



## BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(PA)-2021

Course Name – Cardio-Vascular & Thoracic Surgery

Course Code - BPAC501

( Semester V )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify major indication for IABP include all of these except
  - a) PTCA failure
  - b) Medically refracting Angina
  - c) Left main coronary artery basin
  - d) Aortic papillary muscle rupture
- (ii) Select the medication not typically used in the management of acute coronary syndromes.
  - a) Aspirin
  - b) Beta-blockers
  - c) ACE inhibitors
  - d) Antibiotics
- (iii) Give examples of risk factors for IHD.
  - a) Regular exercise
  - b) High cholesterol levels
  - c) Consuming a balanced diet
  - d) Smoking
- (iv) Summarize the surgical procedure which involves bypassing blocked coronary arteries.
  - a) PCI
  - b) Valvuloplasty
  - c) CABG
  - d) Aneurysm repair
- (v) Indicate the most lethal arrhythmia post-MI leading to sudden cardiac death.
  - a) Atrial fibrillation
  - b) Ventricular fibrillation
  - c) Supraventricular tachycardia
  - d) First-degree heart block
- (vi) Give examples of two major complications post-myocardial infarction
  - a) Valvular disease and cardiomyopathy
  - b) Ventricular aneurysm and ventricular septal defect
  - c) Myocarditis and endocarditis
  - d) Hypertension and diabetes
- (vii) Name the artery involved in double vessel disease that makes CABG a potential treatment
  - a) Right coronary artery
  - b) Circumflex artery
  - c) Left anterior descending artery
  - d) Pulmonary artery
- (viii) Give examples of two arteries that can be used for grafts in CABG:

- a) Aorta and pulmonary artery  
 c) Radial and internal mammary arteries
- b) Brachial and femoral arteries  
 d) Carotid and cerebral arteries
- (ix) Select the best lifestyle change post-CABG:  
 a) Smoking continuation  
 c) Physical inactivity
- b) Regular exercise  
 d) High-fat diet
- (x) Select invasive procedure where a new valve is inserted within the old, damaged valve?  
 a) Heart transplantation  
 c) TAVR
- b) Surgical valve replacement  
 d) Balloon angioplasty
- (xi) Identify the most appropriate incision in the emergency room for patients with penetrating cardiac injury is  
 a) Left Thoracotomy  
 c) Medium Sternotomy
- b) Right Thoracotomy  
 d) Subxiphoid incision
- (xii) Identify most common complication following cardiac surgery is  
 a) Bleeding  
 c) Stroke
- b) Infection  
 d) Arrhythmia
- (xiii) Identify the condition which is not true for CPR  
 a) Closed chest massage is as effective as open chest massage  
 c) Most common cause sudden death is ischemic heart disease
- b) Success rate for out of hospital resuscitation 30 to 60%  
 d) Standard chest massage generally provides less than 15 % of normal coronary and cerebral blood flow
- (xiv) Choose the most common type of hiatal hernia  
 a) Type I  
 c) Type III
- b) Type II  
 d) Type IV
- (xv) Indicate which of these is not an indication for Aortic valve replacement for Aortic stenosis  
 a) Angina  
 c) Congestive heart failure
- b) Syncope  
 d) Transvascular gradient of 35 mm of Hg without symptoms

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Tell What are the key considerations in pre-operative assessment and optimization for cardiovascular and thoracic surgical patients? (3)
3. Explain the role of early mobilization and respiratory therapy in preventing post-operative complications in cardiothoracic surgery patients. (3)
4. Explain the management of CABG patient (3)
5. Tell What are common symptoms and signs associated with disorders of the major airways? (3)
6. Discuss the importance of hemodynamic monitoring in the post-operative care of cardiothoracic surgery patients. How does it impact patient outcomes? (3)

OR

Describe the principles of pain management in the post-operative period for cardio-vascular and thoracic surgical patients. How can adequate pain control contribute to recovery? (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Analyze the key factors that contribute to the high mortality rates among critically ill cardiovascular and thoracic surgical patients during the post-operative period. (5)

8. Explain the key components of a cardiopulmonary bypass (CPB) circuit and describe the role of each component in maintaining adequate perfusion and oxygenation during cardiac surgery. (5)
9. Write in detail about the management of MDR TB (5)
10. Explain the etiology and management of Infective endocarditis. (5)
11. Classify Chest wall tumors. Write in details about its management. (5)
12. Explain the TNM staging and management of Non small cell lung carcinoma. (5)

**OR**

Explain the types, indication and complication of Diaphragmatic pacing. (5)

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