

Shah Jalal University of Science & Technology, Sylhet
Department of Computer Science & Engineering
2nd year 1st semester Final Examination 2014
Course ID: CSE-203Y (BNB) (Introduction to Computer Language)
Full Marks: 50 Time: 2 Hours
(Answer any 4 questions taking 2 questions from each group)
Part: A

- Q1. a) Which of them are valid identifier and which are not and why:
As_12, FOR, break, cost\$, auto. 2.5
- b) Draw the electrical circuit for NAND gate and draw its truth table. 4
- c) What do the getchar() and putchar() functions do? Give proper example for them. 3+3

Q2. a) Assume a=5, b=10, c=.001, d='a'. Find out the value of followings:

- i) $x = a > b < c ? a + 1 : b$ 4
ii) $(a < b) \&\& (c > 1) || (d < 'b')$ 4.5

b) Write a program that will calculate the series of 2 n.

c) Explain and define the output of the C code:

```
#include<stdio.h>
#include<string.h>
main()
{char ch[4];
int i,j;
scanf("%s",ch);
if(strncmp(ch,"YES")==0)
{for(i=1,j=9;i<=9;i++,j--)
printf("%d+%d=%d\n",i,j,i+j);}}
```

- Q3. a) If there is a valid statement "X=0XFFFUL" in a program, what is the data type of a variable X? 2

b)

```
#include<stdio.h>
main()
{int i,r,k;
scanf("%d",&r);
for(i=0;i<r;i++)
{ for(k=1;k<=2*i+1;k++) printf("*");
printf("\n");}}
```

if r=4, draw the output of above C code. 4

c) Prove $x + \overline{xy} = x + y$.

Part: B

- Q4. a) What will be the output of the following programs:

6.5