

**CARDIO THORACIC SURGERY**

PAPER-II

CTS/D/18/04/II

Time: 3 hours  
Max. Marks:100

**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. Operative procedure and indications for: 6+4
  - a) Arterial Switch.
  - b) Atrial Switch.
2. a) Evolution of prosthetic heart valves. 7+3  
b) Recent advances in bio-prosthetic valves.
3. a) Morphology and pathophysiology of ALCAPA (Anomalous origin of Left Coronary Artery from Pulmonary Artery). 5+5  
b) Management of ALCAPA.
4. a) Pathophysiology and clinical presentation of Epstein's anomaly. 4 +6  
b) Indications for surgical management of Epstein's anomaly describing the various procedures.
5. a) Evolution of various types of Fontan operations. 5+5  
b) Operative principle, indications and benefits of extra cardiac Fontan operation.
6. Clinical application of: 5+5
  - a) Cardiac magnetic resonance imaging.
  - b) 3D printing technology in cardiovascular surgery.
7. a) Comparing cardiac tamponade with constrictive pericarditis based on morphology, etiopathogenesis and clinical features. 6+4  
b) How pericardiectomy is done in constrictive pericarditis?
8. a) What is Minimally Invasive Cardiac Surgery (MICS)? 4+6  
b) Various technological innovations facilitating MICS.
9. a) Criteria for donor heart and indications for heart transplantation. 5 +5  
b) Operative steps in heart lung transplantation.
10. a) The classification and pathology of cardiac tumours. 4+6  
b) Clinical manifestation and management of left atrial myxoma.

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