FNU 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, 2013

DAY: **DATE:**   **TIME:**   **VENUE:**

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!

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

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

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

1. This startup routine tests all the hardwares and memories.
   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 secondary 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 Primary 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 automatically use unless you tell it otherwise?
   a) a specification
   b) a wildcard
   c) a default
   d) 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 Document 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   TRUE OR FALSE   (28 Marks)

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 power supply failure 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 'WORM' CD-ROM is a Virus.

9. A scanner is an input device.

10. Printer is an important output device.

11. The set of instructions given to the computer is called programming.

12. Application Software must be present in order to run the system software.

13. UNIX is a multi-user operating system.

14. DOS and Windows are single-user operating systems.

15. High level languages are machine-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. Low level language and High level language are two major types of programming languages.

19. Machine language is the only language that is indirectly understood by the computer. .

20. Assembly language is second generation language.

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-E   C++ PROGRAMMING   (16 Marks)

1. Write a C++ program that calculates the circumference of a circle
   whose radius = 5.0 units and   π = 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******************************

SECTION-D SHORT ANSWER QUESTIONS (20 Marks)

1. Differentiate between software and hardware. (2 Marks)

2. What is computer Language? (1 Marks)

3. Name the three different categories of computer languages. (3 Marks)

4. What is machine language? Why is it required? . (2Marks)

5. What are advantages and disadvantages of machine language? (2 Marks)

6. What is assembly language? What are its advantages over machine languages?
   (2 Marks)

7. What is the difference between source program and object program? (2 Marks)

8. What is higher level languages? Why are higher level languages easier to use.
   (2 Marks)

9. What is compiler? Why is it required?. (2 Marks)

10. What is an interpreter? How does it differ from the compiler? (2 Marks)