

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 02

Paper ID [A0219]

(Please fill this Paper ID in OMR Sheet)

BCA (404) (Old) (Sem. - 4th)

OPERATING SYSTEMS

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A

Q1)

(15 × 2 = 30)

- a) What are the disadvantages of batch processing systems?
- b) What is process state?
- c) Describe the function of dispatcher.
- d) What is the difference between hard real time systems and soft real time systems?
- e) What is the need of operating system?
- f) What is the difference between turnaround time and response time?
- g) Differentiate logical and physical address space.
- h) Describe different steps in case of page fault.
- i) What type of fragmentation is there in case of paging and why?
- j) What are the disadvantages of FCFS scheduling?
- k) Describe two examples of deadlock.
- l) What is the difference between authentication and authorization?
- m) Differentiate resource allocation graph and wait for graph.
- n) What is semaphore?
- o) What is deadlock avoidance?

Section - B**(9 × 5 = 45)**

- Q2)** What is operating system? Explain its different services.
- Q3)** Explain different functions performed by operating system in multiprogramming.
- Q4)** What is process control block? Explain with diagram all its contents.
- Q5)** Explain inter process communication with example of producer consumer problem.
- Q6)** Explain scheduling criteria.
- Q7)** Explain the difference between multilevel queue scheduling and multilevel feedback queue scheduling.
- Q8)** Describe the paging memory management technique with address translation and relocation.
- Q9)** Explain different allocation methods in files.
- Q10)** Explain four conditions which are necessary to occur a deadlock.
- Q11)** What is Banker's algorithm? Make safe sequence by taking any example.
- Q12)** Explain different security threats.
- Q13)** Explain public key encryption with advantages and disadvantages.

