

2005 October SONGS NRC Written Exam

Exam Item Analysis

Analysis items selected using ES-403-1 guidelines. Number 6 "...;evaluate validity of questions missed by half or more of the applicants." Exam item analysis identified the following questions as being missed by half or more of the ROs and SROs applicants for questions 1-75, or in the case of the SRO only questions 76-100, questions missed by half or more of the SRO applicants only.

Question #37 65% failure rate

This question was found to be technically valid. One distracter was selected, which could indicate a common mis-conception in the topic area and/or test taking techniques. Examinees will be provided with remedial training focused on Steam Bypass Control System (SBCS). The training program will be evaluated for inclusion of these weaknesses.

Question #70 65% failure rate

This question was found to be technically valid. Two different distracters were selected, which would indicate a generic weakness in this topic area. Examinees will be provided with remedial training focused on Source Range Nuclear Instrumentation OPERABILITY and the applicable Technical Specifications. The training program will be evaluated for inclusion of these weaknesses.

SRO-only Question #92 77% failure rate

This question was found to be technically valid. Three different distracters were selected, which could indicate a generic weakness in this topic area. Examinees will be provided with remedial training focused on RCS Pressure Safety Limit Basis. The training program will be evaluated for inclusion of these weaknesses.

SRO-only Question #98 50% failure rate

This question was found to be technically valid. Three different distracters were selected, which could indicate a generic weakness in this topic area. Examinees will be provided with remedial training focused on 10CFR100 Radiation Release limits. The training program will be evaluated for inclusion of these weaknesses.

SRO-only Question #99 83% failure rate

This question was found to have some technical issues. The fire burning for 20 minutes meets the threshold for an Unusual Event, which was the distracter. The information in the stem identifying the control room being evacuated was intended for the correct answer to be an Alert but lacked the information as to whether or not control of shutdown systems was established locally or at the shutdown panel. The question will be modified prior to future use. The training program will be evaluated for inclusion of these weaknesses.

2005B NRC Written Exam

Standard Item Analysis Report On NRC_Exam1 Version A

Course #: 2005B NRC RO
 Course Title: 2005BNRCR
 Day/Time:

Instructor: Whitehouse
 Description: 2005B NRC RO Exam
 Term/Year: 10/28/05

Total Possible Points:	75.00	Median Score:	70.00	Highest Score:	72.00
Student in this group:	5	Mean Score:	70.00	Lowest Score:	67.00
Standard Deviation:	1.90	Reliability Coefficient (KR20):	0.14		

No.	Correct Group Responses			Point Biserial	Correct Answer	Response Frequencies										Non Distractor
	Total	Upper 27%	Lower 27%			A	B	C	D							
1	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
2	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
3	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
4	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
5	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
6	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
7	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
8	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
9	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
10	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC
11	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
12	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
13	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
14	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
15	80.00%	100.00%	100.00%	0.26	B	0	4	0	1							AC
16	60.00%	100.00%	0.00%	0.86	B	0	3	0	2							AC
17	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
18	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
19	80.00%	0.00%	100.00%	-0.53	A	4	0	1	0							BD
20	60.00%	100.00%	0.00%	0.65	B	1	3	1	0							D
21	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC
22	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
23	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC
24	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
25	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
26	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
27	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC
28	80.00%	100.00%	0.00%	0.79	B	0	4	0	1							AC
29	40.00%	100.00%	0.00%	0.43	B	0	2	2	1							A
30	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
31	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
32	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
33	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
34	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
35	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
36	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC

2005B NRC Written Exam

Standard Item Analysis Report On NRC_Exam1 Version A

Course #: 2005B NRC RO

Instructor: Whitehouse

Course Title: 2005BNRCR

Description: 2005B NRC RO Exam

Day/Time:

Term/Year: 10/28/05

Total Possible Points:	75.00	Median Score:	70.00	Highest Score:	72.00
Student in this group:	5	Mean Score:	70.00	Lowest Score:	67.00
Standard Deviation:	1.90	Reliability Coefficient (KR20):	0.14		

No.	Correct Group Responses			Point Biserial	Correct Answer	Response Frequencies										Non Distractor
	Total	Upper 27%	Lower 27%			A	B	C	D							
37	60.00%	100.00%	100.00%	-0.43	A	3	2	0	0							CD
38	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
39	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
40	60.00%	0.00%	0.00%	0.22	B	0	3	2	0							AD
41	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
42	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC
43	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
44	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
45	80.00%	100.00%	100.00%	0.00	C	0	1	4	0							AD
46	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
47	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
48	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
49	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
50	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
51	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
52	100.00%	100.00%	100.00%	0.00	D	0	0	0	5							ABC
53	80.00%	100.00%	100.00%	0.26	D	1	0	0	4							BC
54	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
55	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
56	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
57	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
58	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
59	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
60	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
61	80.00%	100.00%	100.00%	0.00	B	0	4	1	0							AD
62	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
63	80.00%	100.00%	0.00%	0.79	C	1	0	4	0							BD
64	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
65	80.00%	100.00%	100.00%	0.00	A	4	0	0	1							BC
66	60.00%	100.00%	0.00%	0.86	D	0	2	0	3							AC
67	80.00%	0.00%	100.00%	-0.53	D	0	0	1	4							AB
68	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
69	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
70	40.00%	100.00%	0.00%	0.43	A	2	0	2	1							B
71	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD
72	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD

2005B NRC Written Exam

Standard Item Analysis Report On NRC_Exam1 Version A

Course #: 2005B NRC RO

Instructor: Whitehouse

Course Title: 2005BNRCR

Description: 2005B NRC RO Exam

Day/Time:

Term/Year: 10/28/05

Total Possible Points:	75.00	Median Score:	70.00	Highest Score:	72.00
Student in this group:	5	Mean Score:	70.00	Lowest Score:	67.00
Standard Deviation:	1.90	Reliability Coefficient (KR20):	0.14		

No.	Correct Group Responses			Point Biserial	Correct Answer	Response Frequencies										Non Distractor
	Total	Upper 27%	Lower 27%			A	B	C	D							
73	100.00%	100.00%	100.00%	0.00	B	0	5	0	0							ACD
74	100.00%	100.00%	100.00%	0.00	C	0	0	5	0							ABD
75	100.00%	100.00%	100.00%	0.00	A	5	0	0	0							BCD

2005B NRC Written Exam

Standard Item Analysis Report On NRC_Exam1 Version A

Course #: 2005B NRC SRO

Instructor: Whitehouse

Course Title: 2005BNRCS

Description: 2005B NRC SRO Exam

Day/Time:

Term/Year: 10/28/05

Total Possible Points:	100.00	Median Score:	89.50	Highest Score:	93.00
Student in this group:	6	Mean Score:	89.50	Lowest Score:	85.00
Standard Deviation:	2.63	Reliability Coefficient (KR20):	0.19		

No.	Correct Group Responses			Point Biserial	Correct Answer	Response Frequencies										Non Distractor
	Total	Upper 27%	Lower 27%			A	B	C	D							
1	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
2	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
3	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
4	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
5	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
6	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
7	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
8	83.33%	100.00%	100.00%	0.09	C	0	1	5	0							AD
9	100.00%	100.00%	100.00%	0.00	B	0	6	0	0							ACD
10	100.00%	100.00%	100.00%	0.00	D	0	0	0	6							ABC
11	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
12	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
13	83.33%	100.00%	100.00%	0.09	A	5	1	0	0							CD
14	33.33%	50.00%	50.00%	0.13	C	1	1	2	2							
15	100.00%	100.00%	100.00%	0.00	B	0	6	0	0							ACD
16	66.67%	100.00%	0.00%	0.81	B	0	4	0	2							AC
17	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
18	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
19	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
20	100.00%	100.00%	100.00%	0.00	B	0	6	0	0							ACD
21	100.00%	100.00%	100.00%	0.00	D	0	0	0	6							ABC
22	83.33%	50.00%	100.00%	-0.43	B	1	5	0	0							CD
23	100.00%	100.00%	100.00%	0.00	D	0	0	0	6							ABC
24	100.00%	100.00%	100.00%	0.00	B	0	6	0	0							ACD
25	66.67%	50.00%	50.00%	0.27	B	0	4	0	2							AC
26	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
27	100.00%	100.00%	100.00%	0.00	D	0	0	0	6							ABC
28	100.00%	100.00%	100.00%	0.00	B	0	6	0	0							ACD
29	83.33%	50.00%	100.00%	-0.43	B	0	5	1	0							AD
30	83.33%	100.00%	50.00%	0.26	A	5	0	0	1							BC
31	100.00%	100.00%	100.00%	0.00	C	0	0	6	0							ABD
32	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
33	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
34	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
35	100.00%	100.00%	100.00%	0.00	A	6	0	0	0							BCD
36	66.67%	50.00%	50.00%	0.27	D	0	2	0	4							AC