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



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

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| **Code :** | **17BT2051** | **Duration :** | **3hrs** |
| **Sub. Name :** | **HUMAN PHYSIOLOGY AND ANATOMY** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | List out the cell organelles and write the function of any two organelle. | CO1 | 10 |
| b. | Discuss about the various transports through cell membrane. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Portray the structure of an animal cell and explain in brief the function of each component. | CO1 | 12 |
| b. | Define action potential. Write a detailed note on the mechanism of action potential giving suitable diagrams. | CO1 | 8 |
|  |  |  |  |  |
| 3. | a. | Enumerate the process of oxygen transport and formation of haemoglobin. | CO2 | 5 |
| b. | Explain the structures associated with respiratory system with a neat sketch. | CO3 | 10 |
| c. | Differentiate anatomy from physiology. | CO1 | 5 |
| **(OR)** | | | | |
| 4. | a. | List out the types of leucocytes. Add a detailed note on the structure and function of leucocytes. | CO3 | 12 |
| b. | Comment on the factors responsible for regulation of blood flow. | CO2 | 8 |
|  |  |  |  |  |
| 5. | a. | Outline the structures associated with cardiovascular system with a neat sketch. | CO4 | 5 |
| b. | Portray schematically the relationship between the heart and different types of blood vessel. | CO3 | 5 |
| c. | Portray a clear pictorial representation of electrical changes in heart and its significance in functioning of heart. | CO3 | 10 |
| **(OR)** | | | | |
| 6. | a. | Enumerate a cardiac cycle and the subsequent events in the cycle with neat sketch. | CO4 | 14 |
| b. | Sketch ECG waveform and explain the segments. | CO4 | 6 |
|  |  |  |  |  |
| 7. | a. | Outline the functional components of nervous system with neat sketches. | CO5 | 10 |
| b. | Discuss the events that occur following the release of a neurotransmitter at a synapse. | CO5 | 10 |
| **(OR)** | | | | |
| 8. | a. | Classify the brain waves and their significance in EEG analysis. | CO5 | 8 |
| b. | Comment on 10-20 electrode system for EEG analysis. | CO5 | 12 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Sketch the structure of a nephron and describe the various blood vessels involved in urine formation in henel’s loop. | CO6 | 10 |
|  | b. | Discuss the fuctions of kidneys including the main processes involved in urinary system. | CO6 | 10 |