

**Five-Year Integrated M. Sc. Examination 2021-2022**

**Semester: V**

**Paper: LS-3-5-1**

**(System Physiology)**

**Time: Four Hours**

**Full Marks: 80**

Questions are of value as indicated in the margin

Answer *Question No. 1* and *any six* from the rest

1. Answer *any ten* of the following: 2x10 = 20
  - a) What do you mean by cardiac ejection fraction?
  - b) What is myocardial infarction?
  - c) Bipolar lead
  - d) Erythroblastosis foetalis
  - e) Counter current multiplier
  - f) Action potential
  - g) Neurotransmitter
  - h) Role of ADH
  - i) Resting potential
  - j) Cardiac output
  - k) Saltatory propagation
  - l) Loops of Henle
  
2. a) With labelled diagram of heart describe origin and spread of cardiac excitation.  
b) Draw and describe the events in cardiac cycle. 5+5=10
3. What is ECG grid? Describe the wave of normal electrocardiogram .Mention different wave interval with their significance. 2+8=10
4. Mention the different types of cranial nerves in man with their origin , nature and functions. 10
5. Explain the role of renin and angiotensin in regulation of arterial blood pressure. 10
6. Describe the conduction of nerve impulse through nonmyelinated neuron. 10
7. What do you mean by countercurrent exchanger? describe the role of vasa recta in the maintenance of medullary gradient 2+8=10
8. How blood volume is measured by direct and indirect method 3+7=10
9. How acid base balance is regulated in the body? 10