

APPENDIX J

**TVA's Corporate Training,
"Radiochemical laboratory Analyst Fundamental
Assessment Exam" for Browns Ferry,
Sequoyah and Watts bar.**

RADIOCHEMICAL LABORATORY ANALYST

FUNDAMENTAL ASSESSMENT EXAM

19

PURPOSE: To determine fundamental subject matter that needs to be incorporated into continuing training

FORMAT: Format utilized was total recall

- Best assessment of retained knowledges
- Format utilized by auditors

Divided into six subject areas

- Section 1--Principles of Chemistry & Basic Nuclear Physics
- Section 2--Analytical Instrumentation
- Section 3--Counting Room Instrumentation
- Section 4--Plant Chemistry
- Section 5--Gamma Spectroscopy
- Section 6--QA/QC

QUESTIONS: Selected from RLA Fundamentals Exam Bank

Evaluated by section

Question point values by section

- Section I 39 pts
- Section II 25 pts
- Section III 28 pts
- Section IV 47 pts
- Section V 48 pts
- Section VI 28 pts

- TOTAL 215 pts

RADIOCHEMICAL LABORATORY ANALYST

FUNDAMENTAL ASSESSMENT EXAM

BFN RESULTS

A. FAE EXAM SCORES

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
SCORES	SCORES	SCORES	SCORES	SCORES	SCORES
56%	44%	21%	60%	34%	39%
10%	60%	54%	49%	32%	36%
33%	20%	18%	52%	50%	14%
28%	40%	36%	55%	32%	46%
18%	40%	18%	43%	77%	50%
13%	56%	68%	56%	18%	14%
MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE
26%	43%	36%	53%	41%	33%

B. FAE QUESTIONS NOT ATTEMPTED

QUESTION No	SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
#1		1		1		1
#2	3	1			3	2
#3	1		3			5
#4	3	1	2		4	3
#5			1		2	4
#6					3	1
#7					2	DELETED
#8	3			1	5	
#9					1	
#10					4	
#11				1	2	
#12						

C. AVERAGE % CORRECT / QUESTION

QUESTION No	SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
#1	24/36=67%	12/24=50%	06/24=25%	04/18=22%	12/12=100	20/24=83%
#2	08/48=17%	10/12=83%	07/12=58%	04/12=33%	08/36=22%	06/54=11%
#3	00/24=00%	07/12=58%	08/30=27%	24/36=67%	39/54=72%	02/12=17%
#4	11/30=37%	13/18=72%	15/48=31%	13/42=31%	09/54=17%	08/24=33%
#5	01/18=06%	10/36=28%	05/12=42%	15/24=63%	06/12=50%	04/30=13%
#6	08/24=33%	06/18=33%	12/12=100	10/12=83%	03/18=17%	21/24=88%
#7	06/24=25%	07/24=29%	07/30=23%	15/36=42%	05/18=28%	DELETED
#8	04/30=13%			09/18=50%	02/12=17%	
#9				24/36=67%	10/12=83%	
#10				22/24=92%	02/12=17%	
#11				10/24=42%	14/24=58%	
#12					09/24=38%	

RADIOCHEMICAL LABORATORY ANALYST

FUNDAMENTAL ASSESSMENT EXAM

SQN RESULTS

FAE EXAM SCORES

A.

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
SCORES	SCORES	SCORES	SCORES	SCORES	SCORES
44%	24%	18%	33%	63%	57%
56%	20%	68%	43%	30%	39%
33%	20%	04%	38%	70%	68%
69%	48%	14%	55%	39%	14%
51%	60%	64%	40%	18%	00%
MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE
51%	34%	34%	42%	44%	36%

FAE QUESTIONS NOT ATTEMPTED

B.

QUESTION No	SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
#1		1	1	1	2	2
#2		2	3	1		3
#3		2		1	2	2
#4	1			1	1	2
#5				1	2	2
#6		1		1	3	DELETED
#7				2	1	
#8	3				2	
#9					3	
#10					1	
#11						
#12						

AVERAGE % CORRECT / QUESTION

C.

QUESTION No	SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
#1	28/30=93%	14/20=70%	09/20=45%	10/15=67%	08/10=80%	12/20=60%
#2	10/40=25%	04/10=40%	04/10=40%	00/10=00%	13/30=43%	10/45=22%
#3	08/20=40%	02/10=20%	10/25=40%	06/30=20%	31/45=69%	02/10=20%
#4	10/25=40%	04/20=20%	09/40=23%	09/35=26%	14/45=31%	08/20=40%
#5	11/15=73%	12/30=40%	05/10=50%	05/20=25%	04/10=40%	09/25=36%
#6	15/20=75%	06/15=40%	06/10=60%	03/10=30%	03/15=20%	10/20=50%
#7	10/20=50%	02/20=10%	04/25=16%	08/30=27%	04/15=27%	DELETED
#8	07/25=28%			01/15=07%	04/10=40%	
#9				26/30=87%	06/10=60%	
#10				20/20=100	00/10=00%	
#11				11/20=55%	10/20=50%	
#12					11/20=55%	

RADIOCHEMICAL LABORATORY ANALYST

FUNDAMENTAL ASSESSMENT EXAM

WBN RESULTS

A. FAE EXAM SCORES

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
SCORES	SCORES	SCORES	SCORES	SCORES	SCORES
23%	48%	07%	40%	23%	11%
36%	08%	29%	30%	00%	00%
23%	08%	18%	00%	24%	14%
46%	16%	04%	53%	04%	14%
MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE	MEAN SCORE
32%	20%	15%	31%	13%	10%

B. FAE QUESTIONS NOT ATTEMPTED

QUESTION No	SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
#1		3	1	2	2	2
#2			2	2	4	4
#3	1	3	2	2	2	4
#4	1	4	1	3	4	4
#5		1	3	1	2	3
#6		1	3	2	3	4
#7	1	1	2	2	3	DELETED
#8	3			2	2	
#9				1	2	
#10				2	2	
#11					2	
#12						

C. AVERAGE % CORRECT / QUESTION

QUESTION No	SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
#1	12/24=50%	03/16=19%	06/16=38%	03/12=25%	04/08=50%	08/16=50%
#2	12/32=38%	06/08=75%	02/08=25%	00/08=00%	00/24=00%	00/36=00%
#3	04/16=25%	00/08=00%	00/20=00%	05/24=21%	05/36=13%	00/08=00%
#4	06/20=30%	00/12=00%	09/32=28%	01/28=04%	00/36=00%	00/16=00%
#5	03/12=25%	05/24=21%	00/08=00%	07/16=44%	02/08=25%	03/20=15%
#6	03/16=19%	02/12=17%	00/08=00%	01/08=13%	00/12=00%	00/16=00%
#7	05/16=31%	04/16=25%	01/20=05%	08/24=33%	00/12=00%	
#8	05/20=25%			03/12=25%	02/08=25%	
#9				10/24=42%	04/08=50%	
#10				12/16=75%	04/08=50%	
#11				08/16=50%	02/16=13%	
#12					02/16=13%	

