



**FIJI NATIONAL UNIVERSITY**

**COLLEGE OF ENGINEERING, SCIENCE & TECHNOLOGY (CEST)**

**SCHOOL OF ELECTRICAL & ELECTRONICS ENGINEERING**

**CERTIFICATE IV IN ELECTRONICS ENGINEERING-STAGE 4**

**EEE419- COMPUTER SYSTEMS 1  
FINAL EXAMINATION – PENSTER 4, 2012**

**DAY/DATE: MONDAY                      TIME:                      ROOM: as per timetable.**

**INSTRUCTIONS TO STUDENTS**

1. *You are allowed 10 minutes Extra reading time during which you are NOT to write.*
2. *Begin each answer on a fresh page and use both sides of each sheet.*
3. *Write your candidate-number at the top of each attached sheet*
4. *Insert all written foolscaps, graph paper, drawing paper, etc. in their correct sequence and secure with string*
5. *For all sheets of paper on which rough/draft work has been done, cross each one through and ATTACH these to your answer script.*
6. *Write clearly the number(s) of the question(s) attempted on the top of each sheet.*
7. **ATTEMPT ALL QUESTIONS.**
8. *Show all workings where necessary.*
9. *Use of Programmable Calculators, especially the ones that does the conversions of number systems is prohibited.*
10. **ALWAYS CHECK TO ENSURE THAT YOUR ANSWER SCRIPT IS IN ORDER BEFORE YOU SUBMIT AND LEAVE THE ROOM!**

**SECTION-A** (26 Marks)**MATCHING**

Match Column A to Column B as best as you can.

	<b>COLUMN A</b>		<b>COLUMN B</b>
1.	A car computer	A	The degree of correctness of computer is very high and every calculation is performed with the same accuracy
2.	A personal computer	B	Computer can perform millions (1,000,000) of instructions and even more per second.
3.	Computer Input	C	A computer is free from tiredness, lack of concentration, fatigue, etc. It can work for hours without creating any error
4.	Computer Processes	D	Consists of the parts that are tangible, visible and take up space.
5.	Computer Storage	E	Are basically additional pieces of equipment that you use with a computer
6.	Computer Output	F	Manipulates large amount of information at high speeds.
7.	Digital computer	G	Computer checks if all its hardware is working.
8.	Analog computer	H	It means the capacity to perform completely different type of work
9.	Power On Self-Test	I	Is a device that accepts data as a continuously varying quantity.
10.	Computer Hardware	J	It is the end-product of processing.
11.	Computer Software	K	Can be described as special-purpose, because it only accepts specific input and performs limited functions.
12.	Peripheral devices	L	Is general-purpose, meaning it accepts a wide range of input and can perform a variety of tasks.
13.	Speed	M	A sequence of instructions which a computer follows in order to process data.
14.	Accuracy	N	Floppy disks and CD-ROM are examples of such devices
15.	Diligence	O	Is data which can be in the form of words, symbols, numbers, pictures and audio signals.
16.	Versatility	P	Computer has the power of storing any amount of information or data
17.	Power of Remembering	Q	A computer cannot take its own decision as you can.
18.	No IQ	R	Consists of a collection of computer programs which are written in a language that is understood by the computer
19.	No Feeling	S	It does not have feelings or emotion, taste, knowledge and experience
20.	Storage	T	The Computer has an in-built memory where it can store a large amount of data
21.	Supercomputers	U	Are the fastest and most expensive machines
22.	Mainframe computers	V	The actual processing of the data and instruction are performed by this Unit. i.e. addition, subtraction, multiplication, division, logic and comparison
23.	Minicomputers	W	The next component of computer is the Acts like the supervisor and determines the sequence in which computer programs and instructions are executed
24.	Microcomputers	X	Are generally 32-bit microprocessors and are generally used in centralised databases
25.	Arithmetic Logical Unit (ALU)	Y	Are also used as servers in Local Area Networks (LAN).
26.	Control Unit (CU)	Z	Are most widely used and fastest-growing type of computer

**SECTION-B** (12 Marks)**MULTIPLE CHOICES**

For each of the following questions, choose the most appropriate answer and write your answer in your answer script. Example: 1a, 2d, 3c etc.....

1. The startup routine runs, when machine boots up is known as
  - a) POST
  - b) BOOT up
  - c) Operating Routine
  - d) I/O operation
  
2. Operating system is also known as:
  - a) database
  - b) system software
  - c) hardware
  - d) printer
  
3. What is the maximum length allowed for primary name of a computer file under DOS?
  - a) 8
  - b) 12
  - c) 3
  - d) None of the above
  
4. Which of the following could be a valid DOS file specification?
  - a) NOSFILE.POST
  - b) NOSFILE.P.OST
  - c) NOSFILE.DOC
  - d) NOST.FILEDOC
  
5. How many characters form a secondary name for a file?
  - a) 8
  - b) 12
  - c) 3
  - d) None of the above
  
6. What is the name given to something that the computer will
  - a) automatically use unless you tell it otherwise?
  - b) a specification
  - c) a wildcard
  - d) a default
  - e) a rule

7. As per symbolic notation of DOS, which of the following indicates the ROOT directory
  - a) \*
  - b) >
  - c) /
  - d) None of the above
  
8. In wildcard specification '?' is used as replacement for
  - a) one character
  - b) two character
  - c) three character
  - d) none of the above
  
9. With DOS, you may use the '\*' and '?':
  - a) when changing the default settings
  - b) to represent unspecified characters in a filename
  - c) instead of wildcard characters
  - d) in the extension but not in the drive name or the file name
  
10. DOS system file consists of
  - a) IBMBIO.COM, IBMDOS.COM, COMMAND.COM
  - b) COMMAND.COM, IBMBIO.COM, FORMAT.COM
  - c) SYS.COM,IBMBIO.COM,IBMDOS.COM
  - d) None of the above
  
11. The batch file uses the extension
  - a) .BAT
  - b) .DOC
  - c) .PRG
  - d) .DOS
  
12. To display the list of all the file of the disk you would type
  - a) DIR
  - b) COPY
  - c) DIR FILES
  - d) DIR AUTOEXEC.BAT

**SECTION-C** (28 Marks)      TRUE OR FALSE

For each of the following statements, write “True” or “False”

1. There are two kinds of computer memory primary and secondary.
2. The computer takes inputs in the form of 0 and 1.
3. The storage of program and data in the RAM is permanent.
4. PROM is secondary memory.
5. The memories which do not lose their content on failure of power supply are known as non-volatile memories.
6. Secondary memory is called Auxiliary memory.
7. The magnetic tapes and magnetic disk are primary memories.
8. A CD-ROM is read only memory.
9. Mouse is an output device.
10. Printer is an important output device.
11. The set of instructions given to the computer is called programming.
12. Application Software is a set of programs to carry out operations for a specific application.
13. UNIX is a multi-user operating system.
14. DOS and Windows are also multi-user operating systems.
15. High level languages are problem-oriented language.
16. Object program generated by compiler is machine independent.
17. The disadvantage of interpreter Translator Programs is that it is time consuming.
18. Command.Com is hidden file.
19. Primary name of a file can be of 10 characters.
20. The command MKDIR and MD performs the same task.
21. Under DOS .EXE is not an executable file.
22. DIR command is used to see the content of a specific file.
23. Assembly language is the second generation language.
24. An integer value of 498678 cannot be stored in a variable of type *int*.
25. A C++ identifier may begin with a number.

26. The C++ input stream object `cin >>` is used to read values input from the keyboard.
27. The C++ identifier is case sensitive.
28. All variables must be declared before using

**SECTION-D** (20 Marks)

**SHORT ANSWER QUESTIONS**

1. What are the five basic operations performed by the computer? (5 Marks)
2. Distinguish between bit and byte. (2 Marks)
3. Define volatile and non-volatile memory. (2 Marks)
4. Distinguish between impact and non-impact printers. (2Marks)
5. Define soft copy and hard copy terminals. (2 Marks)
6. Compare computer Primary memory to Secondary memory. (2 Marks)
7. What is a Computer Program. (1 Mark)
8. What is Computer Programming. (1 Mark)
9. What is Computer Software. (1 Mark)
10. What are the two broad categories of Computer software. (2 Marks)

**SECTION-E** (16 Marks)

**C++ PROGRAMMING**

1. Write a C++ program that calculates the circumference of a circle whose radius = 5.0 units and  $\pi = 3.14159$  (6Marks)
2. Write a C++ Program that asks the user to enter the values for the length and the width of a rectangle. The program should then compute the perimeter and area of the rectangle and print these to the screen. (10Marks)

\*\*\*\*\*THE END\*\*\*\*\*