

CARDIOTHORACIC SURGERY

PAPER – I

CTS /J/17/04/I

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. Hypothermic circulatory arrest under following headings: 2+4+4
 - a) Indications.
 - b) pH and alpha stat strategies for blood gas management.
 - c) Retrograde cerebral perfusion.
2. Use of MRI in cardiac surgery under following headings: 3+3+4
 - a) Role in anatomical diagnosis.
 - b) Role in physiological diagnosis.
 - c) Compare MRI with CT scan in cardiac surgery.
3. Acute coronary syndrome under following headings: 2+4+4
 - a) Definition.
 - b) Role of biomarkers in management.
 - c) Role of various revascularization strategies.
4. Intra aortic balloon pump (IABP) under following headings: 2+3+3+2
 - a) Define counter pulsation.
 - b) Physiological effects of IABP.
 - c) Indications of IABP.
 - d) Contraindications of IABP.
5. Myocardial protection under following headings (Physiological basis and advantages): 3+4+3
 - a) Antegrade warm blood cardioplegia.
 - b) Retrograde cardioplegia.
 - c) "Hot-shot".
6. Heparin induced thrombocytopenia under following headings: 2+4+4
 - a) Definition.
 - b) Diagnosis.
 - c) Management.

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7. Atrial fibrillation under following headings: 2+3+3+2
a) Definition and diagnosis.
b) Pharmacological treatment.
c) Role of surgical Maze procedure in atrial fibrillation associated with mitral valve disease.
d) Current alternative to surgical Maze procedure.
8. Chylothorax under following headings: 3+2+2+3
a) Anatomy of thoracic duct.
b) Causes of chylothorax.
c) Diagnosis.
d) Management outline.
9. Anatomy of tricuspid valve under following headings: 3+3+4
a) Leaflet and sub valvular apparatus.
b) Relationship with conduction tissue (AV node and bundle of His).
c) DeVega's Annuloplasty: Procedure & outcome.
10. Left superior vena cava under following headings: 3+3+4
a) Embryology.
b) Implications during cardio-pulmonary bypass.
c) Draw an adult circuit of venous line with size of tubes and connectors.
