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7/30/03  
 John G. Curran

ES-401

SUSQUEHANNA Written Examination 8/03

Form ES-401-9

Review Worksheet

NOTE: RESOLUTION OF COMMENTS IN BOLD AND ITALICS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
1	H	3		X									Y	N	E	D. is only ans. with reset limiter #1 as only limiter offered - <b>modify "A" distractor</b>
2	H	3											Y	N	S	Typo in stem.
3	F	2	X										Y	N	E	Closer to a memory question . <b>Modified "C" distractor testing logic.</b>
4	F	2											Y	N	E	Typo. Alarm is indicative of a turbine trip.
5	<del>F</del> H	1-2											Y	N	U	typo. LOD 1-2 does not diiscriminate with EOP provided. <b>Replaced question with a new higher order question.</b>
6	F	2											N	N	U	Opening Valve in the control room does not disable the valve function K/A mismatch. <b>Reviewed K/A with John Monro</b>
7	H	3											Y	N	S	
8	H	3											Y	N	S	
9	F	2											Y	N	S	

New Question H

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
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 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).															
3.	Check the appropriate box if a psychometric flaw is identified:															
	<ul style="list-style-type: none"> <li>· The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).</li> <li>· The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).</li> <li>· The answer choices are a collection of unrelated true/false statements.</li> <li>· One or more <del>than one</del> distractors is not credible.</li> <li>· One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).</li> </ul>															
4.	Check the appropriate box if a job content error is identified:															
	<ul style="list-style-type: none"> <li>· 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).</li> <li>· 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).</li> <li>· The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).</li> <li>· The question requires reverse logic or application compared to the job requirements.</li> </ul>															
5.	<u>Check questions that are sampled</u> for conformance with the approved K/A and those that are <u>designated SRO-only</u> (K/A and license level mismatches are unacceptable).															
6.	Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?															
7.	At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).															

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
10	H	3										Y	N	S	
11	H	3										Y	N	S	
12	F	3					X					Y	N	E	D. appears close to A. (A. = correct answer). <b>One flawed distractor does not result in U, per Rev. 9. Modified "D" distractor.</b>
13	F	3		X								Y	N	E	K/A match not strong. Question does not require interpreting SP temp and level when HCTL exceeded based on level. The stem is leading applicant to look at HCTL curve on EOP provided. <i>John monro concured this is an acceptable match for K/A. Modify stem.</i>
14	F	3										Y	N	S	
15	F	3										Y	N	E	Memory level question. Also no correct answer provided. <b>Modified "A&amp;D" distractors</b>
16	H	3										Y	N	U	<b>Distractors C &amp; D not plausible. Replaced question with a new higher order question.</b>
17	<del>F</del> H	3/4				x						Y	N	U	"A&D" distractors not palusible. <b>Modify stem to raise to cognitive level question also modified distractors.</b>
18	F*	2/3				X						N	N	U	K/A mismatch. A&D distractors not plausible. Memory level question? <b>Replaced question with a memory level.</b>
19	F	2				X	X					Y	N	E	Easy question, LOD <b>Improve distractor A &amp; C. Only one flawed distractor, not a U.</b>
20	F	2										?	N	E	No K/A provided
21	H	4										Y	N	S	
22	H	3										Y	N	E	What is EAP in D.?
23	H	3										Y	N	S	
24	<del>F</del> H	2				X						N	N	U	K/A mismatch. Do not agree with LOK or LOD. <b>Replaced question.</b>
25	F	3										Y	N	S	
26	H	3										Y	N	S	

New question

New question

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
27	H	3										Y	N	S	
28	H ✓	3	X									N	N	U	Is RHR needed, given conditions in stem? (RHR inj mode) <i>Revised stem to match intent of K/A.</i>
29	H	3										Y	N	E	Fix tech. references. Provide TS all sect 3 only and verify this won't give answers away to other questions.
30	H	3										Y	N	E	Reword correct answer
31	H	2*								X		Y	N	S	Backward logic but higher order.
32	F	2										Y	N	S	Elec supply - okay limited number
33	F	3										Y	N	S	
34	F	2*										Y	N	E	Memory level question
35	H	3										Y	N	S	
36	F	3										Y	N	S	
37	H	3										Y	N	S	
38	H	3										Y	N	S	
39	<del>H</del>	1										Y	N	U	GFE question <i>LOD = 1, Replaced with a higher order new question.</i>
40	H	3										Y	N	S	
41	F	3										Y	N	S	
42	H	3										Y	N	S	
43	F	3										Y	N	S	
44	H	2*										Y	N	S	
45	H	3*										Y	N	S	
46	F	3										Y	N	S	
47	F	3										Y	N	S	
48	F	3	X	X								Y	N	E	Answer is only choice that has a battery supply. Modify one distractor. <i>One flawed distractor, not a U.</i>

Replaced question →

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
49	F ✓	1						X				N	N	U	K/A and NLO level question - <b>Replaced with bank memory level question.</b>
50	F	2*										Y	N	E	Technical reference does not support question AR-105 vs. AR-106)
51	H	3										Y	N	E	Modify wording in distractor A.
52	H	3	X									Y	N	E	Stem and justification need correction.
53	H	3										Y	N	S	
54	F	3*										Y	N	E	LOD, overly simplistic distractors. <b>Will enhance distractors.</b>
55	H	3										Y	N	S	
56	F	3										Y	N	S	
57	H	3										Y	N	S	
58	H	3										Y	N	S	
59	F	3										Y	N	S	
60	H	3										Y	N	S	
61	F	2*										Y	N	S	LOD & LOK: memory level (power supply knowledge)
62	F	2*										Y	N	E	K/A- need to know what procedure requires to answer the question. <b>Added distractor that loses cooling water and add operator actions.</b>
63	F	3										Y	N	S	
64	H	3										Y	N	S	
65	F	3										Y	N	E	<b>Typo in stem - will revise.</b>
66	F	2										Y	N	S	
67	<del>F</del> H	1										Y	N	U	NLO knowledge -does not discriminate. <b>Replaced with a new fundamental question.</b>
68	F	3										Y	N	E	LOK = procedure step memory.
69	F	3										Y	N	S	
70	F	2*										Y	N	E	Typo

New question →

*New question*

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
71	<del>F</del> H	2*							X				Y	N	U	LOD dne 3. ROs don't need to know from memory <i>Replace question with new higher order.</i>
72	H	3											Y	N	S	
73	H	3											Y	N	S	
74	F	3											Y	N	E	<i>Typo in stem, re plural bases vs. singular basis - will revise.</i>
75	H ✓	3											N	Y	U	K/A mismatch/set point. <i>Modified distractors to include mitigation strategies to match K/A.</i>
76	F	3	X										Y	Y	E	LOK = procedure memory recall. Stem focused
77	H	3											Y	Y	S	
78	H	3+	X										Y	Y	E	<i>Revise stem to include DBA Refuel accident.</i>
79	H ✓	2											N	N	U	K/A mismatch. <i>Replaced question using same K/A.</i>
80	H	3											Y	Y	E	<i>"B&amp;C" distractors enhanced.</i>
81	H ✓	3											Y	Y	U	Wrong answer provided - licensee caught after submittal to NRC. <i>Revised correct answer and one distractor.</i>
82	H ✓	3				X							Y	N	U	Not SRO and not credible distractors <i>Revised conditions in the stem made questioning more challenging and SRO level.</i>
83	H	3											Y	Y	S	
84	H ✓	3											N*	Y	U	K/A mismatch: loss of vacuum & reactor power? <i>Replaced question.</i>
85	H ✓	3											Y	Y	U	Per tech ref: is answer correct, event not reportable? <i>Answer fixed, distractor D enhanced.</i>
86	H ✓	3				X							Y	N	U	Distractors not credible - also not SRO only. System level knowledge/RO level; no knowledge of EOPs required to answer to question. <i>Replaced with a higher order bank question.</i>
87	H	3											Y	Y	E	Typo in stem - <i>will revise.</i>
88	H	4											Y	Y	E	<i>Typos re start times in stem corrected.</i>
89	H	4											Y	Y	E	All sect 3 of TS References provided; <i>syntax improved in answers.</i>

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90	H	3										Y	Y	E	Revise one distractor. Technical reference? References provided: entire TRM instrument section
91	H	4										Y	Y	S	
92	H	2*										Y	Y	E	Modify distractors
93	F	3										Y	Y	S	
94	H	3	X									Y	Y	E	Stem: 100% power and fuel damage occurs? K/A: typo listed wrong K/A
95	H	2*										Y	Y	S	
96	F	3										Y	Y	S	
97	F	3										Y	Y	S	
98	F	3										Y	Y	E	Typo
99	H	3*										Y	Y	E	Typo
100	H	3*										Y	Y	E	Syntax

NUREG-1021, Draft Revision 9

H/F      RO                      SRO                      TOTAL  
    40/35                      20/5                      60/40      BASED ON FINAL TALLY  
UNSAT      12                                      6                                      18