

## Review for Final Exam

Do NOT write on this test. Record all answers on the bubble sheet. **Closed book. No notes.** Work strictly from memory. **No calculators. No time limit. Scratch paper okay.**

On the following printf questions you are given a list of inputs. For each problem line determine which printf statement created the accompanying outputs. (   means space.)

Which of these printf statements created the outputs shown for each problem below? (x is int x;)

- (A) printf("uuuu%-2d",x);    (D) printf("%+3d",x);    (G) printf("%03d",x);  
 (B) printf("uuu%-3d",x);    (E) printf("%05d",x);    (H) printf("%-7d",x);  
 (C) printf("uu%-4d",x);    (F) printf("%0+6d",x);    (I) printf("%+5d",x);

inputs:	<u>8</u>	<u>-1</u>	<u>1898889263</u>	<u>-1520959144</u>
1/6p.	uuu+8uu	uuu-1uu	+1898889263uu	-1520959144uu
2/6p.	uuuu8uu	uuu-1uu	uuuu1898889263u	uuu-1520959144u
3/6p.	uuu8uuu	uu-1uuu	uuu1898889263u	uu-1520959144u
4/6p.	u008uuu	u-01uuu	u1898889263uuu	u-1520959144uuu
5/6p.	u8uuuuu	-1uuuuu	u1898889263	-1520959144
6/6p.	uuuu8uu	uuuu-1u	uuuu1898889263u	uuuu-1520959144u
7/6p.	u+00008	u-00001	u+1898889263	u-1520959144
8/6p.	u+8uuuu	u-1uuuu	u+1898889263uuu	u-1520959144uuu

Which of these printf statements created the outputs shown for each problem below? (x is int x;)

- (A) printf("uu%-5d",x);    (D) printf("%+3d",x);    (G) printf("%7d",x);  
 (B) printf("uu%0+4d",x);    (E) printf("%-4d",x);    (H) printf("%-6d",x);  
 (C) printf("u%5d",x);    (F) printf("%-4d",x);    (I) printf("%7d",x);

inputs:	<u>0</u>	<u>-8</u>	<u>1384258863</u>	<u>-1279792292</u>
9/6p.	uu0uuuu	uu-8uuu	uu1384258863	uu-1279792292
10/6p.	u0uuuuu	u-8uuuu	u1384258863uu	u-1279792292uu
11/6p.	uuuuuu0	uuuuu-8	1384258863	-1279792292
12/6p.	0uuuuuu	-8uuuuu	1384258863u	-1279792292u
13/6p.	uuuuu0u	uuuu-8u	uu1384258863u	u-1279792292u
14/6p.	uu+0uuu	uu-8uuu	u+1384258863uuu	u-1279792292uuu
15/6p.	uuuuuu0	uuuuu-8	u1384258863	-1279792292
16/6p.	uu0uuuu	u-8uuuu	uu1384258863uu	u-1279792292uu

Which of these printf statements created the outputs shown for each problem below? (x is int x;)

- (A) printf("uu%ud",x);    (D) printf("%2d",x);    (G) printf("%+5d",x);  
 (B) printf("uu%-3d",x);    (E) printf("%05d",x);    (H) printf("%-+7d",x);  
 (C) printf("u%-4d",x);    (F) printf("%07d",x);    (I) printf("%-5d",x);

inputs:	<u>0</u>	<u>-3</u>	<u>1610896293</u>	<u>-1585913080</u>
17/6p.	u0000uu	-0003uu	u1610896293uu	-1585913080uu
18/6p.	uuu0uuu	uu-3uuu	uuu1610896293uuu	uu-1585913080uuu
19/6p.	0uuuuuu	-3uuuuu	1610896293uu	-1585913080uu
20/6p.	uu0uuuu	u-3uuuu	u1610896293uuu	u-1585913080uuu
21/6p.	uuu+0uu	uuu-3uu	+1610896293uu	-1585913080uu
22/6p.	uuu0uuu	uu-3uuu	uuu1610896293uu	uu-1585913080uu
23/6p.	+0uuuuu	-3uuuuu	+1610896293	-1585913080
24/6p.	u000000	-000003	u1610896293	-1585913080

Which of these printf statements created the outputs shown for each problem below? (x is char \* x);

- (A) `printf("____%s____",x);` (D) `printf("_%4s_",x);` (G) `printf("_%-6s",x);`  
 (B) `printf("____%1s____",x);` (E) `printf("_%s____",x);` (H) `printf("_%5s_",x);`  
 (C) `printf("____%3s_",x);` (F) `printf("_%-3s____",x);` (I) `printf("_%6s",x);`

inputs:	<u>""</u>	<u>"z"</u>	<u>"lp"</u>	<u>"bqyj"</u>	<u>"lgbxch"</u>	<u>"gjzlldhg"</u>
25/6p.	____	____z	____lp	____bqyj	____lgbxch	____gjzlldhg
26/6p.	____	____z	____lp	____bqyj	____lgbxch	____gjzlldhg
27/6p.	____	____z	____lp	____bqyj	____lgbxch	____gjzlldhg
28/6p.	____	____z	____lp	____bqyj	____lgbxch	____gjzlldhg
29/6p.	____	____z	____lp	____bqyj	____lgbxch	____gjzlldhg
30/6p.	____	____z	____lp	____bqyj	____lgbxch	____gjzlldhg

Which of these printf statements created the outputs shown for each problem below? (x is char \* x);

- (A) `printf("____%1s",x);` (D) `printf("_%2s_",x);` (G) `printf("%-4s_",x);`  
 (B) `printf("____%s____",x);` (E) `printf("_%s____",x);` (H) `printf("%-5s",x);`  
 (C) `printf("_%3s",x);` (F) `printf("_%3s_",x);` (I) `printf("%5s",x);`

inputs:	<u>""</u>	<u>"z"</u>	<u>"pw"</u>	<u>"xkpl"</u>	<u>"dzvcdp"</u>	<u>"xwpxdjyy"</u>
31/6p.	____	____z	____pw	____xkpl	____dzvcdp	____xwpxdjyy
32/6p.	____	____z	____pw	____xkpl	____dzvcdp	____xwpxdjyy
33/6p.	____	____z	____pw	____xkpl	____dzvcdp	____xwpxdjyy
34/6p.	____	____z	____pw	____xkpl	____dzvcdp	____xwpxdjyy
35/6p.	____	____z	____pw	____xkpl	____dzvcdp	____xwpxdjyy

Which of these printf statements created the outputs shown for each problem below? (x is double x);

- (A) `printf("____%010.0f_",x);` (D) `printf("_%012.6f",x);` (G) `printf("_%011f____",x);`  
 (B) `printf("____%011.4f",x);` (E) `printf("_%010.6f____",x);` (H) `printf("%+14.2f",x);`  
 (C) `printf("_%010.2f____",x);` (F) `printf("_%012.6f",x);` (I) `printf("%013f_",x);`

inputs:	<u>5</u>	<u>-2.36</u>	<u>-3.3993</u>	<u>-45182.756604</u>
36/6p.	____0000000005	____-000000002	____-000000003	____-000045183
37/6p.	____000005.000000	____-00002.360000	____-00003.399300	____-45182.756604
38/6p.	____+5.00	____-2.36	____-3.40	____-45182.76
39/6p.	____5.000000	____-2.360000	____-3.399300	____-45182.756604
40/6p.	____5.000000	____-2.360000	____-3.399300	____-45182.756604
41/6p.	____0005.000000	____-002.360000	____-003.399300	____-45182.756604

Which of these printf statements created the outputs shown for each problem below? (x is double x);

- (A) `printf("_%+11.6f_",x);` (D) `printf("_%12.2f_",x);` (G) `printf("%+013.2f_",x);`  
 (B) `printf("_%010.4f____",x);` (E) `printf("_%12.4f_",x);` (H) `printf("%+14.4f",x);`  
 (C) `printf("_%+012.4f_",x);` (F) `printf("_%13.2f",x);` (I) `printf("%13.6f_",x);`

inputs:	<u>7</u>	<u>6.95</u>	<u>-3.0094</u>	<u>-846182.217035</u>
42/6p.	____7.00	____6.95	____-3.01	____-846182.22
43/6p.	____+000007.0000	____+000006.9500	____-000003.0094	____-846182.2170
44/6p.	____+00000007.00	____+00000006.95	____-00000003.01	____-000846182.22
45/6p.	____+7.0000	____+6.9500	____-3.0094	____-846182.2170
46/6p.	____7.0000	____6.9500	____-3.0094	____-846182.2170
47/6p.	____7.0000	____6.9500	____-3.0094	____-846182.2170

Total points 282.

**Answer Key** (points per line)

1 (6).	I	25 (6).	I
2 (6).	B	26 (6).	H
3 (6).	C	27 (6).	A
4 (6).	G	28 (6).	G
5 (6).	H	29 (6).	E
6 (6).	A	30 (6).	D
7 (6).	F	31 (6).	G
8 (6).	D	32 (6).	C
9 (6).	A	33 (6).	A
10 (6).	F	34 (6).	E
11 (6).	I	35 (6).	H
12 (6).	H	36 (6).	A
13 (6).	C	37 (6).	I
14 (6).	D	38 (6).	H
15 (6).	G	39 (6).	F
16 (6).	E	40 (6).	E
17 (6).	E	41 (6).	G
18 (6).	A	42 (6).	F
19 (6).	I	43 (6).	C
20 (6).	D	44 (6).	G
21 (6).	G	45 (6).	H
22 (6).	B	46 (6).	B
23 (6).	H	47 (6).	E
24 (6).	F		

Total points 282.