Reg. No. : | | | | | | | | | | | | |

Question Paper Code : X67524

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020
Seventh Semester

Computer Science and Engineering
CS 1005 – UNIX INTERNALS

(Regulations 2008)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions

PART – A **(10×2=20 Marks)**

1. What is meant by Kernel ?
2. What is meant by the process "sleep on an event" ?
3. State the content of buffer header.
4. Mention any two fields of super block.
5. What is system calls ?
6. How do you adjusting the position of the file pointer in file handling ?
7. Write the algorithm for wait.
8. List the complete set of process states.
9. How is the process priority controlled ?
10. What are the different states that causes page fault ?

PART – B **(5×16=80 Marks)**

11. a) i) List out the features of unix os. **(8)**

ii) Explain the architecture of UNIX. **(8)**

(OR)

b) Explain kernel data structures in detail.

12. a) i) Explain the structure of the buffer pool. **(8)**

ii) Explain the advantages and disadvantages of buffer cache. **(8)**

(OR)

b) i) Discuss about super block. **(8)**

ii) Explain an algorithm that converts path name to an inode in detail. **(8)**

13. a) Discuss on linking and unlinking of files in file system. **(16)**

(OR)

b) Explain the following in pipe system call.

i) Opening and closing. **(8)**

ii) Reading and writing. **(8)**

14. a) Explain process states, transitions and process control in UNIX OS.

(OR)

b) i) What is signal ? Explain different types of signals. **(8)**

ii) How do you use SigAlarm signal in UNIX ? Explain it with suitable application. **(8)**

15. a) Explain the function of terminal driver both in canonical and raw modes. **(16)**

(OR)

b) What are the two types of page fault ? Explain. **(16)**

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