

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2015**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 carries 1 mark.*

1. List the functions of an operating system.
2. What is meant by scheduling ?
3. What are the differences between MS-DOS and MS-WINDOWS ?
4. Differentiate between fixed length and variable length memories.
5. What is chatting ? Explain.
6. What is VAN ? Explain.
7. State three concepts used for the realization of virtual memory.
8. What is a newsgroup ? How is it useful ?

(8 × 1 = 8)**Part B (Brief Answer Questions)***Answer any six questions.**Each carries 2 marks.*

9. Explain the Booting Process. What will happen if the booting process is tampered ?
10. What are the differences between MS-WINDOWS and MS-WINDOWS-NT ?
11. Explain the priority based scheduling.
12. Explain the three factors affecting the efficiency of memory management.
13. Describe the protection bits and fence register in single contiguous management.
14. Differentiate between uniprogramming and multiprogramming memory models.
15. Describe the factors that one should consider while selecting a modem.
16. What is a LAN ? What are its objectives ?
17. What is a coaxial cable ? How it is used for data communication ?
18. What are search engines ? Explain with suitable examples.

(6 × 2 = 12)**Turn over**

Part C (Descriptive/Short Essay Questions)

Answer any four questions.

Each carries 4 marks.

19. What are the scheduling strategies commonly adopted by OS ? Explain.
20. Explain the shared memory multiprocessors.
21. What are the different process scheduling levels ? How do they interact with each other ?
22. Describe two basic methods of multiplexing. Explain the uses of both methods in computer communication networks.
23. Explain the layering used in the design of computer communication.
24. What is ISDN ? Differentiate between narrowband and broadband ISDN.

(4 × 4 = 16)

Part C (Essays)

Answer any two questions.

Each carries 12 marks.

25. Draw the logical architecture diagram of a computer system. Explain the role of an operating system in this architecture. How it manages various processes.
26. With neat block diagrams, explain how the performance of the memory and speed and efficiency of the computer can be improved using virtual memory ?
27. What are communication protocols ? Why they are needed in a computer network ? Explain giving an example.
28. Explain the functions of the following in the working and use of internet :
 - (i) Netscape navigator ;
 - (ii) Outlook express ; and
 - (iii) Internet explorer.

(2 × 12 = 24)