



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(TAKE HOME)
SEMESTER II
SESSION 2019/2020**

COURSE NAME : MEDICAL MEASUREMENT SYSTEM
COURSE CODE : BEU 41003
PROGRAMME CODE : BEJ
EXAMINATION DATE : JULY 2020
DURATION : 3 HOURS
INSTRUCTION : ANSWER **FIVE (5)** QUESTIONS
ONLY
OPEN BOOK EXAMINATION

THIS QUESTION PAPER CONSISTS OF **TWO (2)** PAGE

- Q1** (a) Summarize about electrocardiogram (ECG). (2 marks)
(b) Appraise ECG waveform and label the parameters. (4 marks)
(c) Explain Electromyography (EMG). (2 marks)
(d) Mention any **TWO (2)** inherent limitations of the EMG Sensors. (2 marks)
- Q2** (a) Explain the External Anatomy of Heart and label the parts. (6 marks)
(b) Illustrate the **FIVE (5)** features of Korotkoff sounds from a patient. (4 marks)
- Q3** Organize the general process of Photoplethysmogram (PPG) with its block diagram. (10 marks)
- Q4** (a) Define Ventilation. (2 marks)
(b) Illustrate **FOUR (4)** points about the normal physiology ventilation process of the human lungs (4 marks)
(c) Summarize about the basic principle of ventilation process of lung machine. (4 marks)
- Q5** (a) Sketch the Current to Voltage Converter Circuit and label the components used in pulse pressure measurement. (4 marks)
(b) Compose minimum **SIX (6)** points about the practical use of oxygen Saturation monitor. (6 marks)
- Q6** (a) Sketch the **TWO (2)** types of Bio electrical impedance measurement techniques. (4 marks)
(b) Compose any **SIX (6)** points about the human body constituents with their respective function. (6 marks)

– END OF QUESTIONS –