

Seat
No.

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DII1347

Advance Unix Programming (New) (1230)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** questions from each unit.
5. Figures to the right indicate full marks.
6. Draw suitable diagram wherever necessary.
7. Assume suitable data wherever necessary.

UNIT - I

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|----|----|-----|--|---|
| 1. | a) | i) | Explain Unix architecture with suitable diagram. | 5 |
| | | ii) | Discuss advantages of standard I/O. | 5 |
| | b) | i) | In context of file execution, discuss the consequences of 'Write' operation. | 5 |
| | | ii) | What is sticky bit ? Explain in brief. | 5 |
| | c) | i) | Write a short note on v-node structure. | 5 |
| | | ii) | What is 'Fcntl' function ? List five different purposes of it. | 5 |

UNIT - II

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|----|----|-----|---|---|
| 2. | a) | i) | Discuss three functions for memory allocation with respect to 'ISO C' specification. | 5 |
| | | ii) | Explain process ID0, process ID1 & process ID2 with respect to their special purpose. | 5 |
| | b) | i) | What is vfork () ? How it differs from fork () ? | 5 |
| | | ii) | Differentiate between wait () and wait pid (). | 5 |
| | c) | i) | Write a short note on environment list. | 5 |
| | | ii) | List the various fields of /etc/passwd file. | 5 |

UNIT - III

3. a) Explain in brief. 10
- i) Interrupted system calls.
- ii) Kill () and raise () functions.
- b) Discuss memory mapped I/O & its functions. 10
- c) Discuss unreliable signals in context of the problems faced by earlier versions of unix. 10

UNIT - IV

4. a) Discuss threads & fork. Assume that child process runs before the parent and the parent calls fork; Explain what steps are taken ? 10
- b) What is daemon process ? Discuss rules for daemon process. 10
- c) Explain: 10
- i) Thread limits.
- ii) Thread creation.

UNIT - V

5. a) Write a short note on : 10
- i) Byte ordering of socket.
- ii) Semaphores.
- b) Explain various forms of IPC in Unix. 10
- c) Discuss the concept of stream based pipes. 10
