FNU FIJI NATIONAL UNIVERSITY

College of Engineering, Science and Technology
School of Electrical and Electronics Engineering

Trade Diploma in Electronics Engineering
(Telecommunication / Networking)
TDEEN

EEE562 – Engineering Software

Trimester 3, 2015

Date: December, 2015 Time: As per Time Table

Duration – 3 h 10 min (Including 10 min reading time)
Total Marks – 100

Instructions to candidates:

1) You are allowed 10 minutes extra reading time during which you are NOT allowed to write.
2) Begin each answer on a fresh page and use both sides of the sheet.
3) Write your candidate number at the top of each attached sheet.
4) Insert all written full-scapes, graph paper, drawing paper or printouts etc. in their correct sequence and secure with string.
5) For all sheets of paper on which rough/ draft work has been done, cross it through and you must attach all of them to your answer scripts.
6) Write clearly the number(s) of the questions(s) attempted on the top of each sheet.
7) Where computer programs are the answers, then take print out of both the program listing and the copy of the output screen and attach all of the pages in correct sequence to the main answer book.
8) Write your ID Number and the Question Number as a "Comment Field" in your program.
9) Use of mobile phones or other programmable electronic gadget/storage device is NOT ALLOWED

- *Total Number of pages – 02 (Two) including this cover page*

Main Question Paper

1) Explain the Hardware Architecture of a Personal Computer with block diagram and brief description of each of the functional block. **[10 Marks]**

2) Explain the Software Architecture of a computer system with suitable layered diagram and brief description of each of the block. **[10 Marks]**

3) Write a simple C++ program that accepts your ID Number and writes a message on the screen as "Hello student ID - , Good luck for your Trimester-3, 2015 examination". **[10 Marks]**

4) Write a program in C++ to calculate the current in a resistor when the battery voltage is 3 Volts and the user has to enter the resistor value. The program should accept the resistor value in Ohms from the user and then display the current through the resistor. **[10 Marks]**

5) You are provided with values of two components – Inductor in H and capacitor in F. Write a program in C++ to accept the values of inductor and capacitor and then calculate the resonance frequency of a parallel tuned LC circuit. **[10 Marks]**

6) Write a program to calculate the wavelength in meters of an electromagnetic wave when the velocity of light is given as 3×10^8 m/s and the user has to enter the frequency in MHz. **[10 Marks]**

7) Write a program that accepts values of two resistors in Ω from the user and calculates the series and parallel resistance of the two values. Display the results as "RS = ..." and "RP = ...". **[10 Marks]**

8) A farm land has a side of 100 meters and a length of 230 meters. Write a C++ Program to calculate –
   a. The area of the land in square meters **[5 Marks]**
   b. If the land price is $4.50 per square meter, then show that your program calculates and displays the value of the farm land. **[5 Marks]**

9) Write a small program that writes some text into a text file named "Example.txt". This text file should be later opened in any text editor such as Notepad to view the contents of the file. **[10 Marks]**

10) Write a program to calculate and display the sine, cosine and tangent functions for angles ranging from 0 Degrees to 360 degrees. Also calculate the value of tangent function by using the sine and cosine values and compare with the original tangent function. **[10 Marks]**

******** End of Question Paper!***

YEAR: -	2015
PERIOD: -	Trimester3
VENUE: -	Samabula
UNIT CODE: -	EEE562
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Number Enrolled: - **10**

05.11.2015
Prasanna Mitchal