

**CARDIOLOGY**  
**PAPER-I**

TIME: 3 HOURS  
MAX. MARKS: 100

CARD/JJ/20/05/I

**Important Instructions:**

- *Attempt all questions in order.*
- *Each question carries 10 marks.*
- *Read the question carefully and answer to the point neatly and legibly.*
- *Do not leave any blank pages between two answers.*
- *Indicate the question number correctly for the answer in the margin space.*
- *Answer all the parts of a single question together.*
- *Start the answer to a question on a fresh page or leave adequate space between two answers.*
- *Draw table/diagrams/flowcharts wherever appropriate.*

**Write short notes on:**

1. a) Sample size determination. 5+5  
b) Pitfalls of meta-analysis.
2. a) Embryological development of Left Ventricular Outflow Tract. 5+5  
b) Embryogenesis of Inter-Atrial Septum.
3. a) Genesis of U wave & its clinical implications. 5+5  
b) Heart rate variability.
4. a) Principles of iFR & FFR. 5+5  
b) Genetic basis of Long QT Syndrome.
5. a) Biomarkers in Acute Coronary Syndrome. 5+5  
b) Cardiac bio-markers for cardiac fibrosis.
6. a) Anatomy & functions of various components of Mitral Valve Apparatus. 5+5  
b) Anatomy of pericardium and its nerve and blood supply.
7. a) Odds Ratio. 5+5  
b) Kaplan Meier Estimates.
8. a) Embryogenesis of Ascending aorta, Aortic arch and its branches. 5+5  
b) Congenital anomalies due to faulty embryogenesis of Ascending aorta, Aortic arch and its branches.
9. What is Neo-atherosclerosis? How is it different from neo-intimal hyperplasia? How will you diagnose and manage neo-atherosclerosis? 3+3+4
10. a) Briefly describe the coagulation pathway. 5 +5  
b) Discuss the sites of actions of various anti-coagulants.

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