S.D.E.

M.C.A. SEM - IV : SUMMER - 2018

SUBJECT: UNIX & LINUX INTERNALS

Day : **Thursday** Time: **02.00 P.M. TO 05.00 P.M.**
Date : **31/05/2018** **S-2018-4619** Max. Marks: 80

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.

SECTION – I

Q.1 Explain architecture of LINUX Operating System. **[10]**

Q.2 What is shell? Explain different types of shell and its functions. **[10]**

Q.3 What is process? Explain how process is executed in Unix. **[10]**

Q.4 Explain the various scenarios of retrieval of a buffer. **[10]**

Q.5 Differentiate between the following: **[10]**
a) Hard link and soft link
b) 'Fork' vs 'Exec' system call

Q.6 Explain file system layout in Linux in detail. **[10]**

Q.7 Write short notes on **ANY TWO** of the following: **[10]**
a) Disk Drivers
b) Super block
c) Piping concept

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SECTION – II

Q.8 Write shell script for the following:
a) To print prime factors of a given number N. **[07]**
b) To display the last three lines of every file specified on the command line preceded by the file name. **[08]**

Q.9 Write a program in C that toggles the case of character from input screen. **[15]**

Q.10 Write a menu driven shell script to display following information: **[15]**
a) CPU **c)** Hard disk size
b) Total RAM **d)** Mounted file system

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