

**2020**

**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 stannius ligature?
  - (b) What is the significance of ‘murmur’ in heart sounds?
  - (c) State Marey’s Law.
  - (d) Why arteries are called Windkessel vessels?
  - (e) State Einthoven’s law.
  - (f) What do you mean by turbulent and laminar flow?
  - (g) Mention the relation among End diastolic volume, End systolic volume and Stroke volume.
  - (h) What do you mean by cardiac index?
2. Write short notes on **any two** from the following :
- (a) Myocardial infarctions 5
  - (b) Measurement of arterial blood pressure by Auscultatory Method 5
  - (c) (i) Bainbridge reflex (ii) idio-ventricular rhythm 2½+2½
  - (d) Vasomotor centre. 5

Answer **any three** questions.

3. (a) What is “Wilson’s Central Terminal”? Mention its application in ECG recording. 2+4
- (b) Name two arteries where pulse can be felt. 2
  - (c) State the basic principle used in Echocardiography. 2
4. (a) Discuss the significance of various ECG waves with an appropriate labelled diagram of normal electrocardiogram. 3+2
- (b) What is the difference between tachycardia and bradycardia? 2
  - (c) What do you understand by P–R interval? Mention its significance. 1+2

**Please Turn Over**

5. (a) Draw a pressure–volume loop of cardiac cycle with proper labelling. Mention the factors which can alter this loop. 4+3
- (b) Explain the causes of hypertension in old age. 3
6. (a) State Hagen–Poiseuille’s Law. 3
- (b) Why blood is called non-Newtonian fluid? 2
- (c) Discuss the cardiovascular adjustment after haemorrhage. 5
7. (a) Describe the role of chemoreceptors in the control of blood pressure in human. 5
- (b) What do you mean by arterial and venous pulse? 2
- (c) Mention the role of ‘Funny Channels’ in maintaining pacemaker potential. 3
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