

**CARDIOTHORACIC SURGERY**

PAPER - III

CTS/D/13/04/III

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.

1. a) Describe the applied anatomy of mitral valve. 5+5  
b) What are the surgical methods to tackle ischemic mitral regurgitation?
2. Discuss lung transplant under the following headings: 4+4+2  
a) Indications  
b) Post operative complications  
c) Results
3. a) What is PET? 1+4+5  
b) What is its role in SOL of lung?  
c) What is its role in ischaemic myocardium and ischaemic cardiomyopathy?
4. a) What is Lung Volume Reduction Surgery (LVRS)? 1+(3+3)+3  
b) Mention the inclusion and exclusion criteria.  
c) Mention the surgical techniques.
5. a) State the materials used in making bio-valves and outline the treatment procedures available. 5+5  
b) Discuss the current status of Bio-prosthetic valve uses.
6. a) What is patient-prosthetic mismatch (PPM)? 3+2+5  
b) Classify PPM.  
c) How do you investigate a patient suspected to have severe PPM?
7. a) What is cardiac MRI? 2+(3+3+2)  
b) Explain its relevance in defining anatomy, physiology and function of heart with examples
8. a) Discuss intra-operative graft patency assessment during CABG. 5+5  
b) Discuss briefly background and current status of TMR (Trans-Myocardial Revascularization).
9. Describe the pathogenesis, causes and management of pulmonary hypertensive crises. 3+2+5
10. a) Discuss the immuno-pathology of myasthenia gravis 5+5  
b) Discuss the biological markers in carcinoma lung.