00731

POST GRADUATE DIPLOMA IN CLINICAL CARDIOLOGY (PGDCC)

Term-End Examination

December, 2015

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 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. The most common cause of cardiovascular deaths is
   (1) Atherosclerotic disease
   (2) RHD
   (3) CCF
   (4) Myocarditis

2. Which is *not* a manifestation of atherosclerotic disease ?
   (1) CAD
   (2) Stroke
   (3) PVD
   (4) CRF

3. The term South Asians includes all *except*
   (1) Indians
   (2) Pakistanis
   (3) Russians
   (4) Sri Lankans

4. Which is an *incorrect* statement ?
   (1) South Asians are more prone to CAD.
   (2) Indians in USA are less prone to CAD.
   (3) CAD risk reduces over three generations in migrants.
   (4) South Asians have more diffuse CAD.

5. Which is *incorrect* about the pattern of CAD amongst Indians ?
   (1) More severe disease
   (2) More extensive lesions
   (3) Less AMI
   (4) Small coronaries

6. Correct about CAD in Indians is all *except*
   (1) Males have greater risk
   (2) More prevalent in rural population
   (3) Urban population has more obesity
   (4) Hypertension is more prevalent in urban population

7. Cardiovascular diseases that impose major burden on India include all of the following *except*

   (1) CAD

   (2) Hypertension

   (3) Rheumatic Heart Disease

   (4) None of the above

8. Which statement about the development of CAD is *incorrect* ?

   (1) Incubation begins in early teens.

   (2) Presence of risk factors accelerates the process.

   (3) Disease may remain asymptomatic for long periods.

   (4) Angina is a clinical presentation which occurs in advanced stage.

9. The correct sequence of staging in atherosclerosis is

   (1) Atheroma → Fibrous Plaque → Fatty Streak → Thrombus

   (2) Fatty Streak → Thrombus → Fibrosis → Atheroma

   (3) Atheroma → Thrombus → Fibrosis → Fatty Streak

   (4) Fatty Streak → Fibrous Plaque → Atheroma → Thrombosis

10. Which of the following is a modifiable risk factor for CAD ?

    (1) Age

    (2) Gender

    (3) Genes

    (4) Smoking

11. Modifiable risk factors for CAD constitute all *except*

    (1) Lipids

    (2) Diabetes

    (3) Smoking

    (4) Family history of CAD

12. Moderate alcohol intake has beneficial action by virtue of its action on

   (1) HDL

   (2) Platelets

   (3) Fibrinolysis

   (4) All of the above

13. Lifestyle-related risk factors for CAD are all *except*

   (1) High calorie diet

   (2) Vigorous exercise

   (3) Current smoking

   (4) Mental stress

14. The advantages of physical activities are all *except*

   (1) Decrease in LDL

   (2) Increase in insulin sensitivity

   (3) Increase in triglycerides

   (4) Increase in cardiac reserve

15. Correct statements about cigarette smoking are all *except*

   (1) Single most important preventable factor

   (2) Significantly increases morbidity and mortality

   (3) Causes vasoconstriction

   (4) Second-hand smoking is not injurious

16. Which of the following is *incorrect* ?

   (1) Diet can determine cardiovascular risk.

   (2) Diet can affect lipid levels.

   (3) Saturated fats help in reducing CAD risk.

   (4) Salt intake contributes to hypertension.

17. About the role of mental stress in the development of CAD choose the *incorrect* statement.

   (1) Chronic stress in family contributes to CAD.

   (2) People with Type-B personality are more prone.

   (3) Stress affects the sympathetic nervous system.

   (4) Marital stress leads to poor prognosis.

18. With regards to systemic HT as a risk factor for CAD, which is an *incorrect* statement ?

   (1) Systolic BP is the more important risk factor.

   (2) Diastolic BP is of no importance.

   (3) HT is a risk factor for stroke and renal failure also.

   (4) Risk is progressive with increasing BP.

19. Correct statement about the treatment of systemic HT is

   (1) No specific targets for treatment.

   (2) No impact on heart failure after treatment.

   (3) Diabetics should have much lower targets.

   (4) Stroke risk increases with tight control of HT.

20. The following statements about dyslipoproteinemia are *incorrect except*

   (1) High HDL protects against CAD.

   (2) Low LDL is a risk factor.

   (3) Triglycerides are of no consequence.

   (4) TC/HDL ratio is a weak marker for CAD.

21. Which of the following is an *incorrect* statement ?

   (1) Insulin resistance is atherogenic.

   (2) Risk of CAD is high in DM-2.

   (3) DM-1 does not increase the risk for CAD.

   (4) Pre-diabetes also increases the risk strongly.

22. Which is *not* a correct statement about CAD in type-2 Diabetes Mellitus ?

(1) More severe disease

(2) Very poor collateral circulation

(3) More left main involvement

(4) Very little calcification

23. Mark the *incorrect* statement about DM-2.

(1) Greater cardiovascular mortality

(2) Increasing risk of mortality with duration

(3) Higher risk of strokes

(4) Protection against heart failure

24. Select the *incorrect* statement about obesity.

(1) Obesity decreases the risk of CAD by a factor of 2.

(2) BMI is used to measure ideal body weight.

(3) Distribution of fat is equally important.

(4) Dyslipoproteinemia can be attributed to obesity.

25. All of the following statements are *incorrect except*

(1) Visceral fat is an inert mass of cells.

(2) 'Apple' type obesity is more strongly associated with CAD.

(3) BMI is a stronger predictor than WHR.

(4) Greater WHR is protective against CAD.

26. All of the following are components of metabolic syndrome *except*

(1) Systemic Hypertension

(2) Impaired blood glucose

(3) BMI less than 25

(4) Abnormal lipid profile

27. In the presence of diabetes

    (1)   Likelihood to develop CAD increases 3 – 5 times

    (2)   Overall mortality from heart disease in women increases 4 – 5 times

    (3)   Prevalence of CAD may be as high as 55%

    (4)   All of the above

28. Which of the following is *not* considered as 'novel' risk factor for CAD ?

    (1)   Lipoprotein (a) excess

    (2)   Hyperhomocysteinemia

    (3)   Infection

    (4)   Right ventricular hypertrophy

29. Which of the following statements is *incorrect* ?

    (1)   Majority of people with CAD have conventional risk factors.

    (2)   People with acute coronary event may have no risk factors at all.

    (3)   People considered 'low-risk' may still present with CAD.

    (4)   No further risk factors have been identified for CAD.

30. Within six years of heart attack

    (1)   18% of men will have another heart attack

    (2)   7% of men will experience sudden death

    (3)   8% of men will have a stroke

    (4)   All of the above

31. Which is an *incorrect* statement about Lp(a) ?

    (1)   More atherogenic than LDL

    (2)   Biological marker for familial CAD

    (3)   Influenced by diet and smoking

    (4)   Indians have higher levels compared to Chinese

32. Plasma fibrinogen levels are reduced by all *except*

(1) Smoking

(2) Weight loss

(3) Regular exercise

(4) Moderate alcohol intake

33. Which of the following organisms is *not* considered etiological in CAD ?

(1) Chlamydia

(2) CMV

(3) H. Pylori

(4) HIV

34. Which of the following is an *incorrect* statement ?

(1) CAD is an inflammatory disease.

(2) CRP levels are elevated.

(3) Statins reduce inflammation.

(4) Steroids reduce CRP levels and decrease CAD risk.

35. All of the following risk factors are more prevalent in South Asians as compared to Caucasians *except*

(1) Truncal obesity

(2) Low triglyceride levels

(3) High Lp(a)

(4) High PAI-1 activity

36. Important source of Omega 3 is

(1) Canola oil

(2) Olive oil

(3) Fish oil

(4) None of the above

37. Which is *not* used as part of Framingham risk scoring system ?

    (1) Gender

    (2) HDL cholesterol

    (3) Asian ethnicity

    (4) Systolic BP

38. Which is *not* a correct statement ?

    (1) Angioplasty and stenting constitute tertiary prevention.

    (2) To inculcate healthy lifestyle is primordial prevention.

    (3) Identification and treatment of risk factors is primary prevention.

    (4) Minimizing the risk after a coronary event is secondary prevention.

39. All are sources of trans-fats *except*

    (1) Margarines

    (2) Fried chips

    (3) Burgers

    (4) Corn-ear

40. Which is *not* a correct dietary recommendation ?

    (1) Carbohydrates 60% of energy

    (2) Fruits 4 – 5 servings daily

    (3) Saturated fats 30%

    (4) Dietary fibres 40g/day

41. Which of the following is *not* a benefit of smoking cessation ?

    (1) Decrease work capacity in the first two years

    (2) Improve in lung functions

    (3) Reduction in chance of lung cancer

    (4) Non-smoker equivalence after 10 years

42. Following are true about quitting smoking *except*

    (1) Within 1 year the risk of heart attack is reduced by 50%.

    (2) Lung cancer is reduced by 60% after 5 years.

    (3) Personality is adversely affected.

    (4) There is immediate decrease in angina episodes.

43. Correct statement about the benefits of physical exercise are all *except*

    (1) Frequency should be twice a week

    (2) Target heart rate of 75% of MPHR

    (3) 30 – 60 min/day

    (4) Continuous, involving all muscle groups

44. Which of the following interventions does *not* help in the reduction of hypertension ?

    (1) Regular physical exercise

    (2) Reducing weight

    (3) Reducing salt intake to less than 25 g/day

    (4) Discontinuation of smoking

45. Correct statement about HRT in women are all *except*

    (1) Menopause reverses the partial protection against CAD.

    (2) HRT should be started early rather than late.

    (3) Incidence of breast cancer is reduced.

    (4) Incidence of pulmonary embolism is increased.

46. Which is *not* a feature of unstable plaque ?

    (1) More lipid core

    (2) Thin fibrous cap

    (3) Thick fibrous cap

    (4) Internal hemorrhage

47. Non-pharmacological management of blood pressure includes

    (1)   Restriction of salt intake to less than 4 gm/day

    (2)   Reduction of overweight

    (3)   Regular physical exercise

    (4)   All of the above

48. All of the following are "coronary heart disease equivalent" *except*

    (1)   Risk 10 – 20% in 10 years plus two risk factors

    (2)   Diabetes mellitus

    (3)   Peripheral arterial disease

    (4)   Dyslipidemia

49. Best predictor for future risk of the cardiovascular events, amongst the following is

    (1)   hs-CRP

    (2)   Lipoprotein(a)

    (3)   Homocystine

    (4)   Interleukin-6

50. Premature CAD is defined as – CAD and occurs before the age of

    (1)   40 years in men and 50 years in women

    (2)   55 years in women and 65 years in men

    (3)   55 years in men and 65 years in women

    (4)   40 years in women and 50 years in men

51. Mono-unsaturated fats are found in all *except*

    (1)   Canola oil

    (2)   Coconut oil

    (3)   Peanut oil

    (4)   Olive oil

52. Modifiable risk factors are all *except*

    (1)   Improper Diet

    (2)   Smoking

    (3)   Alcohol

    (4)   Age

53. The most powerful predictor of Atherosclerosis, a Total Cholesterol/HDL ratio > _____ is associated with high risk of CAD.

    (1)   4·5

    (2)   3·5

    (3)   5·5

    (4)   6·5

54. Type-A Behaviour is characterized as all *except*

    (1)   Ambitious

    (2)   Impatient

    (3)   Competitive

    (4)   More Passive

55. In secondary prevention according to AHA guidelines, the goal is to have BMI of

    (1)   15·5 to 20·5 kg/m^2

    (2)   18·5 to 24·9 kg/m^2

    (3)   25·5 to 30·5 kg/m^2

    (4)   30·5 to 40·5 kg/m^2

56. Most important risk factor for the development of CAD throughout India is

    (1)   HTN

    (2)   DLP

    (3)   Smoking

    (4)   DM

57. CARE study is based on

(1) DM

(2) HTN

(3) Statins

(4) Beta Blockers

58. False statement for Nicotine is

(1) Agonist of SNS

(2) Decreases Coronary Tone

(3) Release of Norepinephrine

(4) Provokes vasoconstriction

59. Which of the following is true ?

I. Men should have a WHR equal to or less than 0·95, in women it should not be more than 0·80.

II. The waist circumference should not be more than 90 cm in women and 100 cm in men.

(1) I

(2) II

(3) Both I and II

(4) None of the above

60. Earliest recognizable pathologic lesions in the process of Atherosclerosis is

(1) Fatty streaks

(2) Fibrous plaque

(3) Atheroma

(4) Complicated

61. High Glycaemic Index foods are all *except*

(1) White Bread

(2) White Rice

(3) Whole Fruits

(4) French Fries

62. Which statement is *false* ?

(1) Fat intake should be < 30% of total calories.

(2) Cholesterol should be less than 300 mg.

(3) Saturated fat should be < 10%.

(4) Complex carbohydrate should provide 10 to 20% of calories.

63. Which of these is *not* a secondary prevention ?

(1) Smoking control

(2) CABG

(3) HTN control

(4) Weight reduction

64. Regarding stress management in CAD, all are true *except*

(1) Stress has been implicated in pathophysiology of Atherosclerotic process, HTN and stroke.

(2) Stress-related hormones such as cortisol and catecholamines in excess cause body system dysfunction.

(3) Meditation, Yoga and Biofeedback are useful methods.

(4) Alcohol and smoking are included in stress management.

65. NCEP ATP-III stands for

(1) National Cholesterol Education Programme Adult Treatment Panel-III

(2) Newer Cholesterol Evading Programme Adult Treatment Panel-III

(3) Non-Cholesterol Enzyme Producing Adult Treatment Panel-III

(4) National Cholesterol Eradicating Programme Adult Treatment Panel-III

66. Omega 3 fat is found high in

(1) Mutton

(2) Salmon

(3) Pork

(4) Lamb

67. Relationship between low birth weight and enhanced susceptibility to CAD in adult life is

(1) Barter's Hypothesis

(2) Bayer's Hypothesis

(3) Basker's Hypothesis

(4) Barker's Hypothesis

68. Which is *not* a secondary prevention trial ?

(1) WOSCOPS

(2) 4S

(3) CARE

(4) LIPID

69. Strongest Anthropometric measure associated with risk of MI in inter heart study is

(1) WHR

(2) Height

(3) BMI

(4) Weight

70. Trans-Fats

(1) ↑ LDL

(2) ↓ HDL

(3) ↑ LDL and ↓ HDL

(4) ↑ LDL and ↑ HDL

71. Which statement is *false* ?

(1) The prevalence of CAD among immigrant Indians is about 3-fold lesser comparable to the indigenous population.

(2) CAD tends to occur earlier in life among people of Indian descent.

(3) Process is very severe, diffuse extensive often involving multiple vessels.

(4) Mortality attributable to CAD is substantially higher among Indian immigrants.

72. Which is *not* true in the IDF definition of Metabolic Syndrome ?

(1) Elevated TGs ≥ 1·7 mmol/L or receiving specific Rx for this lipid abnormality.

(2) HDLC level > 1·03 mmol/L (> 40 mg/dl) in men.

(3) Raised BP ≥ 130 mmHg/DBP ≥ 85 mmHg.

(4) Raised FBS ≥ 5·6 mmol/L or per diagnosed with type-2 diabetic.

73. ATP III goal to reduce the level of LDLC in high-risk category is

(1) < 160

(2) < 130

(3) < 100

(4) < 200

74. According to inter-heart study, two strongest predictors of acute MI are

(1) DM and HTN

(2) Stress and Depression

(3) Exercise and Diet

(4) Apo B/Apo A1 ratio and current smoking

75. Benefits of smoking cessation are all *except*

(1) Immediate benefit is a decrease in Anginal episodes and improvement of effort tolerance.

(2) Only one year after quitting, risk of heart attack is reduced by 90%.

(3) Ten years after quitting, male ex-smoker has same mortality rate as of non-smoker.

(4) For female ex-smoker, the benefit is seen even early in 2 – 3 years.

76. Regarding CAD in women all are true *except*

(1) CAD in women is both preventable and amenable to lifestyle changes and pharmacological intervention.

(2) Statins are first line to reduce LDL level.

(3) Premenopausal is benefited from HRT therapy.

(4) HRT may even have deleterious effect on primary prevention.

77. *False* statement about HDL is

    (1) Called as good cholesterol

    (2) Inverse relationship between HDL and Risk of CAD

    (3) VA – HIT (Veterans Administration – HDL Intervention Study) – decrease in HDL reduces Major Coronary events

    (4) None of the above

78. Which of the following is a primary prevention trial ?

    (1) JUPITER

    (2) HOPE

    (3) 4S

    (4) CURE

79. Controlling, Reversing and Treating the risk factors that are already present in the individual or in the community before any damage/before any symptoms is called

    (1) Primordial prevention

    (2) Primary prevention

    (3) Secondary prevention

    (4) Tertiary prevention

80. Which is true in CAD for women ?
    (1) Less severe than for men at any age
    (2) Less mortality
    (3) Infarct size smaller
    (4) More lethal

81. Which statement about Lp(a) is *false* ?
    (1) Concentration of Lp(a) is elevated in South Asians irrespective of their immigrant status.
    (2) Low level Lp(a) is associated with CAD especially with concomitant elevation of LDL levels.
    (3) Lp(a) level is genetically determined.
    (4) There is structural similarity of Lp(a) and Plasminogen.

82. Drugs used for smoking cessation are all *except*

(1) Nicotine chewing gum

(2) Bupropion

(3) Varenicline

(4) None of the above

83. True regarding Fish Oil is

(1) Thrombic effects

(2) Inflammatory

(3) Contraindicated in hypertriglyceridemia

(4) Decrease VLDL synthesis

84. Syndrome X (angina with normal angiogram) is due to

(1) Coronary emboli

(2) Micro-vascular dysfunction

(3) Coronary spasm

(4) Atherosclerosis

85. Following drugs causing Dyslipidemia :

(1) Beta Blockers

(2) Thiazide Diuretic

(3) Retinoic Acid

(4) CCB

86. Exercise does all *except*

(1) Reduces Blood Pressure

(2) Decreases insulin sensitivity

(3) Reduces LDL

(4) Increases HDL

87. In CHF, the following drugs are used *except*

(1) ARB

(2) Aspirin

(3) ACE-I

(4) Beta Blockers

88. Secondary prevention are all *except*

(1) Weight reduction

(2) HTN control

(3) CABG

(4) Smoking cessation

89. Obesity is defined as BMI

(1) > 20

(2) > 25

(3) > 30

(4) > 35

90. Atherosclerosis starts in

(1) Childhood

(2) Young adulthood around 24 years

(3) Middle age about 30 to 50 years

(4) None of the above