

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2014**First Semester****Vocational Course—OPERATING SYSTEM AND COMPUTER NETWORKS**

(For the Vocational Subject : Computer Applications of B.Sc. Physics — Model II)

[2013 Admission onwards]

Time : Three Hours

Maximum : 60 Marks

Part A (Very Short Answer Questions)*Answer all questions briefly.**Each question carries 1 mark.*

1. Mention the three major areas in which the operating system divides its services.
2. Name different memory management schemes.
3. What are the two primary objectives of having an operating system in a computer system ?
4. What are the three basic concepts used for realisation of virtual memory ?
5. What are provided by the Kernel in UNIX ?
6. Define the term word length of a memory.
7. What is a peer-to-peer network ?
8. What is URL ? Explain.

(8 × 1 = 8)

Part B (Brief Answer Questions)*Answer any six questions.**Each question carries 2 marks.*

9. Explain the functions of using micro Kernel based operating systems.
10. Clearly describe the steps involved in "Booting".
11. Explain the important features of MOS-DOS.
12. Explain the round robin scheduling.
13. Explain the dynamic relocation.
14. What is a virtual memory ? How it is effectively used to increase the speed and efficiency ?
15. What are shared memory multiprocessors ?
16. What is an e-mail ? Why it is preferred by many to paper mail, telephone and fax services ?
17. Explain various terms in the e-mail id admin_2@hotmail.ac.in
18. What is hypertext ? How it is useful ?

(6 × 2 = 12)

Turn over

Part C (Descriptive/Short Essays)

*Answer any four questions.
Each question carries 4 marks.*

19. Explain the role of operating system as a resource manager of a computer system.
20. Highlight and explain the features of Linux as an open source OS.
21. Differentiate between fixed number of memory partition and variable number of memory partition.
22. What are modems ? Clearly explain their functions in computer communication system.
23. List the differences between TDM and FDM which method is suitable for computer communication. Explain.
24. What is a network interface card ? Explain its use in a computer network ?

(4 × 4 = 16)

Part D

*Answer any two questions.
Each question carries 12 marks.*

25. Discuss the various scheduling objectives and their meaning. Show how the different objectives can at times be contradictory. How to overcome the same ?
26. Explain virtual memory. Describe, with examples, how virtual addresses are mapped to physical addresses ?
27. What is internetworking ? What are the main issues in internetworking ? Explain the differences among the following :—
(a) Bridge ; (b) Router ; (c) Gateway.
28. What is network topology ? Describe three network topologies in common use. Explain their advantages and disadvantages.

(2 × 12 = 24)