- 1. Recording, understanding of pressure volume loops in CHF
- 2. Nitric oxide and pulmonary hypertension.
- 3. Genetics of sudden cardiac death.
- 4. Embryology & anatomy of AV septal defects.
- 5. Pharmacology of clopidogrel.
- 6. Metabolic reserve of the heart.
- 7. Mechanism of breathlessness & fatigue in chronic congestive failure.
- 8. LV non compaction.
- 9. Molecular basis of vulnerable plaque.
- 10. Sodium intake & hypertension.

- 1. Current role of myocardial contrast echocardiography.
- 2. ECG localization of acute MI.
- 3. Strain Rate Imaging.
- 4. Use & misuse of cardiac troponins.
- 5. Assessment of borderline coronary setnosis
- 6. Current role of MRI in functional assessment of cardiovascular diseases.
- 7. Determinants, assessment and management of pulmonary regurgitation in post operative patients of tetralogy of fallot.
- 8. Role of DFT in ICD implantation.
- 9. Low flow, low gradient aortic stenosis evaluation & treatment.
- 10. Role of PET in cardiology.

- 1. Anatomy of AV junction
- 2. Anaerobic threshold
- 3. Apoptosis and cardiovascular disorders
- 4 Platelet function testing
- 5 Nitric oxide and oxidative stress in cardiovascular disorders
- 6 Mandelian inheritance in cardiovascular disorders
- 7 Coronary callateral circulation
- 8 Flick principle
- 9 Laplace law
- 10 Sensitivity specificity and predictive accuracy

- 1. RV myocardial infarction Diagnosis and management
- 2. Low flow low gradient in aortic stenosis: Definition and management principles
- 3. Pregnancy in a patient with bileaflet valve in aortic position treatment principles
- 4 Criteria for the diagnosis of infective endocarditis
- 5 Role of color M mode in diastolic heart failure
- 6 AV block in alcohol ablation for hypertrophy cardiomyopathy
- 7 Management of acute pericarditis
- 8 Methods to assess responders of CRT
- 9 Nesirtide
- 10 Treatment of proximal dissection of aorta

- 1. Design an investigative protocol to test the efficacy of stem cell therapy in CHF
- 2. Non-invasive investigation for CCP (chronic constrictive pericarditis)
- 3. Fetal echocardiography
- 4 Strength of non invasive techniques for viability
- 5 Investigations for active plaque in acute coronary syndrome
- 6 Investigation for a case presenting with syncope
- 7 Lipoprotein
- 8 Incremental value of SPECT IMAGING in Suspected CAD
- 9 Risk stratification of long QT Syndrome
- 10 Role of intra vascular ultrasound in cath lab

- Fibrous skeleton of the heart.
- 2. Myocardial contractility.
- 3. Ion Channels
- 4. Mechanisms of pulmonary oedema.
- 5. Haemodynamics of univentricular heart.
- 6. Haemodynamics of constrictive versus restrictive physiology.
- 7. Current prevalence of rheumatic heart disease.
- 8. Chromosomal aberration in cardiovascular diseases.
- 9. Estimation of coronary blood flow.
- 10. Myocardial regeneration.

- Brain Natriuretic Peptide (BNP) in heart failure.
- 2. Electrical device therapy in heart failure.
- 3. Non-ST elevated ACS: the rationale for conservative and invasive strategies.
- 4. ST elevated AMI: Facilitated reperfusion.
- 5. Diuretics in hypertension criticize the JNC7.
- 6. Lower the better what should be the lower level of LDL-C in secondary prevention.
- 7. Sudden cardiac death discuss the primary electrical abnormalities.
- 8. Drug eluting stents and subacute stent thrombosis.
- 9. IHD in young a tropical disease.
- 10. Newer Anti-anginal drugs.

- 1. Echocardiographic evaluation of diastolic dysfunction.
- 2. Non invasive assessment of myocardial viability.
- 3. Clinical applications of cardiac MRI
- 4. Assessment of valvular stenosis in the cardiac catheterization laboratory.
- 5. Non invasive strategies to detect atherosclerotic plaque
- 6. ECG in the emergency room.
- 7. Risk assessment in unstable angina /NSTEMI by cardiac markers.
- 8. Laboratory evaluation of syncope.
- 9. Intra operative trans-esophageal echocaradiography.
- 10. Novel risk factors for atherosclerosis.

- 1. Aspirin use in chronic heart failure.
- 2. Stem cell therapeutics in cardiovascular diseases.
- 3. Atrial fibrillation: Pill in the pocket.
- 4. Genesis, hemodynamcis & understanding of mid diastolic & presystolic murmurs.
- 5. Direct thrombin inhibitors.
- 6. Failing Fontan: Mechanism & management.
- 7. Statins induced myopathy.
- 8. Cryptogenic stroke & patent foramen ovale.
- 9. Anemia in CHF: Etiology, mechanism & management.
- 10. Coronary Bifurcation Lesions.