



RAN-2111000606030001

B.Sc. (IT) (Non NEP) (Sem. VI) Examination March - 2026 603: Operating System (Old)

Time: 3 Hours]

[Total Marks: 70

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book. (2) All questions are compulsory. (3) Give examples wherever applicable	Seat No.: <table border="1"> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Student's Signature						

Q. 1. Answer in Short. (Any Seven)

(14)

- 1) What is overlays?
- 2) List out File Operations.
- 3) Explain rotational Latency.
- 4) What is LRU?
- 5) What is context switching?
- 6) Define: Aging
- 7) What is difference between long-term and short-term scheduler?
- 8) Differentiate user and kernel variable.
- 9) What is starvation?

Q. 2. Answer the following.

(14)

- 1) Why we required operating system? Explain Multi-tasking and multi-use operating system.
- 2) Explain deadlock with its characteristics.

OR

- 2) Explain Single level directory structure with its advantages and disadvantages.

Q. 3. Write a note on following (Any Two)

(14)

- 1) Explain about Inter process Communication.
- 2) Explain SCAN and C-SACN disk scheduling algorithm with its advantages and disadvantages.
- 3) Explain about Semaphore.

Q. 4. Write the following (Any Two)

(14)

- 1) Explain Linked file allocation method with its advantages and disadvantages.
- 2) Explain the concept of page fault in detail.
- 3) Explain grep utilities with example.

Q. 5. Write a note on following :

(14)

- 1) String related operations using shell script.
- 2) Explain about Optimal Page replacement algorithm with example.