University of Sargodha

BS 1st Term Examination 2015

Subject: CS   Paper: Programming Fundamentals (CMP-2122)

Time Allowed: 2:30 Hours   Maximum Marks: 60

Objective Part   Compulsory

Note: Attempt all questions each question carry equal marks?   (2*12=24)

i. What is **preprocessor** directive?
ii. Write three rules of **declaring an identifier** in C program.
iii. Differentiate **while** and **do-while** loop?
iv. What are **primitive data** types? Shortly discuss one of them.
v. What is **control structure**?
vi. What are difference b/w **pre-increment&post-increment** operators?
vii. What is **logical error** and why is it the most difficult error to find?
viii. Difference b/w **built-in** and **userdefined** function.
ix. What is the purpose of **getch()** ?
x. Differentiate 1-D array and 2-D array.
xi. What is a **pointer**?
xii. In file-processing why a programmer use **fgets** and **fputs** functions in C program.

Subjective: (4*9=36)

Note: Attempt any four questions.

Q 2. Write a program that find the **sum of the following series** using **nested loop**.

$$\frac{1}{2!} + \frac{2}{3!} + \frac{3}{4!} + \frac{4}{5!} + \frac{5}{6!}$$

Q 3. Write a program that calculates **four-function(+, -, *, /)** calculator. It asks the user to input two **numbers** and an **operator** from the prompt.

Q 4. Write a **user-defined** function to **read** the content from a text file **OUT.txt**, **count** and display the number of **alphabets** and **digits** present in it.

Q 5. Write a program that accepts **an integer** value from the user and passes that to a function by **reference**. If the number is **positive**, then function finds the **square** of the value. The updated value is display by **main** function.

Q 6. Write a program that accepts 10 elements of an **integer array** from the user. The **array** and its **SIZE** passes to **user define function** that finds the **sum** and **average** of integer array.

Q 7. Write a program that declares a structure **PERSON** to store **income** (float), **tax_rate**(int) and **tax_of_a_person**(float). The program defines an **array of structure** to store the record of five persons. It inputs **incomes** and **tax rate** of five Persons and then displays the **tax payable** (by each person).

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