

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

00062

Term-End Examination

December, 2014

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. Cardiopulmonary bypass is used for
 - (1) Beating heart CABG
 - (2) ASD closure
 - (3) Pericardiectomy
 - (4) Mitral valvotomy

2. IABP (Intra aortic balloon counter pulsation) for temporary circulatory support is used by
 - (1) Inflation at QRS and deflation at T wave
 - (2) Inflation at P wave and deflation in QRS
 - (3) Inflation dirotic notch, deflation QRS
 - (4) De-Bakey timing is adjusted according to site of blockage

3. Left thoracotomy approach is used for all *except*
 - (1) Ligation of PDA
 - (2) Repair of coarctation of Aorta
 - (3) Pericardiectomy
 - (4) Pott's Shunt

4. Which is not the ideal characteristic of oxygenators used in cardiopulmonary bypass ?
 - (1) Maximize gas transfer
 - (2) Maximize priming volume
 - (3) Minimize blood trauma
 - (4) Good heat transfer efficiency

5. At the end of surgery, which is given to neutralize the effect of heparin ?
 - (1) Cyclokapron
 - (2) Vit. K
 - (3) Protamin Sulphate
 - (4) Fresh Frozen Plasma

- 6.** Cardioplegic solution has
- (1) Cold blood
 - (2) High potassium level
 - (3) Albumin
 - (4) Crystalloids
- 7.** In which condition IABP is not used or contraindicated ?
- (1) Failing left ventricle
 - (2) Urgent PTCA
 - (3) Cardiogenic shock
 - (4) Aortic Aneurysm
- 8.** Standard Balloon in IABP has capacity of
- (1) 20 ml
 - (2) 30 ml
 - (3) 40 ml
 - (4) 50 ml
- 9.** Internal Mammary Artery (IMA) in an ideal conduct for CABG because
- (1) Size matches the coronary arteries
 - (2) Resistant to atherosclerosis
 - (3) Excellent long term patency rate
 - (4) All the above are correct
- 10.** RIMA is most often used for bypassing
- (1) LAD
 - (2) PDA
 - (3) RCA
 - (4) OM

11. For bypass grafting which conduits have long term patency ?

- (1) Saphenous vein graft
- (2) LIMA
- (3) Radial Artery
- (4) Biological Conduits

12. Which coronary artery lesions are suitable for CABG ?

- (1) Chronic total exclusion
- (2) Small vessels
- (3) SVG stenosis
- (4) SVD beyond proximal LAD lesion

13. Which one of the following is commonest left main disease ?

- (1) Ostial left main
- (2) Middle of LT main
- (3) Bifurcation of left main
- (4) All three equally common

14. Radial artery patency is checked by the following test

- (1) Stress test
- (2) Allen's test
- (3) Dobutamine echo
- (4) TMT

15. Rastelli Operation is indicated in

- (1) Transposition of great arteries
- (2) Tetralogy of fallots
- (3) Atrial Septal Defects
- (4) Ventricular Septal Defects

16. Emergency surgery is indicated in
- (1) VSD
 - (2) TOF
 - (3) Aortic Dissection
 - (4) Aortic aneurysm
17. Medical Treatment is indicated in which type of Aortic dissection ?
- (1) DeBakey I
 - (2) DeBakey II
 - (3) DeBakey III
 - (4) Stanford type A
18. All the following are acyanotic congenital heart diseases *except*
- (1) Single ventricle
 - (2) Corrected transposition
 - (3) ALCAPA
 - (4) Pulmonary atresia
19. All of the following are left to right shunts *except*
- (1) Partial anomalous pulmonary venous drainage
 - (2) VSD
 - (3) RSOV
 - (4) Pulmonary AV fistula
20. Heart murmur in ASD is due to all *except*
- (1) Increased flow through pulmonary valve
 - (2) Increased flow through tricuspid valve
 - (3) Gradient at atrial level
 - (4) Increased flow into pulmonary branches

- 21.** Which one is not a treatment for TOF ?
- (1) Classic Blalock – Taussig Shunt
 - (2) Modified Blalock – Taussig Shunt
 - (3) Bentall procedure
 - (4) Pott's shunt
- 22.** About ASD which one is false ?
- (1) 5 – 10 % of all CHD's
 - (2) Left to right shunt
 - (3) CHP in early childhood
 - (4) Fixed S₂
- 23.** About VSD which is true ?
- (1) Large VSD has pansystolic murmur
 - (2) Flow murmur is across mitral valve
 - (3) Fixed S₂, not variable with respiration
 - (4) Right to left shunt
- 24.** Treatment of cyanotic spells include the following *except*
- (1) Propranolol
 - (2) Isoproterenol
 - (3) Morphine
 - (4) Phenylephrine
- 25.** Commonest arrhythmia in the post operative period after CABG
- (1) Ventricular fibrillation
 - (2) Atrial fibrillation
 - (3) Idioventricular rhythm
 - (4) Atrial Flutter

- 26.** Shunt between descending aorta to left pulmonary artery is known as
- (1) Blalock – Taussig Shunt
 - (2) Pott's shunt
 - (3) Waterson Shunt
 - (4) Modified Blalock – Taussig shunt
- 27.** Which one is not present in TOF ?
- (1) Overriding of aorta
 - (2) Muscular VSD
 - (3) Anterior deviation of outlet septum
 - (4) Left Ventricular Hypertrophy
- 28.** Which oxygenators are commonly used in cardiopulmonary bypass circuit ?
- (1) Film oxygenators
 - (2) Disc oxygenators
 - (3) Membrane oxygenators
 - (4) Bubble Oxygenators
- 29.** Contraindications for Balloon Mitral Valvotomy are all *except*
- (1) Heavy calcifications in commisures
 - (2) Moderate MR
 - (3) Pulmonary Hypertension
 - (4) LA thrombus
- 30.** Most common type of Atrial Septal Defect (ASD) in
- (1) Sinus venosus
 - (2) Ostium primum
 - (3) Ostium secundum
 - (4) Coronary sinus Type

- 31.** Which congenital heart disease is common in Down Syndrome ?
- (1) Coarctation of Aorta
 - (2) Transposition of great arteries
 - (3) Tetralogy of fallot
 - (4) AV canal defect
- 32.** Which one is not class-I antiarrhythmic drug ?
- (1) Lidocaine
 - (2) Phenytoin
 - (3) Amiodarone
 - (4) Flecainide
- 33.** Beta blocker with vasodilator action are all *except*
- (1) Carvedilol
 - (2) Atenolol
 - (3) Esmolol
 - (4) Labetolol
- 34.** Symptoms of digoxin toxicity are
- (1) Nausea, vomiting, diarrhea
 - (2) Visual disturbance
 - (3) Significant arrhythmia
 - (4) All of the above
- 35.** Indication of ICD is
- (1) VF / VT
 - (2) SVT
 - (3) Atrial Fibrillation
 - (4) All of the above
- 36.** Which drug for treatment of arrhythmia is classified under Vaughan-Williams Classification ?
- (1) Amlodarone
 - (2) Digoxin
 - (3) Adenosine
 - (4) Magnesium

37. The most commonly reported adverse effect of Lidocaine is

- (1) Sinus node depression
- (2) CNS toxicity
- (3) His-purkinje block
- (4) Hyperthermia

38. Elimination half life of adenosine is

- (1) 1 – 6 seconds
- (2) 10 – 16 seconds
- (3) 20 – 26 seconds
- (4) 30 – 36 seconds

39. Magnesium toxicity manifests as all *except*

- (1) Increased QRS duration
- (2) Loss of deep tendon reflexes
- (3) Respiratory paralysis
- (4) Decreased P-R Interval

40. Mitral diastolic murmur may be present in all *except*

- (1) RSOV
- (2) VSD
- (3) TOF
- (4) Mitral regurgitation

41. Which of the following is not a mechanism of cyanotic spell ?

- (1) Infundibular spasm
- (2) Increased right to left shunt
- (3) Activation of mechanoreceptors in RV
- (4) Increase in systemic vascular resistance

42. Which cardiac lesion does not produce cyanotic spells ?

- (1) Tetralogy of Fallot
- (2) Tricuspid atresia with PS
- (3) Coarctation of Aorta
- (4) DORV with VSD and PS

43. Carcinoid Syndrome involves which valve normally

- (1) Mitral Valve
- (2) Aortic Valve
- (3) Tricuspid valve
- (4) Pulmonary valve

44. Which is not a feature of Coarctation of Aorta ?

- (1) Suprasternal pulsation
- (2) Mitral regurgitation
- (3) Atrial fibrillation
- (4) Bicuspid aortic valve

45. Ventricular aneurysm, which is not true ?

- (1) 95% of ventricular aneurysm after transmural MI
- (2) 85% of them are on inferolateral wall of LV
- (3) Trauma and sarcoidosis are other causes
- (4) Manifests as CCF, ventricular arrhythmias and dyspnea

46. In aortic stenosis surgery is not indicated when

- (1) Symptomatic patient with severe AS
- (2) Patient with moderate AS undergoing CABG
- (3) Prevention of Sudden death in Asymptomatic patient
- (4) AS with LV dysfunction

- 47.** Which of the following is biological valve ?
- (1) Starr - Edward (S-E) Silastic ball valve
 - (2) Chitra valve
 - (3) Medtronic hall valve
 - (4) Medtronic Hancock valve
- 48.** Tricuspid regurgitation is quantified angiographically in how many grades ?
- (1) 2
 - (2) 3
 - (3) 4
 - (4) 5
- 49.** Elephant Trunk technique is used in which operation ?
- (1) Aortic Dissection
 - (2) Aortic Aneurysm
 - (3) Coarctation of Aorta
 - (4) VSD
- 50.** Most common type of TAPVC is
- (1) Cardiac
 - (2) Supra cardiac
 - (3) Infra cardiac
 - (4) Mixed Type
- 51.** In dual chamber permanent pacemaker implantation, lead is placed in
- (1) Right atrium
 - (2) Right ventricle
 - (3) Both of the above
 - (4) None of the above

52. Severe toxicity due to Amonidarone is seen on

- (1) GIT
- (2) CNS
- (3) Pulmonary
- (4) Renal

53. Which antiarrhythmic drug shortens QT interval ?

- (1) Quinidine
- (2) Lignocaine
- (3) Amiodarone
- (4) Sotalol

54. In Severe MS, Mean pressure gradient is

- (1) < 5 mm Hg
- (2) > 5 mm Hg
- (3) > 10 mm Hg
- (4) > 20 mm Hg

55. If a patient has moderate MS, Moderate MR and presence of LA clot in TEE, which operation cannot be performed ?

- (1) Closed mitral Valvotomy
- (2) Open Mitral Valvotomy
- (3) Mitral Valve replacement
- (4) Balloon Valvotomy

56. In pulmonic stenosis, which is not seen ?

- (1) Right ventricular hypertrophy
- (2) Pulmonary artery dilation
- (3) Oligemic lung fields
- (4) Soft P₂

- 57.** About congenital Aortic Stenosis, false is
- (1) High incidence of Bicuspid aortic valve
 - (2) Present with LV failure in neonates in severe cases
 - (3) More common in females (F : M – 4:1)
 - (4) In severe AS, murmur present at birth
- 58.** Devices that can interfere with pacemakers is
- (1) MRI
 - (2) Cautery
 - (3) Arc welding
 - (4) All of the above
- 59.** Torsades de Pointes occurs in patients with
- (1) Patient on Class IA drugs
 - (2) Patient on Class III drugs
 - (3) Prolonged QT in ECG
 - (4) All of the above
- 60.** Which of the following is not a property of digoxin ?
- (1) Excreted by kidney
 - (2) Increased para sympathetic tone
 - (3) < 50% absorbed from gut
 - (4) Increased intracellular calcium
- 61.** Anastomosis between Subclavian artery and Pulmonary artery with a graft is
- (1) Modified BT shunt
 - (2) BT shunt
 - (3) Waterston shunt
 - (4) Pott's shunt

- 62.** False about IABP is
- (1) Also called counter pulsation
 - (2) Supports failing LV after CABG
 - (3) Indicated in LV failure with severe AR
 - (4) It augments coronary and cerebral blood flow
- 63.** Following are used to distinguish ischaemic viable myocardium from a scar *except*
- (1) Thallium 201 scintigraphy
 - (2) Dobutamine stress echo
 - (3) Position emission tomography scan
 - (4) Coronary angiogram
- 64.** All are tilting disc valves *except*
- (1) Chitra valve
 - (2) Omni science valve
 - (3) St. Jude valve
 - (4) Bjork-Shiley valve
- 65.** All are biological valves *except*
- (1) Carpentier Edwards valve
 - (2) Perimount valve
 - (3) Medtronic valve
 - (4) TTK Chitra valve
- 66.** True about prosthetic valves
- (1) Should produce acceptable diastolic gradient in mitral position
 - (2) Should produce acceptable systolic gradient in aortic position
 - (3) Should produce acceptable systolic gradient in mitral position
 - (4) (1) and (2) are correct

67. Biological valves can be made of all *except*

- (1) Fascia lata
- (2) Dura mater
- (3) Pericardial tissue
- (4) Pleural tissue

68. Infective endocarditis prophylaxis in post valve replacement is not indicated in

- (1) Oesophageal dilation
- (2) ERCP
- (3) Cystoscopy
- (4) Coronary angiography

69. True about stuck valve is

- (1) Diagnosed by electrocardiography
- (2) Causes muffling of prosthetic sounds
- (3) Always associated with sepsis
- (4) It never occurs only in bioprosthetic valves

70. MVR is indicated in

- (1) Pt with severe MS in NYHA cl-IV who are not considered for BMV
- (2) Pt with severe MS in NYHA cl-II \bar{c} pulmonary hypertension (systolic pressure – 50 mm Hg at rest)
- (3) Pt \bar{c} severe MS in NYHA cl –II \bar{c} Non-plaible calcified valve in absence of LA Thrombus in NYHA cl-I
- (4) (1) and (2) are correct

71. Murmur in acute MR has

- (1) Crescendo-decrescendo character extending beyond S_2
- (2) Crescendo-decrescendo character ending before S_2
- (3) Pan systolic murmur
- (4) Crescendo-decrescendo character ending before S_1

- 72.** False about acute aortic regurgitation is
- (1) Can be caused by stuck prosthetic valve
 - (2) Leads to pulm. oedema and cardiogenic shock
 - (3) Immediate surgical intervention is required
 - (4) Preoperative IABP decreases surgical risk of AVR
- 73.** All are indications for emergency surgery in AR *except*
- (1) Dissecting aneurysm extending into the valve causing acute AR
 - (2) Post balloon valvotomy AR \bar{c} hypotension
 - (3) Native valve endocarditis with controlled blood pressure
 - (4) Traumatic AR \bar{c} hemodynamic compromise
- 74.** Echo quantification of moderate TR shows
- (1) Sustained colour flow jet \bar{c} jet area 5 – 20% of right atrium
 - (2) Sustained colour flow jet \bar{c} jet area 20 – 40% of right atrium
 - (3) Sustained colour flow jet \bar{c} jet area of 40 – 60% of right atrium
 - (4) Sustained colour flow jet \bar{c} jet area of 60 – 80% of right atrium
- 75.** True about organic TR
- (1) Always associated \bar{c} annular dilatation
 - (2) Associated \bar{c} significant mitral valve disease
 - (3) Associated \bar{c} anatomically abnormal leaflets
 - (4) Never associated \bar{c} tricuspid stenosis
- 76.** 55 year old male has pulmonary valve area of 0.4 cm^2 with peak pressure gradient across pulmonary valve of 96 mm Hg by echo cardiography. He is having
- (1) Mild pulmonary stenosis
 - (2) Trivial pulmonary stenosis
 - (3) Moderate pulmonary stenosis
 - (4) Severe pulmonary stenosis

- 77.** The following duration of time should be given to prevent spasm of radial artery
- (1) 6 months
 - (2) 1 month
 - (3) 3 months
 - (4) 2 months
- 78.** In the following percentage of stenosis of left main artery surgery is done
- (1) 40%
 - (2) 50%
 - (3) 60%
 - (4) 70%
- 79.** Which one of the prosthetic valve has lowest effective orifice area ?
- (1) St. Jude's
 - (2) Medtronic Hall
 - (3) Starr Edward
 - (4) Carbomedics
- 80.** Acute MR is caused by all *except*
- (1) Chordal Rupture
 - (2) Infective Endocarditis
 - (3) Acute MI
 - (4) Rheumatic
- 81.** The following procedure is a Ross Operation
- (1) Arterial switch operation
 - (2) Pulmonary autograft replaces Aortic Valve
 - (3) Atrial Septostomy
 - (4) Pulmonary switch operation

- 82.** Surgery in TAPVC is ideal in following age group
- (1) Less than 6 months
 - (2) > 6 months
 - (3) > 1 year
 - (4) > 2 years
- 83.** Which one of the following statements is correct regarding early prosthetic valve endocarditis ?
- (1) Occurs < 60 days
 - (2) Occurs < 60 days
 - (3) Occurs < 90 days
 - (4) Occurs > 90 days
- 84.** Which of the following can cause pulses Bisferiens ?
- (1) AS
 - (2) HOCM
 - (3) Constrictive pericarditis
 - (4) Beri Beri
- 85.** RV cavity obstruction by an abnormal muscle bundle is called as
- (1) Valvular PS
 - (2) Supra Valvular RV
 - (3) Double chambered RV
 - (4) Sub valvular PS
- 86.** Congenital cyanotic heart disease with increased pulmonary blood flow includes all *except*
- (1) TAPVC
 - (2) Truncus Arteriosus
 - (3) Single ventricle
 - (4) L-TGA

- 87.** Endo cardiac cushion defects have
- (1) Right axis deviation
 - (2) Right to left shunt
 - (3) Mitral Regurgitation
 - (4) Cyanotic spells
- 88.** Associated with coarctation least likely to be present is
- (1) ASD
 - (2) VSD
 - (3) Beirut Aortic Valve
 - (4) PDA
- 89.** Large left to right shunts have QP/QS ratio of more than
- (1) 1.5
 - (2) 2.0
 - (3) 3.0
 - (4) 4.5
- 90.** In cyanotic spell ABG will show the following :
- (1) saturation less than 90%
 - (2) CO₂ more than 40
 - (3) pH less than 7.3
 - (4) Hemoglobin less than 8