

E 3145

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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2012

Second Semester

**Vocational Course (Computer Science)—INTRODUCTION TO OPERATING SYSTEM
AND OS AS RESOURCE MANAGER**

(For Model II B.Sc. Mathematics)

Time : Three Hours

Maximum Weight : 25

Part A

Answer all questions in this part.

Objective type, Weightage 1 each for a bunch of four.

I. 1 Which generation computer first supported multiprogramming concept ?

- (a) First.
- (b) Second.
- (c) Third.
- (d) Fourth.

2 OS is a/an :

- (a) Application software.
- (b) System software.
- (c) Business software.
- (d) Editor.

3 Which one of the following is not a multi-user operating system ?

- (a) WINDOWS.
- (b) DOS.
- (c) UNIX.
- (d) Linux.

4 SPOOL is :

- (a) Sequential Peripheral Operation On Line.
- (b) Sequential Peripheral Operation Off line.
- (c) Simultaneous Peripheral Operations On Line.
- (d) Simultaneous Peripheral Operation Off Line.

II. 5 A program under execution is known as :

- (a) Data.
- (b) Process.
- (c) Context switching.
- (d) Online processing.

6 A process currently holding the CPU is said to be in :

- (a) Ready state.
- (b) Running state.
- (c) Blocked state.
- (d) Suspended state.

Turn over

7 A process waiting for an event to happen is said to be in :

- (a) Ready state. (b) Running state.
- (c) Blocked state. (d) Busy state.

8 An event that alters the sequence in which a processor executes instruction is known as :

- (a) Interrupt. (b) Polling.
- (c) Blocking. (d) None of the above.

III. 9 Which of the following is used to achieve IPC over network ?

- (a) Semaphore. (b) Monitor.
- (c) Message Passing. (d) Interrupt.

10 Which one of the following is not a necessary condition for a deadlock ?

- (a) Mutual exclusion. (b) Wait for condition.
- (c) Pre-emption condition. (d) Circular wait.

11 Fixed partition memory management largely face the problem of :

- (a) Segmentation. (b) Fragmentation.
- (c) Partition. (d) Overlay.

12 Collection of free spaces through compaction is called :

- (a) Garbage collection. (b) List collection.
- (c) Node collection. (d) Sector collection.

IV. 13 The working directory is also known as :

- (a) Root directory. (b) Current directory.
- (c) Meta data. (d) Dictionary.

14 MBR stands for :

- (a) Memory Boot Record. (b) Member Boot Record.
- (c) Master Boot Record. (d) Multiprogramming Boot Record.

15 The extra items such as data and time last file modified is called :

- (a) Directory. (b) Attribute.
- (c) Path name. (d) I-node.

16 In which year Windows 2000 OS was released ?

- (a) 1999. (b) 2000.
- (c) 2001. (d) 2002.

(4 × 1 = 4)

Part B

*Answer any five.
Short Answer, Weightage 1 each.*

- 17 Differentiate between multitasking and multiprogramming.
- 18 Differentiate between network OS and distributed OS.
- 19 What is meant by context switching ?
- 20 What are threads ?
- 21 What is the difference between pre-emptable and non-pre-emptable resource ?
- 22 What is meant by memory hierarchy ?
- 23 What is an I-node ?
- 24 List any four differences between Windows NT and Windows 2000.

(5 × 1 = 5)

Part C

*Answer any four.
Short Essay type, weightage 2 each.*

- 25 Write short notes on history of Operating system.
- 26 What is PCB ? Explain.
- 27 Write short notes on Semaphore.
- 28 Explain how deadlock could be avoided.
- 29 Explain memory compaction with necessary diagram.
- 30 What are the most common system calls related to files ?

(4 × 2 = 8)

Part D

*Answer any two.
Essay type, Weightage 4 each.*

- 31 Explain in detail about various scheduling algorithm.
- 32 Describe the structure of Windows 2000 with a neat diagram.
- 33 Explain various page replacement algorithms.

(2 × 4 = 8)

Turn over