- (1) 1 liter (2) 2 liters (3) 4 liters (4) 6 liters
64. Following statements are true except :
- (1) Myocardial oxygen demand can be estimated as the product of HR and Systolic Blood Pressure.
- (2) Increase in Heart Rate and systolic blood pressure are determined by the ventilatory oxygen consumption requirement as a percentage of maximal amount of oxygen that the individual can transport during exercise.
- (3) Double Product is the product of heart rate Systolic Blood Pressure.
- (4) Myocardial oxygen uptake is determined solely by the external exercise work rate.
65. A MET is an energy unit defined as the use of the following ml of oxygen per minute per kilogram of body weight :
- (1) 2.5 ml (2) 3.5 ml (3) 4.5 ml (4) 5.5 ml
66. WHO has summarized the medical goals of cardiac rehabilitation as :
- (1) The prevention of cardiac death
- (2) A decrease in cardiac morbidity
- (3) Improvement in exercise capacity
- (4) The relief of symptoms such as Angina and Breathlessness
67. Following is considered Father of Open Heart Surgery :
- (1) Dr. Walton Lillehei (2) Dr. John Kirklin
- (3) Dr. John Lewis (4) Dr. John Gibbon
68. Following is the essential component of extracorporeal circulation except :
- (1) Blood Pump (2) Oxygenator
- (3) Heart Exchangers (4) Humidifier

69. Patient is fully heparinised before the start of cardio pulmonary bypass, Baseline activated clotting time at 30° C should be above :

- (1) 100 seconds
- (2) 200 seconds
- (3) 300 seconds
- (4) 400 seconds

70. Following statements about Intra aortic balloon pump are true except :

- (1) Contraindicated in severe aortic regurgitation
- (2) Should be placed below the left subclavian artery
- (3) Reduces after load
- (4) Improves cardiac output by 30 percent

71. Following percentage of Vein Grafts on an average remain patent after 10 years :

- (1) 40 - 49 percent
- (2) 50 - 59 percent
- (3) 60 - 69 percent
- (4) 70 - 79 percent

72. Off-pump, coronary artery surgery has following advantages, compared to on-pump coronary artery surgery except :

- (1) Decreases Inflammatory response
- (2) Activates coagulation system
- (3) Decreases Myocardial Ischaemia
- (4) Decreases risk of micro or macroembolization

73. Following percentage of left internal mammary artery grafts on an average remain patent after 10 years :

- (1) 60 percent
- (2) 70 percent
- (3) 80 percent
- (4) 90 percent

74. Minimally Invasive Direct CABG is generally used for following grafts :

- (1) Saphenous vein grafts to LAD and RCA
- (2) Saphenous vein graft to LAD
- (3) Left internal mammary artery graft to LAD
- (4) One arterial and one venous graft

75. In CABG, graft patency rates are high, when the vessels distal to the graft meet the following criteria except :
- (1) Larger than 1.5 mm (2) Larger than 1 mm
(3) Perfuse a large vascular bed (4) Arc free of Atheroma
76. Present guidelines recommend, following group of drugs to be discontinued about 5 days below CABG :
- (1) Beta blockers (2) Nitrates
(3) Calcium Antagonists (4) Thienopyridines
77. Of the following, which one is a Biological valve :
- (1) Bjork Shiley (2) Omni Science
(3) Chitra (4) Carpentier - Edward
78. In mitral stenosis, with small left ventricle, mechanical valve. which is better avoided :
- (1) Starr-Edward (2) St. Jude
(3) Medtronic - Hall valve (4) Carbomedics valve
79. Following could be the laboratory features of haemolysis in the setting of prosthetic valves except :
- (1) Anaemia (2) Increased INR
(3) Increased Reticulocyte count (4) Increased LDH
80. As per ACC/AHA recommendations for Percutaneous Mitral Balloon Valvotomy- patient with NYHA class III symptoms, severe MS with a non pliable calcified valve, at high risk for surgery, absence of CA thrombus - fit into following class :
- (1) class I (2) class II A (3) class II B (4) class III
81. As per ACC/AHA recommendations ; what is the class of indication for open mitral valvotomy for the following patient ; Patient in NYHA class I ; moderate to severe MS with valve morphology suitable for repair, who had recurrent episodes of embolic events on adequate anticoagulation :
- (1) class I (2) class II A (3) class II B (4) class III

82. Alfieri repair of mitral valve is described in one of the following causes of mitral regurgitation :
- (1) Rheumatic (2) Mitral valve Prolapse Syndrome
(3) Degenerative (4) Ischaemic
83. Supravalvular Aortic Stenosis in children with elfin facies, mental retardation, multiple peripheral pulmonary stenosis is described in :
- (1) Noonan syndrome (2) Turner's syndrome
(3) William's syndrome (4) Down syndrome
84. For asymptomatic patient with severe aortic stenosis and with left ventricular dysfunction ; what is the class of indications for Aortic valve surgery ; as per AHA/ACC guidelines :
- (1) class I (2) class II a
(3) class II b (4) class III
85. In post mortem series ; incidence of rheumatic tricuspid stenosis has been described as high as :
- (1) 35 percent (2) 25 percent
(3) 15 percent (4) 5 percent
86. Patient is said to be suffering from severe tricuspid stenosis when gradient across tricuspid valve is :
- (1) > 15 mm (2) > 10 mm
(3) > 5 mm (4) > 3 mm
87. In addition to cryptogenic stroke ; patent foramen ovale has also been implicated in the pathophysiology of following concept :
- (1) Decompression sickness
(2) Migraine Headache
(3) Platypnea - orthodeoxia syndrome
(4) Coronary Artery disease

88. Following statements about electrical cardioversion are true except :
- (1) Shock related myocardial damage increases directly with increase in applied energy.
 - (2) Monophasic machines need lesser amount of energy for cardioversion than Biphasic machines.
 - (3) For atrial arrhythmias ; antero-posterior pads may have a higher efficacy rate than apico anterior pads.
 - (4) Repeated shocks at the same energy may succeed by decreasing chest wall impedance.
89. Following statements are true except :
- (1) Situs Inversus with Levocardia carries a low incidence of Congenital Heart Diseases (CHD).
 - (2) Situs Inversus with Dextrocardia carries a low incidence of CHD.
 - (3) Situs solitus with Dextroversion carries a high incidence of CHD.
 - (4) Spore complex (syndrome) is an association of multiple levels of left ventricular inflow and outflow obstruction.
90. Presence of AV Block more commonly suggests one of the following congenital heart diseases except :
- (1) AV septal Defect
 - (2) DTGA
 - (3) Ebstein's Anomaly
 - (4) Partial Anomalous Pulmonary Venous connection
-