KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
[Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956 vide Government of India Notification No.F.9-19/2000-U.3 (A)]
Accredited A+ Grade by NAAC (3rd Cycle) **Placed in 'A' Category by MHRD (GoI)**

POST-DOCTORAL DEGREE EXAMINATION – JANUARY 2024
D.M. CARDIOLOGY

Time: 3 Hours **Max. Marks: 100**

PAPER – I
Basic Sciences as applied to Cardiology

Q.P. Code: 1501

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

ESSAY QUESTIONS: **10 X 10 = 100**

1. Describe the basic Physics and Instrumentation of Echocardiography including ultrasound, interaction of ultrasound with tissue, transducers and imaging modalities.
2. Describe the pathophysiology of Hypoplastic Left Heart syndrome.
3. Describe in detail the anatomy of mitral valve apparatus in relation to functional mitral regurgitation.
4. Embryology of Atrial septum and the pathophysiology of Ostium primum defects.
5. Describe the embryological basis of anomalies of the coronary arteries.
6. Describe the evidence and basis for considering coronary artery disease as an inflammatory disease.
7. Discuss Genetics of Long QT syndrome and risk stratification of these syndromes.
8. Describe clinical and biochemical features of Familial dyslipidemias.
9. Discuss basics of cardiac PET and its use in viability assessment.
10. Describe the role of Palliative Surgeries in cardiovascular medicine.

****

KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
[Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956 vide Government of India Notification No.F.9-19/2000-U.3 (A)]
Accredited A+ Grade by NAAC (3rd Cycle) **Placed in 'A' Category by MHRD (GoI)**

POST-DOCTORAL DEGREE EXAMINATION – JANUARY 2024
D.M. CARDIOLOGY

Time: 3 Hours **Max. Marks: 100**

PAPER – II
Ischemic Heart Disease and Congenital Heart Disease

Q.P. Code: 1502

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

ESSAY QUESTIONS: **10 X 10 = 100**

1. Discuss the differences between Hibernating vs stunned myocardium and clinical implication.
2. Antiplatelet therapy in acute coronary syndrome with trials comparing the various antiplatelet therapy use?
3. Medical therapy vs anrevascularisation therapy in stable ischemic heart disease – current guidelines?
4. What is cardiac rehabilitation? Enumerate principle and component of cardiac rehabilitation?
5. Gene therapy in IHD?
6. Ebstein Anomaly – embryonic basic, presentation, ECG abnormality and indication of intervention?
7. Indication of Fontans? Prerequisite, various modification of Fonton surgery?
8. Describe Fetal circulation? Changes after birth with clinical implication?
9. Assessment of reversibility in Pulmonary hypertension in shunt lesions?
10. Discuss balloon valvuloplasty in Children.

****

KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
[Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956 vide Government of India Notification No.F.9-19/2000-U.3 (A)]
Accredited A+ Grade by NAAC (3rd Cycle) **Placed in 'A' Category by MHRD (GoI)**

POST-DOCTORAL DEGREE EXAMINATION – JANUARY 2024
D.M. CARDIOLOGY

Time: 3 Hours **Max. Marks: 100**

PAPER – III
RHD, Hypertension, Cardiomyopathy and other Cardiovascular Diseases

Q.P. Code: 1503

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

ESSAY QUESTIONS: **10 X 10 = 100**

1. Discuss the recent classification of heart failure and evidence based novel pharmacotherapy for heart failure with reduced ejection fraction.
2. Discuss the pathophysiology, natural history, diagnosis and management of severe Aortic stenosis with low ejection fraction.
3. Describe the hemodynamics of restrictive cardiomyopathies and the role of MRI in the diagnosis of sarcoid.
4. Discuss the pathophysiology, diagnosis and management of cardiovascular complications of cancer chemotherapeutic agents.
5. Discuss about the role of Positron emission tomography in cardiac diseases.
6. Discuss about the echo evaluation of diastolic dysfunction.
7. Discuss about the diagnosis, management and prevention of acute rheumatic fever.
8. Discuss about the indications and timing of surgery in infective endocarditis and current recommendations for infective endocarditis prophylaxix.
9. Discuss about the definitions of hypertensive crisis and its management in various clinical setting.
10. Discuss about exercise based comprehensive cardiac rehabilitation.

****

KLE ACADEMY OF HIGHER EDUCATION AND RESEARCH, BELAGAVI.
[Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956 vide Government of India Notification No.F.9-19/2000-U.3 (A)]
Accredited A+ Grade by NAAC (3rd Cycle) **Placed in 'A' Category by MHRD (GoI)**

POST-DOCTORAL DEGREE EXAMINATION – JANUARY 2024
D.M. CARDIOLOGY

Time: 3 Hours **Max. Marks: 100**

PAPER – IV
Recent Advances in Cardiology

Q.P. Code: 1504

Answers should be specific to the Questions asked.
Draw neat, labeled diagrams wherever necessary.
All questions are compulsory.

Question Number **Marks**

ESSAY QUESTIONS: **10 X 10 = 100**

1. What are the adverse hemodynamic consequences of permanent right ventricular pacing? What are the various algorithms to reduce right ventricular pacing?
2. Discuss emerging non-conventional risk markers for atherosclerosis and interventions to reduce them.
3. Discuss the management of hypertension in various high risk patient groups with the appropriate blood pressure targets. Discuss the details of the TIME trial.
4. What is the role of chest pain units in evaluation and treatment of patients presenting with chest pain?
5. Briefly discuss the determination of microvascular flow in coronary arteries?
6. Define cardiogenic shock. Discuss the current management of Acute coronary syndrome with cardiogenic shock in the light of the Culprit trial.
7. Discuss novel therapies for acute heart failure.
8. What is endovascular aortic repair and its current status in interventional Cardiology? What are the various types of endoleak?
9. Define high bleeding risk (HBR) in patients undergoing cardiovascular treatment. Discuss best antiplatelet strategy in HBR patients in the context of TWILIGHT and MASTER DAPT trials.
10. What is myocardial strain echo and discuss the role in evaluation of cardiac patients?

****