

Total number of printed pages-3

53 (IE 801) BMIN

2019

BIOMEDICAL INSTRUMENTATION

Paper : IE 801

Full Marks : 100

Time : Three hours

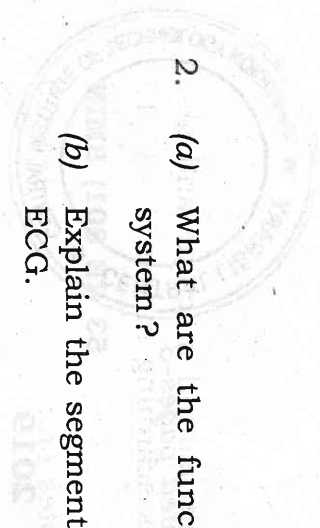
**The figures in the margin indicate
full marks for the questions.**

Answer **any five** questions out of **seven**.

4×5=20

1. Explain the following :
 - (a) Action potential
 - (b) Isolation Amplifier
 - (c) Differential Amplifier
 - (d) Instrumentation Amplifier.

Contd.



- 2. (a) What are the functions of nervous system? 6
- (b) Explain the segments and intervals of ECG. 6
- (c) Explain the generation of ECG. 8
- 3. (a) What is a defibrillator? Explain its needs. 6
- (b) Explain lung volumes and capacities. 8
- (c) Explain biotelemetry. 6
- 4. (a) Explain an ECG machine. 14
- (b) Explain surface electrodes. 6
- 5. (a) Explain X-ray machine. 12
- (b) Explain invasive electrodes. 8
- 6. (a) Explain photoplethysmograph and its types. 8
- (b) Explain ultrasound machine and also its various scanning modes. 12
- 7. Write short notes on : 4×5=20
 - (a) Pacemaker
 - (b) Sphygmomanometer
 - (c) Spirometer
 - (d) Audiometer.