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Question Paper Code: 59B20

B.E./B.Tech. DEGREE EXAMINATION, NOV 2019

Elective

Biomedical Engineering

15UBM902 – Clinical Engineering

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The core functions of a clinical engineering department can be CO1 R
(a) Technology management (b) Risk management
(c) Both A and B (d) None of the above
2. In 1924 Berger invented _____ CO1- R
(a) EEG (b) ECG (c) EMG (d) EOG
3. Strategic technology planning requires a _____ year long-range capital spending plan. CO2- R
(a) 3 to 5 (b) 4 to 6 (c) 3 to 6 (d) 4 to 5
4. _____ should provide a detailed description of the “must haves” and the “extras”. CO2- R
(a) RR (b) RED (c) RFP (d) DCE
5. The goal of health care technology management (HTM) is to optimize _____. CO3- R
(a) Computers (b) Acquisition and utilization (c) WiFi (d) Transportation
6. EHTP aims is to provide _____. CO3- R
(a) Promotive (b) Preventive (c) Curative Health Car (d) All the above

7. Identify timetable to complete monthly IPM services comes under the CO4- R
 (a) Goal (b) Reliability (c) Performance (d) Internal assessment
8. _____ important to be able to quickly compile the relevant data. CO4- R
 (a) Determine threshold (b) Evaluate indicator data
 (c) Identify trends (d) Modify indicator
9. _____ are calling for a reduction of medication error. CO5- R
 (a) CPOE (b) ADT (c) CIS (d) None of the above
10. Patient safety is impacted by each of these hospital domains. CO5- R
 (a) ICU (b) ER (c) OR (d) All of the above

PART – B (5 x 2= 10 Marks)

11. What are the roles of clinical engineering? CO1- R
12. Define the stages of technology life cycle. CO2- Ana
13. Short notes on promotive, preventive and curative health care. CO3- R
14. Short notes on IPM. CO4- U
15. Write short notes on CPOE. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) Explain briefly about the functional status of clinical engineering with neat diagram. CO1- U (16)
- Or
- (b) Discuss the Medical Technology and Patient Safety methods. CO1- U (16)
17. (a) Analyze technology assessment and its audit and budget strategies. CO2- Ana (16)
- Or
- (b) Explain briefly about the device evaluation and risk reduction. CO2- Ana (16)
18. (a) Elaborate the techniques involved in logical framework implementation. CO3- U (16)
- Or
- (b) Write a brief note on EHTP justification. CO3- U (16)

19. (a) Analyze case study to enhance IPM services and its action plan. CO4- Ana (16)
- Or
- (b) Write brief notes on case study to enhance IPM services. CO4- Ana (16)
20. (a) Explain in health care failure mode (HFMEA) and effect. CO5- U (16)
- Or
- (b) Discuss in detail about health care failure mode and effect. CO5- U (16)

