

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

Term-End Examination

00354

December, 2014

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. Diagnosis of HONK is made by following biochemistry profile *except*
 - (1) Plasma glucose concentration > 600
 - (2) Serum osmolarity < 330 mOsm/kg
 - (3) Arterial pH > 7.3
 - (4) Absence of ketones

2. All of the following are autonomic symptoms of hypoglycaemia *except*
 - (1) Tremor
 - (2) Palpitations
 - (3) Coma
 - (4) Pallor

3. Normal blood osmolarity is
 - (1) 320 mosm/kg
 - (2) 300 mosm/kg
 - (3) 290 mosm/kg
 - (4) 600 mosm/kg

4. All of the following are features of Neuropathic foot *except*
 - (1) Cool
 - (2) Palpable pulses
 - (3) Distended veins on dorsum of foot
 - (4) Edema

5. The accepted proportion of macro nutrient for diabetic is as follows *except*
 - (1) Carbohydrates should form < 50% of total calories
 - (2) Proteins – 0.85 gm/kg body weight
 - (3) Fats < 30 percent
 - (4) 30 – 40 gms of fibre/day

- 6.** The mechanism of action of Biguanides include all of the following *except*
- (1) Glucose output from liver is reduced
 - (2) Increased utilisation by peripheral tissues
 - (3) Marked reduction in circulation triglycerides and free fatty acids
 - (4) Reduced appetite
- 7.** All of the following are true regarding plain/soluble insulin *except*
- (1) unmodified insulin
 - (2) pH is neutral
 - (3) After sc injection action starts within 10 minutes
 - (4) Peak action at 2 hours
- 8.** Goals of Diabetes management are all *except*
- (1) HBA1C values of 7%
 - (2) FBS below 126 mg%
 - (3) PP2BS below 220 mg%
 - (4) Effective management of acute and chronic complications.
- 9.** Changes in blood volume in pregnancy are attributed to all hormones *except*
- (1) Estrogen
 - (2) Prolactin
 - (3) Growth hormone
 - (4) Progestrone
- 10.** Cardiac output in pregnancy increases by
- (1) 10%
 - (2) 20%
 - (3) 30%
 - (4) 50%

11. Supine hypotension syndrome in pregnancy is present in
- (1) 2%
 - (2) 4%
 - (3) 6%
 - (4) 11%
12. HELLP syndrome comprises all *except*
- (1) Low platelets
 - (2) Elevated LFT
 - (3) Raised sugar levels
 - (4) Minimal or no rise of BP
13. Pregnancy with Marfan's syndrome can cause all *except*
- (1) Dilatation of ascending aorta
 - (2) AS
 - (3) AR
 - (4) Heart failure
14. Following are true regarding murmurs in pregnancy *except*
- (1) Short diastolic murmur due to increased flow across aortic valve
 - (2) Mammary souffle due to increased flow in mammary arteries
 - (3) Cervical venous hum
 - (4) Innocent systolic murmur
15. Clinical signs which should lead to search for PE are all *except*
- (1) Explained sinus tachycardia or tachypnoea
 - (2) Lower limb edema
 - (3) Hypotension
 - (4) Parasternal heave

16. All of the following are true regarding D-dimer *except*
- (1) It is a fibrin specific degradation product
 - (2) Elevated D dimer do not necessarily indicate PE
 - (3) Can be elevated in DVT, infection, inflammation, necrosis, trauma and cancer
 - (4) It has low positive predictive value
17. Following should be done annually to detect chronic complication of DM *except*
- (1) Lipid profile
 - (2) ECG
 - (3) Checking for neuropathy
 - (4) BMI
18. Which of the following is true for cotton wool spots in DM ?
- (1) Found in non proliferative diabetic retinopathy
 - (2) Represent local corneal damage
 - (3) Fluffy white with well defined borders
 - (4) In association with deep blotchy haemorrhages they have a good prognosis
19. Which of the following beta blockers does not cause low birth weight when given to a pregnant mother ?
- (1) Propranolol
 - (2) Acebutolol
 - (3) Metoprolol
 - (4) All of the above
20. Drugs which potentiate the effect of warfarin are all *except*
- (1) Sulphinpyrazole
 - (2) Metronidazole
 - (3) Amiodarone
 - (4) Digitalis

- 21.** All of the following is true about pre-eclampsia *except*
- (1) Young < 20 years
 - (2) Onset is before 20 weeks of gestation
 - (3) Proteinuria present
 - (4) primigravida
- 22.** Which of the following is not a cause of diastolic heart failure ?
- (1) Restrictive cardiomyopathy
 - (2) Severe aortic stenosis
 - (3) High cardiac output states
 - (4) Hypertension
- 23.** Which is false regarding peri partum cardiomyopathy ?
- (1) Last month of pregnancy upto 5 months post partum
 - (2) Absence of demonstrable cause of cardiac failure
 - (3) Absence of demonstrable heart diseases before pregnancy
 - (4) Documented diastolic dysfunction
- 24.** Predisposing factors for venous thromboembolism are all *except*
- (1) Obesity
 - (2) Pregnancy/post partum period
 - (3) Advanced maternal age
 - (4) Indwelling central venous catheters
- 25.** PAH is defined as
- (1) Mean PA pressure > 20 mm Hg
 - (2) Systolic PA pressure > 30 mm Hg
 - (3) Both (1) and (2)
 - (4) None of the above

- 26.** In Cor pulmonale PFT reveals all *except*
- (1) Reduced FEV 1
 - (2) Increase in FVC
 - (3) Increase in residual volume
 - (4) Normal total lung volumes
- 27.** Which is not a macrovascular complications of diabetes ?
- (1) Coronary artery disease
 - (2) Cerebro vascular disease
 - (3) Peripheral vascular disease
 - (4) Retinopathy
- 28.** ECG changes occurring in normal pregnancy is
- (1) Greater R wave in left sided leads
 - (2) Qs pattern in V1 – V4
 - (3) ST elevation
 - (4) Small Q wave & an inverted P wave in Lead II
- 29.** All are side affects of ACE inhibitors *except*
- (1) Hyerkalemia
 - (2) Teratogenicity
 - (3) Peripheral oedema
 - (4) Hypotension
- 30.** All are true about Digitalis during pregnancy *except*
- (1) Do not cross placenta
 - (2) Has no teratogenic effect
 - (3) Is the drug of choice to treat fatal arrhythmias
 - (4) Excreted in breast milk

31. The drug of choice for treating fetal supraventricular tachycardia refractory to digitalis is
- (1) Quinidine
 - (2) Flecainide
 - (3) Propafenone
 - (4) Sotalol
32. During routine checkup of pregnant lady in 2nd trimester few premature ventricular ectopics are found in ECG, Echocardiography is normal. The lady is asymptomatic and past medical history is unremarkable. Treatment of choice is
- (1) Digitalis
 - (2) No treatment
 - (3) Amiodarone
 - (4) Propranolol
33. Following are the O Sullivan criteria *except*
- (1) Fasting glucose level : 110 mgs
 - (2) 1 hour glucose level : 190 mgs
 - (3) 2 hour glucose level : 165 mgs
 - (4) 3 hour glucose level : 145 mgs
34. In glucometer post prandial values diagnostic for diabetes is
- (1) > 200 mgs
 - (2) > 210 mgs
 - (3) > 220 mgs
 - (4) = 220 mgs
35. In elderly patients who have been on oral hypoglycemics, the glucose infusion should be kept going for
- (1) 24 hours
 - (2) 30 hours
 - (3) 36 hours
 - (4) 48 hours

- 36.** Diagnosis of HONK coma is made by following biochemical profile *except*
- (1) Arterial pH > 7.3
 - (2) Presence of ketones
 - (3) Serum bicarbonate > 20 meq/L
 - (4) RBS > 600 mgs
- 37.** The ankle brachial systolic blood pressure ratio suggesting severe peripheral vascular disease is
- (1) > 1
 - (2) < 1
 - (3) < 0.5
 - (4) None of the above
- 38.** Hypertension in diabetics
- (1) Thrice than non-diabetics
 - (2) Twice than non-diabetics (without renal disease)
 - (3) Drugs are the only cause
 - (4) None of the above
- 39.** Termination of pregnancy is advised for all *except*
- (1) Primary pulmonary hypertension
 - (2) Eisenmenger syndrome
 - (3) CHF
 - (4) Marfans with dilated aorta
- 40.** Leriche syndrome include
- (1) Impotence
 - (2) Claudication
 - (3) Absence of both femoral pulses
 - (4) All of the above

- 41.** Maternal complications of prolonged use of heparin may cause all *except*
- (1) Sterile abscess
 - (2) Risk of fracture
 - (3) Osteoporosis
 - (4) Itching
- 42.** Following are the manifestations of warfarin embryopathy *except*
- (1) Telecanthus
 - (2) Hyperplasia of nose
 - (3) Small nasal bone
 - (4) Depressed nasal bridge
- 43.** A 34-year-old male presented with *De novo* hyperglycaemia, his BMI is 18. What is the optimal strategy ?
- (1) Exercise and diet
 - (2) Metformin
 - (3) Sulphonylurea
 - (4) Statins
- 44.** A 34-year-old pregnant lady of 15 weeks gestation in heart failure on conventional drugs requires your advice. The most appropriate will be
- (1) MTP
 - (2) Continue pregnancy on medication
 - (3) Stop ACE inhibitor
 - (4) Stop Metoprolol
- 45.** Isolated hypertension is defined as
- (1) Systolic pressure > 160 mm Hg
 - (2) Diastolic pressure < 90 mm Hg
 - (3) Both (1) and (2)
 - (4) None of the above

46. The following would be features of per-eclamsia *except*
- (1) Common in primigravid
 - (2) Onset after 20 weeks of gestation
 - (3) Onset before 20 weeks of gestation
 - (4) Proteinuria present
47. Following can cause high output cardiac failure *except*
- (1) Anemia
 - (2) Systemic AV fistula
 - (3) Hyperthyroidism
 - (4) Hypothyroidism
48. Potassium sparing diuretics are all the following *except*
- (1) Amiloride
 - (2) Amrinone
 - (3) Eplerenone
 - (4) Spironolactone
49. Mother who exposes to the radiation in 3rd month of pregnancy may lead to
- (1) Intra uterine growth retardation
 - (2) Increased incidence of childhood cancer
 - (3) Teratogenic effect
 - (4) (1) and (2) of the above
50. Weight gain does not occur with which of the following drugs for type 2 diabetes mellitus ?
- (1) Insulin
 - (2) Insulin secretagogues
 - (3) Thiazolidinediones
 - (4) Metformin

- 51.** Supplementation of the following in pregnancy with diabetes mellitus reduces the risk of fetal neural tube defects
- (1) Iron
 - (2) Calcium
 - (3) Folate
 - (4) Vitamin B12
- 52.** Earliest sign of autonomic diabetic neuropathy is
- (1) Erectile dysfunction
 - (2) Gastroparesis
 - (3) Anhidrosis of lower extremities
 - (4) Distal sensory loss
- 53.** In all pregnant women measurement of BP should be performed in which position ?
- (1) Supine
 - (2) Sitting
 - (3) Standing
 - (4) All of the above
- 54.** High risk pregnancies include all *except*
- (1) Symptomatic aortic stenosis
 - (2) Symptomatic mitral stenosis
 - (3) Coarctation of aorta
 - (4) Asymptomatic VSD
- 55.** All the following can be seen in diabetic ketoacidosis *except*
- (1) Acidotic breathing
 - (2) Abdominal pain
 - (3) Decrease PCO_2 levels
 - (4) Prominent U-waves as ECG

- 56.** All are ECG features of pulmonary embolism *except*
- (1) Sinus tachycardia
 - (2) Sinus bradycardia
 - (3) Right axis deviation
 - (4) T inversion in V1-V4
- 57.** Which of the congenital malformations is typical of rubella embryopathy ?
- (1) Pulmonary artery stenosis
 - (2) Coarctation of aorta
 - (3) Tricuspid atresia
 - (4) VSD
- 58.** Insulin resistance is due to mutations in the
- (1) Lipoprotein lipase
 - (2) PPAR-gamma
 - (3) PPAR-alpha
 - (4) None of these
- 59.** A pregnant woman presented in first trimester with complaint of breathlessness. She is a known case of mitral stenosis. Echocardiographic examination showed severe mitral stenosis with Wilkin's score of 8. The best management option at appropriate time is
- (1) Percutaneous balloon mitral valvuloplasty
 - (2) Medical management
 - (3) Mitral valve replacement
 - (4) Mitral valve repair
- 60.** Which is not a Virchow's triad ?
- (1) Venostasis
 - (2) Hemorrhage
 - (3) Vessel wall inflammation
 - (4) Hypercoagulability

- 61.** Following drugs can be associated with hyper-glycemia *except*
- (1) Beta-blockers
 - (2) Steroids
 - (3) Thiazide diuretics
 - (4) Cephalosporins
- 62.** Regarding metformin true is
- (1) Contraindicated in renal failure
 - (2) Contraindicated in hepatic failure
 - (3) Contraindicated in heart failure
 - (4) All of the above
- 63.** Goals of diabetes treatment are all *except*
- (1) HbA1C < 7%
 - (2) FBS < 126 mg/dl
 - (3) PPBG < 200 mg/dl
 - (4) Promote use of insulin than OHAs
- 64.** Glucose is transported into the pancreatic beta cells via
- (1) GLUT 2
 - (2) GLUT 1
 - (3) GLUT 3
 - (4) GLUT 4
- 65.** Drugs commonly used to treat hypertension in pregnancy include all *except*
- (1) Methyl Dopa
 - (2) Thiazides
 - (3) Labetalol
 - (4) Calcium channel blockers

- 66.** Least common source of pulmonary embolism
- (1) Amniotic fluid embolism
 - (2) Calf vein thrombi
 - (3) Large veins of legs
 - (4) Cardiothoracic surgery
- 67.** Most definitive method for diagnosing pulmonary embolism is
- (1) Pulmonary angiography
 - (2) V/Q scan
 - (3) ECG
 - (4) Lower limb Doppler study
- 68.** S1 q3 T3 is sign of
- (1) Myocardial infarction
 - (2) Pulmonary embolism
 - (3) LBBB
 - (4) None of the above
- 69.** Which is not true in acarbose ?
- (1) Relatively weak antidiabetic
 - (2) Cannot be used in individual with type 1 DM
 - (3) Chances of hypoglycemia are less
 - (4) Cannot be used in renal failure
- 70.** The third generation sulphonylurea is
- (1) Glimepiride
 - (2) Chlorpropamide
 - (3) Glibenclamide
 - (4) GI ipizide

- 71.** Glycosylated haemoglobin (HbA1C) indicates average glycemic value of past
- (1) 6 months
 - (2) 9 months
 - (3) 1 month
 - (4) 3 months
- 72.** Which is not a high output state causing heart failure ?
- (1) Thyrotoxicosis
 - (2) Paget's disease
 - (3) Cardiogenic shock
 - (4) Cor pulmonale
- 73.** Eclampsia is characterized by all *except*
- (1) Hypertension
 - (2) Hyperglycemia
 - (3) Edema
 - (4) Proteinuria
- 74.** Which of the following antihypertensive agents is safest during pregnancy ?
- (1) Olmesartan
 - (2) Labetalol
 - (3) Furosemide
 - (4) Verapamil
- 75.** Which is not a microvascular complication of diabetes ?
- (1) Retinopathy
 - (2) Neuropathy
 - (3) Nephropathy
 - (4) Cerebrovascular accident

- 76.** Potentially life threatening complications of Metformin
- (1) Hypoglycemia
 - (2) Renal failure
 - (3) Lactic acidosis
 - (4) None of the above
- 77.** Amiodarone is contraindicated in pregnancy due to following reasons
- (1) Bradycardia in mother
 - (2) QT prolongation in new born
 - (3) Foetal hypothyroidism
 - (4) All of the above
- 78.** An elderly diabetic patient has recently read about the complications of diabetes and wants to know if his kidneys can be protected. All of the listed measures can help *except*
- (1) Diuretics
 - (2) ACEI
 - (3) ARB
 - (4) Control of BP
- 79.** All the following increases during normal pregnancy *except*
- (1) Blood volume
 - (2) Heart rate
 - (3) Cardiac output and stroke volume
 - (4) Systemic vascular resistance
- 80.** All the following can induce hyperglycemia *except*
- (1) Prednisolone
 - (2) Niacin
 - (3) Hydrochlorothiazide
 - (4) Nikorandil

- 81.** Ankle-brachial index is a tool for diagnosis of
- (1) Subclinical atherosclerosis
 - (2) Wilson syndrome
 - (3) Marfan's syndrome
 - (4) PAD
- 82.** Pioglitazone is contraindicated in
- (1) Hepatitis
 - (2) Myopathy
 - (3) Gastritis
 - (4) Ischemic heart disease
- 83.** Diabetes mellitus is characterized by
- (1) Thirst
 - (2) Polyuria
 - (3) Weight loss
 - (4) All the above
- 84.** Ketone bodies are all *except*
- (1) Acetone
 - (2) Glucose
 - (3) Aceto acetate
 - (4) Beta hydroxyl butarate
- 85.** Which of the following statements is not correct in the case of Cor pulmonale : pulmonary heart disease ?
- (1) High altitude dwellers is one of causes of Cor pulmonale
 - (2) Chest X-ray of lungs never show features of emphysema
 - (3) PFT studies often show reduction in FEV1 and in forced vital capacity
 - (4) All patients should be treated with O₂ in amounts adequate to restore arterial tension to greater than 60 mm of Hg

- 86.** Adenosine half-life is
- (1) < 10 sec
 - (2) 60 seconds
 - (3) 12 seconds
 - (4) 20 seconds
- 87.** Warfarin in pregnancy is switched over to heparin in which trimester ?
- (1) 26 weeks
 - (2) 30 weeks
 - (3) 38 weeks
 - (4) None of the above
- 88.** Sildenafil is which inhibitor ?
- (1) Phosphodiesterase -5
 - (2) Phosphodiesterase -3
 - (3) Phosphodiesterase -1
 - (4) (1) and (2)
- 89.** HELLP syndrome includes all *except*
- (1) Hemolysis
 - (2) Elevated liver enzymes
 - (3) Low platelet count
 - (4) High platelet count
- 90.** The most common medical complication of pregnancy is
- (1) Hypertension
 - (2) Cardiac failure
 - (3) Cardiac arrhythmia
 - (4) Venous thrombo embolism