

Total No. of Questions : 11 ]

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**PSJA-2026****M.Sc. Computer Science (IInd Semester)****Examination, June-2025****OPERATING SYSTEM****Paper - MSC-6.5-DCCT-204***Time : 3 Hours ]**[ Maximum Marks : 80**श्री जैन (पी.सी.) कॉलेज, जीकले*

The question paper contains three Sections.

**Section-A****(Marks : 1 × 10 = 10)**

*Note :-* Answer all *ten* questions. Questions (i) to (v) are multiple-choice questions, while questions (vi) to (x) are fill in the blank questions. Each question carries 1 mark.

**Section-B****(Marks : 5 × 5 = 25)**

*Note :-* Answer all *five* questions. Each question has internal choice (Answer limit 150 words). Each question carries 5 marks.

**Section-C****(Marks : 15 × 3 = 45)**

*Note :-* Answer any *three* questions out of five (Answer limit 400 words). Each question carries 15 marks.

## Section-A

1. (i) The program in execution is called :
  - (a) Thread
  - (b) File
  - (c) Process
  - (d) Kernel
- (ii) The core component of an operating system :
  - (a) Shell
  - (b) Kernel
  - (c) File
  - (d) Process
- (iii) The Linux command to list files in a directory :
  - (a) cd
  - (b) ls
  - (c) mv
  - (d) rm
- (iv) In shell scripting, the symbol for piping output to other command :
  - (a) >
  - (b) <
  - (c) |
  - (d) &
- (v) The linux command to change file permissions :
  - (a) chmod
  - (b) chown
  - (c) chgrp
  - (d) ls

- (vi) The Linux command to change directory is .....
- (vii) The Linux command to display current directory path is .....
- (viii) ..... is the operating system layer that interacts with user.
- (ix) ..... is a situation where processes wait indefinitely for resources.
- (x) The Linux command to copy files or directories .....

### **Section-B**

#### **Unit-I**

2. Explain preemptive scheduling.

*Or*

Write functions of Operating System.

#### **Unit-II**

3. Write a note on Readers-Writers problem.

*Or*

Explain Round Robin Scheduling.

#### **Unit-III**

4. Write a detailed note on Paging.

*Or*

Write a note on segmentation.

#### **Unit-IV**

5. What are different file permissions in Linux ? Discuss.

*Or*

How packages can be installed in Linux ? Explain.

#### **Unit-V**

6. Write a note on expr. in shell script.

*Or*

How shell script can be write, read and executed in Linux ?

### **Section–C**

7. Explain process scheduling in detail.
8. Discuss critical section problem with suitable examples.
9. What is Dead Lock ? Discuss its characteristics, prevention and recovery.
10. Discuss any *ten* Linux commands with example.
11. Explain decision making and looping statements in shell script.