University of Sargodha

M. Sc. 1st Term Exam 2016.

Subject: I. T **Paper: Programming Fundamentals (CMP: 2122)**

Time Allowed: 2:30 Hour **Maximum Marks: 60**

Note: **Objective part is compulsory. Attempt any four questions from subjective part.**

Objective Part (Compulsory)

Q 1. Write short answers of the following in 2-3 lines (2*12=24)

i. What is **preprocessor** directive?
ii. Write two rules of declaring a valid **variable in C**?
iii. Differentiate **control controlled** and **sentinel-controlled** repetition?
iv. What is meant by **data type**?
v. What is the **high level** language? Give one example.
vi. What are difference b/w **pre-increment&post-increment** operators?
vii. Describethe importance of **default** statement in **switch** statement.
viii. What are **syntax errors**? Why does it occur?
ix. Define a **structure?**
x. Define **array.**
xi. What is a **pointer**?
xii. In file-processing why a programmer use **fgets** and **fputs** functions in c program.

Subjective Part (4*9=36)

Q 2. Write a program to calculate the monthly electricity bill, input the **unit** from the user. Calculate the bill and display it. Calculate the monthly electricity bill as per the following rule

- If the unit consumed are **equal or less** than 300, then the cost is Rs.3/-per unit.
- If units consumed are **more than** 300, then the cost is Rs.3.5/- per unit and a surcharge of **5% of bill is added**

Q 3. Write a program that displays the following output using **nested** loop.

```
1 2 3 4 5
2 4 6 8
3 6 9
4 8
5
```

Q 4. Write a program that initializes an **array** of ten integers. It input an **integer (key)** from the user and search the value (key) in the array using **sequential** search.

Q 5. Write a program that takean **integer** number from the user and passes the number to a user define function. The function displays the **table** of that number.

Q 6. Write a **four function** calculator to perform **addition, subtraction, multiplication** and **division** that takes **two operands** and **an operator** from user. Perform this logic by using **switch statement**.

Q 7. Write a user-defined function in C to write number 1 to 100 in a text file.