

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

00833

Term-End Examination

December, 2013

MCC-007 : CARDIO-VASCULAR RELATED DISORDERS

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 following would be features of pre-eclampsia, except :
 - (1) Common in Primigravida
 - (2) Onset after 20 weeks of gestation
 - (3) Onset before 20 weeks of gestation
 - (4) Proteinuria present

2. A 26 years old lady with 26 weeks of gestation presents to your clinic with history of ongoing palpitations since past 20 minutes. ECG shows SVT. The following are **true** except :
 - (1) Reentrant SVP are most frequent in pregnancy.
 - (2) Atrial fibrillation and flutter are not common in pregnancy with structurally normal hearts.
 - (3) When AF occurs with MS, rapid ventricular rate is poorly tolerated
 - (4) Electrical cardioversion is not advocated.

3. A 30 year old primigravida wants to know about the echo report as she is concerned about a value indicating mean pulmonary artery pressure of 32 mm Hg which of the following statements is false ?
 - (1) PPH is defined as elevation of mean PA pressure 25 mm Hg in the absence of a demonstrable cause.
 - (2) PPH carries high maternal mortality during pregnancy of about 50-60%
 - (3) Prematurity and fetal loss are not associated with PPH.
 - (4) Death may be due to progressive RV is ischemia and failure.

4. In Eisenmenger's syndrome and pregnancy :
 - (1) Maternal mortality/morbidity is around 40%
 - (2) Early Abortion is not advised
 - (3) Inhalation of nitric oxide is not beneficial
 - (4) Induction of labour is preferred in comparison to spontaneous labour

5. Following can cause high output cardiac failure except :
 - (1) Anemia
 - (2) Systemic AV fistula
 - (3) Carcinoid Syndrome
 - (4) Restrictive cardiomyopathy

6. Potassium sparing diuretics are all of the following except :
- (1) Amiloride (2) Amrinone
(3) Epterenone (4) Spironolactone
7. A pregnant lady with Marfan's syndrome presents to your clinic with apprehension about pregnancy Echo show aortic root diameter of 35 mm. Your advice would be :
- (1) Aortic size < 40 mm is favourable for tolerating pregnancy
(2) Complications usually occur in early pregnancy with Marfan's
(3) Aortic regurgitation is unusual in pregnancy with Marfan's
(4) Aortic dissection is less common in Marfan's patients with pregnancy compared to Marfan's patients who are non-pregnant
8. You have diagnosed a young lady with 12 weeks gestation to have Hypertrophic cardiomyopathy. The following are true except :
- (1) Sudden death is common especially with a positive family history of sudden cardiac disease
(2) Most cases of pregnancy with HCM have favourable outcome
(3) During labour and delivery blood loss is to be avoided in symptomatic patients
(4) Prostaglandins may be used to induce contractions in obstructive cardiomyopathy
9. In a spot urine sample microalbuminuria is defined as :
- (1) 10-100 $\mu\text{g}/\text{mg}$ creatinine (2) 20-200 $\mu\text{g}/\text{mg}$ creatinine
(3) 30-300 $\mu\text{g}/\text{mg}$ creatinine (4) 40-400 $\mu\text{g}/\text{mg}$ creatinine
10. A rise in 1% HbA_{1c} translates into how much increase in mean glucose level :
- (1) 15 mg/dl (2) 25 mg/dl (3) 35 mg/dl (4) 45 mg/dl
11. Basal insulin is provided by which of the following insulins :
- (1) Glargine (2) Aspart (3) Lispro (4) Glulisine

8. In Diabetes Control and Complications Trial (DCCT) which of the following complications showed maximum reduction with better glycemc control :
- (1) Retinopathy (2) Micro albuminuria
(3) Clinical nephropathy (4) Neuropathy
19. Which of the following drugs is useful in orthostatic hypotension due to diabetic autonomic neuropathy :
- (1) Midodrine (2) Clonidine
(3) Octreotide (4) All of the above
20. Which of the following statements is correct for cardiovascular death rate among Men and Women with type 2 DM :
- (1) More in men than women
(2) More in women than men
(3) Equal in men and women
(4) Any of the above
21. In all pregnant women measurement of BP should be performed in which position :
- (1) Supine (2) Sitting
(3) Standing (4) All of the above
22. Warfarin therapy during the first trimester of pregnancy is associated with :
- (1) Fetal chondrodysplasia punctate
(2) Fetal optic atrophy
(3) Mental Retardation
(4) All of the above
23. Following are **true** about prosthetic valves except :
- (1) Tissue valves are less thrombogenic
(2) Tissue valves have greater longevity
(3) Mechanical valves require long term anticoagulation
(4) Tissue valves are less problematic in pregnancy

24. In a patient with cyanotic heart disease with pregnancy the following statements are **correct** except :
- (1) Women who develop DVT are at a higher risk of paradoxical embolism
 - (2) When maternal oxygen saturation is < 85% fetal outcome is good
 - (3) When maternal oxygen saturation is > 90% fetal outcome is good
 - (4) For pregnant patients with Tetralogy, Screening for 21q11 deletion is recommended
25. High risk pregnancies include all except :
- (1) Symptomatic aortic stenosis
 - (2) Symptomatic mitral stenosis
 - (3) Coarctation of Aorta
 - (4) Asymptomatic VSD
26. Pulmonary hypertension can occur associated with the following condition except :
- (1) Sickle cell disease
 - (2) Schistosomiasis
 - (3) Sarcoidosis
 - (4) Salmonellosis
27. Following are prostacyclins used in the treatment of PAH except :
- (1) Epoprostenol
 - (2) Treprostinil
 - (3) Loprost
 - (4) Ambrisentan
28. The following are histopathological types of hypertensive pulmonary vascular disease except :
- (1) Isolated medial hypertrophy
 - (2) Plexogenic arteriopathy
 - (3) Thrombotic Arteriopathy
 - (4) Toxic arteriopathy
29. Regarding optimal duration of anticoagulation after PTE, following are true except :
- (1) First provoked DVT/PTE → 3-6 months
 - (2) Isolated calf DVT, first episode → 3 months
 - (3) Unprovoked PE → 3 months
 - (4) Cancer with PE → Indefinite duration

0. All are ECG features of pulmonary embolism except :
- (1) Sinus tachycardia (2) Sinus Bradycardia
(3) Right axis deviation (4) T inversion in V₁-V₄
31. Platypnoea is dyspnoea that occurs in which position :
- (1) Upright (2) Sitting (3) Supine (4) Lateral
32. Which of the following is false in Eisenmengers syndrome :
- (1) Cyanosis
(2) Elevated pulmonary vascular resistance
(3) Intracardiac communication
(4) Pulmonary stenosis
33. Angiotensinogen is synthesized by :
- (1) Kidney (2) Liver (3) Pancreas (4) Lung
34. Which of the following is **not** related to infective endocardity :
- (1) Subungual hemorrhages (2) Osler's nodes
(3) Nikolsky's sign (4) Janeway lesions
35. Trisection is a method for :
- (1) Assessing chest expansion
(2) Assessing character of arterial pulse
(3) Assessing postural fall of BP
(4) Assessing pulse, BP and respiration
36. Ankle brachial index consistent with critical limb ischemia and rest pain is :
- (1) < 0.3 (2) < 0.5 (3) < 0.7 (4) < 0.9
37. Pseudotumor cerebri is found in :
- (1) MS (2) AS (3) AR (4) MR

38. Alternation of right and left bundle branch block is a sign of :

- (1) Bifascicular disease
- (2) Trifascicular disease
- (3) Complete heart block
- (4) AV dissociation

39. Bazzett's formula for calculation of QTc is

- (1) $\frac{QT}{\sqrt{P-R \text{ interval}}}$
- (2) $\frac{QT}{\sqrt{R-R \text{ interval}}}$
- (3) $QT \times \sqrt{P-R \text{ interval}}$
- (4) $QT \times \sqrt{R-R \text{ interval}}$

40. Which of the following is **not** an adverse effect of amiodarone :

- (1) Pulmonary infiltration
- (2) Hepatitis
- (3) Photosensitivity
- (4) Bronchospasm

41. Which of the congenital malformation is typical of Rubella Embryopathy :

- (1) Peripheral pulmonary stenosis
- (2) Coarctation of aorta
- (3) Tricuspid Atresia
- (4) VSD

42. Barlows syndrome refers to :

- (1) Bicuspid Aortic stenosis
- (2) Mitral valve prolapse
- (3) Atrial myxoma
- (4) HOCM

43. Holiday heart syndrome is the term used for cardiotoxicity due to :

- (1) Alcohol
- (2) Tobacco
- (3) Amphetamine
- (4) Cocaine

44. Blunting of day-night blood pressure pattern occurs in :

- (1) Sleep apnea
- (2) Autonomic neuropathy
- (3) African American population
- (4) All of the above

45. In the ALLHAT trial which of the following ACE Inhibitors was used :
- (1) Lisinopril (2) Ramipril
(3) Enalapril (4) Perindopril
46. Insulin resistance is due to mutations in the :
- (1) Lipoprotein Lipase (2) PPAR-gamma
(3) PPAR-alpha (4) None of these
47. Possible contributor of diabetic cardiomyopathy is :
- (1) Collagen accumulation (2) Activation of PKC
(3) Genetic abnormalities (4) All of the above
48. All of the following are clinical features of pulmonary embolism except :
- (1) Syncope (2) Paradoxical embolism
(3) Pneumothorax (4) Pulmonary infarction
49. DVT in pregnancy occurs mostly during :
- (1) 1st trimester (2) 2nd trimester
(3) 3rd trimester (4) Post partum
50. The peripheral wedge shaped density above diaphragm in pulmonary embolism is known as :
- (1) Westermark sign (2) Hampton's hump
(3) Mc connell's sign (4) Palla's sign
51. Mc connel's sign is seen in :
- (1) Primary pulmonary Hypertension
(2) DVT
(3) PTE
(4) Arterial thrombosis

52. NC filters are most often placed at :
- (1) Below renal veins
 - (2) Above renal veins
 - (3) At the level of renal veins
 - (4) At the level of hepatic veins
53. The window period for effective thrombolysis in pulmonary embolism is :
- (1) 1 week
 - (2) 6-12 hours
 - (3) 0-3 hours
 - (4) Upto 2 weeks
54. Nitric oxide is derived from :
- (1) L-arginine
 - (2) L-Citrulline
 - (3) Cyclic AMP
 - (4) Cyclic GMP
55. The most common etiology for secondary pulmonary hypertension is :
- (1) Collagen vascular disease
 - (2) Secondary to congenital heart disease
 - (3) secondary to mitral valve disease
 - (4) HIV infection
56. Following ECG findings do not occur during normal pregnancy :
- (1) QRS axis deviation
 - (2) Sinus bradycardia
 - (3) Increased R/S ratio in V_1 and V_2
 - (4) ST-T changes
57. Following heart diseases are well tolerated during pregnancy expect :
- (1) ASD
 - (2) VSD
 - (3) PPH
 - (4) PDA
58. This is **untrue** regarding acute MI in the peripartum period :
- (1) Highest incidence occurs in the third trimester
 - (2) More common in multigravida
 - (3) Most maternal deaths occur at the time of infarction or within 2 weeks
 - (4) Anterior MI commoner than inferior MI

59. All of the following are **true** regarding use of heparin in pregnancy except :
- (1) Is not considered safe
 - (2) Carries no risk of embryopathy
 - (3) Prolonged use may cause sterile abscesses, osteoporosis, fractures, bleeding complications
 - (4) Rarely spontaneous abortion have been reported
60. The total amount of insulin secreted by pancreas is estimated as :
- (1) 18-32 units in 24 hours
 - (2) 30-45 units in 24 hours
 - (3) 8-24 units in 24 hours
 - (4) None of the above
61. Following are true about type 1 diabetes, except :
- (1) It is a result of auto-immune beta cell destruction
 - (2) HLA antigens on chromosome 26 are responsible
 - (3) Characteristically present with polyuria, polyphagia and polydipsia
 - (4) Discontinuation of insulin can rapidly precipitate ketoacidosis
62. Following drugs can be associated with hyper-glycemia except :
- | | |
|------------------------|--------------------|
| (1) Beta-blockers | (2) Steroids |
| (3) Thiazide diuretics | (4) Cephalosporins |
63. Following are true except :
- (1) Patients with impaired glucose tolerance are more susceptible to macrovascular complications
 - (2) Patients with impaired glucose tolerance are more susceptible to microvascular complications
 - (3) 3-5% of IGT patients develop frank diabetes
 - (4) None of the above are true

64. Regarding hypoglycemia - all are true expect :
- (1) Symptoms include confusion, weakness, drowsiness
 - (2) Hypoglycemia unawareness is common in elderly
 - (3) Hypoglycemia is less common in renal failure
 - (4) Hypoglycemia is defined as blood glucose < 60 mg/dl
65. For diagnosis of hyperosmolar, non ketotic coma following are true except :
- (1) Plasma glucose > 600 mg/dl
 - (2) Serum osmolarity > 330m osm/kg
 - (3) Presence of ketones in blood/urine
 - (4) Arterial pH > 7.3
66. Glastazol is a :
- (1) Phosphodiesterase inhibitor
 - (2) Useful in pulumonary artery hypertension
 - (3) Used in treatment of ovarian cancer
 - (4) None of the above
67. Background diabetic Retinopathy shows all except :
- (1) Micro aneurysms
 - (2) Dot and blot hemorrhages
 - (3) Uveitis
 - (4) Cotton wool spots
68. Regarding diabetic Amyotrophy following is **true** :
- (1) Painless neuropathy
 - (2) Knee jerk is usually lost
 - (3) Usually affects young males
 - (4) Symptoms are worse during the day
69. Following drugs are useful in diabetic neuropathy except :
- (1) Amitriptyline
 - (2) Carbamazepine
 - (3) Gabapentin
 - (4) Cabergoline

70. Gastrointestinal features of Autonomic neuropathy of diabetes include all except :
- (1) Early satiety
 - (2) Diarrhoea
 - (3) Diarrhea alternating with constipation
 - (4) Abdominal colic
71. Regarding metformin true is :
- (1) Contraindicated in Renal failure
 - (2) Contraindicated in Hepatic failure
 - (3) Contraindicated in heart failure
 - (4) All of the above
72. Artificial sweetness include all except :
- | | |
|----------------|---------------|
| (1) Saccharin | (2) Aspartame |
| (3) Acesulfame | (4) Acebutol |
73. All are short acting insulin analogues except :
- | | |
|---------------|--------------|
| (1) Lispro | (2) Aspart |
| (3) Glulisine | (4) Glargine |
74. Goals of diabetes treatment are all except :
- (1) $HbA_{1C} < 7\%$
 - (2) FBS < 126 mg/dl
 - (3) PPBG < 200 mg/dl
 - (4) Promote use of insulin than OHAs
75. Following should be done annually to detect complications of diabetes except :
- (1) Check distal pulses
 - (2) Lipid profile
 - (3) Tonometry for intraocular pressure
 - (4) ECG

76. Following physiological changes occur in pregnancy except :
- (1) Average increase in blood volume by 50%
 - (2) Heart rate increases and peaks by 3rd trimester
 - (3) Pulmonary vascular resistance increases
 - (4) Systemic vascular resistance falls
77. D-Dimer levels are elevated in :
- (1) Acute myocardial Infarction
 - (2) Sepsis
 - (3) 2nd or 3rd trimester of pregnancy
 - (4) All of the above
78. A 23 year old primigravida comes to your clinic for routine health check. You find a murmur on cardiac auscultation. Which of the following murmurs would be pathological :
- (1) Mid systolic murmur
 - (2) Continuous murmur heard over the heart
 - (3) Pansystolic murmur at the apex
 - (4) None of the above
79. A primary health officer wants your opinion on the diagnosis of peripartum cardiomyopathy in a young lady who has delivered 1 week ago. The following features would be suggestive of the same except :
- (1) Common in the last month of pregnancy
 - (2) Common in the first 5 months post partum
 - (3) Has higher mortality in subsequent pregnancies
 - (4) Does not recur in subsequent pregnancies
80. Wells diagnostic scoring system is used in :
- | | |
|------------------------|---------------------|
| (1) ILD | (2) COPD |
| (3) Pulmonary embolism | (4) Cystic fibrosis |

81. A 34 year old woman presents at 34 week pregnancy with severe substernal chest pains since past 1 hour. ECG shows 4 mm elevations from V_1 - V_4 . Following are true except :

- (1) Coronary spasm is most likely etiology
- (2) MI occurs most commonly in the 3rd trimester
- (3) Prognosis would be better if the event occurred in the 1st trimester
- (4) Aspirin should be given immediately

82. Which of the following endothelial receptor antagonist is used in the treatment of idiopathic pulmonary arterial hypertension :

- (1) Epoprostenol
- (2) Bosentan
- (3) Trepostinil
- (4) Sildenafil

83. The most frequent ECG finding in pulmonary embolism is :

- (1) New onset AF
- (2) $S_1Q_3T_3$
- (3) QRS Axis $> 90^\circ$
- (4) T inversion in V_1 - V_4

84. Regarding Fondaparinux all are true except :

- (1) Anti Xa Pentasaccharide
- (2) Given as once daily subcutaneous injection
- (3) Recombinant factor VIIa can be used as antidote
- (4) Used to prevent pulmonary embolism

85. Most common side effect of warfarin is :

- (1) Alopecia
- (2) Skin necrosis
- (3) Seizure
- (4) Osteopenia

86. Glucose is transported into the pancreatic beta cells via :

- (1) GLUT 2
- (2) GLUT 1
- (3) GLUT 3
- (4) GLUT 4

87. For every 100 mg/dl rise in serum Glucose the serum sodium is reduced by :
- (1) 1.0 mEq/L (2) 1.2 mEq/L
(3) 1.4 mEq/L (4) 1.6 mEq/L
88. Screening for gestational diabetes mellitus is recommended for pregnant women between:
- (1) 12-14 weeks (2) 16-20 weeks
(3) 24-28 weeks (4) 32-36 weeks
89. Involvement of which of the following cranial nerves is most common in diabetes mellitus :
- (1) 2nd (2) 3rd (3) 6th (4) 7th
90. Drugs commonly used to treat hypertension in pregnancy include all except :
- (1) Methyl Dopa (2) Labetalol
(3) Thiazides (4) Calcium Channel Blockers
-