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

G:\logo and QP Template\logo 3 Feb 2018 final.tif

**End Semester Examination – Nov/Dec – 2018**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14CS2050** | **Duration :** | **3hrs** |
| **Sub. Name :** | **UNIX ARCHITECTURE** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Identify the various building blocks of kernel architecture with neat  diagram. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Illustrate the different scenarios the kernel will follow in the getblk algorithm to allocate a buffer for a disk block. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Describe system calls related to accessing existing files and changing the file attributes with necessary example. | CO2 | 20 |
| (OR) | | | | |
| 4. | a. | Discuss the algorithm to convert the given path name into its inode  with an example. | CO2 | 10 |
| b | Differentiate disk inode and in-core inode. | CO2 | 10 |
|  |  |  |  |  |
| 5. |  | Inspect the various states of the process and its transitions with neat sketch. | CO1 | 20 |
| (OR) | | | | |
| 6. |  | Describe fork algorithm for process creation and write a C/C++ code to create a parent and child process. | CO2 | 20 |
|  |  |  |  |  |
| 7. |  | Explain the algorithm for process scheduling with example. | CO3 | 20 |
| (OR) | | | | |
| 8. |  | Explain Swapping algorithm used in memory management with suitable diagram. | CO3 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Discuss the interprocess communication using sockets. Code a chat  program using basic functions of socket programming. | CO3 | 20 |