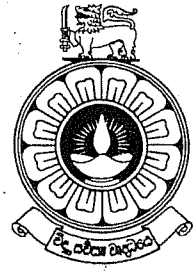


THE OPEN UNIVERSITY OF SRI LANKA  
B.Sc. DEGREE PROGRAMME: LEVEL 03  
DEPARTMENT OF MATHEMATICS & COMPUTER SCIENCE  
NO BOOK TEST I: 2016/2017  
CPU1141 : INTRODUCTION TO COMPUTER PROGRAMMING  
DURATION: ONE HOUR ONLY (1 HOUR)



Date: 06<sup>th</sup> May 2017

Time: 1.00 p.m. – 2.00 p.m.

**Instructions**

- This paper contains **TWO** questions which carry a total of 100 marks, 50 marks each.
- Answer all questions.
- Consider that all questions are related to **C Programming Language**.

**Question 1.**

- a) Identify the **syntax errors** in the following program and rewrite the correct code.

```
#include <studio.h>
int main (int)
{
    Int qty = 15;
    double Unit Price = 20.50;
    double totPrice = qty * Unit Price;

    char isDis = "Y"
    double do = 0.1;

    int discount = 0;

    if (isDis = 'Y' & totPrice >> 1000 );

        discount == totPrice * do;
        print("%.2f" discount);
    }
    else
        printf(No Discount);
}
```

b) Write down the output value of a, b, c and d, if p=5 and q=6.

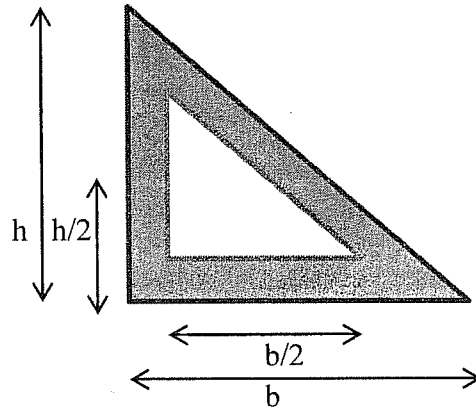
i.  $a = 2 * p + q / 2$

ii.  $b = (p / 3 + q) / 2$

iii.  $c = (p - q) \% q + p / 2$

iv.  $d = p + q + 2$

c) Write a complete C program to print the area of the shaded section in the following diagram, when the user gives the value of base (b) and height (h) of the large right triangle. Area =  $\frac{1}{2}(b*h)$



### Question 2.

a) The following identifiers are written in C and some of them are syntactically incorrect. Find these identifiers, precisely write down each error and write the corrected variable.

i. #Address

ii. record of student

iii. noOf Students

iv. for

v. identity-number

b) Write the outputs of the following code segments.

(a) `printf("\n\Welcome\n\to\the University");`

(b) `double c = 90;  
double f = c / 9 * 5 + 32;  
printf("f is: %f ", f);`

(c) `int x = 10;  
x %= 3;  
printf("x is : %d ", x);`

```
(d) char ch = 'c';
```

```
switch(ch){
```

```
case 'a' : printf("Abort");
```

```
case 'c' : printf("Continue");
```

```
case 'x' : printf("Exit");
```

```
default : printf("Invalid Choice");
```

```
}
```

```
(f) int x = 10, y = 15, z = 0;
```

```
z = (x > y) ? y : x;
```

```
printf("%d", z);
```

```
(h) int t = 0, a = 0;
```

```
while (a < 5)
```

```
{
```

```
++a;
```

```
t += a++;
```

```
}
```

```
printf("t = %d ", t);
```

```
(e) int i, j;
```

```
for (i = 0; i < 3; i++)
```

```
{
```

```
printf("i = %d", i);
```

```
for (j = 1; j < 4; j++)
```

```
{
```

```
if (i == 1)
```

```
break;
```

```
printf("\t j = %d", j);
```

```
}
```

```
printf("\n");
```

```
}
```

```
(g) int x = 10, y = 15, z = 0;
```

```
if (x > y){
```

```
if (x%2 != 0)
```

```
z = x;
```

```
}
```

```
else
```

```
z = y;
```

```
printf("%d", z);
```

```
(i) int t = 0, a = 0;
```

```
do
```

```
{
```

```
t += a++;
```

```
a++;
```

```
}while (a < 5);
```

```
printf("t = %d ", t);
```

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