

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

Term-End Examination

00459

December, 2014

MCC-006 : CARDIO VASCULAR EPIDEMIOLOGY

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. South Asian also called as "Asian Indian" are people belonging to the following nations of the Indian sub-continent *except*
 - (1) Pakistan
 - (2) Myanmar
 - (3) Sri Lanka
 - (4) Nepal

2. Following are the top four leading causes of Global death in GBD expand 2000 study in developing countries *except*
 - (1) CAD
 - (2) CVA
 - (3) Road Traffic Accidents
 - (4) HIV / AIDS

3. Following statements about prevalence of CAD and Coronary Risk factors in South Asian population are true *except*
 - (1) 6 times higher than Chinese
 - (2) 4 times higher than Asian American
 - (3) Same as that of Japanese
 - (4) 3 times higher than the native population in Singapore, Uganda, Fiji and South Africa

4. Following are the cardinal features or epidemiology of CAD in South Asian population *except*
 - (1) Severe diffuse Extensive disease
 - (2) Pre maturity
 - (3) Lesser prevalence
 - (4) Higher Mortality

5. Following are the periods of the development of CAD *except*
 - (1) Preclinical and Latent period
 - (2) Clinical period
 - (3) Incubation period
 - (4) Fatty streak period

6. In which stage of atherosclerosis, complications like Plaque fissure rupture, Plaque thrombus and ACS occur ?
- (1) Fibrous Plaque
 - (2) Calcified Plaque
 - (3) Fatty streak
 - (4) Soft lipid laden atheroma
7. Risk factors of CAD are conventionally classified as follows *except*
- (1) Causal factors directly responsible for promoting Atherosclerosis
 - (2) Conditional factors - contributing but not causal risk
 - (3) Modifiable and non-Modifiable factors
 - (4) Pre disposing factors – intensifying the causal factor and affects conditional factor
8. Following are true about the predisposing risk factors of CAD *except*
- (1) influence CAD by intensifying action of major causal factors
 - (2) influence CAD by affecting conditional factors
 - (3) Age, Sex, Ethnicity are predisposable risk factors
 - (4) Preventable by lifestyle modification
9. Risk factors for Atherosclerosis and CAD among South Asians are all *except*
- (1) Physical inactivity
 - (2) Abdominal Obesity
 - (3) Improper Diet
 - (4) Anxiety
10. Premature atherosclerotic vascular disease according to family history of CAD means all *except*
- (1) CAD in father/brother < 55 years of age
 - (2) CAD in 1st degree female ratio < 55 years
 - (3) CAD in Mother and Sister < 65 years
 - (4) CAD in 1st degree male relative < 55 years of age

11. Cigarette smoking is a known CAD risk factor. It causes endothelial injury increase HR & BP, decrease Oxygen level in the blood. It increases CAD incidence, Mortality and Morbidity by all mechanisms *except*
- (1) ↑ Platelet aggregation and blood clotting
 - (2) ↑ Coronary Spasm
 - (3) ↓ HDL Cholesterol
 - (4) ↑ Para sympathetic activity
12. All of the following statements about Alcohol consumption is correct *except*
- (1) Binge drinking precipitates AF
 - (2) Associated with dilated CMP
 - (3) Moderate alcohol consumption protects CAD by elevating HDL Cholesterol
 - (4) Excess alcohol consumption is associated with decreased risk of cardio vascular disease
13. 52 year old Hypertensive, Diabetic patient on regular medication got following fasting lipid profile TC = 210; HDLc = 32; LDLc = 160; TG = 250. Which of the statements is not correct ?
- (1) LDL-C needs drug therapy
 - (2) Drug of choice is Statin
 - (3) High TG to be controlled first
 - (4) Anti Lipid drugs to be used irrespective of CAD Status
14. Modified definition of the metabolic syndrome for South Asians are as follows *except*
- (1) Central Obesity waist circumference Male > 90cms; Female > 82cms
 - (2) Reduce HDL-C (< 40 mg/dl)
 - (3) High BP > 130/85 mm Hg
 - (4) High LDL-C (> 160 mg/dl)
15. Newer and Emerging Coronary risk factor for CAD is LVH. Which of the following is not true about LVH ?
- (1) LV measures > 131 g/m² of BSA in male
 - (2) LV measures > 100 g/m² of BSA in female
 - (3) Independently associates with increased CVD, stroke and all causes of mortality
 - (4) Reduction in LVH is independently associated with the decreased CVD irrespective of BP control

16. Peripheral Arterial Disease is associated with all the following *except*
- (1) Elevated Total cholesterol level (> 150 mol/l)
 - (2) Smoking
 - (3) NIDDM
 - (4) Excess lipoprotein (a)
17. Following risk factors are more causes in South Asians *except*
- (1) Hyper insulinemia and Insulin resistance
 - (2) \uparrow LP(a)
 - (3) \uparrow PAI-1 activity
 - (4) BMI
18. Insulin resistance is a metabolic disorder associated with the resistance of various tissues to normal level of plain insulin. Metabolic abnormality that are seen as a consequence of Insulin resistance are all *except*
- (1) Hyper secretion of Insulin by pancreatic beta cell
 - (2) \uparrow Glucose production by liver
 - (3) \uparrow Release of FFA by adipose tissue
 - (4) \uparrow Uptake of glucose by skeletal muscles
19. Inter Heart study is one of the largest case control studies evaluating Risk Factors for CAD. Goal is to evaluate the association of Risk Factors globally as well as in each region and among the different ethnic groups. Patients included in the study belong to which group ?
- (1) All ACS patients
 - (2) First MI patients only
 - (3) All stable CAD patients
 - (4) CCF - post MI patients
20. According to inter heart study, strong genetic prediction of Acute MI risk regardless of ethnicity, region or gender is
- (1) Current smoking
 - (2) Abnormal ApoB/Apo A1 ratio
 - (3) DM
 - (4) (1) and (2) only

21. Framingham risk prediction for CAD is based under following risk factors *except*
- (1) Systolic BP
 - (2) HDL Chol
 - (3) LDL Chol
 - (4) DM
22. Limitation of Framingham risk score which is widely used are *except*
- (1) Not accurate for South Asians
 - (2) Under estimate the risk for Indians
 - (3) Modifications are needed in this scoring system to be used accurately In Indian Sub-continent
 - (4) Predict CAD risk with reasonable accuracy in white men and women
23. Prevention of CAD and CAD related deaths at individual level can be done by the following ways *except*
- (1) Primary Prevention
 - (2) Secondary Prevention
 - (3) Primordial Prevention
 - (4) Tertiary Prevention
24. Primordial prevention is a preventive strategy for CAD. All are true *except*
- (1) Prevention of CAD by treating risk factor
 - (2) Prevention of recurrent CAD by treating CAD
 - (3) Prevention of occurrence of risk factors in healthy population
 - (4) Life style modification
25. Prevention means reduction and elimination of the risk factors for CAD. The approach for adopting prevention measure are all *except*
- (1) Population based strategy
 - (2) Single risk factor strategy
 - (3) High baseline risk strategy
 - (4) Gender based strategy

- 26.** Main four components of life style modifications in the prevention of CAD are all *except*
- (1) Behavioural change
 - (2) Quit smoking
 - (3) Change in diet
 - (4) Treatments of all risk factors medically
- 27.** Based on HOPE clinical study, the following drugs are recommended for secondary prevention of CAD *except*
- (1) Calcium channel blockers
 - (2) ACE inhibitors
 - (3) Anti Platelets – Aspirin
 - (4) Statin
- 28.** The following facts about carbohydrates in diet are true *except*
- (1) Complex Carbohydrates – brown rice, whole bread, ata are good
 - (2) Simple Carbohydrates – Sugar, Candy, glucose derivatives are bad
 - (3) Classified according to Glycaemic index
 - (4) Highly processed carbohydrates are found to have low glycaemic index
- 29.** The glycaemic index of food is determined by all the following features *except*
- (1) Fiber content
 - (2) Ripeness
 - (3) Fat contents
 - (4) Natural or Artificial
- 30.** Different types of fats that are classified according to their effects on human beings are all *except*
- (1) Monounsaturated
 - (2) Polyunsaturated
 - (3) Trans fat
 - (4) Omega 3 unsaturated fatty acids

- 31.** Saturated fat is high in all of the following Animal and Plant products *except*
- (1) Coconut oil, Palm oil
 - (2) Cheese, Milk, Ice cream
 - (3) Animal meat, Egg yolk
 - (4) Fish
- 32.** Diet recommendation by WHO for prevention of Heart Diseases are as follows *except*
- (1) Total fat (% energy 15 – 30%)
 - (2) Cholesterol < 300 mg/day
 - (3) Salt 6 mgs/day
 - (4) Free sugar 10 – 20 gms/day
- 33.** Physical exercise prescription should contain all of the following *except*
- (1) Frequency – Ex 4 – 6 days/week
 - (2) Duration – Ex 30 – 60 mts excluding warm-up and cool down
 - (3) Type – Ex rhythmic, aerobic
 - (4) Timing – Ex morning and evening
- 34.** Benefits of regular exercise programme include all of the following *except*
- (1) Weight loss and maintenance
 - (2) Improvement in glucose metabolism and lipids
 - (3) Control of BP
 - (4) Precipitation of CAD
- 35.** Control of hypertension involves non pharmacological management and drug treatment. The non pharmacological measures mostly relate to life style modification and include all *except*
- (1) Reduction in salt intake
 - (2) Stoppage of smoking
 - (3) Regular physical exercise
 - (4) Alcohol intake

- 36.** Dyslipidemia is a risk factor for CAD. By treating dyslipidemia CAD can be prevented. Trials that showed primary prevention of CAD by statins are as follows *except*
- (1) WOSCOPS
 - (2) 4S
 - (3) AFCAPS
 - (4) TEXCAPS
- 37.** Non pharmacological way of reducing dyslipidemia is by doing regular exercise. All of the following changes occur with exercise *except*
- (1) ↑ HDL
 - (2) ↓ LDL
 - (3) ↓ TG
 - (4) ↓ LP(a)
- 38.** American Heart Association guidelines for secondary prevention of CAD are all *except*
- (1) Lipid management including statins
 - (2) Anti platelets
 - (3) Beta blockers
 - (4) Weight reducing drugs
- 39.** Risk intervention needed for primary prevention of CAD as recommended by AHA are all *except*
- (1) BP control
 - (2) Diet therapy
 - (3) Physical activity
 - (4) Moderate Alcohol intake
- 40.** Drugs recommended in the control of BP after Acute MI and during follow-up are all *except*
- (1) Beta Blockers
 - (2) Nitrates
 - (3) ARBs
 - (4) ACEI

41. In blood lipid management the target given by NCEP for CAD patients and those having DM are all *except*
- (1) LDL chol < 100
 - (2) HDL chol > 40
 - (3) TG < 150
 - (4) TC < 150
42. Diagnostic criteria given by WHO for the diagnosis of DM are as follows *except*
- (1) Fasting Plasma Glucose > 7mmol/l - DM
 - (2) Fasting Plasma Glucose < 7 mmol/l PP > 7 IGT < 11 - IGT
 - (3) Fasting < 7, > 6.1 mmol/l - IFG
 - (4) PP < 11.1 mmol/l - DM
43. Guideline for CAD prevention in women released by AHA made following recommendation regarding HRT
- (1) HRT should not be initiated
 - (2) HRT should not be continued
 - (3) Statin is preferable to HRT
 - (4) Statin and HRT can be used simultaneously
44. Exercise rehabilitation therapy is recommended in the following patients *except*
- (1) Unstable CAD
 - (2) PAD
 - (3) Stable CAD
 - (4) Heart failure
45. Fatty Meat and Meat products which are rich in saturated fats and cholesterol to be avoided are all *except*
- (1) Red meat – Mutton, Lamb, Pork
 - (2) Organ meat – Liver, brain and kidneys
 - (3) Lobster, shrimps and egg yolk
 - (4) Fish and fish products

46. Cardio Protective agent present in Red wine is
- (1) Resveratrol
 - (2) Methyl Alcohol
 - (3) Ethyl Alcohol
 - (4) None of the above
47. According to JNC VI, stage I HTN is
- (1) 130 – 139/85 – 89
 - (2) < 130/85
 - (3) 140 – 159/90 – 99
 - (4) 160 – 179/100 – 109
48. Following oils contain more polyunsaturated fats than monosaturated fats *except*
- (1) Sunflower
 - (2) Corn
 - (3) Soyabean
 - (4) Peanut
49. CVD accounted for what percent of deaths in developing countries ?
- (1) 8
 - (2) 23
 - (3) 17.1
 - (4) 58
50. Prevalence of hypertension in India is _____ in urban areas.
- (1) 10 – 30.9%
 - (2) 3.5 – 5%
 - (3) 26.8 – 32.6%
 - (4) 18.4 – 21.8%

51. Which cholesterol is considered as good cholesterol ?

- (1) LDL
- (2) HDL
- (3) VLDL
- (4) Triglycerides

52. Recent drugs used for smoking cessation

- (1) Nicotine Chewing gum
- (2) Bupropion
- (3) Buscopan
- (4) Low yield cigarettes

53. Obesity is defined as BMI

- (1) 20
- (2) 25
- (3) 30
- (4) 45

54. Following are the beneficial effects of exercise *except*

- (1) Increases HDL
- (2) Decreases insulin sensitivity
- (3) Reduces LDL
- (4) Reduces Blood Pressure

55. Which is not true for Marfan syndrome ?

- (1) Pregnancy is safe
- (2) Dissection of aorta is common
- (3) Dilatation of ascending aorta
- (4) High risk of child inheritance

56. Atherosclerotic process starts as early as _____ years of age.

- (1) 3
- (2) 10
- (3) 18
- (4) 40

57. Lack of physical activity causes the following *except*

- (1) Increase in insulin sensitivity
- (2) Increase in blood lipids
- (3) Rise in blood pressure
- (4) Increase in body weight

58. Which is well tolerated in pregnancy ?

- (1) Aortic stenosis
- (2) Mitral regurgitation
- (3) Primary PPH
- (4) None of the above

59. The Hydroxymethylglutaryl- COA reductase inhibitor is

- (1) Aspirin
- (2) Clopidogrel
- (3) Statins
- (4) Nifedepine

60. According to WHO recommendation on diet, fat intake should be less than _____ of total calories.

- (1) 10%
- (2) 30%
- (3) 25%
- (4) 15%

- 61.** Sullivan criteria is used for:
- (1) Diagnosis of hypertension
 - (2) Diagnosis of gestational diabetes
 - (3) Diagnosis of keto acidosis
 - (4) Diagnosis of heart failure
- 62.** Following personality behavior increases the incidence of CAD
- (1) Type A
 - (2) Type B
 - (3) Type C
 - (4) Type D
- 63.** Hypoglycemia is defined as
- (1) Blood sugar less than 40mg percent
 - (2) Blood sugar less than 60mg percent
 - (3) Blood sugar less than 80mg percent
 - (4) Blood sugar less than 100mg percent
- 64.** Drug useful for erectile dysfunction is
- (1) Nitrate
 - (2) Phosphodiesterase inhibitor
 - (3) ACE inhibitor
 - (4) Alpha blocker
- 65.** INR test is for monitoring of
- (1) Heparin
 - (2) Oral Antiplatelet
 - (3) Low molecular Heparin
 - (4) Warfarin

66. Amino acid associated with atherosclerosis is
- (1) Lysine
 - (2) Homocysteine
 - (3) Cysteine
 - (4) Alanine
67. All of the following dietary goals are recommended for patients with high risk or coronary heart disease *except*
- (1) total cholesterol < 300mg/dl
 - (2) Saturated fat < 7% of total calories
 - (3) Salt restriction < 6 gm/day
 - (4) PUFA > 10%
68. CARE study belongs to
- (1) Pravastatin
 - (2) Simvastatin
 - (3) Fluvastatin
 - (4) Atorvastatin
69. A 66 years old man presents with chest pain since last 6 hours and is diagnosed as acute MI. Angiography showed total occlusion of LAD, the most common site of infarct is
- (1) Anterior Wall
 - (2) Posterior Wall
 - (3) Inferior Wall
 - (4) Septum
70. 70 year old patient presents with unstable angina. Which of these treatments is not advisable ?
- (1) Nitroglycerine drip
 - (2) Aspirin
 - (3) Coronary Angiography
 - (4) Streptokinase

- 71.** Patient with acute inferior wall MI develops shock. Most likely cause is
- (1) Cardiac Tamponade
 - (2) Right ventricular infarct
 - (3) Papillary muscle rupture
 - (4) VSD – acquired
- 72.** Major risk factors for CAD are all *except*
- (1) Hypertension
 - (2) CRP
 - (3) DM
 - (4) Obesity
- 73.** Moderate alcohol intake has been protective for CAD through
- (1) Increased HDL
 - (2) Platelets
 - (3) Fibrinolysis
 - (4) All of the above
- 74.** Intake of which of these vitamins is not protective against oxidative stress
- (1) Vit A
 - (2) Vit C
 - (3) Vit D
 - (4) Vit E
- 75.** Recommended HbA1c level in diabetic patient is
- (1) < 6%
 - (2) < 6.5%
 - (3) < 7.1 %
 - (4) < 7.5%

- 76.** The nonpharmacological management of hypertension includes the following *except*
- (1) Reduction of overweight
 - (2) Reduction of salt intake
 - (3) High carbohydrate diet
 - (4) Stress management
- 77.** Low glycemic index food is
- (1) fruits
 - (2) soft drinks
 - (3) sugar
 - (4) white rice
- 78.** Which among these oils have high PUFA ?
- (1) Coconut
 - (2) Olive oil
 - (3) Vanaspati
 - (4) Ghee
- 79.** Premature CAD is defined as
- (1) MI or angina occurring in men less than 40 years
 - (2) MI or angina occurring in women less than 55 years
 - (3) MI or angina occurring in men less than 55 years
 - (4) MI or angina occurring in men less than 65 years
- 80.** True regarding smoking is all *except*
- (1) Smoking causes endothelial injury
 - (2) Smoking decreases oxygen level in blood
 - (3) Smoking decreases heart rate
 - (4) Smoking increases platelet aggregation and promotes blood clotting

- 81.** High glycaemic index foods include all *except*
- (1) White bread
 - (2) Refined breakfast cereals
 - (3) Oats
 - (4) White spaghetti
- 82.** Lifestyle modifications for the prevention of Coronary Artery Disease include all *except*
- (1) Change in diet
 - (2) Institution of appropriate anti hypertension medications
 - (3) Stoppage of smoking and tobacco
 - (4) Behavioural change for stress management
- 83.** Smoking causes the following *except*
- (1) Increases the incidence of CAD
 - (2) Causes more severe CAD
 - (3) Causes premature CAD
 - (4) Incensed HDL cholesterol level
- 84.** Source of saturated fat is
- (1) Olive oil
 - (2) Soybean
 - (3) Animal fats
 - (4) Corn
- 85.** Which one of the following is a modifiable risk factor for atherosclerosis ?
- (1) Age
 - (2) Gender
 - (3) Heredity
 - (4) Diabetes mellitus

- 86.** Atherogenetic risk factors are particular to
- (1) Coronary Artery Disease
 - (2) Stroke
 - (3) Peripheral Vascular Disease
 - (4) All of the above
- 87.** Normal BMI is
- (1) Less than 20
 - (2) 20 to < 25
 - (3) 20 to < 30
 - (4) 25 to < 30
- 88.** Trans fatty acids are
- (1) Found in dry fruits
 - (2) Liquid at room temperature
 - (3) Decrease the shelf life of the oil
 - (4) Found in junk foods
- 89.** Which of the following is not a primary prevention trial ?
- (1) WOSCOPS
 - (2) AFCAPS /TEXCAPS
 - (3) 4 S
 - (4) Jupiter
- 90.** Which of the following increases HDL ?
- (1) Monounsaturated fats
 - (2) Polyunsaturated fats
 - (3) Trans fats
 - (4) Saturated fats