BCA-203

B.C.A. (Second Year) EXAMINATION, 2018

Paper–III

(Fundamentals of Operating System)

Time allowed : 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 50 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 question from each Unit.
All questions carry equal marks.

प्रत्येक इकाई से एक प्रश्न चुनते हुए कुल पाँच प्रश्न कीजिए । 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 कीजिए । प्रत्येक प्रश्न का उत्तर 300 शब्दों से अधिक न हो । सभी प्रश्नों के अंक समान हैं ।

P.T.O.

Part A

1. (a) Define multiprocessor.

   (b) Define handheld system.

   (c) Define interprocess communication.

   (d) What is scheduling criteria ?

   (e) Define semaphores.

   (f) Define deadlock characterization.

   (g) What is swapping ?

   (h) What is thrashing ?

   (i) What is shell ?

   (j) Define kernel.

Part B

Unit I

2. Write short notes on :

   (a) Clustered system

   (b) Real time system.

3. What is operating system ? Explain its services.

Unit II

4. What is Process ? Explain process scheduling.

5. Explain algorithm evaluation with suitable example.

Unit III

6. What is process synchronization ? Explain its critical section problem.

7. What is deadlock ? What are the recovery from deadlocks ?

Unit IV

8. What is memory management ? Explain its segmentation with paging.

9. What is virtual memory ? Explain its allocation of frames.

Unit V

10. Explain the file system of Linux.

11. What are the interprocess communications in Linux.

Part C

12. Write short notes on :

    (a) System components

    (b) System programs.

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13. What is CPU scheduling ? Explain through SJF algorithm.

14. Explain Deadlock prevention, avoidance and detection.

15. Write short notes on :

    (a) Contiguous memory allocation

    (b) Page replacement

16. Explain the security system of Linux.