

POST GRADUATE DIPLOMA IN CLINICAL
CARDIOLOGY (PGDCC)

00384

Term-End Examination

June, 2012

MCC-003 : COMMON CARDIOVASCULAR DISEASES - I

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 Sheet.
- (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 Sheet.
- (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) There will be 90 questions in this paper and each question carries *equal* marks.
- (vi) There will be no negative marking for wrong answers.
- (vii) No candidate shall leave the examination hall at least for one hour after the commencement of the examination.

1. All the following statements regarding sphygmomanometer in recording B.P are correct except :
 - (1) lower edge of the cuff should be 2.5 cms above the antecubital fossa
 - (2) width of the cuff must be 80% of the circumference of the arm
 - (3) the length of rubber bag must cover more than 80% of the circumference of the limb
 - (4) in pregnant women the B.P must not be recorded on supine position

2. As per JNC VII classification Stage 2 hypertension said to be present when the Blood Pressure said to be reading :

(1) >140/90 mmHg	(2) >160/90 mmHg
(3) >160/100 mmHg	(4) >170/90 mmHg

3. When do you say isolated systolic hypertension ?

(1) systolic >180 : diastolic >90 mmHg	(2) systolic >160; diastolic >90 mmHg
(3) systolic 140 : diastolic <90 mmHg	(4) systolic 150; diastolic 100 mmHg

4. Which is the commonest cause for secondary hypertension ?

(1) Cushing's syndrome	(2) Renal parenchymal disease
(3) Pheochromocytoma	(4) Primary aldosteronism

5. In untreated hypertension patients what percentage of patients die with coronary artery disease ?

(1) 15%	(2) 33%	(3) 50%	(4) 26%
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6. In pre-eclampsia all the following features are seen except :

(1) proteinuria	(2) B.P > 160/95 mmHg
(3) seizures	(4) pedal odema

7. Which of the following drug belongs to thiazide group of diuretics ?

(1) Torsamide	(2) Eplerenone	(3) Indapamide	(4) Amiloride
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8. Which of the following drug belongs to loop diuretics ?

(1) Bumetanide	(2) Triamterene	(3) Spironolactone	(4) Chlorthalidone
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9. Which of the following drug has both alpha and beta blockers effect ?

(1) Bisoprolol	(2) Acebutolol	(3) Carvedilol	(4) Metoprolol
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10. All the following drugs can be safely given in pregnancy except ?

(1) Labetolol	(2) Ramipril	(3) Methyldopa	(4) Digoxin
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11. Which of the condition causes heart failure with volume overload ?
- (1) mitral regurgitation (2) hypertension
(3) co-archtation of aorta (4) Aortic stenosis
12. Which of the condition causes heart failure with pressure overload ?
- (1) co-archtation of aorta (2) aortic regurgitation
(3) ventricular septal defect (4) patent ductus arteriosus
13. All the following statements regarding Frank -Starling mechanism are correct except :
- (1) stroke volume is related to end-systolic volume
(2) stroke volume is related to end-diastolic volume
(3) mechanism accounts for increased inotropic state
(4) increased preload helps in sustaining cardiac performance
14. By decreasing 1 kg of body weight how much blood pressure fall on an average would be ?
- (1) 3.5 mmHg (2) 1.6 mmHg (3) 4.5 mmHg (4) 5 mmHg
15. In patients with hypertension with diabetes mellitus which of the antihypertensive medications are first choice ?
- (1) Betablockers (2) ACEI
(3) calcium channel blockers (4) diuretics
16. 43 year old police a know hypertensive and diabetic admitted with chest pain of 1 day duration. ECG showed ST depression in V1 - V6. His heart rate is 96/mt. His blood pressure is 150/92 mm Hg. Cardiac enzymes are marginally elevated. Which antihypertensive medication is the first choice ?
- (1) long acting nifedipine (2) Bisoprolol
(3) Iv. Enalapril (4) IV sodium Nitropruside
17. 66 year old farmer admitted with shortness of breath at rest for the last 1 week. His pulse rate is 88/mt. His blood pressure is 150/90 mmHg. His X-ray chest showed increased CT ratio of 0.65. His echo showed EF of 0.45, his blood urea was 38 mg/l, creatinine was 1.1 mg/l. Which is the preferred choice of antihypertensive medication for him ?
- (1) Angiotensin receptor blocker (2) Atenolol
(3) methyldopa (4) Indapamide
18. The commonest cause of right sided heart failure is :
- (1) pulmonary embolism
(2) COPD
(3) secondary to left side heart failure
(4) infective endocarditis

19. All the following drugs can be safely given in diastolic failure except :
- (1) angiotensin converting enzyme inhibitors
 - (2) angiotensin receptor Blockers
 - (3) diuretics
 - (4) digoxin
20. High cardiac output failure is seen in all of the following condition except :
- (1) Thyrotoxicosis
 - (2) Beri beri
 - (3) Arterio-venous fistula
 - (4) Hypertension
21. All of the following statements regarding digoxin are correct except :
- (1) it acts via parasympathomimetic activation
 - (2) it inhibits NA, K. ATPase
 - (3) increase in the cytosolic Ca²⁺ concentration
 - (4) it acts via activation of sympathetic system
22. All the following drugs have drug interactions with digoxin pharmacokinetics except :
- (1) phenytoin
 - (2) amiodarone
 - (3) verapamil
 - (4) Quinidine
23. Which is type III phosphodiesterase inhibitor ?
- (1) sildenafil
 - (2) Milrinone
 - (3) sodium nitroprusside
 - (4) dobutamine
24. All the following statements regarding Hydralazine are correct except :
- (1) it is potent venous dilator
 - (2) increases cardiac output
 - (3) tachycardia and hypotension are side effects
 - (4) it can be combined with isosorbide dinitrate
25. In Framingham criteria for heart failure all the following are included in major criteria except :
- (1) neck vein distension
 - (2) S3 gallop
 - (3) central venous pressure > 16 cm H₂O
 - (4) pleural effusion
26. In pulmonary embolism all the following findings are correct except :
- (1) Normal electrocardiogram does not exclude Pulmonary embolism
 - (2) S1 QT 3 changes are seen ECG in 26% patients
 - (3) Low PO₂, high CO₂ is seen commonly in arterial blood gas analysis of PE patients
 - (4) Most common physical finding is tachypnea

27. Which of the following test has high sensitivity to detect pulmonary embolism ?
- (1) Ventilation perfusion scan
 - (2) D-dimer more than 500 micrograms
 - (3) Magnetic Resonance Imaging
 - (4) computed tomographic pulmonary angiography
28. All of the following pharmacologic agents are direct thrombin inhibitors except ?
- (1) Hirudin
 - (2) Hirulog
 - (3) Ximelagatran
 - (4) warfarin
29. All the following statements are correct in the treatment of venous thrombo embolism except ?
- (1) anti coagulant therapy is recommended in patients with symptomatic proximal DVT
 - (2) Low molecular weight heparin (LMWH) is preferred than unfractionated heparin
 - (3) Therapeutic range of a PTT ratio (patient / control) 3.5 to 4.5 is recommended in all DVT patients
 - (4) 3 months anticoagulation is recommended in patients with VTE associated risk in recent surgery
30. All the following medications are used in pulmonary edema except :
- (1) Furosemide intravenously
 - (2) Inj. Pethidine
 - (3) IV sodium nitroprusside
 - (4) Digoxin
31. In heart failure patients all the following measures are done except :
- (1) ultrafiltration
 - (2) Fluid restriction
 - (3) verapamil dose to be increased
 - (4) discontinuation of NSAID drugs
32. Angiotension converting enzyme inhibitors cause all the following adverse effects except :
- (1) hypotension
 - (2) hyponatremia
 - (3) hyperkalemia
 - (4) angioedema
33. All the following statements regarding spironolactone are correct except :
- (1) it reduces myocardial fibrosis
 - (2) in RALES study spironolactone showed 26% reduction in mortality
 - (3) it causes potassium loss in distal tubules
 - (4) it causes sodium loss in the distal tubules
34. Eplerenone is specifically used in which of the following condition ?
- (1) Hypertension
 - (2) Heart failure
 - (3) Pheochromocytoma
 - (4) Renal failure

35. All the following statements regarding digitalis glycosides are correct except :
- (1) It reduces the heart rate via sympathetic effects
 - (2) It inhibits the enzyme Na K ATPase
 - (3) It increases the cytosolic Ca²⁺ concentration
 - (4) Serum digoxin levels should be maintained between 0.7 to 1.2 mg/ml
36. Which of the following drug is used for ventricular arrhythmias due to digoxin ?
- (1) Amiodarone
 - (2) Phenytoin
 - (3) Propafenone
 - (4) Quinidine
37. Amrinone causes all the following effects in heart failure except :
- (1) venous dilatation
 - (2) arterial vaso constriction
 - (3) increase myocardial contractility
 - (4) increase in cyclic GMP in vascular smooth muscle
38. Which of the following statements regarding Frank - Starling mechanism is **incorrect** ?
- (1) stroke volume is related to the end - systolic volume
 - (2) increased preload helps in sustaining cardiac performance
 - (3) Frank - Starling law accounts for increased inotropic state and increased diastolic filling
 - (4) Greater initial left ventricular volume leads to rapid rise of pressure
39. Alveolar odema occurs when pulmonary venous pressure exceeds which one of the following pressure required ?
- (1) > 25 mmHg
 - (2) 12 to 18 mmHg
 - (3) 18 - 20 mmHg
 - (4) 10 - 12 mmHg
40. All the following conditions are absolute contraindications for thrombolysis except one :
- (1) Prior intracranial hemorrhage
 - (2) Ischaemic stroke within 3 months
 - (3) Suspected aortic dissection
 - (4) Active peptic ulcer
41. 56 years male, diabetic, was admitted with chest pain in CCU with ECG showing ST depression in L2, L3, aVF, V4 - V6, with Blood pressure 160/100 mmHg and troponin I was elevated. All the following drugs are recommended except one :
- (1) Metoprolol
 - (2) Nifedipine
 - (3) Clopidogrel
 - (4) low molecular weight heparin
42. All the following findings are seen in the metabolic syndrome except one :
- (1) Increased HDL - C
 - (2) Hyperinsulinemia
 - (3) Hypertriglyceridemia
 - (4) Glucose intolerance

43. All the following statements regarding dobutamine are correct except one :
- (1) It causes the release of norepinephrine
 - (2) has more effective positive inotrope action than dopamine
 - (3) plasma half life is < 2 minutes
 - (4) It is a relatively weak beta agonist
44. All the following measures are done in right ventricular myocardial infarction except one :
- (1) Early thrombolysis
 - (2) early use of nitrates
 - (3) maintain AV synchrony in case of high grade block
 - (4) Maintain Right ventricular preload
45. In Hyperhomocysteinemia all the following statements are correct except one :
- (1) Homocystine is derived from methionine
 - (2) Hyperhomocysteinemia causes increased release of nitric oxide from endothelial cells
 - (3) Hyperhomocysteinemia is treated with folic acid, B6 and B12
 - (4) Elevated plasma homocysteine levels > 15 U/L confer independent risk for vascular disease
46. Rapid control of blood pressure is **not** recommended in :
- (1) aortic dissection
 - (2) gestational hypertension
 - (3) acute left ventricular failure
 - (4) cerebral infarct
47. The following statements are regarding renovascular hypertension -
- (I) presence of abdominal bruit
 - (II) fibroplastic disease is common in elderly
 - (III) young individual without family history of hypertension
 - (IV) may present as malignant hypertension

Which of the above are **correct** :

- (1) I, II, III (2) I, III, IV (3) II, III, IV (4) all of above

48. While recording blood pressure
- (I) Two consecutive recordings are done in atrial fibrillation
 - (II) phase 5 Korotkoff sounds corresponds to diastolic blood pressure
 - (III) clenching and unclenching the fist augments Korotkoff sounds
 - (IV) normally more than 10 mmHg difference is observed between the two upper limbs

Which of the above statements are **correct** :

- (1) I, II, III (2) II, III (3) II, III, IV (4) III, IV

49. Which of the following statement is **false** ?
- (1) Diuretics and ACE inhibitors are the first line of drugs in gestational hypertension
 - (2) Decrease of 1 kg of body weight is associated with an average fall of 1.6 mm of BP
 - (3) Daily consumption of more than one ounce of Ethanol increases blood pressure
 - (4) Selectivity of betablockers is lost in high doses
50. Which of the following statement is **correct**
- (1) Sodium nitroprusside, labetalol and ramipril can be given intravenously in hypertensive emergencies
 - (2) Hypertensive urgencies require rapid reduction of BP within one hour
 - (3) Headache, irritability and Seizures denote hypertensive encephalopathy
 - (4) Presence of retinal hemorrhage indicates malignant hypertension
51. A hypertensive, on irregular medication is admitted with a BP of 180/120 mmHg and dyspnoea on exertion. ECG showed Sinus rhythm with 'S' wave of 20 mm in V1 and 'R' wave of 25 mm in V5 with ST depression and T wave inversion in V5 and V6. QRS duration was 0.11 seconds in V5. Prominent negative terminal deflection of 'P' wave was seen in V1. Chest X ray showed Kerley B lines in both bases. Which of the following statements are **correct** ?
- (I) ECG shows left ventricular hypertrophy and left atrial enlargement
 - (II) Pulmonary venous pressure is 18 to 25 mmHg
 - (III) Left bundle branch block
 - (IV) Chest X ray favours interstitial edema
- (1) I, II, III (2) I, II, IV (3) I, IV (4) all of above
52. Which of the following statements regarding Angiotensin converting enzyme inhibitors is **not correct** ?
- (1) Reduce the afterload by peripheral vasodilatation
 - (2) cause down regulation of sympathetic nervous system
 - (3) improve baro receptor function
 - (4) cause degradation of bradykinin
53. Which of the following statements are **correct** ?
- (I) In pregnant women, BP should not be recorded in supine posture
 - (II) Muffling of Korotkoff sounds occurs in Phase 3
 - (III) According to JNC VII, Stage I hypertension is systolic BP of 140-159 and diastolic BP of 90-99 mmHg,
 - (IV) Width of the standard BP Cuff is 12.5cm
- (1) I, II, III (2) II, III, IV (3) I, III (4) II, IV

54. Which of the following statement is **true** ?

- (1) Transient ischaemic attack (TIA) occurs due to intracranial atherosclerosis
- (2) Hypertension induces microalbuminuria in late stages
- (3) Commonest abnormality of aorta associated with systemic hypertension is thoracic aortic aneurysm
- (4) Systolic BP is a stronger and more consistent predictor of cardiovascular risk than diastolic BP

55. Which of the following statements is **correct** ?

- (1) Renovascular hypertension presents with spells of nausea, headache, palpitation, sweating, nervousness and tremors
- (2) Preeclampsia denotes elevated blood pressure after 12 weeks of gestation
- (3) When diastolic blood pressure increases from 91 mmHg to 105 mmHg, risk of stroke increases six fold
- (4) ACE inhibitors and thiazides reduce the frequency of recurrent strokes

56. Which of the following statements regarding heart failure is **correct** ?

- (I) ACE inhibitors are useful in all stages of heart failure
 - (II) Diuretics are used in stage C of heart failure
 - (III) A patient with coronary artery disease is in stage of A of heart failure
 - (IV) Cardiac transplantation in cardiac failure has 5 year survival rate of 30%
- (1) I, II, III (2) I, III (3) II, IV (4) all of above

57. A patient on long term treatment for atrial fibrillation presents with anorexia, nausea and Yellow vision. The following differential diagnosis was considered.

- (I) infective hepatitis (II) congestive hepatomegaly
- (III) digitoxicity (IV) tachycardiomyopathy

Which of the above are **unlikely** ?

- (1) I, II, III (2) I, II, IV (3) II, III, IV (4) all of above

58. Which of the following statements about Renin Angiotensin System is **incorrect** ?

- (I) Stimulation of Alpha 1 receptor in juxtaglomerular apparatus of kidney leads to renin release
 - (II) Angiotensin II causes cardiac myocyte remodelling
 - (III) Systemic vasodilatation and retention of fluid is caused by angiotensin II.
 - (IV) Angiotensin converting enzyme acts on adrenal cortex and causes release of aldosterone
- (1) I, II, III (2) I, III, IV (3) II, III, IV (4) all of above

59. A well compensated cardiac failure patient, on treatment, gets admitted with sudden worsening of symptoms. The following investigations were ordered.
- (I) Electrocardiography (II) Total and differential leucocyte count
 (III) Serum calcium (IV) Serum creatinine
- Which of the above are **appropriate** ?
- (1) I, II, III (2) I, II, IV (3) I, III, IV (4) all of above
60. In treatment of pulmonary oedema, mechanical ventilation,
- (I) elevates intraalveolar pressure
 (II) decreases transudation of fluid from alveolar capillaries
 (III) impedes venous return to the thorax
 (IV) elevation of pulmonary capillary pressure occurs
- Which of the above statements are **correct** ?
- (1) I, II, III (2) II, III, IV (3) I, III (4) all of above
61. Which of the following is **incorrect** in treatment of pulmonary edema ?
- (I) Morphine elevates adrenergic vasoconstrictor stimuli
 (II) Morphine reduces anxiety
 (III) Intravenous loop diuretics produce rapid diuretics and increase circulating blood volume
 (IV) Frusemide exerts a venodilator action, reduces venous return and this action occurs much before diuresis completed
- (1) I, III (2) I, IV (3) III, IV (4) I, III, IV
62. Which of the following is **correct** ?
- (I) reversible causes of heart failure include valvular lesions, myocardial ischaemia, uncontrolled hypertension, arrhythmias
 (II) Cardiomyopathy of hemochromatosis may be partially reversible and the progression may be slowed by treatment
 (III) Diastolic dysfunction caused by pericardial disease is not reversible
 (IV) LV hypertrophy of systemic hypertension is a reversible cause of diastolic dysfunction
- (1) I, II (2) I, II, IV (3) I, II, III (4) all of above
63. Which is **false** about diuretics ?
- (I) Continuous intravenous administration of loop diuretics may overcome diuretic resistance
 (II) when metalazone is added to frusemide clinical improvement can occur
 (III) metalazone is lipophilic
 (IV) spironolactone acts on distal convoluted tubule and increases K⁺ secretion
- (1) I, III (2) II, IV (3) III, IV (4) IV

64. Which one is **false** ?
- (1) Sodium and water retention causes pulmonary congestion and edema in long term
 - (2) Sympathetic stimulation increases HR and stroke volume and decreases energy expenditure
 - (3) vasoconstriction increases BP but causes pump dysfunction by increase in after load in long term
 - (4) Hypertrophy helps to unload individual muscle fibres, but leads to cardiac cell death and cardiomyopathy of overload
65. Which is **incorrect** regarding pathogenesis of paroxysmal nocturnal dyspnoea ?
- (1) increased resorption of fluid into vascular space on lying down
 - (2) elevation of diaphragm due to recumbency
 - (3) increased sympathetic drive during sleep
 - (4) nocturnal depression of respiratory center
66. Which is **true** ?
- (1) Unilateral pleural effusion usually occurs in left side
 - (2) In constrictive pericarditis and severe TR, pedal oedema is more prominent than ascites
 - (3) cardiomegaly is always present in diastolic heart failure
 - (4) Pulses alternans tends to disappear with successful treatment of heart failure
67. Regarding chest X ray findings in cardiac failure, which is **correct** ?
- (1) When pulmonary venous pressure is 12 - 18 mmHg, alveolar edema develops
 - (2) In pulmonary arterial hypertension, central and peripheral vessels become prominent
 - (3) Cephalisation denotes prominence of upper lobe veins
 - (4) Kerley B lines indicate alveolar edema
68. Which of the following is **not true** in heart failure ?
- (1) Increased sympathetic activity results in sodium retention
 - (2) Increased N terminal pro BNP is a reliable marker
 - (3) Warm extremities with narrow pulse pressure occurs in high output failure
 - (4) With RV failure, hepatomegaly, pedal edema and elevated JVP occur
69. Which is unusual in cardiac tamponade ?
- (1) dyspnoea
 - (2) elevated JVP
 - (3) bradycardia
 - (4) pulsus paradoxus
70. In heart failure, which of the following statement is **true** ?
- (I) Weight loss in obese patients, will increase systemic vascular resistance and reduce myocardial O₂ consumption
 - (II) Cardiac rehabilitation and appropriate aerobic exercise, reduces functional capacity
 - (III) Very severe fluid restriction may lead to pre renal azotemia
 - (IV) Daily salt consumption of 5 - 6 gm is allowed
- (1) I, II, III (2) II, III, IV (3) III, IV (4) all of above

71. Which of the following statements are **correct** about Lipoprotein ?
- (I) is secreted by endothelium
 - (II) is a modified VLDL
 - (III) has structural homology with plasminogen
 - (IV) serum concentration is inversely related to CHD risk
- (1) I, III (2) II, IV (3) III (4) IV
72. Mr.A. has waist circumference of 100 cms, fasting blood sugar of 130 mg% HDL of 26 mg% LDL of 124 mg% and triglyceride of 260 mg%. He has :
- (1) appendicular obesity
 - (2) diabetic dyslipidemia
 - (3) Friedrickson type IIb dyslipidemia
 - (4) metabolic syndrome
73. **Absolute** contraindication for thrombolysis is :
- (1) abdominal surgery done 3 months ago
 - (2) blood pressure of 170/100 mm Hg
 - (3) history of hemorrhagic stroke 3 yrs ago
 - (4) active menstrual bleeding
74. The following indicates successful thrombolysis **except** :
- (1) relief of chest pain (2) atleast 50% resolution of ST elevation
 - (3) atrial fibrillation (4) accelerated idioventricular rhythm
75. Mrs. B, is a diabetic with the BP of 180/110 mmHg. Her Creatinine is 2.5mg%. Treadmill test showed 2mm ST depression at 7 mets.
- (1) Target a blood pressure reduction to 130/80 mmHg
 - (2) Betablocker and Calcium channel blockers are ideal drugs
 - (3) ACE inhibitors and ARB to be used with caution
 - (4) All of the above
76. Which of the following statement is **wrong** regarding acute coronary syndrome ?
- (1) more than half of deaths following acute myocardial infarction occur before the patient is hospitalised
 - (2) Fissuring and ulceration of atherosclerotic plaque triggers acute coronary syndrome
 - (3) Modern management of acute myocardial infarction has eliminated nonfatal recurrence
 - (4) Platelet adhesion and aggregation have important role in pathogenesis

77. Identify the **incorrect** statement.
- (I) Completely occluding thrombus in a coronary artery causes Non ST elevation myocardial infarction
 - (II) Stunning is a chronic reversible LV dysfunction following reperfusion of transient ischaemia of any cause
 - (III) Hibernation is an acute reversible LV dysfunction caused by ischaemia
 - (IV) Thinning and expansion of infarcted segment results from ventricular remodelling
- (1) I, III (2) II, IV (3) I, II, III (4) II, III

Questions 78-80 : pertain to a single clinical situation -

78. A 65 years old post menopausal female with poorly controlled diabetes and hypertension of 15 years is admitted in emergency room with difficulty in breathing of one hour duration. Her pulse is 120/min and BP is 90/60 mm Hg, Respiratory rate 30/min with SpO₂ of 92%.

The following diagnostic possibilities were considered :

- (I) acute myocardial infarction with cardiogenic shock
- (II) acute pulmonary embolism
- (III) acute pneumonia with septicemic shock
- (IV) acute dissection of aorta

Which of the above conditions will be diagnosed by you ?

- (1) I, II (2) I, II, III
 (3) I, III (4) All of the above

79. Which among the following clinical findings will be helpful in arriving at a correct diagnosis :

- (I) Presence of S3
- (II) Elevated JVP
- (III) Bronchial breath sound
- (IV) tenderness of calf muscle
- (V) early diastolic murmur along left sternal border

- (1) I+III+IV (2) I+II+III (3) I+II+III+IV (4) all of the above

80. The following investigations are available :

- (I) Troponin and CPK MB
- (II) LDH
- (III) D - Dimer
- (IV) X ray chest
- (V) bedside colour doppler echocardiography

Which of the above investigations will be helpful ?

- (1) I+II+III (2) I+III+IV+V (3) I+III+V (4) All of the above

81. Which of the following statement is **incorrect** regarding coronary circulation ?
- (1) In a myocardial bridge, coronary artery is intramural
 - (2) Myocardium extracts high and relatively fixed amount of oxygen
 - (3) Intramyocardial resistance vessels are fully dilated at rest
 - (4) Changing oxygen needs of heart influence vascular resistance
82. Identify the **wrong** statement.
- (1) Dopamine stimulates the release of norepinephrine
 - (2) Dobutamine causes less chronotropic effects than Dopamine
 - (3) Epinephrine requires neuronal reuptake and hence ineffective in denervated transplanted heart
 - (4) Isopreterenol is predominantly chronotrope and causes no significant effect on blood pressure
83. The following statements concern the diagnosis of pulmonary embolism
- (I) A normal chest X ray does not rule out pulmonary embolism
 - (II) A normal electrocardiogram does not exclude pulmonary embolism
 - (III) Normal pulse oxymetry rules out pulmonary embolism
 - (IV) Echocardiographic detection of RV overload and dysfunction is a practical and sensitive technique to diagnose large pulmonary embolism.
 - (V) D - dimer assay is a reliable screening test
 - (VI) V/Q scan is a better alternative to pulmonary angiography
- Which of the above are **true** ?
- (1) I, III, V, VI
 - (2) I, II, IV, V
 - (3) I, IV, V, VI
 - (4) I, II, V, VI
84. Which of the following statements are **correct** in management of pulmonary embolism
- (I) Dopamine is better than dobutamine when RV dysfunction occurs in pulmonary embolism
 - (II) Dose of low molecular weight heparin to be adjusted to achieve a PTT of 1.5-2.5 times the control value
 - (III) Thrombolysis will be life saving in massive pulmonary embolism
 - (IV) Patients with unprovoked venous thromboembolism require long term anticoagulation
 - (V) When RV dysfunction is present, thrombolysis can be deferred
- (1) I, III, V
 - (2) I, II, III
 - (3) I, III, IV
 - (4) III, IV, V
85. Which of the following statements regarding cyanotic spells are **correct** ?
- (I) Commonly seen below 2 years of age
 - (II) Infant is irritable and cries incessantly
 - (III) Deep slow breathing with significant subcostal retraction
 - (IV) Pulmonary ejection murmur becomes louder
 - (V) Secondary to infundibular spasm
- (1) I, II, III
 - (2) II, III, V
 - (3) I, II, V
 - (4) II, IV, V

86. A known asthmatic and diabetic of 10 years duration, is admitted with retrosternal chest pain of 2 hours duration. His admission ECG showed ST elevation of 2 mm in II, III, aVF, V3r. His pulse was 96/min. BP was 100/70 mmHg. JVP 7cm above sternal angle. Faint S3 was heard. Lungs were clear. The following therapeutic options are available.

- (I) Administration of Streptokinase of 15 Lakh Units
- (II) Isosorbide Dinitrate 5 mg 3 times a day orally
- (III) Enteric coated Aspirin 300 mg orally
- (IV) Clopidogrel 300 mg orally
- (V) Atenolol 25 mg bd orally
- (VI) Frusemide 20 mg orally

Which of the above options have to be avoided ?

- (1) I, II, III, IV (2) II, IV, V, VI (3) II, III, V, VI (4) III, IV, V, VI

87. A patient presents with acute anterior wall myocardial infarction with chest pain duration of 2½ hours. He gives history of renal biopsy 3 days before. The cardiac catheterisation laboratory has an angiographic procedure going on which is likely to take another one hour. Which of the following statement is correct about management ?

- (I) Reperfusion chances in this patient is equal with fibrinolysis well as primary PCI
- (II) Thrombolysis is contraindicated
- (III) Inview of the delay in door to balloon time, thrombolysis is the correct option
- (IV) primary PCI is the only option available

- (1) I, II, III, IV (2) I, II, III
(3) I, II, IV (4) II, III, IV

88. In acute myocardial infarction,

- (I) Complete heart block in inferior wall myocardial infarction carries better prognosis than in anterior wall myocardial infarction
- (II) Complete heart block in inferior wall myocardial infarction is due to infranodal lesion
- (III) Development of left bundle branch block indicates a high risk individual
- (IV) Compared to left anterior fascicular block, left posterior fascicular block indicates more extensive myocardial damage
- (V) Escape rhythm in complete heart block, complicating anterior wall myocardial infarction will have narrow QRS complex

Identify the correct statements from the above :

- (1) I, II, III, IV (2) I, III, IV (3) II, III, V (4) II, III, IV, V

89. Rupture of papillary muscle complicating acute myocardial infarction _____ .

- (I) Usually occurs 2-7 days after infarction
- (II) Acute pulmonary edema may be the presentation
- (III) Hollow systolic murmur is often faint or absent
- (IV) Anterolateral papillary muscle is commonly affected
- (V) Early surgical treatment improves prognosis

Identify the correct statements from above

- (1) I, II, III, IV (2) I, II, V (3) II, III, IV (4) I, II, III, V

90. Diet prescription to a patient who has survived myocardial infarction. Which of the following statements are **correct** ?

(I) Cholesterol content should be less than 400 gms/day

(II) Transfatty acids are preferred

(III) MUFA and PUFA are preferred over saturated fatty acids

(IV) Protein content should be 1 gm/kg/day

(V) Vegetables and fruits are necessary

(1) I, II, III, IV (2) II, III, IV (3) I, II, IV, V (4) III, IV, V
