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



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

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| **Code :** | **18BM2001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **HUMAN ANATOMY AND PHYSIOLOGY** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course Outcome** | **Marks** |
| **PART – A (10X1 = 10 MARKS)** | | | |
| 1. | Draw the structure of a cell. | CO1 | 1 |
| 2. | Differentiate smooth and rough endoplasmic reticulu. | CO1 | 1 |
| 3. | Outline the structure of a femur bone. | CO2 | 1 |
| 4. | Comment on the significance of plasma membrane. | CO2 | 1 |
| 5. | Define Stroke Volume. | CO3 | 1 |
| 6. | Comment on auto regulation exhibited by heart. | CO3 | 1 |
| 7. | The arterial blood pressure is pulsative in nature. Justify the statement. | CO4 | 1 |
| 8. | Define cardiac output. | CO4 | 1 |
| 9. | Enlist the types of reflex. | CO5 | 1 |
| 10. | Define homeostasis. | CO6 | 1 |

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| **PART – B (6 X 3 = 18 MARKS)** | | | |
| 11. | Human cell is a tiny biological battery. Justify the statement. | CO1 | 3 |
| 12. | Enlist the type of tissues and give example for each. | CO2 | 3 |
| 13. | Differentiate systolic and diastolic pressure. | CO3 | 3 |
| 14. | Compare and contrast pulmonary and systemic circulation. | CO4 | 3 |
| 15. | Comment on reflex system. | CO6 | 3 |
| 16. | Portray the structure of kidney. | CO5 | 3 |

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| **PART – C (6 X 12 = 72 MARKS)**  **(Answer any five Questions from Q.no 17 to 23. Q.No 24 is a Compulsory Question)** | | | | |
| 17. | a. | List out the cell organelles and write the function of any two organelle. | CO1 | 6 |
| b. | Discuss about the various transports through cell membrane. | CO1 | 6 |
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| 18. | a. | Enumerate the process of gas exchange through capillaries with relevant diagrams. | CO3 | 6 |
| b. | Portray the respiratory system and explain in detail. | CO3 | 6 |
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| 19. | a. | Outline the structures associated with cardiovascular system with a neat sketch | CO4 | 6 |
| b. | Portray a clear pictorial representation of electrical changes in heart and the significance in functioning of heart. | CO4 | 6 |
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| 20. | a. | Enumerate a cardiac cycle and the subsequent events in the cycle with neat sketch. | CO4 | 6 |
| b. | Sketch ECG waveform and explain the segments. | CO4 | 6 |
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| 21. | a. | Discuss the structure, function and formation of bones. | CO2 | 6 |
| b. | Comment on the types of tissues. | CO2 | 6 |
| 22. | a. | Portray the structure of human eye and explain the physiology of eye in detail. | CO5 | 6 |
| b. | Explain the physiology of hearing. | CO5 | 6 |
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| 23. | a. | Sketch the structure of a nephron and describe the various blood vessels involved in urine formation in henel’s loop. | CO5 | 6 |
| b. | Discuss the fuctions of kidneys including the main processes involved in urinary system. | CO5 | 6 |
|  |  | **Compulsory:** | | |
| 24. | a. | Outline the functional components of nervous system with a neat sketch. | CO6 | 6 |
| b. | Discuss the events that occur following the release of a neurotransmitter at a synapse. | CO6 | 6 |