# POST GRADUATE DIPLOMA IN CLINICAL CARDIOLOGY (PGDCC) 

## Term-End Examination

June, 2011

## MCC-006 : CARDIOVASCULAR EPIDEMIOLOGY

Time: 2 hours

Maximum Marks : 60

## Note :

(i) There will be multiple choice type of questions in this examination which are to be anstuered in OMR Answer Sheet.
(ii) All questions are compulsory.
(iii) Each question will have four options and only one of them is correct. Answers have to 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 $H B$ or lead pencil and not by ball pen in OMR Answer Sheets.
(iv) If any candidate marks more than one option it will he 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.
 SIl of the following are true resuding coromary artery disense in south Asians except:
(1) (N) tende to ix more ageressive and manifests at a pounger age.

 in whan? population
(t) In India, there is likethood of a noth sonth divide with provaloner is higher in the Gouth than in the moth of the rountry.

(1) It mas be rebated to ageresation of major rick factors like hypertension and diabetes.
(2) Family history of ( $N$ ) in men at an age < 55 yes. increases the risk of $C N D$.


(4) It is combitered a mon modifistle risk factor for C A ).
3. Dhatex metlitus is atmong and independent risk factor for the velopment of coronary
 M!
(1) Both trpece of daboten mellitus are assocmated with a markedly increased risk of ( $A D$ ).
(3) In dhath patient- the overali mortality from heart disease is 4 to 5 thenes hegher in men and is twioe as geat an women.
(3) Acederated atherosebosis and theorabosis play an impontant robe.
(t) Nom-CV motality is ereater in diabetic compared with nom-diabetic subjects.
 sydrome is

(2) Flevated if lif dolesterol is included in the reteria lad down for diagnosis.
(3) Centrat obesty is the come beature.
(t) Impaned yhaco wherano is included in the miteria had down for diamosis.
5. All are trac regathon motablic syndrome encept:
(1) Fofuhelial inflammation is now regarded as a major component.
(2) !his tem refers to the fustering of multiple risk factore for cardiovascular disease.
(3) It reposents a pro infommatory shate.
(t) shabolic symbome is the man cause of increasing number of (VD) in west, as - ompared to derelophen countries.
6. All are true resarding oberty except
(1) Obese men have a wast-hip ratio equal to or bess than 0.9 , whereds in women it should not be more than usti.



 and thes hos led to bentetication of newer bisk factors. These newer risk factom matede at except
(1) Sxidntre attens
(2) Itspehnomecrstememia
(3) Increaced fibrinogen (1) Montal stress
8. Inoe rowatins loft ventriculn hepertmphere all exept:
(1) It develops became of dronic preshme or volume orertond.
(2) It con regres eith pfentive blond presube contro! and non pharmacologicat intervention.
(3) There is cometusis: dib hat meducton of ledt ventriontar mass can mprove cardiovascolar outcome independent of the decrease in BP.
(t) IVHI is not an indeperntentrisk fator for cordiovesomar disease.
9. Which of the following is trat manding ! ipoprotemint ?
(1) li is the atherogente sub fracton o! VDD
(2) The inherited sermm level of lipupotemen are mfluened by smokine
(3) it is beleved to bo a biotogical mather for familial ( Na)

10. True regarding CAD in Indians arr ail excent:
(1) New borns with low birth werght have amenhanced suscoptibitity to (AD) in adult here.
(2) There is confluence of both conventional and non conventional risk factors in fndians.
(3) Demographic transtion is playing an important role
(4) Flevated phama homoryteine lowels are indepmotenty associated with (Ab)
11. True regarding hypertension as a rick futor for ( ND) are all exapt:

(2) Reduction of hood pressme reduces rion of ( XD) ant heon matum.
(3) Ilypertonswn awses ondothelin thans

12. True regarding dyslipidemia is
(1) The association between LDI cholesterol and risk of vascuiar events is not a graded response.
(2) The VA-HIT trial gave evidence that increase in HDI - Cholesterol in CAD patents is followed by a significant decrease in maior coronary events.
(3) $\wedge$ total cholesterol/ HI$) \mathrm{l}$, cholesterol ratio more than 2.5 is ascociated with hish risk of CAD.
(4) The association between LDI, cholesterol levels and vascular events does not hold true in women.
13. True regarding smoking is all except:
(1) Smoking causes endothelial injury.
(2) Smoking decreases oxygen leved in blood.
(3) Smoking decreases heart rate.
(4) Smoking increases platelet aggregation and promotes blood cloting.
14. Regarding smoking and $C \triangle D$, which is incorrect ?
(1) Smoking is the single most important preventable risk factor for CAD.
(2) Smoking causes coronary spasm.
(3) Nicotine is a potent agonist of the parasympathetic nervous system.
(4) The benefits of smoking cessation are seen regardless of how long and how much the patient previously smoked.
15. The first step of lipid management according to ATP III guidelines is :
(1) Determine fasting lipoprotein levels.
(2) Identify the presence of clinical atherosclerosis.
(3) Calculate the global risk score.
(4) Determine the patient's CAD risk category.
16. The World Health Organization dietary recommendations include all except :
(1) Total carbohydrates should contribute 55-75\% of the energy.
(2) Salt consumption should be less than $2 \mathrm{gm} /$ day.
(3) Fruit consumption should be around $400 \mathrm{gm} /$ day.
(4) Total dietary fiber intake should be 27-40 gm/day.
17. Which is true regarding polyumsaturated fats?
(1) Eolyunsatmated fats lower both LDI and IIDI.
(2) Their math wome is shew ab and comota oil.
(3) They lower LDL but raise IDDL
(4) They are in a liquid state at room temperature.
18. True regarding fish oils is all except:
(1) They lower plasma triglyceride levels.
(2) They have antithrombotic properties.
(3) They are used in cases of severehypertriglyceridemia refractory to conventional therapy.
(4) They are rich in monounsaturated fatty acids.
19. Framingham risk score is truly characterized by all of the following statements except :
(1) It is useful tool to assess the risk of cardiovascular event in patients both without pre-existing cardiac disease and in those with coronary artery disease.
(2) It includes six variables to predict the 10 and 20 year risk of CAD.
(3) It provides the absolute risk of coronary artery disease.
(4) It is widely used for risk assessment.
20. AHA guidelines for the secondary prevention of coronary heart disease include all except :
(1) Complete and permanent cessation of smoking.
(2) Blood pressure goal less than $140 / 90 \mathrm{~mm}$ of Hg in diabetics.
(3) BMII of $18.5-24.9 \mathrm{~kg} / \mathrm{m}^{2}$.
(4) Indefinite use of ACE inhibitors in all post MI patients.
21. Coronary artery disease equivalents are all exoopt:
(1) Transient ischemic attacks
(2) Peripheral arterial disease
(3) Diabetes Mellitus
(4) Hypertension
22. True regarding $C N D$ in diabetics is:
(1) Only patients with Type II Diabetes Meilitus have increased risk of CAD.
(2) Risk of CAD is not closely related with glycaemic control.
(3) Level of fasting blood glucose may decrease during acute myocardial ischemia or infarction.
(4) $25 \%$ of patients with diabeles die from macro vascular disease.




(t) Stres induced (Al) is independent of andetheliat function.
24. Therosterosis whith vive rise wormary atome distose mathes in stares. The earlest

(1) Bativ streaks
(2) Horows plapur
(3) Abmeroma
4) (omplianed phatue
25. True resarding alcohot consumpton is all exiept:
(1) Naderate alowht intake ha- beas thoush to have a protedive deat on CAD.

 stoke and hypertension.


(1) Trumal ohersits
(2) Bherated mand B hoopotem
(3) Low llin! chomestern!
(d) Ramed body mise Index
27. Prammpham rish some int hates all wapp
(i) lotal or l ble cholesterol
(2) Ilatom of dintoter
(3) Nabmotic sumarome
(i) sender
 disease include all exepet:
(1) Grarette somatios
(2) Ihepotlemam
(i) Bobres meltus
(4) Ieftrentriatar Mypembapha


 cormonaits

(4) It dom not hall the fremens of wheresterosis.
30. True statements regarding carbohydrates are all except
(1) They are a moressary that of a healthe diet
 and minerals.
(3) Intake of simple carhohydrates should be encouraged as compared to comple carbohydrates.
(4) Carbohydrates are chassified acoording to givadente index.
31. High glycaemic index foods include all except:
(1) White bread
(2) Refined broakfast cereals
(3) Oats
(4) White spayhetti
32. Physical inactivity is considered a modifiable lifestyle risk fanor for Coronary artery discase. All of the following statements regarding physical incotivity are true exoppt:
(1) It causes an increase in cardiac reserve.
(2) It causes a decrease in insulin sensitivity.
(3) A rise in blood pressure may be seen with physical inativety
(4) It is an independent and statistically significant risk factor for ( ND ) as per the us Railroad study.
33. Lifestyle modifications for the prevention of Coronary Artery Disease inclade all except:
(1) Change in diet
(2) Institution of appropriate antihypertensive medications:
(3) Stoppage of smoking and tobacco
(4) Behavioural change for stress management
34. True regarding West of Scothan Coronary Prevention Study WOs( 1 Wh are all except:
(1) It was a primary prevention trial of lipid lowering therapy.
(2) It enrolled both men and women with high risk of coronary disease.
(3) Enrolled subjects had elevated cholesterol and other risk factors for coromary atery disease.
(4) Lipid lowering therapy resulted in decline in total mortality.
35. Health education and motivational campaign for the prevention of smoking habits and other tobacco use is -
(1) Primordial prevention
(2) Primary prevention
(3) Secondary prevention
(4) Both primordial and primary prevention
36. True regarding physical exercise prescription are all except:
(1) The frequency of exercise should be about 4-6 days in a week.
(2) 30-60 minutes of exercise excluding warm up and cool down.
(3) The aim is to reach a target heart rate of $50-80 \%$ of maximum heart rate.
(4) The rate of perceived exertion (RPE) should be 8 to 10 (in a scale of 6 to 20 ).
37. Secondary prevention trials evaluating the benefit of cholesterol lowering are all except:
(1) $4 S$ trial
(2) LIPID trial
(3) CARE trial
(4) AF CAPS/Tex CAPS trial
38. True statements regarding primary prevention are all except:
(1) It is concerned with controlling, reversing and treating the risk factors that are already present in the individual.
(2) The subjects undergoing primary prevention are those who are either asymptomatic or those in whom no damage has resulted from atherosclerosis.
(3) Although primary prevention halts the process of atherosclerosis, it is not effective in reversing atherosclerosis.
(4) It results in a decline in the prevalence of the disease in the community.
39. South Asian also called as "Asian Indian" are people belonging to following nations of the Indian sub continent except :
(1) Pakistan
(2) Myanmar
(3) Sri Lanka
(4) Nepal
40. 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) $\mathrm{HIV} / \mathrm{AIDS}$

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41. Following statements about prevalence of (AD) and Coronary Rish hators in South Asian 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, Lganda lifiand Sonth Ntica.
42. Following are the Cardinal features of Epidermiology of CAD ) in South Asian except
(1) Severe diffuse Extensive disease
(2) Pre maturity
(3) Lesser prevalence
(4) Higher Mortality
43. Following are the periods of the development of CAD except :
(1) Preclinical and I atent period
(2) Clinical poriod
(3) Incubation period
(4) Fatty stroak period
44. In which stage of atherosclerosis, complication like Playue fissure rupture, Playue thanibus and ACS occur ?
(1) Fibrous Plaque
(2) Calcified Plaque
(3) Fatty streak
(4) Soft lipid laden atheroma
45. Risk factors of CAD are conventionally classified as follows except :
(1) Causal factors directly responsible for the promoting Atherosclerosis
(2) Conditional factors - contributing but not causal risk
(3) Modifiable and Un Modifiable factors
(4) Pre disposing factors - intensifying the causal factor and affects condibional factor
46. Following are the true about the predisposing risk factors of (AD) except:
(1) influence CAD by intensifying action of major causal factors
(2) influence CAD by affecting conditional factor
(3) Age, Sex, Ethnicity are predisposable risk factors
(4) Preventable by life style modification

(i) !!a,


(d) Amxisり
48. Prombure atheros tembe vasular discase according to family History of CAD means all except
(1) (A!) in father/brother < 55 vears of age
(2) (N) in tegre temate retative $<55$ years
(3) (Ai) m Nother and Sister $<63$ years

 BP, derese (hysenked in the biood. It increases (AD) incidence, Mortality and Morbidity by all Nuchanamsexcept:
(1) Plawiv dghemmon and blowd lotting
(2) : (annay oprosin
(3) $\quad$ : 1101 Cholesterol
(4) P Iata simpathetio activity
50. All of the following statements about Aloohol consumption are correct except :
(1) Bme drmking precipitates AF
(2) Assumbted with dhated CMP
(3) Mosteate aicohol consumption protects CAD by elevating HDI Cholesterol.
(4) Eacesalumat monsmation is associated with decreased risk of cardio vascular disease.


(1) Whe needs trug themper
(2) Dugy of chatice is statin.
(3) High TG to be controlled first.
(4) Antu Lipid drugs to be used irrespective of (AD) Status.


(2) Kedure mble reta me m
(3) Sioh Bla $=130 / 85 \mathrm{mmlig}$
(i) High IDI C $>160 \mathrm{my}$ d
53. Newer and Emergine Coronary risk factor for CND is I VIE. Wheh of the fomming is met true about I.N: ?
(1) IV measures $>131 \mathrm{~m} / \mathrm{m}^{2}$ of BSA in male
(2) i'measures > mos me of BS in femate
(3) Independenth assochates whth increased (Vh, otroke and ah catses of mombly
(4) Redurtion in IVII is independently associated with the decreased (V) imenperter of BP antan
54. P'eriphere! Atmeral Disense an assmated with all the following exept:
(i) Sevated lotal t/ ( level $(>170 \mathrm{~mol} / \mathrm{l})$
(2) Smoking
(i) NIIH)N
(4) Exacs lipopumein (a)
55. Following risk factor are more casatme in south samsexcept
(1) Hyper mbubmenia and Insulan restimence
(2) inl (1)
(3) TMA I-ladivaty
(4) BN11

 resistance dro all exept
(1) Ifyer secretion of Imentit: by pencmati meta cell
(2) TBMow praturtan by haw

(f) Yptah of shacome by skeletal mustes



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-i) (Cl-post MI patients
 abmat, araburaner a

(1) (1) and (2) only


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( i: i: in (! i) !











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it Cilwo Channel Blockers



(3) Classified according to biyonomb num

65. The glycaemic index of fool is detemmbut at an an and
(1) Fiber content a) Pimeness

 all exrept :
(1) Mono unsaturated
(2) Pown monwome
(3) Trans fat

67. Saturated fat is high in all of the following Anmm: matherase
(1) Coconut oil, Pahm oil

(3) Animal meat, Egs yolk
(1) (mit

(1) Weight loss and maintenanir
(2) Improvement in glucose melabolmm ani it, is
(3) Control of BP
(4) Precipitation of (AD)

 except:
(1) Reduction in salt intak:

(3) Regular physical exerrise
(i) Almol man

Trials that showed primary prevenima a
(1) WOSCOPS
$\therefore$ a!
(3) TEXCAPS


! ! :
(2) $\downarrow$ ! !
(3) ! TC
(1) $\quad$ i P $(a)$


O Brambun

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 -的:
(1) P! mitan
(a) Dev heramp
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(4) Moderate Alowal inhowe
7. Mass: meommendes in the control of BP after Acute Mi and durins tollow up are ali arent

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?
(a) H1T तhol $>$ H
O: $\because<13$
(t) $T(\ll 15)$

(1) 1 H
(3) Gwhe CNO
(2) PAN
(4) Unvabo ( A J
 areali exont
(1) Rea ment - Muitor, Lamb, Port
(?) Orem meat lever bron and lathers
(3) Vobter, shmms and egs yolk
(4) Andome fish prodeds

Ts. AD prablace in mban population in India is:
(i)

$$
110
$$

$$
\text { (3) } 1<r^{\prime \prime}
$$

$$
1+20
$$

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 CKD is:
(1) $<140 / 90$
(2) $<120 / 80$
(3) $<130.80$
(4) < $310 / 80$
80. The most powerfal predictor of atheroseterosis is total chonestombthat rato lak ratio associated with high risk of CAD is:
(1) $\quad[\mathrm{C} / \mathrm{HD}) \mathrm{C}$ > $5!$ 12) ! 1106>ッ
(3) $1 \mathrm{C} / \mathrm{H} \mathrm{H}) \mathrm{C}>4.5$

81. Person with 10 years risk of (A) $10^{\prime \prime}$ o: higher aghin is recommonded ber primany prevention in dose of:
(1) $50 \mathrm{mg} /$ day
(2) 75-17(1) midas
(3) $325 \mathrm{mg} /$ day
(A) $200 \mathrm{ma} / \mathrm{day}$
82. If TDL cholesterol goal is attamed in promay prewntom th statin therapy then antilly cholesterol lowering is secondary goal. Non IIDI cholesterol is
(1) Total cholesterol - Triglycerides
(2) Total cholesterol-HDI cholesterol
(3) TC- LDL cholesterol
(4) TC- VI DI cholesterol
83. Drug of choice for lowering triglyceride levels after LID goal is achieved by statinc are :
(1) omega - 3 -fatty acid and high fibre diod
(2) fibrates or Niacin
(3) high doses of statins and high fibre diet
(4) 1200 K cal Low fat, Low cholestew high fibre diet
84. Drugs recommended as secondary prevention in ali fost vi and post ABs pationts are:
(1) betablockers, statins
(2) betablockers, statins, aspirin
(3) betablockers, statins, aspirin, omega -3-fatty wis
(4) betablockers, statins, aspirin, ACE-Inbibitors

85 Men and women who stops smoking take: $\qquad$ sones io athere risk motr of those people who never smoked.
(1) in 5 yrs
(2) in 8 yrs
(3) in9:rs
(-1) in ! 11 yrs
P.T.O.
86. All of them are side cffects of alohol excess except :
(1) Henestonsion
(2) Liver disease (cirrhosis)
(3) Pancratitis
(4) Rise in HDL cholesterol
87. Inceased levels of which of the following reduce the risk of myocardial infarction
(1) ! !
(2) HIDL
(3) V 1 y
(4) Triglycerides
88. A 35 yer old female, diahetis, non-hypertensive, with family history of CAD and a typical chest pam has BMil of $35 \mathrm{~kg} / \mathrm{sqm}$, hyperlipidemid and negative TMT. What will be your atime?
(1) (amonary angiogram
a) CT connamy angiogram
(3) Lifentelemodification, anti cholesterol drugs and aspirin
(f) iffestye modification alone
89. A 6 yen old diabetic lady with stable episodes of angina has normal ECG and chonatiogram. What will be your next plan of management?
(1) Coronary angogriphy
(2) lifestyle modification and anti - anginal medications
(3) ifastyle medications, antianginal medications, diabetes control
(t) lifestyle medications, antianginal medications, aspirin, diabetes control, statins and treatmin test
90. A 50 year old gentleman was admitted with acute myocardial infarction and underwent primary anghoplasty. His LDI was found to be $130 \mathrm{mg} / \mathrm{dl}$. A prescription of statins for him is am examphe of which preventive strategy?
(1) Irmondial j'revention
(2) Primary Prevention
(3) arnay l'ewnton
(4) Tertiary Prevention

