Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.

2. Enter the level of difficulty (LOD) of each question using a 1 to 5 (easy to difficult) rating scale (questions in the 2 to 4 range are acceptable).

- 3. Check the appropriate box if a psychometric flaw is identified:
 - a. The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).

b. The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).

c. The answer choices are a collection of unrelated true/false statements.

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d. The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.

e. One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).

4. Check the appropriate box if a job content error is identified:

a. The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).

b. The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).

c. The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).

d. The question requires reverse logic or application compared to the job requirements.

5. Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).

6. Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.

7. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory? Place the answer letter here

Place the 55.41(b)x or 55.43(b)y item here (example 1, 2, 3, 10, etc)

8. At a minimum, explain any Unsat ratings (e.g., how the Appendix B psychometric attributes are not being met).

	1. LOK	2. LOD		3. Psy	chometric	Flaws		4.	Job Con	tent Fla	ws	5. (Other	6	7	Ans Letter	CFR	8
Q#	(F/H)	(1-5)	stem focus	cueing	T/F	cred dist	partial	job link	minutia	# / units	back- ward	K/A	SRO- only	B/M/N	U/E/S	A/B/C/ D	55.41 55.43	Explanation
																		Entire exam NRC authored
1	Н	3												Ν	S	D	10	
2	Н	2												Ν	S	Α	7	
3	F	2												Ν	S	С	7	
4	F	3												Ν	S	А	5	
5	F	2												Ν	S	С	7	
6	Н	3												В	S	D	5	not used on an NRC exam
7	Н	3												М	S	В	5	
8	Н	3												Ν	S	D	7	
9	Н	3												Ν	S	С	7	
10	Н	3												Ν	S	D	5	
11	F	3												Ν	S	Α	7	
12	F	3												Ν	S	В	7	
13	Н	2												Ν	S	Α	7	
14	Н	3												Ν	S	D	7	

						1	 			1			
15	Н	3							Ν	S	А	7	
16	F	4							N	S	С	7	
17	Н	3							Ν	S	С	8	
18	F	3							В	S	D	7	not used on an NRC exam
19	F	2							Ν	S	В	5	
20	F	3							Ν	S	В	10	
21	Н	3							Ν	S	В	7	
22	F	3							Ν	S	A	7	
23	Н	3							Ν	S	D	10	
24	Н	3							Ν	S	D	7	
25	Н	4							Ν	S	С	10	reference provided
26	F	3							Ν	S	С	9	
27	Н	3							Ν	S	С	7	
28	Н	3							Ν	S	С	9	
29	Н	2							В	S	В	5	
30	Н	3							Ν	S	В	6	2013 NRC Exam
31	F	2							Ν	S	С	7	
32	F	3							Ν	S	С	7	
33	F	3							Ν	S	А	13	
34	Н	3							В	S	А	7	
35	Н	3							Ν	S	D	7	
36	F	2							Ν	S	А	7	
37	Н	3							Ν	S	D	8	
38	F	2							В	S	D	7	2012 NRC
39	Н	3							N	S	А	7	
40	F	3							Ν	S	С	4	
41	Н	3							N	S	С	10	
42	Н	3							N	S	В	8	
43	Н	3							Ν	S	А	10	
44	F	3							N	S	С	10	
45	F	3							N	S	А	7	
46	Н	2							В	S	С	6	2009 NRC
47	F	3							N	S	А	10	
48	Н	3							Ν	S	В	10	

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50 H 3 M M M M N S B 10 51 H 4 M M M M M B S A 10 205 NRC 53 H 3 M M M M B S A 10 205 NRC 53 H 3 M M M M S A 7 54 F 3 M M M S A 7 55 H 3 M M M S A 7 56 H 3 M M M S A 7 56 H 3 M M M S A 10 57 H 3 M M M M S B S M 10 58 H 3 M M M M S D 7 59 H 3 M M M M S D 7 61 F 3 M M M M S D <th>40</th> <th>Ц</th> <th>2</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>М</th> <th>S</th> <th>۸</th> <th>7</th> <th>FROM 2017 NRC</th>	40	Ц	2						М	S	۸	7	FROM 2017 NRC
1 H 4 M M M M B S A 10 2015 NRC 52 F 2 M M M M S C 10 M 54 F 3 M M M M S B S B 10 55 H 3 M M M S A 70 M 56 H 3 M M M S A 70 M 57 H 3 M M M S A 10 M 58 H 3 M M M S A 10 58 H 3 M M M S A 10 64 H 3 M M M M S D 7 65 F 3 M M M M S D 7 64 H M M M M S D T 64 H M M M M S A 10 65							 					-	
52 F 2 N S C 10 53 H 3 N S C 10 55 H 3 N S A 7 56 H 3 N S A 7 56 H 3 N S A 7 56 H 3 N S A 70 57 H 3 N S B 5 2010 RC 59 H 3 N S D 7 60 H 3 N N S D 5 61 F 3 N N S													
13 H 3 I <thi< th=""> I<td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2015 NRC</td></thi<>													2015 NRC
54 F 3 M M M M M M N<													
55 H 3 M M M N </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td> </td> <td> </td> <td> </td> <td></td> <td></td> <td></td> <td></td>							 	 	 				
56 H 3 u </td <td></td> <td></td> <td></td> <td> </td> <td> </td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				 	 								
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58 H 3 a a b a b a b </td <td></td> <td>2010 NRC</td>													2010 NRC
59 H 3 a a a a a a a a a a a a a 60 H 3 a<						 			В				
60 H 3 M M M M N S C 7 61 F 3 M M M N S D 7 62 F 3 M M M S D 7 63 F 3 M M M S D 5 C 11 64 H 2 M M S D S C 11 65 F 3 M M M S D S C 11 66 F 3 M M M S B S Z Z 67 F 3 M M M M S A 10 67 F 3 M M M M S A 10 66 F 3 M M M M S A 10 70 F 2 M									N		В		
61 F 3 M M M M M M N S D 7 Preside 62 F 3 M M M M N S D 7 Preside Preside M S D 7 Preside	59		3						Ν	S		10	
62 F 3 M M M N N S D 5 63 F 3 M M M S C 11 64 H 2 M M M S C 11 64 H 2 M M M S C 11 64 H 2 M M M S C 11 65 F 3 M M M S C 2 2015 NRC 66 F 3 M M M S B 12 2 67 7 2 M M M M S A 10 68 F 3 M M M M S A 10 69 F 2 M M M M M M M M M 70 F 2 M M M M <t< td=""><td>60</td><td>Н</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td>Ν</td><td>S</td><td>С</td><td>7</td><td></td></t<>	60	Н	3						Ν	S	С	7	
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64 H 2 M M M M M M M M M M S B S B S 2015 NRC 65 F 3 M M M M M M S C 2 66 F 3 M M M M S B 12 67 F 2 M M M S A 12 68 F 3 M M M S A 12 2015 NRC 70 F 2 M M M M S A 12 2015 NRC 71 F 2 M <td< td=""><td>62</td><td>F</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td>Ν</td><td>S</td><td>D</td><td>5</td><td></td></td<>	62	F	3						Ν	S	D	5	
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66 F 3 M M M M N	64	Н	2						В	S	В	5	2015 NRC
67 F 2 M M M M N S A 2 M 68 F 3 M M M N S A 10 69 F 2 M M M M S A 12 2015 NRC 70 F 2 M M M S A 10 M 70 F 2 M M M S A 10 M 71 F 2 M M M S A 10 M <t< td=""><td>65</td><td>F</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td>Ν</td><td>S</td><td>С</td><td>2</td><td></td></t<>	65	F	3						Ν	S	С	2	
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68 F 3 M M N	67	F	2	 					N	S	А	2	
70 F 2 2 6 6 7	68	F	3						N	S	А	10	
70F2101010101010101071F211	69	F	2	 					В	S	А	12	2015 NRC
71F2222211 <th< td=""><td></td><td>F</td><td></td><td> </td><td></td><td></td><td></td><td></td><td>N</td><td>S</td><td>А</td><td>10</td><td></td></th<>		F		 					N	S	А	10	
73 F 4 m <th< td=""><td>71</td><td>F</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td>В</td><td>S</td><td>С</td><td>5</td><td>odd on B and D, not like bank q</td></th<>	71	F	2						В	S	С	5	odd on B and D, not like bank q
74 F 2 1 1 1 1 1 1 1 74 F 2 1 1 1 1 1 1 1 74 F 2 1 1 1 1 1 1 1 1 75 F 2 1 <th< td=""><td>72</td><td>F</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td>Ν</td><td>S</td><td>В</td><td>10</td><td></td></th<>	72	F	3						Ν	S	В	10	
75 F 2 1 1 1 1 1 1 1 1 1 76 H 3 1 1 1 1 1 1 1 1 76 H 3 1	73	F	4						N	S	D	5	
Image:	74	F	2						Ν	S	С	10	
77 F 3 ∞ <th< td=""><td>75</td><td>F</td><td>2</td><td></td><td></td><td></td><td></td><td></td><td>N</td><td>S</td><td>D</td><td>10</td><td></td></th<>	75	F	2						N	S	D	10	
78 H 3 Image: Simple strain str	76	Н	3						Ν	S	А	2	
78H3Image: Second Seco	77	F	3						Ν	S	С	2	
79 H 3 Image: Constraint of the system		Н	3						N	S	В	5	
	79	Н	3						В	S	D	5	2013 NRC Exam
81 H 3 N S A 1	80	Н	3						М	S	А	2	
	81	Н	3						Ν	S	А	1	

82	Н	3						В	S	С	2	
83	Н	3						Ν	S	С	2	
84	Н	3						Ν	S	В	5	
85	Н	3						В	S	D	5	2009 NRC
86	Н	3						Ν	S	А	2	
87	Н	3						Ν	S	В	5	
88	Н	3						Ν	S	А	2	
89	F	3						Ν	S	С	2	
90	Н	3						Ν	S	В	2	
91	F	2						Ν	S	А	5	
92	F	3						Ν	S	D	5	
93	Н	3						Ν	S	С	5	
94	F	3						Ν	S	В	5	
95	F	3						В	S	В	2	
96	F	2						М	S	D	3	MOD FROM 2007 NRC
97	Н	3						В	S	С	5	
98	F	3						В	S	А	6	
99	F	3						Ν	S	D	3	
100	Н	3						Ν	S	D	5	

Results Table

RO LOK -H	39	Avg RO LOD		2.8	Flaws		10 CFR	Dist	tributio	n
RO LOK-F	36	AVG SRO LOD		2.92	Stem focus	0	41(b)1	0	43(b)1	1
SRO LOK - H	16	Overall LOD		2.83	Cues	0	41(b)2	2	43(b)2	10
SRO LOK - F	9				T/F	0	41(b)3	0	43(b)3	2
		%		%	Cred Dist	0	41(b)4	1	43(b)4	0
RO Bank	13	17.33 SRO Bank	6	24	Partial	0	41(b)5	12	43(b)5	11
RO Mod	2	2.667 SRO Mod	2	8	job link	0	41(b)6	2	43(b)6	1
RO New	60	80 SRO New	17	68	units	0	41(b)7	28	43(b)7	0
		%			minutia	0	41(b)8	3		
Total Bank	19	19			backward	0	41(b)9	2		
Total Mod	4	4			KA	0	41(b)10	21		
Total New	77	77			SRO-only	0	41(b)11	1		
		%		%	LOD = 1	0	41(b)12	2		

<u>ES-401</u>		CP-2018	<u>3-06</u>			Written		Form ES-	<u>401-9</u>						
RO Sat	75		SRO Sat	25	100						41(b)13		Į		
RO Unsat	0	0 S	SRO Unsat	0	0	A	nsw	er Dis	st (in %)		41(b)14	0			
RO Edit	0	0 S	SRO Edit	0	0	R	O-A	21	SRO-A	7					
		%			%	R	О-В	16	SRO-B	6					
Total Sat	100	100 T	Total Unsat	0	0	R	o-c	21	SRO-C	6					
Total Edit	0	0				R	O-D	17	SRO-D	6					

Question Overlap with the Previous Two NRC Exams

QA form ES-401-6 item 4 requires 4 or less questions on RO exam from previous two NRC exams, SRO portion two or less questions from previous two NRC exams*

PREVIOUS 2 EXAMS ARE 2017 AND 2016 EXAMS

* if this is exceeded, the region shall call NRR to explain why/reasons.

RO overlap from previous two NRC exams NONE

SRO overlap from the previous two NRC exams NONE

Questions Requiring References to Answer

6-10 questions rule of thumb on SRO portion of exam are allowed to be open reference, while the RO exam is generally none

RO Questions that require hand-outs Q25

SRO Questions that require hand-outs