

S.D.E.

M.C.A. Sem - IV : WINTER - 2018  
SUBJECT: UNIX & LINUX INTERNALS

Day Wednesday  
Date 05/12/2018

W-2018-4807

Time: 02.00 PM TO 05.00 PM  
Max. Marks: 80

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**N.B.:**

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
  - 2) Answers to both the sections should be written in **SEPARATE** answer books.
  - 3) Figures to the right indicate **FULL** marks.
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**SECTION – I**

- Q.1** Explain the architecture of UNIX operating system in detail with suitable diagram. [10]
- Q.2** What are socket system calls? Explain inter process communication sockets in detail. [10]
- Q.3** Explain process life cycle in detail with suitable diagram. [10]
- Q.4** Discuss driver management in detail. [10]
- Q.5** Discuss user management, backup and recovery mechanism to be performed by system administrator. [10]
- Q.6** Describe components of Linux Operating System with suitable diagram. [10]
- Q.7** Write short notes on **ANY TWO** of the following: [10]
- a) Features of Linux
  - b) Memory management
  - c) Features and functions of Telnet and Ping commands

**SECTION – II**

- Q.8** a) Write a program in C to implement who am I using system calls. [07]  
b) Write a Shell script to find whether given number is odd or even. [08]
- Q.9** a) Write a program to read in 10 numbers and compute the average, maximum and minimum values. [07]  
b) Write a shell script to find out factorial of a number [08]
- Q.10** a) Explain the following with respect to advanced Linux programming with suitable example: [08]  
i) Standard library functions      ii) System / administrative commands  
b) Explain Linux Task Structure in details. [07]

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