

PSSC Computer Studies
1996 Finals – Marking Scheme

1. Which of the following can be considered both an input and output device ?
c. 120Mb disk drive. Other possible answers include: Network Card, Modem, Sound Card
2. You require a printer to print invoices for which the paper will be 2-part. The top copy is for you, the underneath carbon copy is for the customer. Which kind of printer would you purchase?
c. dot matrix. A dot matrix printer is the only one in the list that hits the ink onto the paper, which is also required to force an imprint with the carbon paper onto the 2nd copy underneath the 1st sheet of paper. The other printers cannot print on paper underneath the top paper.
3. Apple Macintosh computers differ fundamentally from IBM-compatible computers because the Apple Macintosh.
b. has its own operating system. Most other computers (>80%) are using Microsoft Windows for their operating system. The Macintosh was more unique when there was a time it was the only major machine that was sold with a GUI (prior to Windows 3.1 and Windows 95 etc.)
4. Which one of the following DOS files must be present for an IBM compatible computer to 'boot' properly?
c. command.com – This is the file that is the major part of the MS-DOS operating system. All other programs in MS-DOS are run/executed by command.com reading them into memory (ram) and starting its instructions.
5. Which of the following is NOT a well known operating system?
d. PCMCIA. This is an acronym for devices (small credit card size) that is often used with notebooks. All the other names are examples of operating systems.
6. Graphical User interfaces have been made popular by Microsoft Windows systems. They operate best with .
b. fast processors and extra memory. Since GUIs require more processing and storage space than non-GUIs the best answer is b.
7. A graphical user interface (GUI) is a technique using a screen presentation which
b. addresses each pixel to draw the screen. This phrase explains that the GUI can draw any item it wants by changing any picture element (pixel) on the screen.
8. Finau tells Sela that common features found in GUI computer programs include: (pull-down menus, pop-up menus, push-buttons, radio-buttons, checkboxes, and archived files) Sela disagrees, saying the odd one out is.
b. archived files. This has nothing to do whether a GUI is being used or not.
9. Sela's teacher asks her to prepare a boot disk for her computer terminal. To do this Sela will need to place a disk in the A: drive of her terminal and type.
c. Format a: /s
10. Finau wants to archive all his WordPerfect files and store them on a floppy disk in the A: drive. All Finau's WordPerfect files have an extension of FIN. The command Finau must type to achieve this is:
d. Copy *.FIN a:
11. The reference A1..E1 is called a
d. range
12. Which formula below would sum the first 3 values in row 2?
c. sum(a2..c2)
13. COBOL is a programming language that is widely used to
b. solve business problems
14. An algorithm is
d. method of solving a problem
15. A type of programming language that converts a line of a program to machine code and then executes it is called.
a. an interpreter
16. The main difference between a PASCAL function and a PASCAL procedure is that
a. functions return a value
17. A student wishes to store the names of all class members in a program variable. In PASCAL, that variable should be of TYPE
d. array
18. The program will produce output of:
d. 5/25
19. If you own some commercial software with a standard license agreement, you are permitted to:
d. only use it yourself on one computer at a time
20. A computer affected with a virus should
d. have all its files and memory checked and cleaned of viruses.

Theory of Computer Systems A

21. Give two reasons why you would NOT recommend a mainframe configuration to Lafi?
- Price. A mainframe is too expensive for what they wish to achieve.
 - Maintenance. A mainframe requires a lot of maintenance work from competent technicians.
 - Overkill. A mainframe will do more than they wish, but is too much at a too high a cost.
22. Lafi decides to purchase a compatible computer with a Pentium chip. Explain what is meant by compatible computer and Pentium chip.

Compatible computer – a computer that can achieve the same tasks, using the same software and hardware as the majority of computers on the market based on the Intel chip design and Microsoft Windows operating system.

Pentium chip – a class of central processing unit with powerful capabilities designed and sold by Intel Corporation.

23. From the following list, which peripherals would you recommend as essential for their business and why?

Printer (essential)
Keyboard (essential)
Monitor (essential)

24. Lafi is uncertain whether to get a laser printer or a dot matrix printer. Which would you advise? Give 2 reasons for your choice.

Note: either selection is correctly, dependent on good reasoning.

25. Lafi is told the computer's operating system is MS-DOS 6.2. Explain the letters "MS-DOS" means. Microsoft Disk Operating System – an operating system developed and sold by Microsoft for microcomputers. MS-DOS does not have the features of other operating systems such as Windows, or Macintosh but takes up little space in RAM and Disk storage.

26. Sina asks what "booting" the computer means. Give a brief explanation of this phrase with reference to DOS.

Booting is the process of the computer starting and finding an operating system to continue starting until it is in a state that it can work. In MS-DOS this means that booting is when the computer is turned on, the hardware performs a hardware check and then looks for MS-DOS files required to start the computer and runs those programs.

27. Sina's job will be to operate and maintain the computer. Give 3 (THREE) options available to her to maintain the hard disk so that its capacity is not exceeded?

(a) copy files to floppies (b) delete old files from the hard disk (c)

28. Sina will also need the ability to communicate quickly with her customers such as receiving orders and sending out shipping information. Give 2 (TWO) possibilities that are available to her.

Theory of Computer Systems B

29. Their teacher describes the computers as "intelligent terminals." What does he mean by this?

The "intelligent terminals" are capable of doing their own work, independent of the central file server. The statement intelligence means that the computers can perform independent tasks from the central file server.

30. Sione tells Mele the computers represent data in memory as binary numbers and that a binary number is called a bit. What does he mean by this?

Binary Number. The binary number system is a good means of representing how electrical equipment works (with two different states of electricity – ON and OFF). Since the binary number system only has two digits (1 and 0) the binary number system is a good way of representing how data can be stored in a computer.

BIT – an acronym for

31. He also explains that binary numbers are grouped together to form bytes. What is a byte?

32. Mele is asked to convert the following hexadecimal number **20FF**, to decimal form. What answer should she get?

This is much easier to perform using a Scientific Calculator – have one available

33. Sione is asked to represent the same hexadecimal number in full binary form. What answers should he get?

34. What is a LAN?

Local Area Network – In a localised (small environment) like a class room or small building, a

LAN is a means of connecting the computers so they can share resources like printers, file storage, internet connections etc.

35. What are two advantages for the school in having all the computers networked ?

36. Mele is keen for the school to be connected to the Internet (i) What hardware would the school need to get to do this ? (ii) Give one advantage for the school to have access to the internet (iii) What are two problems in your country in connecting to the Internet ?

- (i) modem
- (ii) information, pictures, e-mail, web research,

- (iii) high cost of connection, fears about what is on the internet, not enough computers so everyone can use the internet, when things break down it is expensive to fix things.

37. Give 3 precautions the school should take to ensure computer viruses are not introduced into the network system.

- (i) all programs must be installed by the system administrator, after scanning for viruses
- (ii) anti-virus scanner installed on all machines
- (iii) regularly update anti-virus scanner at least once every 2nd month
- (iv) students taught the problems with viruses and how to scan their own disks and how to use anti-virus programs to clean viruses.

Computers and Society

38. The bank officer is working at a computer terminal. What is the advantage for the bank in having its tellers work with computer terminals ?

- (i) Speed
- (ii) Accuracy
- (iii) Data Redundancy

39. List TWO advantages this type of access to information has for the customer. Give ONE disadvantage.

- (i) Speed
- (ii) Accuracy
- (iii) Data Redundancy
- (iv) Disadvantage: Privacy
- (v) Disadvantage: Personal Attention

40. List three skills you think the bank officer will need to operate the computer efficiently?

- (i) Typing
- (ii) Communications with Customers. Knowledge of what the customer is asking for, and how this (if at all) is serviced by the bank.
- (iii) Knowledge of the application to be used.

41. Where would the officer acquire the training for such work?

On the job training at the Bank, or a similar institution (like another bank.)

42. One of the computers is made by a company which is regarded as the inventor of the concept of desktop publishing. (i) What is the name of the company? (ii) What is the name of their DTP computer ?

- (i) Apple Computers
- (ii) Apple Macintosh

43. List FOUR skills and experiences these people would need to be skilled at desk top publishing

- (i) Writing
- (ii) Proof Reading
- (iii) Page Layout
- (iv) Graphics, Drawing, Editing

44. Compare the skills required by the jobs shown in Photo A and Photo B, and decide which job would require the greater amount of training. List at least 3 skills for comparison.

WP, SS, etc.

53. Write the formula that has been entered in cell E4
=IF(D4=\$E\$3,C\$,"")

54. What is the formula once copied to E5

Ignore Q 60. – Q 64 (This is not in the prescription and should not have been in the test.)

Ignore Q. 65 onwards (Again, these questions are very far from the prescription and should not have been in the test.)