

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

Term-End Examination

00304

June, 2016

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 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 following statement about procainamide is false :
 - (1) About 50% is metabolised to napa
 - (2) Napa prolongs depolarisation
 - (3) Napa competes with procainamide for renotubular secretory sites
 - (4) Napa can increase procainamide's elimination half life

2. Treatment of bradyarrhythmia due to suppression of SA node/ AV node by antiarrhythmics is :
 - (1) Stopping of the offending drug
 - (2) Instituting temporary pacing
 - (3) Both
 - (4) Denervation of the heart

3. Which of these class IC drugs have the most proarrhythmic potential ?
 - (1) Flecainide
 - (2) Propafenone
 - (3) Moricizine
 - (4) Both (1) and (2)

4. The most well established use of parenteral magnesium is in treatment of :
 - (1) Torsades-de-pointes
 - (2) Supraventricular Tachycardia
 - (3) Ventricular fibrillation
 - (4) Atrial fibrillation

5. Magnesium toxicity is evidenced by :
 - (1) Increased PR interval and QRS duration in ECG
 - (2) Loss of deep tendon reflexes
 - (3) Respiratory paralysis
 - (4) All of the above

6. The following device may not interfere with a pacemaker :
 - (1) Cellular telephone
 - (2) Radiotherapy units for treating cancers
 - (3) Arc welding equipments
 - (4) Ultrasound machines

7. Lead failure in pacemakers occur due to trauma to the lead. The most common cause of which is :
 - (1) Accidents
 - (2) People twiddling with their pacemakers
 - (3) Battery short circuit
 - (4) Faulty pacemakers

8. External pacing :
 - (1) Done for stabilizing of the patient after implanting permanent pacemaker
 - (2) Typically done by placing two pacing pads on the chest wall
 - (3) It can be relied on for a long period of time
 - (4) The heart is always well stimulated along with the chest wall muscles

9. True about the defibrillators are all except :
 - (1) Both solid and wet gel electrodes are available
 - (2) Solid gel electrodes are more convinient
 - (3) Wet gel electrodes do not need cleaning of the patient's skin after removing the electrodes
 - (4) Solid gel electrodes have a higher risk of burns during defibrillation

10. In resuscitation, the resuscitation electrodes :
- (1) Are placed in antero posterior scheme preferably
 - (2) May be placed in anterior - apex scheme when anteroposterior scheme is unnecessary
 - (3) The apex electrode is placed to the left side of the patient just below and to the left of the pectora muscle
 - (4) All of the above statements are true
11. _____ Mode is the basic single chamber ventricular pacing mode i.e. it allows pacing only when the ventricular rate is below the programmed limit.
- (1) VVI
 - (2) AVI
 - (3) DDD
 - (4) DDI
12. Regarding implantable cardioverters - defibrillators, true statement is :
- (1) Dual chamber ICDS are better
 - (2) Single chamber ICDS are better
 - (3) Currently there is no consensus on the use of single V/S dual chamber ICDS
 - (4) All statements are false
13. In treatment of atrial fibrillation, false statement is :
- (1) Dronedrone is approved for treatment of AF
 - (2) After successful radiofrequency catheter ablation, AF can recur in 2-3 years
 - (3) Sotalol is ineffective in treating AF
 - (4) Ibutilide is an agent which can be used in the acute termination of AF episodes
14. The following patients are considered for heart transplantation while evaluating potential recipient, except :
- (1) Patients with cardiogenic shock requiring mechanical/high dose inotropic support
 - (2) Chronic, refractory, progressive or stage D heart failure
 - (3) Recurrent life threatening arrhythmias despite maximal interventions
 - (4) Refractory angina patients awaiting CABG
15. Immunosuppressive drugs used after cardiac transplantation are :
- (1) Glucocorticoids
 - (2) Calcineurin inhibitors
 - (3) Antiproliferative agents
 - (4) All of the above
16. Torsades de pointes, true statement :
- (1) Is a form of monomorphic VT with QT prolongation
 - (2) Cisapride when given with cyto P450 inhibitor can cause TDP
 - (3) Torsades de point means ballooning around a point
 - (4) All are false

17. Which of these class of conditions does not produce heart failure in the newborn ?
- (1) Critical coarctation of aorta
 - (2) AV malformations of the heart
 - (3) d transposition with intact ventricular septum
 - (4) Congenital mitral regurgitation
18. Following statements about intra aortic balloon pump are all 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%
19. Haemofiltration during open heart surgery - statement which is not untrue is :
- (1) During ultrafiltration blood is diluted and haematocrit is kept around 18-20
 - (2) Haemofiltration reduces pre operative compliment activation
 - (3) Haemofiltration causes blood destruction especially of platelets and coagulation factors
 - (4) Haemofiltration preserves excess fluid in the body especially in renal failure patients
20. Internal mammary artery is an ideal conduit for CABG because :
- (1) Size matches the coronary arteries
 - (2) Resistant to atherosclerosis
 - (3) Has excellent long term patency rates
 - (4) All are true
21. False about VSD surgical closure is :
- (1) Results of VSD surgery are excellent
 - (2) Mortality in a large series of patients was 1.6%
 - (3) Complications like complete heart block can occur
 - (4) Recurrent VSD is a rare complication of VSD surgery
22. Of the following, which one is a biological valve ?
- (1) Njork Shiley
 - (2) Omni Science
 - (3) Chitra
 - (4) Carpentier - Edward
23. Which of these valves has the largest effective orifice area for an aortic position :
- (1) Starr Edwards
 - (2) Single leaflet
 - (3) Bileaflet
 - (4) Heterograft
24. In post mortem, incidence of rheumatic tricuspid stenosis is as high as :
- (1) 15%
 - (2) 50%
 - (3) 5%
 - (4) 25%
25. Tricuspid stenosis is severe when the gradient across the tricuspid valve is :
- (1) 5 MM
 - (2) 10 MM
 - (3) 15 MM
 - (4) 12 MM

26. Alfieri repair is done in patients with mitral regurgitation of _____ origin.
 (1) Rheumatic (2) MVP (3) Degenerative (4) Ischemic
27. 7 year old child is having elfin facies, mental retardation, multiple peripheral artery stenosis and hypercalcaemia and also supraaortic stenosis. The most likely diagnosis is :
 (1) Noonans syndrome (2) Williams syndrome
 (3) Downs syndrome (4) Klinefelters syndrome
28. Approaches for pericardectomy usually include :
 (1) Right anterolateral thoracic approach
 (2) Median sternotomy
 (3) Both (1) and (2)
 (4) Interscapular approach
29. "Elephant trunk" technique is used in the surgical procedure for :
 (1) Aortic aneurysm (2) Aortic dissection
 (3) Coronary sinus ligation (4) SVC ligation
30. Hospital mortality for the ventricular septal rupture post M.I. is :
 (1) 30% (2) 25% (3) 20% (4) 40%
31. Around 80% of VSD are _____.
 (1) Membranous (2) Perimembranous
 (3) Muscular (4) Posterior
32. Circulation in congenitally corrected TGA is as follows :
 (1) Right atrium → right ventricle → pulmonary artery
 left atrium → left ventricle → aorta
 (2) Right atrium → left ventricle → pulmonary artery
 left atrium → right ventricle → aorta
 (3) Right atrium → right ventricle → aorta
 left atrium → left ventricle → pulmonary artery
 (4) None of the above
33. Notching of the ribs is a classical X-ray finding in :
 (1) Coarctation of the aorta (2) Pulmonary stenosis
 (3) Aortic dissection (4) Pulmonary atresia
34. During embryological development, the morphogenetic abnormality of malalignment of the infundibular septum gives rise to which of the following congenital heart disease ?
 (1) Ebsteins anomaly
 (2) Coarctation of aorta
 (3) Total anomalous pulmonary venous connection
 (4) Tetralogy of fallot

35. Parachute mitral valve results from :
- (1) Single papillary muscle
 - (2) Split anteromedial papillary muscle
 - (3) Split posteromedial papillary muscle
 - (4) None of the above
36. Atrial switch operation is performed in :
- (1) Truncus arteriosus
 - (2) Tricuspid atresia
 - (3) Transposition of great arteries
 - (4) Tetralogy of fallot
37. Definitive indication for surgery in aortic dissection are all except :
- (1) All proximal dissections
 - (2) Distal aorta dissection with rupture impending rupture
 - (3) Distal aorta dissection with retrograde extension into ascending aorta
 - (4) All of above are indications for surgery
38. True about adenosine is :
- (1) It does not produce flushing, dyspnoea and chest pressure as side effect unlike other anti arrhythmics
 - (2) Transient side effects occur in 50% of patients with SVT
 - (3) Ventricular ectopics, sinus bradycardia are common especially when SVT terminates abruptly
 - (4) Atrial fibrillation is occasionally observed in 22% of the patients
39. Digoxin toxicity is enhanced by :
- (1) High potassium levels
 - (2) Low potassium levels
 - (3) Both high and low levels are equally harmful
 - (4) Potassium levels have no effect on digoxin toxicity
40. Beta blocker with intrinsic sympathomimetic activity is :
- (1) Atenolol
 - (2) Propranolol
 - (3) Esmolol
 - (4) Labetalol
41. Which of these are highly protein bound ?
- (1) Lidocaine
 - (2) Phenytoin
 - (3) Mexelitine
 - (4) All class IB drugs are equally protein bound
42. Fontan procedure comprises of :
- (1) Redirecting all of RA blood into pulmonary circulation bypassing the RV
 - (2) Switching the great arteries to restore the normal ventriculoarterial concordance
 - (3) Outflow resection of RV and pulmonary valvulotomy
 - (4) Release of papillary muscles

43. A surgery involving closure of VSD and establishing RV to PA connection with an external conduit is called :
- (1) Blalock procedure (2) Glenn shunting
(3) Rastelli operation (4) Ross procedure
44. PDA has the tendency to close within _____ period.
- (1) 1-2 years (2) 3-4 years (3) 2-4 weeks (4) 10-12 weeks
45. ASD > _____ are unlikely to close spontaneously.
- (1) 8 mm (2) 15 mm (3) 10 mm (4) 3 mm
46. All of the following drugs decrease the effect of quinidine (class IA antiarrhythmic) except :
- (1) Phenobarbital (2) Phenytoin (3) Rifampicin (4) Ethanol
47. Cyanotic condition with normal pulmonary flow is :
- (1) Pulmonary atrio-venous fistula (2) Left SVC to AN unroofed coronary sinus
(3) Both (1) and (2) (4) None of the above
48. 33 year old female with mitral stenosis has a LAA clot and is in atrial fibrillation. Treatment of choice for her is :
- (1) Closed mitral valvulotomy (2) Balloon mitral valvulotomy
(3) Mitral valve repair (4) Open valvulotomy
49. Which of the following prosthetic valves has the highest effective orifice area at mitral aortic area ?
- (1) Starr Edwards (2) Free homograft
(3) Heterograft (4) ST Jude Bileaflet valve
50. Unclassified drugs under Vaughen Williams classification are all except :
- (1) Bretylium (2) Adenosine (3) Magnesium (4) Digoxin
51. Cyanotic spells are seen in all of the following conditions except :
- (1) Tetralogy of fallot
(2) Total anomalous pulmonary venous connection
(3) Tricuspid atresia with pulmonary stenosis
(4) Double outlet right ventricle with VSD and pulmonary stenosis
52. Which of the following can cause chemical sympathectomy like state :
- (1) Labetalol (2) Bretylium tosylate
(3) Carvedilol (4) Adenosine

53. Following are the mechanisms for cyanotic spells :
- (1) Acute increase in the pulmonary blood flow
 - (2) Decrease in the circulation catecholamines
 - (3) Both (1) and (2)
 - (4) None of the above
54. In Down's Syndrome which of the following chromosomal abnormality is seen ?
- (1) Trisomy 21 (2) Trisomy 18 (3) Trisomy 24 (4) Trisomy 26
55. Dose of aspirin following device closure of ASD is :
- (1) 3-5 mg/kg/day (2) 10 mg/kg/day
 - (3) 1 mg/kg/day (4) 81 mg/day
56. All of the following statements regarding ASD are correct except :
- (1) ASD < 8 mm are likely to close spontaneously
 - (2) Ostium primum ASD do not close spontaneously
 - (3) Fossa ovalis ASD have tendency to close
 - (4) Sinus venosus ASD do close spontaneously
57. Neurological/central nervous system complications of congenital heart disease include all of the following except :
- (1) Acute global ischaemia (2) Chronic focal ischaemia
 - (3) Brain abscess (4) Mycotic aneurysms
58. Which of the following class III antiarrhythmics have the longest half life ?
- (1) Amiodarone (2) Bretylium (3) Sotalol (4) Ibutilide
59. False statement about hypoxia test is :
- (1) It is used to rule out critical congenital heart disease
 - (2) It is based on the principle that administration of 100% O₂ can raise the PO₂ of arterial blood to higher level in the absence of shunt
 - (3) It requires estimation of PCO₂ levels
 - (4) All statements are true
60. Proximal aortic aneurysms include :
- (1) DeBakey type I and II or Stanford type A
 - (2) DeBakey type I and Stanford type A
 - (3) DeBakey type I and II and Stanford type B
 - (4) DeBakey type III or Stanford type B

61. In complete transposition of great arteries, in relation to the pulmonary valve, the aortic valve :
- (1) Is placed more anteriorly, superiorly and to the right
 - (2) Is placed more posteriorly, inferiorly and to the left
 - (3) Is placed more anteriorly, inferiorly and to the left
 - (4) Is placed more posteriorly, inferiorly and to the right
62. Cardiac rehabilitation is prescribed for patients who :
- (1) Have had myocardial infarction
 - (2) Have undergone bypass grafting
 - (3) Have chronic stable angina
 - (4) All of the above
63. Correct statement about angiographic quantification of tricuspid regurgitation is :
- (1) Grade I - partial RA quantification
 - (2) Grade II - minimal systolic jet, clears rapidly
 - (3) Grade III - opacification of whole RA
 - (4) Grade IV - opacification of whole of RV
64. Potts shunt is between :
- (1) Left pulmonary artery and descending thoracic aorta
 - (2) Left pulmonary artery and ascending thoracic aorta
 - (3) Right pulmonary artery and ascending thoracic aorta
 - (4) Main pulmonary trunk and ascending thoracic aorta
65. In pulmonary regurgitation, if the jet extends more than 2 cm, then it is :
- (1) Severe PR
 - (2) Mild PR
 - (3) Moderate PR
 - (4) Normal finding
66. The percentage of survival at 10 years with patients undergoing medical treatment for triple vessel coronary artery disease is :
- (1) 20%
 - (2) 50%
 - (3) 70%
 - (4) 30%
67. In bidirectional glenn shunt hospital mortality is :
- (1) 5-10%
 - (2) 10-15%
 - (3) 15-20%
 - (4) 20-25%
68. Differential cyanosis is seen in which of the following conditions ?
- (1) Aorto Pulmonary Window
 - (2) Coarcpation of Aorta with Aortic Stenosis
 - (3) Tetralogy of Fallot
 - (4) Right to Left shunt with Patent ductus arteriosus
69. In critically ill neonates with coarctation of aorta, the following drug is used :
- (1) Prostacyclin
 - (2) Prostaglandin
 - (3) Propranolol
 - (4) Protamine

70. Congenital pulmonary stenosis, the treatment of choice for which is :
- (1) Percutaneous balloon valvulotomy
 - (2) Surgical valvulotomy
 - (3) Pulmonary valve replacement
 - (4) Aorto-pulmonary shunting
71. In acquired aortic stenosis of rheumatic origin, the aortic valve is :
- (1) Predominantly regurgitant with some degree of stenosis
 - (2) Predominantly stenotic with some degree of regurgitation
 - (3) Equally stenotic and regurgitant
 - (4) All of the above
72. All are surgeries for mitral stenosis except :
- (1) Mitral valve replacement
 - (2) Open mitral valvulotomy
 - (3) Closed mitral valvulotomy
 - (4) Mitral valve repair
73. Chithra valve is a :
- | | |
|-------------------------|------------------------|
| (1) Bileaflet valve | (2) Tilting disk valve |
| (3) Ball and cage valve | (4) Bioprothetic valve |
74. Which of the following statements is untrue with regard to dietary aspects in CABG patients ?
- (1) Pre-operatively patients are given low calorie, low fat diet
 - (2) Immediate post-operatively, patients are given strict dieting regimen
 - (3) After a month patients are made to go back to their previously prescribed diet
 - (4) Smoking is strictly prohibited
75. With respect to vein grafts in CABG, at the end of ten years post-operative :
- (1) 50% grafts are patent, 50% have significant atherosclerotic changes
 - (2) 25% are patent with 75% having atherosclerosis
 - (3) 75% are patent with 25% having atherosclerosis
 - (4) 100% are occluded
76. Unture about false ventricular aneurysm is :
- (1) Develops after acute rupture of infarct
 - (2) Occurs more often on the anterolateral surface
 - (3) The mouth is usually narrow
 - (4) Resection is always recommended

77. Bental procedure is a technique used to repair aortic aneurysm involving :
- (1) Ascending aorta and aortic valve
 - (2) Descending thoracic aorta
 - (3) Descending thoracic aorta and arch
 - (4) Ascending aorta below the innominate artery
78. All are true about constrictive pericarditis except :
- (1) Is usually the first stage of inflammatory process involving the pericardium
 - (2) In developing world, infection with M. TB is still common
 - (3) Non infective causes involve idiopathic, post radiation or post surgery
 - (4) A few cases have been reported after insertion of implantable defibrillators
79. Cardiac rehabilitation involves :
- (1) Exercise training
 - (2) Education, counselling and behavioural interventions
 - (3) Both (1) and (2)
 - (4) None of the above
80. True about cardiac rehabilitation are all except :
- (1) Phase I - begins in the hospital
 - (2) Phase II - consists of planned rehabilitation programs
 - (3) Phase III - consists of a lifelong program committed to encourage exercise and a healthful lifestyle
 - (4) Phase IV - ends with the death of the patient
81. Ventricular septal rupture, true statement is :
- (1) Correct terminology is post myocardial ventricular septal defect
 - (2) The location is 60% anterior and 40% posterior
 - (3) An anterior septal rupture is often associated with mitral regurgitation
 - (4) Presence of a ventricular septal rupture is not an indication of surgery
82. Absent in the triad seen in PS with atrial right to left shunt (intact IVS) is :
- | | |
|--------------|--|
| (1) Cyanosis | (2) Ischaemic lung fields in chest X-ray |
| (3) Split S2 | (4) Cardiomegaly |
83. Following statement about sotalolol true except :
- (1) L - isomer is responsible for the beta blockade
 - (2) Effective in ventricular tachycardia
 - (3) Prevents recurrence of wide range of SVT
 - (4) It does not cause pro-arrhythmia

