CS-63

BACHELOR OF COMPUTER APPLICATIONS (BCA) (Pre-Revised)

Term-End Examination

□□5□6   **June, 2016**

CS-63 : INTRODUCTION TO SYSTEM SOFTWARE

Time : 2 hours   *Maximum Marks : 60*

Note : *Question number* **1** *is* **compulsory**. *Attempt any* **three** *questions from the rest.*

1. (a) What are Loaders ? With the help of a diagram, describe the function of a loader. Explain any three Loader Schemes.   *8*

   (b) What are Deadlocks ? What are the conditions that characterise deadlocks ? Support your answer with relevant diagrams.   *4*

   (c) Describe the syntax and functions of the following UNIX commands :   *10*

      (i) mkdir

      (ii) ls

      (iii) chmod

      (iv) kill

      (v) cat

(d) Describe the roles and responsibilities of a System Administrator.   4

(e) Describe the Client/Server Architecture with the help of a diagram.   4

2. (a) What are Schedulers ? Describe the different types of schedulers and their interworking with the help of a diagram.   7

(b) Describe the procedure for booting a UNIX System.   3

3. (a) What is mutual exclusion ? How can semaphores be used for solving the problem of mutual exclusion ?   5

(b) Write a shell script that accepts a file name from the user and copies its content to a new file and displays it.   3

(c) Explain the wild card characters in UNIX and their utility.   2

4. (a) Explain ambiguous grammar with an example.   3

(b)   Draw a parse tree for the expression

      C + 3 * 4 / 2

for the grammar

(i)   List → List + digits

(ii)   List → List – digits

(iii) List → List * digits

(iv) List → List / digits

(v)   List → digits

(vi) digits → 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9   *5*

(c)   Explain the functioning of YACC.   *2*

5. (a)   Explain the symbols used for creating flow charts.   *2*

(b)   What is Segmentation ? Describe address mapping in a segmented system, with the help of a diagram.   *5*

(c)   Write the advantages of virtual memory.   *3*

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