

**2021**

**PHYSIOLOGY— HONOURS**

**Paper : CC-6**

**Full Marks : 50**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

1. Answer **any five** questions from the following: 2×5
- (a) What is ANP?
  - (b) What is mean electrical axis of heart?
  - (c) What is heart block?
  - (d) How cardiac muscles obey All or None Law?
  - (e) What is the significance of 'AV nodal delay'?
  - (f) What is vagal escape?
2. Write short notes on **any two** from the following: 5×2
- (a) Significance of different heart sounds
  - (b) Atherosclerosis
  - (c) Vectorcardiogram
  - (d) Peculiarities of coronary circulation.

Answer **any three** questions.

3. (a) What is 'cardiac reserve'?
- (b) Discuss the determination process of cardiac output by Fick's principle.
- (c) What is Left Axis deviation? When does it occur?
- (d) What is vaso-vagal syncope? 1+3+(2+2)+2
4. (a) State the ionic basis of 'Treppe'.
- (b) Why cardiac muscle cannot be Tetanized?
- (c) How augmented limb leads differs from standard limb leads?
- (d) With a labelled diagram, describe the different phases of Left ventricular action potential, mentioning the role of different ions involved. 2+2+2+4

**Please Turn Over**

5. (a) Discuss the mechanism of generation of Pacemaker potential in the pacemaker cells of heart.  
(b) What is angina pectoris?  
(c) Distinguish between 'capacitance' and 'resistance' vessels. 6+1+3
6. (a) What is Reynold's number? Mention the significance of it.  
(b) What is buffer nerve? Mention its function in baro-reflex.  
(c) Mention the significance of 'c' wave in jugular venous pressure curve. 4+4+2
7. (a) What is Frank-Starling's law? Mention its clinical significance.  
(b) What is Bainbridge Reflex?  
(c) What is His bundle electrogram?  
(d) What do you mean by chronotropic and dromotropic effects of heart? (2+2)+2+2+2
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