

**POST GRADUATE DIPLOMA IN CLINICAL  
CARDIOLOGY (PGDCC) 00260**

**Term-End Examination**

**December, 2011**

**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. All are true except :
  - (1) Total amount of insulin secreted by the pancreas per 24 hrs is 18 to 32 units.
  - (2) Excess calories are stored in liver as triglyceride and muscle as glycogen.
  - (3) High Glucagon-low insulin state releases free fatty acids from adipose tissues.
  - (4) Insulin secretion increases sharply in response to meals.
  
2. All are true except :
  - (1) The C-Peptide is cleaved after insulin leaves the beta-cells.
  - (2) Beta Polypeptide chains of insulin consist of 30 amino-acids.
  - (3) Alfa Polypeptide chains of insulin consist of 21 amino-acids.
  - (4) Insulin is secreted by the beta islet cells.
  
3. All are true about MODY except :
  - (1) It is subgroup of Type 2 diabetes.
  - (2) Patients develop diabetes in the 1<sup>st</sup> decade of life.
  - (3) Has autosomal dominant inheritance.
  - (4) Mutation is in glucokinase gene.
  
4. All are true about IDDM except :
  - (1) Insulin receptors on the cell membrane are insensitive.
  - (2) Has an abrupt onset of symptoms.
  - (3) Insulin stoppage for more than 24 hrs can result in Coma.
  - (4) May manifest for the first time in adults.
  
5. An OGTT using venous plasma has the following result fasting sugar 110mg% 2 hrs PP Sugar 130mg%. Patient has :
 

(1) Diabetes mellitus.	(2) Normal test result.
(3) Impaired glucose tolerance.	(4) None of the above.
  
6. Following is true about gestational DM :
  - (1) 2 hrs post glucose > 140mg% after a 50 gms glucose load is diagnostic.
  - (2) 1 hr post glucose of > 140mg after a 75 gms glucose load is diagnostic.
  - (3) O Sullivan criteria uses 75 gms oral glucose.
  - (4) For the test, one should have unrestricted carbohydrate for 3 days prior to the test.

7. An Insulin dependent diabetic is admitted to ICU in a semi-conscious state. Her blood parameters show :  
 Na + 95(132-144mmol/L)  
 Glucose 110 (3.0-5.5mmol/L)  
 Osmolarity 400 (280-295mmol/L)  
 The patient should be treated immediately by :
- (1) Half strength normal saline.
  - (2) Hypertonic normal saline.
  - (3) Insulin.
  - (4) None of the above.
8. DKA causes :
- (1) Anion gap acidosis.
  - (2) Hyperchloremic acidosis.
  - (3) (1) + (2)
  - (4) None of the above.
9. All are true about non-thrombotic pulmonary embolism except :
- (1) Tumour is a source
  - (2) Amniotic fluid embolism can cause DIC.
  - (3) Aortic root abscess results from septic PE in drug abusers.
  - (4) CVP line removal can cause air embolism.
10. Risk stratification in pulmonary embolism include all except :
- (1) Systemic Hypertension.
  - (2) Pro BNP.
  - (3) Cancer.
  - (4) RV function.
11. The Gold standard for diagnosing pulmonary embolism is :
- (1) Echo cardiography.
  - (2) CT pulmonary angiogram.
  - (3) Contrast venography.
  - (4) Venous Ultrasonography.
12. For Idiopathic PE, low intensity target INR of 1.5 to 2.0 for an indefinite period was shown to be safe in :
- (1) The PREVENT trial.
  - (2) ELATE trial.
  - (3) EINSTEIN trial
  - (4) None of the above.
13. All the following cause pulmonary arterial hypertension except :
- (1) Familial PPH.
  - (2) Portal Hypertension.
  - (3) Fibrosing mediastinitis.
  - (4) HIV infection.
14. All are true about Chronic cor pulmonale except :
- (1) Related to obstructive lung disease.
  - (2) Related to Restrictive lung disease.
  - (3) Causes RV hypertrophy.
  - (4) Causes LV hypertrophy.

15. PPH is characterized by all except :
- (1) Intimal proliferation of pulmonary vasculature.
  - (2) Abnormalities in platelet activation.
  - (3) In situ Hmg of the small pulmonary arteries.
  - (4) Elevated endothelin levels within the pulmonary vasculature.
16. Chest X-ray finding of peripheral wedge shaped density in pulmonary embolism is known as :
- (1) Wester mark's sign.
  - (2) Westergreen's sign.
  - (3) Hampton's sign.
  - (4) Palla's sign.
17. D-Dimer test for PE has :
- (1) High sensitivity.
  - (2) High specificity.
  - (3) Low negative predictive value.
  - (4) None of the above.
18. Perfusion defect in V/Q scan can occur in all except :
- (1) PE.
  - (2) Pleural effusion.
  - (3) Systemic hypertension.
  - (4) COPD.
19. Leriche syndrome includes all except :
- (1) Absent both femoral pulses.
  - (2) Claudication.
  - (3) Proximal aortic occlusion.
  - (4) Impotence.
20. Neuropathic foot causes all except :
- (1) Digital gangrene.
  - (2) Painful ulceration.
  - (3) Charcots joint.
  - (4) Callosities.
21. Extra-ocular muscle palsy in diabetics is characterized by the following except :
- (1) 3<sup>rd</sup> Nerve involvement is most common.
  - (2) Pupils are usually not dilated.
  - (3) Paralysis is usually permanent.
  - (4) Is an example of non-retinal ocular lesion.
22. All are true about postural hypotension in diabetics except :
- (1) Is due to autonomic dysfunction.
  - (2) Resting bradycardia is common.
  - (3) Fludrocortisone may be required.
  - (4) Supportive bandages may just be enough.

23. Following are true regarding nephropathy except :
- (1) ACE inhibitions must be continued even after macro-proteinuria.
  - (2) Control hypertension is semiprotective.
  - (3) Target B.P. is 140/80.
  - (4) Beta blockers may be added in associated IHD.
24. IBW Calorie requirement includes all except :
- (1) Basal calories of 22 kcal/kg body wt.
  - (2) Add 20% for house hold work.
  - (3) Add 50% for physical normal labour.
  - (4) Add 10% for sedentary activity.
25. All are true except :
- (1) Gliclazide is a 3<sup>rd</sup> generation sulphonylurea.
  - (2) Acarbose prevents alpha glucosidase enzyme from digesting complex carbohydrates.
  - (3) Lispo insulin is an insulin analogue.
  - (4) Glitazone cause fluid and salt retention.
26. In pregnancy with prosthetic valves :
- (1) Heparin/LMWH can be given throughout pregnancy.
  - (2) Warfarin can be given throughout pregnancy.
  - (3) Warfarin can be given till planned labour at approx 40 weeks.
  - (4) Warfarin must be withdrawn in pregnancy.
27. Pre-eclampsia is characterized by all except :
- (1) BP > 140/90.
  - (2) Proteinuria > 100 mg in 24 hrs.
  - (3) Proteinuria after 28 weeks of gestation.
  - (4) More common in nulliparous women with multiple gestations.
28. HELLP syndrome includes all except :
- (1) Hemolysis.
  - (2) Elevated creatinine level.
  - (3) Low platelet count.
  - (4) Requires prompt termination of pregnancy.
29. Drugs useful in pre-eclampsia include all except :
- (1) Hydralazine.
  - (2) Labetalol.
  - (3) Magnesium.
  - (4) ACE inhibitors.

30. Following are true except :
- (1) Epoprostenol is an endothelin receptor antagonist.
  - (2) Ilaprost is an inhaled aerosol.
  - (3) Sildenafil can cause abnormal vision.
  - (4) Adenosine can be used to assess acute pulmonary vasodilation during right heart catheterization.
31. Insulin analogues are :
- (1) Soluble insulin.
  - (2) G-largine insulin.
  - (3) Mixtard insulin.
  - (4) None of the above.
32. Adenosine :
- (1) Has a long half life.
  - (2) Contra indicated in pregnancy.
  - (3) Is a purine nucleoside.
  - (4) Treats PSVT.
33. Bumetanide :
- (1) Is a thiazide diuretic.
  - (2) Is a loop diuretic.
  - (3) Inhibits potassium and calcium co-transporter.
  - (4) Inhibits only chloride and potassium co-transporter.
34. Warfain :
- (1) has a half life of 36 - 42 hrs.
  - (2) Reaches peak concentration in 20 mins.
  - (3) Can be given throughout pregnancy.
  - (4) Is thrombogenic.
35. Pre-eclampsia has :
- (1) Systolic B.P. > 120 mmHg.
  - (2) Diastolic B.P. > 110 mmHg.
  - (3) Proteinuria > 100 mg/24 hours.
  - (4) More common in multi parous women.
36. Gestational hypertension :
- (1) Has proteinurea.
  - (2) Occurs 20 weeks after gestation.
  - (3) Never causes pre-eclampsia.
  - (4) Has no known threat to fetus.
37. Eclampsia is characterized by all except :
- (1) Headache.
  - (2) Hyporeflexia.
  - (3) BP > 160/100.
  - (4) Proteinuria > 2 gm in 24 hours.

38. Methyl dopa in pregnancy is usually given as :
- |                     |                      |
|---------------------|----------------------|
| (1) 50 mg P.O. O.D. | (2) 250 mg P.O. TDS. |
| (3) 25 mg P.O. O.D. | (4) 25 mg P.O. TDS.  |
39. Most frequent arrhythmia in pregnancy is :
- |          |         |              |         |
|----------|---------|--------------|---------|
| (1) SVT. | (2) VT. | (3) AV Block | (4) AF. |
|----------|---------|--------------|---------|
40. Dominant systolic heart failure in pregnancy is caused by all except :
- |                                |                             |
|--------------------------------|-----------------------------|
| (1) Peripartum cardiomyopathy. | (2) Valvular heart disease. |
| (3) Myocarditis.               | (4) Severe aortic stenosis. |
41. High output heart failure in pregnancy is caused by all except :
- |                       |                         |
|-----------------------|-------------------------|
| (1) Hyper thyroidism. | (2) Carcinoid syndrome. |
| (3) Hypertension.     | (4) Polycythemia Rubra. |
42. Indwelling central venous catheters can cause :
- |                    |                              |
|--------------------|------------------------------|
| (1) Heart failure. | (2) Venous thrombo embolism. |
| (3) Dysphagia.     | (4) Hoarseness of voice.     |
43. DVT can be prevented by all except :
- |                            |                                   |
|----------------------------|-----------------------------------|
| (1) Early mobilisation.    | (2) Avoiding early physiotherapy. |
| (3) Compression stockings. | (4) Unfractionated heparin.       |
44. Dopamine :
- |  |
|--|
| (1) Is the precursor of Dobutamine.            |
| (2) Stimulates only dopamine receptors.        |
| (3) Haemodynamic effect is not dose dependent. |
| (4) Low dose causes splanchnic vasodilatation. |
45. Prevalence of Diabetes in urban area of India is estimated to be :
- |          |          |           |         |
|----------|----------|-----------|---------|
| (1) 2.4% | (2) 6.3% | (3) 13.3% | (4) 22% |
|----------|----------|-----------|---------|
46. Component of metabolic syndrome includes all except :
- |                       |              |
|-----------------------|--------------|
| (1) Hyper insulinemid | (2) High HDL |
| (3) Hypertension      | (4) Obesity  |
47. Following drugs causes secondry diabetes except :
- |               |               |               |                    |
|---------------|---------------|---------------|--------------------|
| (1) clonidine | (2) phenytoin | (3) B Blocker | (4) Spironolactone |
|---------------|---------------|---------------|--------------------|

48. Rothera's test detect :
- |                           |                      |
|---------------------------|----------------------|
| (1) Acetoacetate in urine | (2) Acetone in blood |
| (3) Acetone in urine      | (4) Acetate in urine |
49. Which is correct in Hyper osmolar Non-Ketotic Coma ?
- |                                     |                             |
|-------------------------------------|-----------------------------|
| (1) Diuretic is Treatment of choice | (2) Common in young patient |
| (3) Plasma glucose less than 500 mg | (4) Arterial PH > 7.3       |
50. Ankle Brachial index indicates :
- |                |                                 |
|----------------|---------------------------------|
| (1) Neuropathy | (2) peripheral vascular disease |
| (3) Myopathy   | (4) Cerebro vascular disease    |
51. Cilostazol is used mainly for :
- |                                 |                 |
|---------------------------------|-----------------|
| (1) Myopathy                    | (2) Retinopathy |
| (3) Peripheral vascular disease | (4) Neuropathy  |
52. Micro vascular complication mainly depends on :
- |                                    |                                   |
|------------------------------------|-----------------------------------|
| (1) Severity of diabetes mellitus  | (2) Duration of diabetes mellitus |
| (3) Delayed use of Insulin therapy | (4) Poor control of diabetes      |
53. Which is not a side effect of thiazide ?
- |                   |                    |
|-------------------|--------------------|
| (1) Hyperglycemia | (2) Hyperlipidemia |
| (3) Hyperuricemia | (4) Hyperkalemia   |
54. Anti Diabetic contra indicated in heart failure :
- |                        |                                 |
|------------------------|---------------------------------|
| (1) Insulin sensitizer | (2) Sulphonyl ureas             |
| (3) Biguanide          | (4) Alpha glucosidase inhibitor |
55. Maximum fall in Blood pressure occurs in :
- |                               |                                     |
|-------------------------------|-------------------------------------|
| (1) 1 <sup>st</sup> trimester | (2) 2 <sup>nd</sup> trimester       |
| (3) 3 <sup>rd</sup> trimester | (4) B.P. does not fall in pregnancy |
56. Abnormal murmur in pregnancy is
- |   |
|---|
| (1) Ejection murmur in pulmonary area         |
| (2) Venous 44m in right supraclavicular fossa |
| (3) Continuous murmur over Breast             |
| (4) Pan systolic murmur in parasternal area   |

57. Termination of pregnancy advised when radiation exposure exceeds :  
 (1) 5 rads (2) 10 rads (3) 25 rads (4) 50 rads
58. A normal Echo finding in pregnancy is :  
 (1) Small Pericardial Effusion (2) Chorode rupture  
 (3) Chamber Enlargement (4) Annular dilation of Tricuspid valve.
59. Mexilletin belongs to which group of antioarrhythmic drug :  
 (1) IA (2) IB (3) IC (4) III
60. Therapeutic steady state level oral Amiodarone reached in :  
 (1) 2 weeks (2) 3 weeks (3) 4 weeks (4) 6 weeks
61. Puring metabolite used as Anti arrhythmic :  
 (1) Verapanil (2) Adenosine (3) Propafenone (4) Flecainide
62. Which is not a Background Retinopathy ?  
 (1) Maculopathy (2) Dot & blot haemorrhage  
 (3) Cotton wool spot (4) Microangiopathy
63. Which is not commonly used drug for Diabetic neuropathy ?  
 (1) Amitryptiline (2) Carbamazepin  
 (3) Sodium valproate (4) Gabapentin
64. Sildenafil is contra indicated with :  
 (1) Statin (2) Nitrate (3) Beta Blocker (4) Aspirin
65. Which Diuretic has shown to reduce mortality ?  
 (1) Hydrochlorothiazide (2) Furosemide  
 (3) Spironolactone (4) Metolazone
66. Drug contra indicated in pregnancy :  
 (1) Cardioselective Beta Blocker (2) Digitalis  
 (3) ACE inhibitor (4) Adenosine

67. Warfarin is not indicated in
- (1) Prosthetic valve.
  - (2) Atrial fibrillation in 1st trimester of Pregnancy
  - (3) DVT
  - (4) Primary Pulmonary Hypertension
68. Which is not an inotrope ?
- (1) Amrinone
  - (2) Dobutamine
  - (3) Pimotendon
  - (4) Vasopressin
69. Drug to be avoided to treat PSVT in Pregnancy :
- (1) Adenosine
  - (2) Diltiazem
  - (3) Verapamil
  - (4) Metoprolol
70. Drug that does not cross placenta :
- (1) Heparin
  - (2) Warfarin
  - (3) Digitalis
  - (4) Beta Blocker
71. Which is not a feature of idiopathic RVOT ventricular tachycardia ?
- (1) LBBB
  - (2) Inferior Axis
  - (3) Polymorphic complex
  - (4) Structurally Normal Heart
72. Which is false statement for cardioversion ?
- (1) Non synchronised shock is delivered in VF
  - (2) It is safe during Pregnancy
  - (3) It is a direct current Electric shock
  - (4) Foetal monitoring is not required immediately
73. Which is not a common symptom of PAH ?
- (1) Syncope
  - (2) Angina
  - (3) Palpitation
  - (4) Edema
74. Which is indicator of severe PAH in IVP ?
- (1) Prominent a wave
  - (2) Prominent V, wave
  - (3) Shallow Y, descent
  - (4) Shallow X, descent
75. Which is not seen in Primary Pulmonary Hypertension ?
- (1) Decreased EDRF
  - (2) Intimal Proliferation
  - (3) In situ thrombosis
  - (4) Increased Prostaglandin
76. Which is a pulmonary vasoconstrictor ?
- (1) Endothelin
  - (2) Epoprostenol
  - (3) EDRF
  - (4) Oxygen

77. Which is not useful for treatment of Primary Pulmonary Hypertension ?  
 (1) Bosentan (2) Sildenafil (3) Epoprostenol (4) Nitrate
78. Which is not a cause of Pulmonary Hypertension ?  
 (1) Interstitial lung fibrosis (2) HIV infection  
 (3) Anorexigens (4) Toxoplasmosis
79. Least vulnerable cause of Eisenmenger's syndrome among following is :  
 (1) AV canal defect (2) Truncus Arteriosus  
 (3) ASD (4) Aorto pulmonary window
80. Diastolic heart failure is not common in :  
 (1) Restrictive cardiomyopathy (2) Hypertrophic cardiomyopathy  
 (3) Peripartum cardiomyopathy (4) Aortic stenosis
81. Which is not true about ANP and BNP ?  
 (1) Prognostic importance (2) Diagnostic importance  
 (3) Therapeutic value (4) It is non peptide
82. Which is not a manifestation of pulmonary embolism ?  
 (1) Cardiogenic shock  
 (2) Haemoptysis  
 (3) Chronic Pulmonary Arterial hypertension  
 (4) LVF
83. Which cardiac disease will be tolerated best in pregnancy ?  
 (1) Mitral stenosis (2) Aortic stenosis  
 (3) Mitral regurgitation (4) Co-aortic of Aorta
84. Absolute contra-indication to pregnancy are all except :  
 (1) Primary pulmonary Hypertension  
 (2) Eisenmenger syndrome  
 (3) Marfan syndrome  
 (4) Severe Aortic Regurgitation.
85. Which is true for peripartum cardiomyopathy ?  
 (1) More common in multipara (2) High selenium level implicated  
 (3) Diastolic failure is rule (4) Symptoms appear in 1<sup>st</sup> trimester

86. Which Ech change is considered normal in pregnancy ?
- (1) QRS axis shift
  - (2) Low R wave amplitude in  $V_2$
  - (3) Q wave appear in  $V_5/V_6$
  - (4) ST segment Elevation.
87. Which is not useful treatment in Primary Pulmonary Hypertension ?
- (1) Atrial septostomy
  - (2) Warfarin
  - (3) Lung transplantation
  - (4) Heart transplantation
88.  $S_1 Q_3 T_3$  is diagnostic Ech of :
- (1) DVT
  - (2) Pulmonary Embolism
  - (3) Primary Pulmonary Hypertension
  - (4) Cor pulmonale
89. Virchow's triad components are all except :
- (1) Blood stasis
  - (2) inflammation
  - (3) Hyper coagulability
  - (4) Anaemia
90. Which is true for pulmonary embolism ?
- (1) Pulmonary infarction is common presentation
  - (2) Tachycardia is most common physical finding
  - (3) D-dimer Assay is a screening a test
  - (4) Thrombolysis is treatment of choice in all case
-