(i) **Printed Pages : 3**   **Roll No.** ....

(ii) **Questions   : 9**   **Sub. Code :** | 1 | 7 | 9 | 4 | 0 |

                                  Exam. Code : | 0 | 0 | 3 | 0 |

Bachelor of Computer Applications 4th Semester
(2055)
OPERATING SYSTEM CONCEPTS AND LINUX
Paper : BCA-16-404

Time Allowed : Three Hours]   **[Maximum Marks : 65**

Note :— Attempt **FIVE** questions in all, selecting **ONE** question from each section and compulsory question. All questions carry equal marks.

SECTION–A

1. (a) Discuss distributed operating system in detail. What are its benefits ?

   (b) What is multi-level feedback queue scheduling algorithm?

   (c) What is process control block ?

2. (a) Discuss real time operating system.

   (b) Discuss round robin scheduling algorithm.

   (c) Define the difference between preemptive and non-preemptive scheduling.

SECTION–B

3. (a) Discuss Optimal page replacement algorithm. What are its benefits over FIFO?

   (b) What is segmentation? Discuss in detail.

(c) What are necessary conditions for occurrence of a deadlock in a system?

4.   (a) Discuss Banker's algorithm to avoid deadlock in a system.

(b) What is swapping memory management technique?

SECTION–C

5.   (a) What are the minimum system requirements for installing Linux?

(b) What are the wild card characters? Explain with the help of suitable examples.

(c) What are the different directory permissions in Linux? How will you change the directory permissions in Linux?

6.   Explain the following in the context of Linux:

(a) umask

(b) sort command

(c) grep command

(d) cut command

SECTION–D

7.   As a Linux System Administrator how do you perform the following:

(a) Mounting and Unmounting a file system

(b) Backup and Restore

(c) As a Linux administrator how will you manage user's account ?

8.   (a) How will you move and copy text in vi editor ?

(b) How will you search and replace text in vi editor ?

(c) Differentiate between background and foreground process.

(d) What is the purpose of nice command ?

(Compulsory Question)

9. (a) Which one is better — FCFS or SJF and why?

   (b) What is the purpose of nice command?

   (c) What are positional parameters in Linux?

   (d) What is a root account?

   (e) What is virtual memory?

   (f) What is a short term scheduler?

   (g) What command should be used to copy the directory /usr/ user1 to /opt/pgms?