

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

Term-End Examination

00691

December, 2010

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. Changes in blood Volume in pregnancy are attributed to all hormones except :
 - (a) Estrogen.
 - (b) Prolactin.
 - (c) Growth hormone.
 - (d) Progesterone.

2. Cardiac output in pregnancy increases by :
 - (a) 10%
 - (b) 20%
 - (c) 30%
 - (d) 50%

3. In third trimester Cardiac output is more in :
 - (a) Sitting Posture
 - (b) Supine Position
 - (c) Lateral Position
 - (d) Prone Position

4. Increase in Cardiac output in 3rd trimester is due to :
 - (a) Increase in stroke Volume
 - (b) Increase in heart rate
 - (c) Decrease in stroke Volume
 - (d) Decrease in heart rate

5. Supine hypotensive Syndrome of pregnancy is present in :
 - (a) 2%
 - (b) 4%
 - (c) 6%
 - (d) 11%

6. Blood pressure increases markedly during :
 - (a) 1st Stage of Labour
 - (b) 2nd Stage of Labour
 - (c) 3rd Stage of Labour
 - (d) Post partum

7. Cardiac output returns to pre Labour levels by how many hours after delivery ?
- (a) One hour.
 - (b) 3 hrs.
 - (c) 6 hrs.
 - (d) 24 hrs.
8. Teratogenic effect by radiation exposure in Pregnancy is :
- (a) 0 - 10 days
 - (b) 10 - 50 days
 - (c) 50 - 90 days
 - (d) 90 - 120 days
9. Termination of pregnancy is advised if exposure to radiation is :
- (a) 5 rads
 - (b) 5 - 10 rads
 - (c) 10 - 15 rads
 - (d) 15 - 20 rads
10. Propranolol in pregnancy may cause following adverse effect except :
- (a) Bradycardia.
 - (b) Growth retardation.
 - (c) Birth apnea.
 - (d) Hyperglycemia.
11. Which is not pre eclampsia Component ?
- (a) Edema
 - (b) Hypertension
 - (c) Proteinuria
 - (d) Diabetes
12. HELLP syndrome comprises all except :
- (a) Decreased platelet count
 - (b) Elevation in liver enzymes
 - (c) Raised blood Sugar
 - (d) Minimal or no rise of BP

13. Antihypertensives commonly used for pre eclampsia and eclampsia are all except :
- (a) Hydralazine
 - (b) Prazosin
 - (c) Labetalol
 - (d) Sodium nitroplusside
14. Pregnancy causes :
- (a) Decrease Sympathetic tone only
 - (b) Increase para Sympathetic tone only
 - (c) Decrease Sympathetic and increase parasympathetic tone
 - (d) Increase Sympathetic and decrease parasympathetic tone.
15. Which is not vagal maneuver used for Supra Ventricular tachycardia :
- (a) Eye ball Compression
 - (b) Drinking of ice cold water
 - (c) Drinking of warm water
 - (d) Carotid massage.
16. All are symptoms of pulmonary hypertension except :
- (a) Exertional dyspnoea
 - (b) Edema
 - (c) Palpitations
 - (d) Syncope.
17. Signs of Pulmonary hypertension are all except :
- (a) Large 'a' waves
 - (b) Large 'V' waves
 - (c) Left parasternal heave
 - (d) Ejection Click
18. Which is not anticipated in primary pulmonary hypertension with pregnancy commonly :
- (a) Premature delivery
 - (b) Normal delivery
 - (c) Caesarian
 - (d) None
19. Sildenafil is phosphodiesterase inhibitor of :
- (a) Type 1
 - (b) Type 2
 - (c) Type 4
 - (d) Type 5

20. Common valve lesion in pregnancy is :
- (a) Mitral regurgitation.
 - (b) Mitral stenosis.
 - (c) Aortic regurgitation.
 - (d) Aortic stenosis.
21. An echo score of following is indication for percutaneous mitral balloon Valvuloplasty in severe MS with Symptoms :
- (a) 8 or less.
 - (b) 9 or less.
 - (c) 10 or less.
 - (d) 11 or less.
22. Pregnancy with Marfan's Syndrome can cause all except :
- (a) dilatation of ascending aorta.
 - (b) aortic stenosis.
 - (c) aortic regurgitation.
 - (d) aortic dissection.
23. Peripartum Cardiomyopathy is defined as development of Cardiac failure :
- (a) In last month of pregnancy or with in 5 months after delivery.
 - (b) In eighth month of pregnancy or within 4 months after delivery.
 - (c) In 7th month of pregnancy or within 3 months after delivery.
 - (d) In 6th month of pregnancy or within 2 months after delivery.
24. Virchow's triad comprises all except :
- (a) Hypercoagulability
 - (b) Venostasis
 - (c) Vessel wall Inflammation
 - (d) Hypertension
25. ECG findings may occur usually in pulmonary embolism except :
- (a) SIQ3 T3
 - (b) Right axis deviation
 - (c) Left bundle branch block
 - (d) Right bundle branch block

26. Pulmonary artery hypertension exists when mean PA pressure exceeds :
- (a) 20 mm Hg
 - (b) 15 mm Hg
 - (c) 10 mm Hg
 - (d) 5 mm Hg
27. In patients with Primary Pulmonary hypertension, INR of following is maintained :
- (a) 1 - 1.5
 - (b) 2 - 2.5
 - (c) 3 - 3.5
 - (d) 4 - 4.5
28. Pulmonary function test in Corpulmonale shows all except :
- (a) ↓ FEV1
 - (b) ↓ FVC
 - (c) ↑ Residual Volume
 - (d) ↓ Residual Volume
29. In MRFIT Study diabetic subjects who required medication for glucose control were likely to develop stroke than non diabetic subjects :
- (a) 1 fold
 - (b) 2 fold
 - (c) 3 fold
 - (d) 4 fold
30. In UKPDS Study Coronary disease did not increase until glucosylated haemoglobin exceeded :
- (a) 7%
 - (b) 8%
 - (c) 9%
 - (d) 10%
31. Diabetes causes all except :
- (a) ↓ No
 - (b) ↑ No
 - (c) ↑ ET-I
 - (d) ↑ AT-II

32. Each uterine Contraction release following ml of blood into circulation :
- (a) 100 ml
 - (b) 200 ml
 - (c) 300 ml
 - (d) 500 ml
33. In normal vaginal delivery approximate blood lost is :
- (a) 100 ml
 - (b) 200 ml
 - (c) 300 ml
 - (d) 400 ml
34. In cesarean section amount of blood lost is :
- (a) 800 ml
 - (b) 600 ml
 - (c) 400 ml
 - (d) 200 ml
35. Fetal echo provides excellent imaging of heart by what gestation ?
- (a) 10 weeks
 - (b) 13 weeks
 - (c) 15 weeks
 - (d) 20 weeks
36. Optimal time for Cardiac surgery during pregnancy if necessary is :
- (a) 10 - 15 weeks
 - (b) 15 - 20 weeks
 - (c) 20 - 28 weeks
 - (d) 28 - 32 weeks
37. Current risk of fetal loss during cardiac surgery in pregnancy is :
- (a) 2%
 - (b) 4%
 - (c) 6%
 - (d) 10%

38. Systolic pulmonary artery pressure higher than what percentage artery pressure higher than what percentage of Systemic pressure may be associated with maternal compromise :
- (a) 20%
 - (b) 30%
 - (c) 40%
 - (d) 60%
39. Dilated aortic root more than _____ cm is associated with complication.
- (a) 2cm
 - (b) 3cm
 - (c) 4cm
 - (d) None
40. Fetal outcome is poor when maternal oxygen saturation is :
- (a) <85%
 - (b) <88%
 - (c) <90%
 - (d) <92%
41. In pregnancy with pulmonary hypertension death is more during :
- (a) 2nd trimester
 - (b) 3rd trimester
 - (c) 1st trimester
 - (d) During parturition and puerperium
42. In Eisenmenger Syndrome with pregnancy in hospital monitoring after delivery is required for :
- (a) 3 days
 - (b) 7 days
 - (c) 10 days
 - (d) 14 days
43. Tissue Valves in pregnancy are :
- (a) More thrombogenic
 - (b) Less thrombogenic
 - (c) Lasts longer than 10yrs
 - (d) More Problematic.

44. Low molecular weight heparin usage in Pregnancy with prosthetic valve is usually stopped at least :
- (a) 6 hrs after delivery
 - (b) 12 hrs before delivery
 - (c) 18 hrs before delivery
 - (d) 24 hrs before delivery
45. "Fetal risk of embryopathy is reduced by initiating heparin instead of warfarin by _____ weeks before pregnancy :
- (a) 1 week
 - (b) 2 weeks
 - (c) 3 weeks
 - (d) 6 weeks
46. Pregnancy is usually Contraindicated in Marfan's Syndrome if aorta is more than :
- (a) 20 mm
 - (b) 25 mm
 - (c) 35 mm
 - (d) 40 mm
47. Incidence of peripartum cardiomyopathy is :
- (a) 1 in 500
 - (b) 1 in 1000
 - (c) 1 in 2000
 - (d) 1 in 3000
48. Which is Contra indicated in pregnancy with Heart failure ?
- (a) ACE inhibitor
 - (b) Beta Blockers
 - (c) Digoxin
 - (d) Hydralazine
49. Reversal of anti coagulation with warfarin in fetus may take upto :
- (a) 2 days
 - (b) 3 days
 - (c) 4 days
 - (d) 1 week

50. All are treatment modalities for atrial fibrillation in pregnancy except :
- (a) Digoxin
 - (b) Non dihydropyridine calcium channel antagonist
 - (c) DC Cardioversion
 - (d) Labetalol
51. Signs of pulmonary embolism are all except :
- (a) Tachypnoea
 - (b) Tachycardia
 - (c) High grade fever
 - (d) Loud P₂.
52. Chest X-ray shows all signs in PE except :
- (a) Westermark Sign
 - (b) Hampton's hump
 - (c) Patta's sign
 - (d) Louis sign
53. All are echo signs for Pulmonary embolism except :
- (a) MC Connell sign
 - (b) 'O' slape LV in embolism except
 - (c) Dilated IVC without inspiratory Collapse
 - (d) Dilated IVC with inspiratory Collapse
54. Markers for increased mortality in pulmonary embolism :
- (a) ↑ Trop-T
 - (b) ↑ BNP
 - (c) RV hypokinesia
 - (d) ↑ d - dimer
55. Window period for thrombolysis in pulmonary embolism is :
- (a) <6 hrs
 - (b) <1 day
 - (c) <1 week
 - (d) <2 weeks

56. Pharmacological prophylaxis options for PE are all except :
- (a) UFH
 - (b) LMWH
 - (c) Fondaparinaux
 - (d) Bivaluridin
57. Chest X-ray in Pulmonary hypertension shows all except :
- (a) Enlarged main pulmonary artery
 - (b) Enlarged RV
 - (c) Enlarged RA
 - (d) Hyperemia
58. Endocarditis prophylaxis recommended in following Cardiac Conditions with pregnancy, except :
- (a) High risk prosthetic cardiac valves
 - (b) Rheumatic heart disease
 - (c) Complex cyanotic disease
 - (d) Isolated secundum ASD
59. Myocardial infarction mostly occurs in pregnant women in :
- (a) 1st trimester
 - (b) Early 2nd trimester
 - (c) Late 2nd trimester
 - (d) 3rd trimester
60. Pregnancy is discouraged in all except :
- (a) Severe PAH
 - (b) Eisenmenger syndrome
 - (c) Coarctation of aorta
 - (d) Small VSD.
61. All are true except :
- (a) Gestational diabetes leads to type II diabetes.
 - (b) B blockers can cause secondary diabetes.
 - (c) MODY is a subgroup of type II diabetes.
 - (d) Hyper insulinemia is a component of syndrome X.

62. In diabetic dyslipidemias, all are true except :
- (a) TG is normally elevated.
 - (b) Major LDL fraction is apo(B).
 - (c) Glycosylation and oxidation of lipoproteins are important in the pathogenesis of vascular complications.
 - (d) Good diabetic control lowers TG and LDL levels.
63. All are true except :
- (a) Hypertension in diabetics is related to hyperinsulinemia.
 - (b) Isolated systolic hypertension has diastolic pressure less than 80 mm Hg.
 - (c) Hemorrhagic stroke is less common in diabetics.
 - (d) Leriche's syndrome is due to distal aortic occlusion.
64. The following are true about neuropathic foot except :
- (a) Causes painful ulceration.
 - (b) Causes warm foot.
 - (c) Foot pulses are palpable.
 - (d) Causes callosities.
65. Acceptable proportion of macro nutrients for a diabetic are all except :
- (a) Carbohydrates = 55 – 60% of total calories.
 - (b) Proteins = 40%.
 - (c) Fat = < 30%.
 - (d) Fibres = 30 – 40 gms per day.
66. Sulphonyl ureas :
- (a) Are insulin sensitizers.
 - (b) Increase insulin output from β cells.
 - (c) Tolbutamide has the longest half life.
 - (d) Cause opening of the ATP-sensitive potassium channel.
67. All are true except :
- (a) Lispro insulin is an insulin analogue.
 - (b) Lente insulin has peak action at 12 hours.
 - (c) Soluble insulin has peak action at 2 hours.
 - (d) pH of plain insulin is neutral.

68. All are true except :
- (a) Gluconeogenesis is accelerated in pregnancy.
 - (b) Facilitated anabolism is a feature of normal pregnancy.
 - (c) During pregnancy the liver is resistant to insulin action.
 - (d) Placental lactogen has anti-insulin action.
69. In diabetic pregnancy :
- (a) Goal of fasting plasma glucose is between 60 and 90 mg%.
 - (b) Carbohydrates should form 40% of calories.
 - (c) Glucose control becomes easier in 2nd trimester.
 - (d) Calorie requirement is about 35 Kcals/kg.
70. In diabetes mellitus :
- (a) There is a tendency to increased coagulability in the microcirculation.
 - (b) There is increased blood flow in vascular bed in retinopathy.
 - (c) AGE involves the enzymatic glycosylation of proteins.
 - (d) Cataracts are 10 times more common in diabetics.
71. In pregnancy :
- (a) Blood volume increases substantially starting at 20th week.
 - (b) Supine hypotensive syndrome of pregnancy is due to compression and acute occlusion of SVC by enlarged uterus.
 - (c) B.P. and stroke volume after delivery returns to pre labour values within 1 hour.
 - (d) Cervical venous hum is heard over left supra clavicular fossa.
72. All are true except :
- (a) Bound free drugs only cross placental barrier.
 - (b) Nearly 50% of fetal circulation directly reaches the heart and brain by passing the liver.
 - (c) Congenital malformations are generally caused by drug toxicity during 1st trimester.
 - (d) Propranolol can be used in pregnancy.
73. All are true about digitalis during pregnancy except :
- (a) Do not cross the placenta.
 - (b) Has no teratogenic effect.
 - (c) Is the drug of choice to treat fetal arrhythmia.
 - (d) Digitalis preparations are excreted in breast milk.

74. All are true except :
- (a) Frusemide is used to treat pulmonary oedema in pre eclampsia.
 - (b) Safety of spirono lactone in pregnancy is not documented.
 - (c) Hydrochlorothiazide is effective in volume overload state in pregnancy.
 - (d) ACEIS are contra indicated in pregnancy.
75. Dobutamine :
- (a) Is absolutely contra indicated in pregnancy.
 - (b) Is a weak agonist.
 - (c) Elevates pulmonary artery pressure.
 - (d) Has no adrenergic activity.
76. All are true about pre-eclampsia except :
- (a) B.P. is above 140/90 mmHg.
 - (b) Proteinuria is > 100 mg in 24 hours after 28 weeks of gestation.
 - (c) More common in nulliparus women with multiple gestations.
 - (d) Commonly has family history of pre-eclampsia.
77. All are true about gestational hypertension except :
- (a) Usually has no proteinuria.
 - (b) May be proteinuric phase of pre-eclampsia.
 - (c) If severe may result in higher rates of premature delivery and growth retardation than mild pre-eclampsia.
 - (d) It occurs in the first trimester of pregnancy.
78. Transient hypertension in pregnancy :
- (a) Normalises by 20 weeks post partum.
 - (b) Never recurs in subsequent pregnancy.
 - (c) Is also called gestational hypertension.
 - (d) Is predicative of future primary hypertension.
79. In hypertension in pregnancy :
- (a) Target diastolic blood pressure is 95 to 105 mm Hg.
 - (b) Convulsion in eclampsia is controlled by calcium in fusion.
 - (c) Methyl dopa is unsafe in pregnancy
 - (d) Sodium nitroprusside is safe on fetus to use in pregnancy.

80. All are true about primary pulmonary hypertension except :
- (a) Mean pulmonary artery pressure is > 25 mmHg in absence of demonstrable cause.
 - (b) Carries 20% maternal mortality rate in pregnancy.
 - (c) Death after delivery is due to sudden death or progressive RV failure.
 - (d) There is high incidence of fetal loss.
81. All are true about Eisenmenger's syndrome and pregnancy except :
- (a) Pregnancy should be avoided.
 - (b) Anticoagulation is indicated in the 3rd trimester.
 - (c) Induction of labour is preferred to spontaneous labour.
 - (d) Inhalation of nitric oxide is indicated during labour.
82. All are true except :
- (a) Mitral regurgitation is poorly tolerated in pregnancy.
 - (b) There is high risk of inheritance of Marfan's syndrome during pregnancy.
 - (c) Surgical correction of coarctation of aorta during pregnancy is indicated in uncontrollable hypertension.
 - (d) Antibiotic prophylaxis is considered in patients with obstructive cardiomyopathy.
83. All are true about peripartum cardiomyopathy except :
- (a) Peripartum cardiomyopathy usually has complete recovery within first 6 months post partum.
 - (b) Mortality is 0 – 2% in subsequent pregnancies with depressed ventricular ejection fraction.
 - (c) Diagnosis is by exclusion.
 - (d) Arterial or venous thrombosis is reported in about 50% women with PPM.
84. Causes of pulmonary embolism include all except :
- (a) Tricuspid infective endocarditis.
 - (b) Venous thrombo embolism.
 - (c) Arterial thrombo embolism.
 - (d) Fat embolism.
85. VTE prophylaxis is strongly recommended in all except :
- (a) Major surgery.
 - (b) Multiple trauma.
 - (c) Any fracture.
 - (d) Hospitalization in ICU.

86. Features of PE include all except :
- (a) Unexplained dyspnoea.
 - (b) Acute LVF.
 - (c) Pulmonary infarction.
 - (d) Chronic PAH.
87. Clinical signs of PE include all except :
- (a) Lower limb oedema.
 - (b) Parasternal heave.
 - (c) Soft P₂.
 - (d) Pleural rub.
88. All are true except :
- (a) D-Dimer test has a poor negative predictive value for PE.
 - (b) CT pulmonary angiography is a first line test for PE.
 - (c) A normal perfusion scan virtually excludes PE.
 - (d) ECG changes in PE are seen in 26% of patient with PE.
89. All are true about treatment of PPH except :
- (a) Phosphodiesterase inhibitors are useful.
 - (b) Diuretics help in RVF.
 - (c) Oral anti coagulation are not indicated if there is no atrial fibrillation.
 - (d) Atrial septostomy is useful in severe cases.
90. In cor pulmonale, PFT reveals all except :
- (a) Reduction FEV₁.
 - (b) Increase in FVC.
 - (c) Increase in residual volume.
 - (d) Normal total lung volume.
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