

(ii) Questions : 9

Sub. Code : 

3	6	0	6
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Exam. Code : 

0	4	5	9
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**M.Sc. Information Technology 1<sup>st</sup> Semester****1128****LINUX SYSTEM ADMINISTRATION AND PROGRAMMING****Paper—MS-66****Time Allowed : Three Hours]****[Maximum Marks : 80**

**Note :—** Attempt *five* questions in all, including Q. 1 in Section-A, which is compulsory and taking *one* each from Section-B to Section-E. Marks are indicated on the right of various questions.

**SECTION—A**

1. (a) Explain the role of shell in Linux Operating System.  
(b) What is an absolute search path to a directory/file ?  
(c) What is difference between a program and a process ?  
(d) What is the role of *‘.bashrc’* system file in BASH ?  
(e) What is DNS ?  
(f) What is the difference between system call and function call ?  
(g) Explain the use of *‘wait()*’ system call.  
(h) What is WWW ?

8×2=16

**SECTION—B**

2. What is meant by ‘Linux is open source software’ ? Give minimum system requirements to install Linux on a PC. What is role of *‘fdisk’* utility in Linux ?
3. Explain the following in Linux :
  - (a) Application of *‘kill’* and *‘ps’* commands
  - (b) *‘grep’* pattern searching command and its features.

8,8

### SECTION—C

4. Define Linux File System. Explain the purpose and use of the following directories in the Linux File System :  
/usr/bin;/etc;/dev;/usr/spool; 16
5. Explain I/O redirection and pipes with appropriate examples. How may the standard error be redirected to a file ? Write a Linux command to list lines 51 through 60 in a given file. 16

### SECTION—D

6. How do you perform the following in Linux as a system administrator ?
  - (a) Setting the login message
  - (b) Setting up of e-mail. 8,8
7. Explain the following in BASH-Linux :
  - (a) Positional Parameters in BASH
  - (b) Difference between 'if' and 'case' statements in shell programming. 8,8

### SECTION—E

8. What is PERL ? Explain the following in context with PERL programming with examples :
  - (a) Iteration statements
  - (b) Conditional statements
  - (c) Functions. 16
9. Write a 'C' program using Input/Output System calls to duplicate the contents of a text file. 16