

S. V. National Institute of Technology, Surat
Mid-Sem Examination Oct-2010
B.Tech-I (Semester-I)
Sub: Fundamental of Computer and Programming

Marks : 30

Duration: 1 Hr

Q1. Answer the following

(4)

1) Do the following code fragments look ok to you? Or does it look wrong?
 if wrong explain

```
int A[4]={10,20,30,40};
int B[4];
B=A;
```

2) Evaluate (to true or false) each of following expression.

a) $12 \leq 2+2*3$ b) $(10-(16/5)+20)\%8+25=28$

3) State whether the following are true or false

- 1) one if can have more than one else clause
- 2) Each case label can have only one statement

4) The unit of speed used for super computer is ✓

Q2. Answer the following

(10)

1) Explain difference between break and continue statement with example

2) Explain different tokens.

3) Explain limitation of flowchart.

4) What is the bitwise operator and explain type conversions with example

5) Difference between SRAM and DRAM

Q3. Answer the following

1) a) Convert $(19B.12)_{16}$ to $()_8$ b) $(111.101)_{16}$ to $()_{10}$. (write a procedure)

2) $(25)_8 + (30)_8 = (?)_8$

3) Perform $(53)_{10} - (76)_{10}$ using 2's complement. (write a procedure)

Q4. Answer the following (Any two)

1) Explain control unit

2) Give the classification of secondary storage and explain optical disk

3) Explain interconnection of computer units

Q5. Write a program to find the addition of Column elements and diagonal elements of one matrix

(3)

0	0	13	11
1	1	14	12
2	2	15	12
3	3	16	13
4	4	17	14
5	4	18	15
6	5	19	16
7	6	20	17
8	7	21	18
9	8	22	19
10	9	23	20
11	10	24	21
12	11	25	22
13	12	26	23
14	13	27	24
15	14	28	25
16	15	29	26
17	16	30	27
18	17	31	28
19	18	32	29
20	19	33	30
21	20	34	31
22	21	35	32
23	22	36	33
24	23	37	34
25	24	38	35
26	25	39	36
27	26	40	37
28	27	41	38
29	28	42	39
30	29	43	40
31	30	44	41
32	31	45	42
33	32	46	43
34	33	47	44
35	34	48	45
36	35	49	46
37	36	50	47
38	37	51	48
39	38	52	49
40	39	53	50
41	40	54	51
42	41	55	52
43	42	56	53
44	43	57	54
45	44	58	55
46	45	59	56
47	46	60	57
48	47	61	58
49	48	62	59
50	49	63	60
51	50	64	61
52	51	65	62
53	52	66	63
54	53	67	64
55	54	68	65
56	55	69	66
57	56	70	67
58	57	71	68
59	58	72	69
60	59	73	70
61	60	74	71
62	61	75	72
63	62	76	73
64	63	77	74
65	64	78	75
66	65	79	76
67	66	80	77
68	67	81	78
69	68	82	79
70	69	83	80
71	70	84	81
72	71	85	82
73	72	86	83
74	73	87	84
75	74	88	85
76	75	89	86
77	76	90	87
78	77	91	88
79	78	92	89
80	79	93	90
81	80	94	91
82	81	95	92
83	82	96	93
84	83	97	94
85	84	98	95
86	85	99	96
87	86	100	97
88	87	101	98
89	88	102	99
90	89	103	100
91	90	104	101
92	91	105	102
93	92	106	103
94	93	107	104
95	94	108	105
96	95	109	106
97	96	110	107
98	97	111	108
99	98	112	109
100	99	113	110

OR

Write program to print following pattern using for loop

```
* * * *
*      *
*      *
*      *
* * * *
```

Q6. Find the error if any the following program otherwise write the output

(3)

```
#include<stdio.h>
main()
{ int a=1;
  switch(a){
    Case J:
      Printf("yes");
      break;
    Case 'I':
      Printf("no");
  }
```

```
#include<stdio.h>
main()
{ int i=0,x=0;
  do{ if(i%5!=0)
      x++;
      printf("%d",x);
      i++;
  } while(i<20);
  printf("%d",x);
}
```

```
#include<stdio.h>
main()
{ int sum=0,j=-5;
  for( ; sum<200;j+=5);
  sum=j;
  printf("%d",sum);
}
```

(3)

0	0	13	11
1	1	14	12
2	2	15	12
3	3	16	13
4	4	17	14
5	4	18	15
6	5	19	16
7	6	20	17
8	7	21	18
9	8	22	19
10	9	23	20
11	10	24	21
12	11	25	22
13	12	26	23
14	13	27	24
15	14	28	25
16	15	29	26
17	16	30	27
18	17	31	28
19	18	32	29
20	19	33	30
21	20	34	31
22	21	35	32
23	22	36	33
24	23	37	34
25	24	38	35
26	25	39	36
27	26	40	37
28	27	41	38
29	28	42	39
30	29	43	40
31	30	44	41
32	31	45	42
33	32	46	43
34	33	47	44
35	34	48	45
36	35	49	46
37	36	50	47
38	37	51	48
39	38	52	49
40	39	53	50
41	40	54	51
42	41	55	52
43	42	56	53
44	43	57	54
45	44	58	55
46	45	59	56
47	46	60	57
48	47	61	58
49	48	62	59
50	49	63	60
51	50	64	61
52	51	65	62
53	52	66	63
54	53	67	64
55	54	68	65
56	55	69	66
57	56	70	67
58	57	71	68
59	58	72	69
60	59	73	70
61	60	74	71
62	61	75	72
63	62	76	73
64	63	77	74
65	64	78	75
66	65	79	76
67	66	80	77
68	67	81	78
69	68	82	79
70	69	83	80
71	70	84	81
72	71	85	82
73	72	86	83
74	73	87	84
75	74	88	85
76	75	89	86
77	76	90	87
78	77	91	88
79	78	92	89
80	79	93	90
81	80	94	91
82	81	95	92
83	82	96	93
84	83	97	94
85	84	98	95
86	85	99	96
87	86	100	97
88	87	101	98
89	88	102	99
90	89	103	100
91	90	104	101
92	91	105	102
93	92	106	103
94	93	107	104
95	94	108	105
96	95	109	106
97	96	110	107
98	97	111	108
99	98	112	109
100	99	113	110

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Handwritten signature and marks.

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7-10

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30

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