Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **18BM3004** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ADVANCED HEALTHCARE SYSTEM DESIGN** | **Max. Marks :** | **100** |

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| **Q. No.** | **Sub Div.** | **Questions** | **Course Outcome** | **Marks** |
| **ANSWER ANY FIVE QUESTIONS (5 x 16 = 80 Marks)** | | | | |
| 1. | a. | Comment on the uptake of ehealth and mhealth in medical industry. | CO3 | 8 |
| b. | Discuss the current advancements in the usage of mobiles and 4G devices in health care sector. | CO2 | 8 |
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| 2. | a. | Enlist the standards used in health care and comprehend the significance of each standard. | CO5 | 8 |
| b. | Illustrate the various FDA medical device classifications and the regulations in designing and usage of devices. | CO5 | 8 |
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| 3. | a. | Illustrate various laws and regulations in clinical healthcare department | CO5 | 8 |
| b. | Describe the barriers and strategies for innovating prototype models or a general medical instrumentation system. | CO3 | 8 |
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| 4. | a. | Outline the process of design of medical instruments relative to the demand. | CO1 | 8 |
| b. | Enumerate the wearable devices used in the current scenario for personal and remote diagnosis. | CO1 | 8 |
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| 5. | a. | Enumerate the digital hospital and the essential components to digitize a hospital. | CO6 | 8 |
| b. | Comment on the ethical issues connecting to the practices in digital health. | CO6 | 8 |
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| 6. | a. | Enlist various methods to select various projects that relates to societal needs. | CO6 | 8 |
| b. | Enumerate the applications of digital radiology with respect to security and accessibility. | CO5 | 8 |
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| 7. | a. | Illustrate the various medical image archiving applications. | CO2 | 8 |
| b. | Comment on the phenomenon of speech recogonition for medical data recording. | CO5 | 8 |
| **COMPULSORY QUESTION (1 x 20 = 20 Marks)** | | | | |
| 8. | a. | Examine the effectiveness and outcome of enforcing security and privacy while digitizing medical sector. | CO5 | 10 |
| b. | Outline the process of medical device design based on societal needs. | CO6 | 10 |