

Cooper Nuclear Station 2012 NRC ILT Examination Analysis

In accordance with NuReg 1021 Rev 9 Sup 1 the Cooper nuclear station NRC ILT Examination analysis was performed for all questions that resulted in half or more of the students missing the question. One question removal is recommended based on this analysis or candidate feedback.

Question RO 4 - This question is technically accurate and psychometrically sound. The candidates who missed it failed to recognize that the particular instrument feeds the high level trip logic for HPCI and chose that HPCI would trip on high level which is not the case. The function of each level instrument was taught in class.

Question RO 24 - This question is technically accurate and psychometrically sound. The candidates who missed the question failed to recognize that the synch meter should be rotating in the reverse direction for the conditions given in the question and chose that it would be rotating in the clockwise direction. Synchronizations in both directions have been performed numerous times in the simulator by the students during class.

Question RO 55 - This question is technically accurate and psychometrically sound. Half of the candidates who missed the question failed to recognize the status of the ATWS and which level leg in the ATWS flowchart was being used, and the other half mistook raising versus lowering subcooling in the explanation. This information was covered with the class.

Question SRO 5 - This question was clarified during the exam both verbally and written on the white boards in the front of the classroom. The question stated "...and directs SA-MO-81, SA TO IA CROSSTIE opened. IA SA-MO-81 cannot be..." The valve was written as Instrument Air - Motor Operator- 81 and it should have been Service Air - motor operator – 81. This was a typo on the exam. The Exam Key has been annotated to reflect the correction.

Question SRO 13 - This question is technically accurate however **not** psychometrically sound. The exam group forgot to identify this revised version of the question as needing a reference and none was authorized for this question. Without the Tech Spec reference the candidates were unable to answer the question. **It is recommended that this question be removed from the exam.**

Question SRO 22 - This question is technically accurate and psychometrically sound. The candidates who missed the question, each chose a different incorrect distracter, indicating that this is a weak area that the candidates should review during delta training, before going on shift.

		Record #	Correct Ans	Que Miss %	[INFORMATION REDUCTED DUE TO PRIVACY CONCERNS]						"a"	"b"	"c"	"d"
		RAW POINTS			72	68	68	71	69	61				
1		d	0.0%	d	d	d	d	d	d				6	
2		b	0.0%	b	b	b	b	b	b		6			
3		c	33.3%	d	d	c	c	c	c			4	2	
4	→	a	50.0%	a	a	c	a	c	c	3		3		
5		d	0.0%	d	d	d	d	d	d				6	
6		c	33.3%	c	c	c	c	a	a	2		4		
7		d	0.0%	d	d	d	d	d	d				6	
8		b	0.0%	b	b	b	b	b	b		6			
9		b	0.0%	b	b	b	b	b	b		6			
10		a	0.0%	a	a	a	a	a	a	6				
11		c	0.0%	c	c	c	c	c	c			6		
12		d	0.0%	d	d	d	d	d	d				6	
13		b	0.0%	b	b	b	b	b	b		6			
14		c	0.0%	c	c	c	c	c	c			6		
15		d	0.0%	d	d	d	d	d	d				6	
16		d	0.0%	d	d	d	d	d	d				6	
17		a	0.0%	a	a	a	a	a	a	6				
18		d	0.0%	d	d	d	d	d	d				6	
19		c	0.0%	c	c	c	c	c	c			6		
20		c	0.0%	c	c	c	c	c	c			6		
21		d	33.3%	d	d	c	d	d	c			2	4	
22		d	33.3%	d	c	d	d	d	c			2	4	
23		c	0.0%	c	c	c	c	c	c			6		
24	→	a	83.3%	d	d	d	c	a	d	1		1	4	
25		c	0.0%	c	c	c	c	c	c			6		
26		b	0.0%	b	b	b	b	b	b		6			
27		b	0.0%	b	b	b	b	b	b		6			
28		b	33.3%	b	c	b	b	c	b		4	2		
29		c	16.7%	c	d	c	c	c	c			5	1	
30		c	0.0%	c	c	c	c	c	c			6		
31		a	0.0%	a	a	a	a	a	a	6				
32		d	0.0%	d	d	d	d	d	d				6	
33		a	0.0%	a	a	a	a	a	a	6				
34		b	0.0%	b	b	b	b	b	b		6			
35		a	0.0%	a	a	a	a	a	a	6				
36		d	33.3%	d	c	c	d	d	d			2	4	
37		c	0.0%	c	c	c	c	c	c			6		
38		d	0.0%	d	d	d	d	d	d				6	
39		c	16.7%	c	c	c	b	c	c		1	5		
40		c	0.0%	c	c	c	c	c	c			6		
41		a	0.0%	a	a	a	a	a	a	6				
42		a	0.0%	a	a	a	a	a	a	6				
43		c	0.0%	c	c	c	c	c	c			6		
44		b	16.7%	b	b	d	b	b	b		5		1	
45		d	16.7%	d	d	d	d	d	a	1			5	
46		a	33.3%	a	a	a	a	c	c	4		2		
47		d	0.0%	d	d	d	d	d	d				6	
48		a	0.0%	a	a	a	a	a	a	6				
49		b	16.7%	d	b	b	b	b	b		5		1	
50		a	0.0%	a	a	a	a	a	a	6				

		Record #	Correct Ans	Que Miss %	[INFORMATION REDACTED DUE TO PRIVACY CONCERNS]					"a"	"b"	"c"	"d"
51		c	33.3%	c	c	c	d	c	d			4	2
52		c	0.0%	c	c	c	c	c	c			6	
53		b	0.0%	b	b	b	b	b	b		6		
54		b	0.0%	b	b	b	b	b	b		6		
55	→	a	66.7%	a	a	d	d	b	b	2	2		2
56		d	16.7%	d	d	d	d	d	c			1	5
57		c	0.0%	c	c	c	c	c	c			6	
58		d	0.0%	d	d	d	d	d	d				6
59		d	16.7%	d	d	d	d	d	c			1	5
60		a	0.0%	a	a	a	a	a	a	6			
61		c	0.0%	c	c	c	c	c	c			6	
62		c	0.0%	c	c	c	c	c	c			6	
63		b	16.7%	b	b	a	b	b	b	1	5		
64		c	16.7%	c	c	c	c	c	b		1	5	
65		d	0.0%	d	d	d	d	d	d				6
66		a	0.0%	a	a	a	a	a	a	6			
67		c	0.0%	c	c	c	c	c	c			6	
68		d	16.7%	d	d	d	d	d	a	1			5
69		a	0.0%	a	a	a	a	a	a	6			
70		c	0.0%	c	c	c	c	c	c			6	
71		d	16.7%	d	d	d	d	c	d			1	5
72		b	16.7%	b	b	b	b	b	a	1	5		
73		d	16.7%	d	b	d	d	d	d		1		5
74		a	0.0%	a	a	a	a	a	a	6			
75		d	0.0%	d	d	d	d	d	d				6
		SCORE (%)		96.0	90.7	90.7	94.7	92.0	81.3				
						Time		5:48			Correct Ans		
75	Total Points					6		Number of Students					
90.9	Average Score					50		Value for color change					

Question	Record #	Correct Ans	Que Miss %	INFORMATION REDACTED DUE TO PRIVACY CONCERNS					"a"	"b"	"c"	"d"
RAW POINTS				21	21	22	21	20				
1		d	0.0%	d	d	d	d	d				5
2		b	40.0%	b	b	b	d	a	1	3		1
3		d	0.0%	d	d	d	d	d				5
4		c	0.0%	c	c	c	c	c			5	
5		a	20.0%	a	c	a	a	a	4		1	
6		b	0.0%	b	b	b	b	b		5		
7		b	0.0%	b	b	b	b	b		5		
8		b	40.0%	d	d	b	b	b		3		2
9		d	20.0%	d	d	d	d	b		1		4
10		a	0.0%	a	a	a	a	a	5			
11		c	0.0%	c	c	c	c	c			5	
12		b	0.0%	b	b	b	b	b		5		
13		a	100.0%	c	c	c	c	c	0		5	
14		c	20.0%	c	c	c	c	b		1	4	
15		d	20.0%	c	d	d	d	d			1	4
16		c	0.0%	c	c	c	c	c			5	
17		b	0.0%	b	b	b	b	b		5		
18		b	40.0%	a	b	b	b	c	1	3	1	
19		a	20.0%	a	a	c	a	a	4		1	
20		b	0.0%	b	b	b	b	b		5		
21		d	0.0%	d	d	d	d	d				5
22		c	60.0%	c	a	b	d	c	1	1	2	1
23		c	0.0%	c	c	c	c	c			5	
24		b	0.0%	b	b	b	b	b		5		
25		c	20.0%	c	c	c	d	c			4	1

SCORE (%)		84.0	84.0	88.0	84.0	80.0
25	Total Points			5		
85.0	Average Score			50		
		93	89	90	92	89

SCORE (%)		93.0	89.0	90.0	92.0	89.0
Time		3:11	4:47	5:30	3:40	4:31
100	SRO Total Points					
91.0	SRO Overall Average Score					