

2017

TIME: 3 HOURS

FULL MARKS: 70

Group – A

(Compulsory)

1. Choose the correct answer from the given alternatives: 1 x 15 = 15
- a. Which of the following is not a type of processing?
    - i. Serial
    - ii. Batch
    - iii. Network
    - iv. Multiprogramming
  - b. Unix operating system is based on:
    - i. Language structure
    - ii. Virtual machine
    - iii. Kernel approach
    - iv. Time sharing
  - c. Kernel is :
    - i. A part of operating system
    - ii. An operating system
    - iii. A Hardware
    - iv. A Register
  - d. Semaphore are used to solve:
    - i. Dead Lock
    - ii. Mutual exclusion
    - iii. Inter process communication
    - iv. Messaging
  - e. Which of the following Unix command is used for pattern matching:
    - i. qwk
    - ii. pattern
    - iii. grep
    - iv. join

- f. Which of the following is not a page Replacement Algorithm?
  - i. LIFO
  - ii. FIFO
  - iii. LRU
  - iv. Optimal
- g. Unix operating system is based on:
  - i. Language structure
  - ii. Kernel approach
  - iii. Virtual machine
  - iv. Time sharing
- h. Virtual machine are:
  - i. Lack of machine
  - ii. Lack of machine
  - iii. Physical machine
  - iv. None of these
- i. Paging is a
  - i. Virtual memory
  - ii. Memory management
  - iii. Allocation of memory
  - iv. Deadlock Prevention Scheme
- j. TLB is the acronym is:
  - i. Translation Looking Buffer
  - ii. Translation Look aside Buffer
  - iii. Translation Left Buffer
  - iv. Translation Look Block
- k. Which of the following UNIX command is used to create empty files?
  - i. Cat
  - ii. Vi
  - iii. Pico
  - iv. Touch
- l. Which of the following is not the feature of UNIX operating system?
  - i. Multiuser
  - ii. Multitasking
  - iii. Single testing
  - iv. Security
- m. Which of the following is the feature of distributed operating system?
  - i. Real Time

- ii. Single Tasking
  - iii. Transparency
  - iv. All of these
- n. Round Robin Scheduling algorithm falls under the category of:
- i. Preemptive Scheduling
  - ii. Non-Preemptive Scheduling
  - iii. Sometime preemptive sometimes non-preemptive
  - iv. None of these
- o. The first version of UNIX was written by:
- i. Dennis Ritchie
  - ii. Andrews
  - iii. Ken Thompson
  - iv. None of these

#### **Group – B**

Answer any **five** questions of the following:

4 x 5 =20

2. Explain the functions of operating system.
3. What is the difference between program and process?
4. Explain “Threads” approach improves performance of operating system.
5. How does the operating system provide external security?
6. Explain the features of the following operating systems:
  - a. MS-DOS
  - b. Windows
  - c. Unix
  - d. Linux
7. Explain the term process synchronization.
8. How does segmentation support a programmer’s viewpoint?
9. What type of information is stored in PCB?

#### **Group – C**

Answer any **five** questions of the following:

7 x 5 = 35

10. What is a scheduler? Explain the primary objective of scheduling, also many types of schedulers consists in a complex operating system. Explain.

11. How can you prevent a system from deadlock? Explain.
12. Mention the advantages of multiprocessors and explain the different classification of parallel computer architecture.
13. Discuss the common failures in distributed system.
14. Explain the principles of Operation and Hardware Support in paging memory management scheme.
15. With the help of diagram, explain the address mapping scheme in segmentation.
16. What is cryptography? Define in detail.
17. Explain Multiuser and Multitasking Operating System.

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