

2016 Davis-Besse Exam

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
1	H	3										X		N	S	
2	H	2										X		N	S	
3	F	2										X		N	S	
4+	F	2										X		N	S	
5	H	3										X		B	S	
6	H	3										X		N	S	

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

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- 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).
- Check the appropriate box if a psychometric flaw is identified:
 - “Stem Focus”: The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - “Cues”: The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - “T/F”: The answer choices are a collection of unrelated true/false statements.
 - “Cred. Dist”: The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - “Partial”: One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
 - “Job Link”: 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).
 - “Minutia”: 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).
 - “#/Units”: The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - “Backward”: The question requires reverse logic or application compared to the job requirements.
- 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).
- Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.
- 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?
- At a minimum, explain any “U” ratings (e.g., how the Appendix B psychometric attributes are not being met).

A “+” in the “Q#” column indicates that question was reviewed as part of the representative sample of 30 questions.

5 RO and 5 SRO Only questions submitted for NRC pre-review

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7	H	3											X		N	S	<p>NRC: Explain distractor B.</p> <p>Licensee: Alarm would be indication of PZR level instrument failure where PZR heaters DE at 40" when in AUTO. The heaters do not DE when ON (ie, manual) is selected due to a low PZR level. As a result, pressure would not be lowering due to a level failure.</p>
8#	H	3											X		N	S	
9+	H F	2											X		N	E S	<p>1 of 2 twice</p> <p>NRC: LOK=F. Very little analysis to determine in natural or forced circ, rest of question is memorization of procedure specified cooldown rate to specific temp.</p> <p>Licensee: LOK=H. Three knowledge issues/concepts need to be tied together, then recall setpoints. Need to know effect of LOOP on RCPs, the C/D rate is limited in this condition, and the target temperature varies based on forced or natural circulation. The procedure title does not provide clue that natural circulation is the mode of cooling, applicant must determine that condition.</p>
10	F	2											X		B	S	
11	H	3											X		B	S	<p>1 of 2 twice</p> <p>2011 NRC ILE</p>
12+	H	3											X		N	S	
13	F	3											X		N	S	<p>1 of 2 twice</p>
14	H	3											X		N	S	
15	H	3											X		N	S	
16+	F	2											X		B	S	
17	F	2											X		B	S	
18	H F	2											X		B	E S	<p>NRC: LOK=F. Question is asking a bases (ie, why...?), very little analysis, memorization of a procedure action bases.</p> <p>Licensee: LOK=H. Need to integrate system knowledge of CRD interlock and the bias removed when the CRDs are reset. The bias is not identified in the procedure.</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
19	F	2										X		N	S	
20	F	2										X		B	S	
21+	H	2										X		N	S	
22	H	3										X		N	S	
23	H	3										X	?	B	U E	<p>1 of 2 twice</p> <p>NRC: 1) Stem clarification: a) first sentence, replace "is" with "was"; b) first bullet, delete second "and". 2) Is this a SRO function?</p> <p>Licensee: 1) Incorporate editorial comments/stem clarification. 2) Dose assessment is an RO task. ROs are trained and qualified to perform dose assessments.</p>
24+	F	3										X		N	S	
25#	F	3										X		B	S	<p>1 of 2 twice</p> <p>2015 NRC ILE</p>
26	F	2										X		B	E	<p>2011 NRC ILE</p> <p>NRC: Delete "the" at beginning of C and D (redundant).</p> <p>Licensee: Incorporate clarification.</p>
27	F	2										X		B	S	
28+	H	3										X		B	S	<p>1 of 2 twice</p> <p>2013 NRC ILE</p>
29	H	2										X		N	E	<p>NRC: 1) Answer B, add "to" before "maintain....".</p> <p>Licensee: Incorporate clarification.</p>
30	H	3										X		N	S	
31	H F	2										X		N	E	<p>1 of 2 twice</p> <p>NRC: Knowledge of interlock(s) is Memory.</p> <p>Licensee: LOK=F. Agree with comment.</p>
32+	H	3										X		B	S	

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
33	H	3										X		B	S	
34	F	2										X		N	S	1 of 2 twice
35	H	3										X		N	E	<p>Reference provided (?)</p> <p>NRC: Question pedigree identifies that <u>no</u> reference is to be provided to applicant; however, a reference for applicant was provided (PZR HTR and DH-12 INTERLOCKS) which should be for Q37.</p> <p>Licensee: Electronic pdf title had wrong question number in "reference provided" folder (fixed). Exam is correct. Incorporated editorial comments.</p>
36#	H	3										X		B	S	<p>Reference provided.</p> <p>NRC: Steam Table reference for this question not identified on list of references with exam submittal.</p> <p>Licensee:</p>
37+	H	2										?		B	U	<p>Reference provided.</p> <p>NRC: 1) Does not meet KA. How does this Q explain and apply, system limits and precautions? 2) Reference identified for Q35 is for Q37.</p> <p>Licensee: Agree with comment. Replaced question.</p>
38	H	2										X		N	E	<p>1 of 2 twice</p> <p>NRC: 1) Add "...ing" to "follow" in stem question; add hyphen between "Pressure Temperature in A(2) and C(2).</p> <p>Licensee: Incorporate clarification.</p>
39	F	2										X		B	S	
40+	F	2										X		N	S	
41	F	2										X		B	S	1 of 2 twice
42	H	3										X		N	S	
43	H	3										X		N	E	<p>NRC: Stem: a) first bullet, put comma after "...7.." and "...Sump..."; b) second sentence, put comma after "...Degradation...".</p> <p>Licensee: Incorporate clarification.</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
44+	H	2										X		N	S	
45	H	3					X					X		N	U E	<p>NRC: 1) More than one correct answer. Stem states that plant heat up to Mode 4 is in progress which indicates the plant has not entered Mode 4; therefore, A also appears to be a correct answer. 2) Stem states "...should be performed..." as does the procedure DB-OP-06201, Step 2.2.12, second bullet. "Should" implies action may or may not be performed.</p> <p>Licensee: Q=S. Only one correct answer. MSIVs are opened in Section 4 and all distractors are performed after correct answer in Section 5 per Plant Heatup Procedure. Changed "...should be..." to "...are to be..." and stated title of procedure in progress. The procedure has two sections, the first part (Section 4) is performed and opens the MSIVs, the second part (Section 5) heats up the plant to Mode 4, this section requires completion of the Checklist.</p>
46	H	2										X		B	S	
47	F	2										X		N	S	
48+	H	3										X		N	S	
49	F	3										X		B	S	
50	F	2										X		B	E	<p>NRC: Stem, last sentence, capitalize "B" in "breaker" and add comma after.</p> <p>Licensee: Incorporate clarification.</p>
51	F	3				X						?		B	U S	<p>2013 NRC ILE</p> <p>NRC: Items 3 and 4 are ARMs (?), KA is for PRMs. As a result, no correct answer based on PRMs only.</p> <p>Licensee: Items 3 and 4 are PRMs in SD-017A, System Description for Process Radiation Monitors. The term "Area" in the RE description is referring to the area the ventilation system services. These REs are in the ventilation ductwork as PRMs.</p>
52+	H	2										X		N	E	<p>NRC: B: Delete term "(Step 4)".</p> <p>Licensee: Incorporate clarification.</p>
53	F	2										X		B	S	2013 NRC ILE

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54	F	2										X		B	S	1 of 2 twice
55+	F	2										X		N	S	
56#	F	3										X		N	S	
57	H F H	4 3				X						X		B	U	1 of 2 twice NRC: 1) "Loss of air will either cause MU 32 to fail open or closed. If it fails open, then C is only correct answer, if it fails closed, then D is the correct answer. As a result, neither A or B are plausible. 2) This is memory question of whether MU 32 fails open or closed on loss of air. 3) Low LOD, very little analysis/synthesis required. Licensee: Agree with comments, replaced question with LOK=H.
58	H	3										X		B	S	1 of 2 twice
59	F	2										X		N	S	1 of 2 twice
60+	F	3										X		N	S	1 of 2 twice
61	H	2										X		B	S	
62	H	2										X		N	S	
63	F	4 2				X						X		N	U S	NRC: Low LOD. The only inputs to the 7-2-C trouble alarm are tank pressures and rad monitor flows; B and C are implausible distractors because they have their own respective alarms and have no input to the trouble alarm. Licensee: B and C alarms are not for WGDTs, but are for WGST and CWRT which tests knowledge of what is sampled and monitored for MCR indication related to the WGDT. The operator must determine what inputs to the Waste Gas Tank Trouble alarm and realize that O ₂ and H ₂ have separate annunciators.
64+	F	4 2										?		N B	U	NRC: 1) Low LOD. 2) Also, does not address KA for operational implications including radiation theory, including sources, types, units and effects. Licensee: Redrew KA, replaced with satisfactory bank question.
65	H	2										X		B	S	
66	H	2										X		N	S	Reference provided.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
67	H	2										X		B	S	
68+	H F	2										X		N	E	NRC: Question is asking what chemistry limits are monitored in TRM which is memory (no analysis) knowledge. Licensee: LOK=F.
69	F	2										X		N	E	1 of 2 twice NRC: Stem, second sentence, add comma after "...hours...". Licensee: Incorporate clarification.
70	F	2										X		N	E	NRC: Low LOD, straight forward, not very discriminating as written. Give actual readings, maybe equipment status. Licensee: Agree with comment, incorporated clarification to add plant parameters and equipment status.
71	F	2										X		B	S	
72+	F	2										X		B	S	
73#	F	3										X		B	S	
74	H	3										X		B	S	
75	F	2										X		N	S	
R	RO Exam: LOK: H(50-60%)=39/75(52%); F=36/75(48%) N(≥8)=41/75, B(56 max)=34/75, M=0/75: U=3/75(4%); E=13/75(17%); LOD=2.43															
76	F	3				X						X		N	U	NRC: NOP-OP-1002, Step 4.12.2-1 says the SM shall have concurrence of at least two other people who are knowledgeable in the station electrical system...; however, the first bullet says the two other persons should be ...and it identifies the choice D individuals. It appears that the A, B, and C choices could meet the "shall" requirement and be correct in addition to choice D individuals. Licensee: Agree with comment. Changed wording to "...the procedure requirement of who by position can authorize resetting the lockout". Eliminate "should".
77#	H	3										X	X	N	S	
78#	H	3										X	X	N	S	1 of 2 twice

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79	H	3										X	X	N	S	
80	F	2										X	X	N	S	1 of 2 twice
81#	H	3										X	X	N	S	
82	H	2										X	X	N	E S	1 of 2 twice Reference provided. NRC: 1) Suggest replacing "Condition E -" With "Condition A -" because it forces operator to identify whether one or two channels are inoperable. Condition E just does not apply. Licensee: Leave as is, suggestion would decrease LOD.
83	F	2										X	X	N	S	
84	H	2										X	X	N	S	
85#	F	3										X	X	N	S	
86	H	3										X	X	N	S	
87	F	3										X	X	N	S	1 of 2 twice
88	H	3										X	X	N	S	1 of 2 twice
89	H	3										X	X	B	S	1 of 2 twice 2013 NRC ILE
90	H	3										X	X	N	S	1 of 2 twice
91	F	3										X	X	N	S	1 of 2 twice
92	H	2										X	X	N	S	
93	H	2										X	X	N	S	1 of 2 twice
94	F	2										X	X	B	S	1 of 2 twice
95#	H	3										X	X	B	S	
96	F	2										X	X	N	S	

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97	H	2										X	X	B	S	Reference provided. 1 of 2 twice
98	F	2										X	X	B	S	2010 NRC ILE 1 of 2 twice
99	H	3										X	X	B	S	2013 NRC ILE Reference provided.
100	H	3										X	X	N	S	
<p>For SRO portion of Exam: LOK: H(50%min)=16/25(64%); F=9/25(36%); N(≥ 2)=19/25, B(19 max)=6/25, M=0/25(0%); U=1/25(4%); E=0/25; LOD=2.6</p> <p>Were any Bank questions from previous NRC exams? Identified during validation.</p> <p>Remove handout reference from questions. Make sure question numbers aren't included on the Handout list to applicants during exam.</p> <p>Submit original questions for Modified questions to verify they were modified IAW ES 1021. Questions submitted.</p>																