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No. of Printed Pages :16

**MCC-005**

# POST GRADUATE DIPLOMA IN CLINICAL CARDIOLOGY (PGDCC)

## Term-End Examination

## June, 2010

## 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. The term "d Loop" designation as applied to developed heart indicates :
   (1) the inflow portion of RV lies on left side
   (2) the inflow portion of RV lies on right side
   (3) the outflow portion of RV lies on left side
   (4) the outflow portion of RV lies on right side

2. In situs inversus with dextrocardia following are true except :
   (1) Usually occur with coexisting congenital Heart disease
   (2) Isolated atrial inversion is rare
   (3) Also called complete situs inversus with mirror image dextrocardia
   (4) All are false

3. The following are the characteristic of right isomerism except :
   (1) Bilateral superior vena cava
   (2) Transverse liver
   (3) Asplenia
   (4) Polysplenia

4. Congenital Cardiac malformation with left isomerism :
   (1) TAPVC
   (2) Pulmonary stenosis or atresia
   (3) Morphological or functional single ventricle
   (4) Left ventricular outflow obstruction

5. The coronary sinus defect is characterized by :
   (1) An opening in the wall of distal end of coronary sinus
   (2) It is associated with LSVC that insert into upper left corner of left atrium
   (3) Un roofing caused by absence of the partition between the coronary sinus and left atrium
   (4) All the above

6. The scimitar syndrome is characterized by :
   (1) Right pulmonary vein opening into IVC
   (2) Hypoplasia of the ipsilateral lung and pulmonary artery
   (3) The lower portion of right lung is perfused by systemic artery
   (4) All the above

7. The murmur of ASD is all except :

(1) Originates from pulmonary valve

(2) Is systolic in timing

(3) Is because of increase flow across the normal size pulmonary valve

(4) It is because of shunt at the atrial level

8. Cyanosis in a Child with ASD can occur due to all except :

(1) TAPVC

(2) Anomalous systemic venous drainage form normally aligned IVC

(3) ASD primum type

(4) Increased PVR

9. The earliest symptoms of an Ostium Secundum type of ASD is :

(1) Dyspnea (2) Platypnea

(3) Orthodeoxia (4) Palpitation

10. Syndrome Associated with ASD are all except :

(1) Holt Oram Syndrome (2) Turner's Syndrome

(3) Patau Syndrome (4) Edward's Syndrome

11. A wave and V wave of JVP in patient with non restrictive ASD have all except :

(1) Equal crest

(2) A wave tends to vary with heart rate

(3) Increase in PVR causes giant A wave

(4) All the above

12. The presence of ASD on Electrocardiogram could be suspected with all except :

(1) Absence of Sinus arrhythmia (2) Presence of Sinus arrhythmia

(3) Incomplete RBBB (4) Right Axis Deviation

13. Surgery in ASD is contraindicated in all except :

(1) The presence of PAPVC (2) Qp/Qs less than 1.5 : 1

(3) PVR more than 8 units/$m^2$ (4) All the above

14. Mortality associated with ASD surgery :
(1) More than 10%
(2) Near 0%
(3) Late survival of Post Op patients are poor
(4) High mortality during first 24 hour

15. Risk of Infective endocarditis is least in which CHD :
(1) Small perimembranous VSD (2) PDA
(3) Muscular defect type of VSD (4) All the above have high risk

16. Following are present in patients with Eisenmenger syndrome except :
(1) Erythrocytosis
(2) Extramural dilated Coronary Artery
(3) Hyperuricemia
(4) Systemic vasoconstriction

17. Infants with Moderately restrictive VSD with low or variable PVR present with :
(1) During birth with sign of heart failure
(2) Within first few months with Heart Failure
(3) Presents with early Cyanosis
(4) All the above

18. In VSD second heart sound becomes single in :
(1) With falling PVR (2) With PS
(3) With Rising PVR (4) With Larger VSD

19. Pulmonary artery banding is seldom done in :
(1) Isolated VSD (2) Swiss Cheese Defect
(3) As a bridge to Fontan (4) Tricuspid Atresia with VSD

20. All the following children with VSD are candidates for Early Repair Except :
(1) Older than 3 months with failure to thrive and increase in PVR
(2) Infant at six months with severe symptoms with PVR of 7 Woods units/$m^2$
(3) Infants with PVR less than 4 units/$m^2$
(4) Doubly committed or Juxta-aortic VSD

21. Continuous murmur of PDA :

(1) Starts after S1 and stops at S2

(2) Starts after S1 falls in intensity near S2 and then stops beyond S2

(3) Starts after S1 peaks in mid phase of S1 and stops beyond S2

(4) Starts after S1 peaks at S2 and continues in diastole

22. Aorto Pulmonary Window is :

(1) restrictive communication between Aorta and PA

(2) non restrictive communication between Aorta and PA

(3) restrictive communication between Aorta and RPA

(4) restrictive communication between Aorta and LPA

23. Ventricular Outflow lesion, Obstructive lesion are all the following except :

(1) Aortic Stenosis (2) Pulmonary Stenosis

(3) Cor triatriatum (4) Coarctation of Aorta

24. All the following are the obstructive Ventricular inflow lesion except :

(1) Supra Mitral ring (2) Tricuspid Stenosis

(3) Cor triatriatum (4) Peripheral Pulmonary Artery Stenosis

25. All the following are correct except :

(1) Noonan Syndrome is associated with Dysplastic PS

(2) Supra valvular PS is associated with Rubella Syndrome and William Syndrome

(3) Newborn with critical PS are cyanotic and tachypneic

(4) Majority of patients are symptomatic in infancy and childhood

26. All the following are wrong except :

(1) The incidence of congenital AS in male is 4:1

(2) Low Incidence of Bicuspid valve

(3) Supra valvular AS not associated with congenital rubella syndrome and William Syndrome

(4) The murmur of AS is softest over the ascending aorta

27. All the following are correct about COA except :

(1) Incidence in male is 3 : 1

(2) May present in symptomatic infant with failure

(3) Young and adolescent may be present without any symptoms

(4) Infants don't present with infective endarteritis and cerebral hemorrhage due to rupture of aneurysm in circle of Willis.

28. The following statements are all true except :

(1) In TOF pulmonary stenosis results in an ESM, the intensity of which is directly proportional to pulmonary flow across the valve.

(2) Cyanosis is directly proportional and ESM is inversely proportional to severity of PS

(3) Cyanosis is inversely proportional and ESM is directly proportional to severity of PS

(4) Second heart sound is single as only aortic component is audible in TOF.

29. The triad of cyanosis, cardiomegaly, and ischemic lung field in chest X ray are seen in following :

(1) Ebstein's Anomaly with PS

(2) TOF

(3) Uncorrected TGA with VSD and PS

(4) Corrected TGA with VSD and PS

30. Which Cyanotic CHD presents with CHF in 2-6 weeks of life ?

(1) TGA with Intact septum

(2) TGA with Restricted Pulmonary Blood Flow

(3) TGA with large VSD

(4) Option 1 and option 2 are correct

31. Following statements about Glenn Shunt are false except :

(1) It is a shunt between subclavian artery and respective PA

(2) SVC is connected with Pulmonary Artery

(3) SVC is connected with Descending Aorta

(4) SVC is connected with Ascending Aorta

32. All the following are criteria for Choussat and Fontan for low risk Surgery except :

(1) Age less than 4 years

(2) Pulmonary Artery/Aorta diameter > 0.70

(3) Mean Pulmonary artery Pressure < =15 mmHg

(4) Pulmonary arteriolar resistance <=4 units/$m^2$

33. Following surgery can be done for D-TGA :

(1) Arterial Switch Operation (2) Senning or Mustard-Procedure

(3) (1) and (2) (4) None of the above

34. Ross procedure consist of :

(1) Harvesting native pulmonary valve and implanting in the aortic position and replacing homograft valve in pulmonary position

(2) Harvesting native aortic valve and implanting in pulmonary valve position and replacing homograft in aortic position

(3) Harvesting tricuspid valve and implanting in mitral valve position and replacing homograft in tricuspid valve position

(4) Harvesting mitral valve and implanting in tricuspid valve position and replacing homograft in the mitral valve position

35. Rastelli operation consist of all except :

(1) Closure of Large VSD

(2) Establishing RV to PA connection

(3) This connection is established with external conduit, valved or non valved

(4) Establishing Aorta to PA connection

36. Following are false about Class I antiarrhythmic drugs except :

(1) It predominantly blocks slow sodium Channels

(2) It predominantly blocks fast sodium channels

(3) Class Ia agents are mexiletine, phenytoin, and lidocaine

(4) Class Ib agents are quinidine, procainamide, disopyramide

37. Following are class II antiarrhythmic agents except :

(1) Sotalol
(2) Propranolol
(3) Timolol
(4) Metoprolol

38. The following Antiarrhythmic agents that exerts vagolytic effect :

(1) Amiodarone
(2) Propranolol
(3) Verapramil
(4) Quinidine

39. Following statements about Antiarrhythmic agents are true except :

(1) Class Ia and III drugs prolong action potential duration increasing QT interval, cause pause dependent early after depolarization leading to VT.

(2) Bradyarrhythmias are a form of proarrhythmia occurring due to excessive suppression of Sinoatrial and atrioventricular nodes

(3) AADs can worsen hemodynamics by depressing ventricular function or by causing hypotension

(4) CAST study showed compared to controls flecainide causes four times less mortality in post MI patients with reduced LV function and complex ventricular ectopy

40. Following statements about Amiodarone are true except :

(1) It is highly effective in converting atrial flutter and atrial fibrillation to sinus rhythm

(2) It is one of the most effective agents developed for treatment of VT and ventricular fibrillation

(3) Patients with AICD on Amiodarone receive fewer shock than those compared with other conventional agents

(4) It is a broad spectrum antiarrhythmic drug.

41. Following statement about Adenosine is true except :

(1) It is a naturally occurring nucleoside

(2) It has profound but very short lasting effect on SA and AV node

(3) Atrial fibrillation is observed in 12% and is problematic in patients with WPW syndrome when the accessory pathway conducts antegrade rapidly

(4) Pediatric dosing is 1 to 3 mg/kg.

42. The characteristics of Ideal blood pump should be all the below except :

(1) It should pump 5 liter of blood per minute

(2) All parts coming in contact with blood should have smooth surface

(3) It should be able to monitor blood flow accurately

(4) Parts like tubing oxygenators and heat exchangers which come in contact with the blood should be disposable without contaminating permanent parts of the pump

43. IABP was introduced by :

(1) Alfred Blalock (2) Robert Gross

(3) John Kerlin (4) Kantrowitz

44. Following are true about Radial Artery Graft except :

(1) It was first used by Carpentier as a conduit for CABG in 1971

(2) To avoid spasm papaverine is liberally applied at the time of dissection

(3) Patency of Radial graft is as good as IMA

(4) C.A car in 90 reintroduced radial artery grafting

45. Which of the following is not an indication for surgery in IE :

(1) Stable asymtomatic incidently detected vegitation ( < 5 mm in size)

(2) Recurrent emboli

(3) Fungal endo carditis

(4) None of the above

46. In open Heart Surgery :

(1) Heart is stopped and put on cardiopulmonary bypass

(2) Heart chambers are essentially opened up

(3) None of the noncardiac vital organs are affected

(4) takes very short duration of Anasthesia

47. Which is the most physiological oxygenator :

(1) Film oxygenator (2) Disc oxygenator

(3) Bubble oxygenator (4) membrane oxygenator

48. Hypothermia during open heart surgery :

(1) Reduces metabolic requirement

(2) Preserves high energy phosphate

(3) Reduces oxygen consumption

(4) All of the above

49. Which is true of IABP :

(1) Its circulatory assist-device

(2) Used in cardiogenic shock

(3) Supportive measure to Revascul a risation

(4) All of the above

50. IABP is contraindicated in :

(1) Trivial AR (2) Mild Aorto Iliac Disease

(3) Aortic Aneurysm (4) None of the above

51. Which of the following grafts has longest ten year patency ?

(1) LIMA (2) Radial Artery

(3) Venous graft (4) None of the above

52. Which is the absolute indication for CABG ?

(1) Single Vessel Disease (2) Triple vessel Disease

(3) Left-main Disease (4) None of the above

53. Which of the following is tilting disc valve ?

(1) Starr Edward (2) St. Jude

(3) Medtronic-Hall (4) None

54. Antibiotic prophylaxis is required in a prosthetic valve patient during which proce dure ?

(1) ERCP (2) Cystoscopy

(3) Bronchoscopy (4) all of the above

55. IMR to be achieved in prosthetic valve is :

(1) 2 - 4.5 (2) 2.5 - 3.5 (3) 2 - 3.5 (4) None of the above

56. 30 yrs old person with Severe MS noncalcific pliable MV ideally needs :

(1) OMC (2) CMV (3) BMV (4) all of the above

57. Chordae are preserved during MVR to :

(1) Preserve LV function (2) To prevent LV rupture

(3) To stop valve thrombosis (4) None of the above

58. Maze operation is done for :

(1) MS (2) MR (3) AF (4) None of the above

59. Which of the following is contraindication for BMV :

(1) LAA-clot (2) Mild Central MR

(3) AF (4) Old CVA

60. Severe MS with Pregnancy needs :

(1) Medical treatment (2) MVR

(3) OMC (4) BMV

61. Commonest site for LV Aneurysm is :

(1) Antero lateral wall (2) Postero lateral wall

(3) Lateral wall (4) None of the above

62. Which of the following symptoms in Aortic stenosis gives worst prognosis :

(1) Angina
(2) Syncope
(3) Dyspnoea
(4) None of the above

63. Post AVR LV function recovers in severe AS as LV dysfunction is due to :

(1) After-load mismatch
(2) Silent MI
(3) Pseudo LV dysfunction
(4) Miscalculation of volumes in Echo

64. Which of the following is not a feature of William's Syndrome :

(1) Elfin facies
(2) Mental retardation
(3) Hypercalcemia
(4) Subvalvular aortic stenosis

65. In Ross procedure :

(1) Aortic valve is replaced by own pulmonary valve
(2) Pulmonary valve is replaced by homograft
(3) Autograft lasts longer in high pressure Aortic area
(4) All of the above

66. Which of them needs earliest Surgery ?

(1) Acute MR in LVF
(2) Asymptomatic moderate MR
(3) Chronic asymptomatic AR
(4) None of the above

67. Aortic valve repair is done in :

(1) ARC VSD
(2) Healed Endocarditis of Aortic valve
(3) Chronic AR with Mild LV dysfunction
(4) Non Rheumatic AR

68. Non PAH TR is caused by :

(1) Ebstein's Anomaly (2) TV Endocardites

(3) RV-Infarction (IHD) (4) All of the above

69. Commonest conduction abnormality seen after Tricuspid valve replacement is :

(1) RBBB (2) LBBB

(3) SSS (Silk Sinus Syndrome) (4) Complete Heart block

70. In Severe Pulmonic Stenosis peak gradient across Pulmonary valve is :

(1) > 60mm (2) > 70mm (3) > 80mm (4) >100mm

71. Ideal treatment for severe valvular Pulmonic stenosis is :

(1) Balloon dilatation (2) Annular Resection

(3) Valve replacement (4) Infundibular Resection

72. Commonest Cause of constrictive Pericarditis is :

(1) Tuberculosis (2) Viral

(3) Idiopathic (4) None of the above

73. Commonest Cause for Ventricular Aneurysm is :

(1) Myocardial infarction (2) Trauma

(3) Chaga's Disease (4) Sarcoidosis

74. Commonest site of enrolment in Aortic Aneurysm is :

(1) Ascending Aorta (2) Arch of Aorta

(3) Descending of Aorta (4) Thoraco Abdominal Aorta

75. Dissection of Aorta in young females commonly occurs :

(1) In pregnancy
(2) During lifting weight
(3) Following infection
(4) None of the above

76. Post MI-VSD may occur upto :

(1) 5 days post MI
(2) 7 days post MI
(3) 14 days post MI
(4) 21 days post MI

77. Which one of the following is diagnostic of pulmonary embolism :

(1) Signs of Acute Cor pulmonale
(2) Ventilation perfusion scan
(3) Echo cardiography study
(4) FDP positive

78. Cardiac transplant is done for the patients with :

(1) Refractory CHT
(2) NYHA class III/IV
(3) Ischemic or non ischemic Myocardial disease
(4) All of the above

79. Surgery is indicated in infective endocarditis causes if :

(1) large vegetation (> 10mm)
(2) Acute valvular regurgitation i.e Lvt
(3) Unresponsive Pyrexia
(4) All of the above

80. Early Trosthetic valve endocarditis is due to :

(1) Staph epidermidis
(2) Staph aureus
(3) Gram negative bacilli
(4) Diphtheroids

81. ASD Sec. width L5 mm diameter is closed if there is h/o :

(1) Hemoptysis (2) Cerebral embolism

(3) Fever (4) Dyspnea

82. Which of the following condition develops eisenmenger fastest :

(1) ASD (2) VSD

(3) PDA (4) None of the above

83. PDA is closed :

(1) Irrespective of sive (2) If there is CHT

(3) At the earliest (4) All of the above

84. Commonest associated lesion with coarctation of Aorta is :

(1) ASD (2) VSD (3) PDA (4) MS

85. Palliative Balloon Atrial Septostomy followed by Arterial switch is required in :

(1) TGA (2) TGAC.ASD

(3) TGAC.VSD (4) TGAC.VSDC.LVOJO

86. Operation of choice for TGAC. VSDC. LVOJ.obstruction is :

(1) Rastelli operation (2) Senning operation

(3) Mustard operation (4) REV procedure

87. B-T Shunt is done in TOF when :

(1) Pulmonary arteries are small (2) Coronaries crossing RVOS

(3) Small baby requiring surgery (4) All of the above

88. In Modified BT Shunt done in TOF :

(1) Subclavian is connected to Pulmonary Artery

(2) PTFE graft is inter positioned in classical BT shunt

(3) Aorta is connected to mix

(4) None of the above

89. Direct anastomosis between ascending Aorta and RPA is called :

(1) BT shunt (2) Waterston shunt

(3) Pott's Shunt (4) None of the above

90. Post repair in TOF pressure ratio of RV and LV is measured to :

(1) Assess RV function (2) Residual RVOT-obstruction

(3) LV function (4) None of the above