



- Notes :
1. All question are compulsory and carry equal marks.
  2. Draw neat and labelled diagram and use supporting data wherever necessary.
  3. Avoid vague answer and write specific answer related to question.

1. Either
  - a) What is operating system? Explain Need and functions of operating system. **8**
  - b) Explain different types of operating system in detail. **8**

**OR**

  - c) What is simple Batch system? Explain in detail. **8**
  - d) Write a short note on **8**
    - 1) Parallel system
    - 2) Real - Time system.
2. Either
  - a) Explain warm and cold Booting in detail. **8**
  - b) Write different between Internal and External in detail. **8**

**OR**

  - c) What is wild card? Explain the use of wild card. **8**
  - d) What is file management command? Explain different file command. **8**
3. Either
  - a) Explain the structure of Linux operating system. **8**
  - b) Explain file system in Linux operating system. **8**

**OR**

  - c) Explain any four file management command with example. **8**
  - d) Write short note on **8**
    - 1) Text editing
    - 2) Vi editor.
4. Either
  - a) What are filters list out various filters available in Linux. **8**
  - b) What is Pipe command in Linux? Explain in detail. **8**

**OR**

  - c) What are the different states of a process in Linux. **8**
  - d) What is shell scripts? Explain Arithmetic in shell scripts. **8**
5. Solve all the questions.
  - a) Explain on - line and off line processing. **4**
  - b) Explain Batch commands in detail. **4**
  - c) Explain Korn and C - shell in detail. **4**
  - d) Explain shell parameters in detail. **4**

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