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Total Pages : 8

BCA-203

B.C.A. II Year Examination, 2016

Paper-III

(Fundamentals of Operating System)

Time : Three Hours
Maximum Marks : 100

PART - A (खण्ड-अ) [Marks : 20]

Answer all questions (50 words each).

All questions carry equal marks.

सभी प्रश्न अनिवार्य हैं। प्रत्येक प्रश्न का उत्तर पचास शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART - B (खण्ड-ब) [Marks : 50]

Answer *five* questions (250 words each).

Selecting *one* from each unit. All questions carry equal marks.

प्रत्येक इकाई से एक-एक प्रश्न चुनते हुए, कुल पाँच प्रश्न को जिए।

प्रत्येक प्रश्न का उत्तर 250 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

PART - C (खण्ड-स) [Marks : 30]

Answer any *two* questions (300 words each).

All questions carry equal marks.

कोई दो प्रश्न को जिए। प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो।

सभी प्रश्नों के अंक समान हैं।

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P.T.O.

PART-A

UNIT-I

1. Explain multiprocessor system.
2. What are system calls?

UNIT-II

3. Definition of process?
4. What do you mean by CPU scheduling?

UNIT-III

5. Write the usages of semaphores.

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6. What is the deadlock situation?

UNIT-IV

7. What is paging?

8. Write the two key techniques of virtual memory segmentation.

UNIT-V

9. What is file system in Linux operating system?

10. Explain process management in Linux Operating system.

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P.T.O.

PART-B

UNIT - I

12. Describe distributed and clustered systems. What are the advantages of multiprocessor system ?

12. Write down different system calls for performing different kinds of tasks.

UNIT - II

13. What do you understand by operating processes ? What are the issues in scheduling such processes ?

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14. What is the requirement of CPU scheduling ? Describe round robin scheduling with example.

UNIT - III

15. Explain essential condition to occur deadlock. How do you detect deadlock ?

16. Describe the process synchronization and its classical problems.

UNIT - IV

17. Describe continuous memory allocation technique. Compare it with any one other possible technique.

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R.T.O.

18. What is thrashing ? Why it occur ? Once it occurs, what can the operating system do to eliminate it ?

UNIT - V

19. What is Linux kernel ? Explain the three main components of a Linux system.

20. Write short notes on :

(a) Input and output in Linux

(b) Security mechanism in Linux

PART-C

UNIT - I

21. What are the goals of an operating system ? Describe about various services provided by an operating system ?

UNIT - II

22. Describe the cooperating process and inter process communication.

UNIT - III

23. What are semaphores ? How they help us in handling process synchronization problems ? Write and describe algorithm for deadlock avoidance.

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can the operating system do to eliminate it ?

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PART-C

UNIT - I

21. What are the goals of an operating system ? Describe about various services provided by an operating system ?

UNIT - II

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UNIT - III

23. What are semaphores ? How they help us in handling process synchronization problems ? Write and describe algorithm for deadlock avoidance.

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P.T.O.

UNIT - IV

24. Describe the steps to perform page replacement. Explain

LRU page replacement algorithm and demand paging.

UNIT - V

25. Describe about various modules of a kernel. Discuss the network structure of Linux operating system.