INITIAL SUBMITTAL OF WRITTEN EXAMINATION

FOR THE LASALLE EXAMINATION - NOVEMBER 2000

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 1	295001	AK2.02	3.2/3.3	BOTH	040.00.05	3

Unit 2 is shutdown with the current conditions:

- 'A' RR pump running.
- All 'B' RR pump breakers are open.
- The total of 'A' loop indicated jet pump flows is 23 Mlb/hr.
- The total of 'B' loop indicated jet pump flows is 1.2 Mlb/hr.

Which of the following values should the total core flow recorder on 2H13-P603 indicate?

A. 24.2 Mlb/hr

B. 23.0 Mlb/hr

C. 21.8 Mlb/hr

D. 12.1 Mlb/hr

Answer:	Reference(s):	Question Reference(s):
C	Rx Vessel Inst, LP-040, Rev 0, pg. 19	New

Explanation: With a recirc pump breaker 'OFF,' the Forward/Reverse logic assumes that any flow sensed in this loop will be REVERSE flow. It will then subtract the flow from this loop from the other flow to determine core flow. Distractors are if flows are added, averaged, and low flow ignored.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 2	295001	AA2.06	3.2/3.3	BOTH	040.00.05	1

Which of the following nuclear boiler instrumentation indication becomes SIGNIFICANTLY MORE accurate as forced core flow circulation is reduced?

A. Narrow Range Reactor Water Level

B. Fuel Zone Reactor Water Level

C. Total Core Flow

D. Individual Jet Pump Flow

Answer:	Reference(s):	Question Reference(s):
B	**Rx Vessel Instrumentation, pg. 14**	**New**

Explanation: While all of the listed instrumentation utilizes dP from within the vessel, Fuel Zone Reactor Water Level instrumentation is adversely affected by the presence of jet pump flow. The remaining instrumentation would not be affected by an increase or decrease in core flow.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 3	295003	2.1.28	3.2/3.3	BOTH	005.00.10	1

Unit 1 is at rated power with a normal electrical lineup.

If Bus 141Y voltage drops to 65% of its normal voltage . . .

A. the SAT feed to 141Y will trip and the UAT feed will automatically close to restore voltage to all loads on the bus.

B. the UAT feed to 141Y will trip and the SAT feed will automatically close to restore voltage to all loads on the bus.

C. the SAT feed to 141Y will trip and the 0 DG will start and pick up the bus to restore voltage to essential equipment.

D. the UAT feed to 141Y will trip and the 0 DG will start and pick up the bus to restore voltage to essential equipment.

Answer:	Reference(s):	Question Reference(s):
C	LOR-1PM01J-A314 Rev 1	New

Explanation: If Bus 141Y voltage <69%, ACBs 1412 will trip, the 0 DG will start and ACB 1413 will close. The normal electrical power supply to 141Y is the SAT. The under voltage signal will also trip multiple non-essential loads.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 4	295003	AA2.03	3.2/3.5	BOTH	006.00.16	2

A loss of all Unit 1 125 DC battery chargers has occurred.

ASSUME equal loads of 25 amps are being supplied by each divisional battery.

Which of the following lists the expected relationship between the Unit 1 batteries' voltages?

A. Div 1 and Div 2 battery voltages approximately equal and greater than Div 3 battery voltage because of the smaller capacity of the Div 3 battery.

B. Div 2 and Div 3 battery voltages approximately equal and greater than Div 1 battery voltage because of the smaller capacity of the Div 1 battery.

C. Div 1 and Div 3 battery voltages approximately equal and greater than Div 2 battery voltage because of the smaller capacity of the Div 2 battery.

D. All battery voltages approximately equal because the capacity of the batteries are very close.

Answer:	Reference(s):	Question Reference(s):
A	DC, LP 06, Rev 1, pg. 25.	New

Explanation: With equal load, .batteries of equal capacity would have equal voltages. Batteries with lower capacity would have lower voltage. The Div 1 and Div 2 batteries are each rated for 1128 amp hours. The Div 3 battery is only rated for 92.8 amp hours.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 5	295005	AA1.02	3.6/3.6	BOTH	049.00.10	3

Unit 2 is starting up.

The turbine load is at 35% of rated capacity.

A short in the bypass jack causes the turbine bypass valves to sequentially open until all five bypass valves are open.

The turbine control valves throttle as designed reducing first stage pressure to 75 psig.

Which of the following describes the INITIAL plant response if a manual turbine trip were initiated at this time?

A. RPS will initiate a scram due to the turbine stop valves closing.

B. RPS will initiate a scram due to a collapse of the core voids.

C. PCIS will initiate an isolation due to elevated steam line flow.

D. PCIS will initiate an isolation due to reduced steam line pressure.

Answer:	Reference(s):	Question Reference(s):
B	**LOA-EH-201, Rev 4 pg. 14**	**New**

Explanation: When the bypass valves open, turbine load will decrease. The corresponding decrease in first stage pressure will bypass the TCV/TSV position scrams. With reactor power above the capacity of the turbine bypass valves, reactor pressure will increase. Reactor power will increase as core voids are collapsed. RPS will initiate a reactor scram due to the elevated pressure/flux. Steam line pressure/flow would not cause an isolation until after the reactor scrammed and pressure decreased below 854 psig with the Mode switch still in run.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 6	295006	AA1.01	4.2/4.2	BOTH	049.00.14	2

The plant is operating at 100% power, when a spurious signal causes a scram signal on RPS channel 'A' ONLY.

Which of the following responses correctly completes the following:

	The 'A' scram pilot solenoid valves (117's) are:	The 'B' scram pilot solenoid valves (118's) are:
A.	Energized	Energized
B.	Energized	DE-energized
C.	DE-energized	Energized
D.	DE-energized	DE-energized

Answer:	Reference(s):	Question Reference(s):
C	RPS, LP 49, Rev 0, pg. 13	049.00.14 001

Explanation: RPS 'A' powers the 'A' scram pilot solenoids, and the scram pilot solenoids are de-energized on a trip. The 'B' scram pilot solenoid valves are unaffected by the 'A' RPS System.

(6)

049.00.14 001

(1 Point) The plant is operating at 100% power, when a spurious signal causes a scram signal on RPS channel 'A' only. Which one of the following responses correctly completes the following:

The 'A' scram pilot solenoid valves (117's) are _____ and
The 'B' scram pilot solenoid valves (118's) are _____.

✓A. DE-energized; energized
B. energized; DE-energized
C. energized; energized
D. DE-energized; DE-energized

RPS 'A' powers the 'A' scram pilot solenoids, and the scram pilot solenoids are de-energized on a trip. The 'B' scram pilot solenoid valves are unaffected by the 'A' RPS System.

Reference: LP-49 Section III.F

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 7	**295007**	**AK2.01**	**3.5/3.7**	**BOTH**	**074.00.05**	**2**

Unit 1 conditions are as follows:

- Rx power: 28 %
- T-G Load: 365 MWE
- Load Set 390 MWE
- Bypass position: 0 %

The operator withdraws a control rod which increases Rx power to 29 %.

Which of the following describe the expected response of the Turbine EHC Control System?

A. The Bypass Valves will open by whatever amount is required to maintain RX pressure.

B. The Turbine Control Valves will open by whatever amount is required to maintain RX pressure.

C. The Bypass Valves will close by whatever amount is required to maintain RX pressure.

D. The Turbine Control Valves will close by whatever amount is required to maintain RX pressure.

Answer:	Reference(s):	Question Reference(s):
B	**EHC Elec, LP 74, Rev 1, pg.4 & 5**	**INPO EB No. 762**

Explanation: Load demand is greater than current load. As reactor power increases, turbine control valves will open to offset the increased steam production.

(7)

KaNumber	QuestionId	ExamType	ExamDate
..295007.AK2.01	762	ILO	03/27/1998

AbbrevLocName	NSSSVendor	NSSSType
GRAND GULF 1	GE	BWR

CognitiveLevel	ExamLevel	RefMaterial	ParentQuestionId
	R		

KaSegment1	KaSegment2	KaSegment3	KaSegment4	KaSegment5	KaRevision
		295007	AK2	01	

QuestionStem

Plant conditions are as follows:

MODE: Mode 1
Rx power: 28 %
T-GLoad: 365 MWE
Load Demand 390 MWE
Bypass position: 0%

All other parameters are per plant design.

The operator withdraws a control rod which increases Rx power to 29 %.

QuestionComment

Answer

The Turbine Control Valves will open by whatever amount is required to maintain Rx pressure.

Distract1

The Bypass Control Valves will open by whatever amount is required to maintain RX pressure.

Distract1Comment

Distract2

The Bypass Control Valves will close by whatever amount is required to maintain RX pressure.

Distract2Comment

Distract3

The Turbine Control Valves will close by whatever amount is required to maintain Rx pressure.

Distract3Comment

JJYPO

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 8	295007	AA2.02	4.1/4.2	BOTH	074.00.21	2

Unit 1 reactor is operating at 100% power with the following conditions:

- The turbine throttle pressure signal to the selected EHC pressure regulator fails low (sends 0 psig signal).
- All other equipment functions as designed.
- No operator actions are taken

Which of the following describes the reactor power/pressure response?

A. Increases until scram conditions met.

B. Increases and stabilizes at slightly higher value.

C. Decreases until isolation conditions met.

D. Decreases and stabilizes at slightly lower value.

Answer:	Reference(s):	Question Reference(s):
B	LOA-EH-101, Rev 4, pg. 13 EHC Elec, LP 74, Rev 1, pg. 29	New

Explanation: Given the described EHC malfunction, the backup pressure regulator would assume control (its output would exceed the controlling output) and power/pressure would stabilize at only a slightly higher level..

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 9	295008	AA1.09	3.3/3.3	BOTH	027.00.03	2

Unit 2 is in Condition 4.

- Reactor water level is being controlled between 70 and 90 inches.
- A plant operator discovered a leak on reactor water cleanup suction line.
- The leak was stopped by closing the RWCU inboard and outboard isolation valves (2G33-F001 and 2G33-F004).
- Reactor water level is increasing due to CRD cooling flow.
- A RHR is running in the shutdown cooling mode.

Which of the following flow paths could be utilized to drain the vessel to MAINTAIN the desired reactor water level?

A. Main Steam Line drains (2B21-F016 and 2B21-F019) to the main condenser.

B. Reverse flow from the RT return header to the main condenser via the RWCU blowdown valve (2G33-F033).

C. A RHR Vent Downstream/ Upstream Valves (2E12-F073A and 2E12-F074A) to the suppression pool.

D. Safety Relief Valves (2B21-F013H/K/P) to the suppression pool.

Answer:	Reference(s):	Question Reference(s):
C	LOP-RH-07, Rev 45, pg. 10 LOP-FC-09, Rev 10, pg. 4	New

Explanation: Only RHR is available to reduce vessel level from the choices provided. The upper level band is below the Main Steam Lines so MSL drains and SRVs would not be able to drain water without exceeding the level band. RWCU returns to the feedwater header upstream of two in-series check valves (1B21-F010A/B & 1B21-F032A/B) so reverse flow would not be possible.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 10	295009	AK3.01	3.2/3.3	BOTH	023.00.10	1

Which of the following interlocks is designed to reduce reactor power in response to a trip of an operating feedwater pump from 100% power?

A. Low RR Pump NPSH Runback

B. Low Feed Flow Downshift

C. Loss of Feed Flow Runback

D. Low Reactor Water Level Downshift

Answer:	Reference(s):	Question Reference(s):
C	RR Flow Control; LP 23, Rev 1, pg. 15	New

Explanation: The output of the loop flow controller function generator is applied to the valve position limiter. Normally, this limiter is bypassed, but if less than two reactor feed pumps are operating and reactor vessel level drops to the low level alarm point (31.5") the contact bypassing valve position limiter will operate to close the flow control valve to the 15% (U2 18%) position. The limiter functions as a loss of feed flow runback. If one feed pump trips and the remaining pump is unable to maintain level, the limiter will reduce recirc flow and thereby reduce reactor power to a value where the remaining turbine driven reactor feed pump can restore level before the reactor scrams on low level.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 11	295010	AK2.04	2.6/2.8	BOTH	093.00.12	1

Unit 1 is at rated conditions.

Nitrogen makeup is aligned to the drywell with the pressure controller in automatic set for +0.2 psig.

The controller fails such that the regulating valve slowly opens fully.

With NO operator action, which of the following will be the first to terminate the nitrogen flow to the drywell?

A. High nitrogen flow isolation of the makeup regulating valve.

B. Low temperature outlet isolation of the makeup regulating valve.

C. High drywell pressure isolation of the nitrogen makeup flowpath.

D. Excess flow check valve closure in the nitrogen makeup flowpath.

Answer:	Reference(s):	Question Reference(s):
C	LOA-PC-201, Rev 02, pg.16 LOP-VQ-04, Rev 12, pg.44	New

Explanation: The nitrogen makeup isolation valves will close when drywell pressure reaches 1.69 psig. There is no high nitrogen flow isolation of the regulating valve. Low temperature is an alarm only.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 12	295010	AK3.03	3.2/3.5	BOTH	092.00.05	1

Following a loss of primary containment cooling, the crew is preparing to perform non-emergency containment venting to control drywell pressure.

While venting the drywell in this condition, the operator is directed to monitor the Standby Gas Treatment or Stack WRGM to . . .

A. maintain sufficient dilution flow.

B. stay below the toxic gas release limits.

C. maintain sufficient stack flow.

D. stay below radiation release limits.

Answer:	Reference(s):	Question Reference(s):
D	LOP-VQ-04, Rev 12 pg.40	New

Explanation: Per the referenced procedure, the operator would monitor vent stack release rate to ensure that limits are not exceeded.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 13	295014	AK1.01	3.7/3.8	BOTH	769.00.01	2

Unit 2 is starting up with the following conditions:

- Coolant temperature is 165°F.

Which of the following describes expected crew response if the reactor were to become prompt critical at this time?

The crew would . . .

A. Ensure the reactor has scrammed and power has turned.

B. Insert the last one or two control rods withdrawn to turn reactor power.

C. Wait for Alpha-T to turn reactor power before withdrawing any more control rods.

D. Wait for Alpha-V to turn reactor power before withdrawing any more control rods.

Answer:	Reference(s):	Question Reference(s):
A	Rx Theory	New

Explanation: Prompt criticality would cause a reactor scram (as the IRMs reached scram setpoint) due to the very short reactor period.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 14	295015	AK1.02	3.9/4.1	BOTH	400.00.14	1

During an ATWS, the operator is directed NOT to cool down until the reactor is shutdown without boron injection or the cold shutdown weight of boron has been injected.

The reason for this requirement is ...

A. Positive reactivity will be added due to the water in the reactor being cooler and more dense.

B. Core flow may become restricted due to the cooler water causing the boron to come out of solution and deposit on core surfaces.

C. Higher reactor pressure helps mixing of the boron due to the higher steaming rates and minimizes the time to complete the shutdown.

D. Lowering reactor pressure would cause the water in the reactor to "swell", thus lowering the boiling boundary and increase the chance to damage fuel.

Answer:	Reference(s):	Question Reference(s):
A	LP LGA010, pg.14	LaSalle 9501 ILT Exam Question #119

Explanation: Boron plating on core surfaces is not a threat to adequate core flow. Elevated reactor pressure does not improve boron mixing. RPV "level swell" is not considered to impact core cooling.

(14)

119. 295015AK1.02 001

During an ATWS, why is the operator directed NOT to cool down until the reactor is shutdown without boron injection or the cold shutdown weight of boron has been injected?

A. Cooling down the reactor with an ATWS in progress will add positive reactivity due to the water in the reactor being cooler and more dense.

B. Core flow may become restricted due to the cooler water causing the boron to come out of solution and depositing on core surfaces.

C. Higher reactor pressure helps mixing of the boron due to the higher steaming rates and minimizes the time to complete the shutdown.

D. Lowering reactor pressure would cause the water in the reactor to "swell", thus lowering the boiling boundary and increase the chance to damage fuel.

REF: L.P. LGA-10 Failure to Scram Rev. 3 page 26
Answer: A

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 15	295015	AK3.01	3.4/3.7	BOTH	045.00.05	1

During performance of LGA-NB-01, Alternate Rod Insert, Single Rod Insertion, the operator is directed to place the MODE SELECT switch in BYP for the Rod Worth Minimizer.

The above action bypasses . . .

A. Nuclear Instrumentation rod blocks to allow all rod motion.

B. Rod insert blocks to allow inward rod motion.

C. The settle function to speed the rate of rod insertion.

D. The single notch function to speed the rate of rod insertion.

Answer:	Reference(s):	Question Reference(s):
B	**LGA-NB-01 Rev 5 pg.10**	**New**

Explanation: Placing the MODE SELECT switch in BYP will bypass the Rod Worth Minimizer bypassing all insert rod blocks. Response A is incorrect because rod withdraw blocks could still be generated by nuclear instrumentation. The RWM has no impact on the settle or single notch functions (of RMCS).

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 16	295016	AA1.01	3.8/3.9	BOTH	049.02.20	1

A severe fire with thick smoke forced an immediate evacuation of the control room. The reactor was not scrammed prior to exiting.

Which of the following is the PREFERRED method of scramming the reactor from outside of the control room?

A. Open and reclose the IRM supply breakers at the DC distribution panels.

B. Open and reclose the RPS output breakers at the RPS distribution panel.

C. Activate the ARI system in the Auxiliary Equipment Room.

D. Vent the scram air header in the Reactor Building.

Answer:	Reference(s):	Question Reference(s):
B	LOA-RX-101, Rev 3, pg. 5	LaSalle 9501 ILT Exam Question #87 Modified

Explanation: Distracters are credible but are not in accordance with the procedure.

(126)

87. 295016AA1.01 001

A severe fire with thick smoke forced an immediate evacuation of the control room. The reactor was not scrammed prior to exiting.

Which of the following is the preferred method of scramming the reactor outside of the control room?

A. Open the RPS feeder breakers at the RPS distribution panels.

B. Trip both RPS motor-generator sets locally.

C. Vent the scram air header in accordance with LGA-NB-01.

D. Open the ARI system feeder breakers at 111Y and 112Y.

REF: LaSalle abnormal operating procedure, LOA-RX-01, page 2, Subsequent Operator Actions.

Answer: A

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 17	295017	AK2.08	2.8/3.3	BOTH	050.00.05	1

A failure of the RHR heat exchanger has resulted in an offsite release above the alarm setpoint.

With NO operator action, the SPDS RADIATION RELEASE box letters will . . .

A. change from green to red.

B. change from green to yellow.

C. change from cyan to red.

D. change from cyan to yellow.

Answer:	Reference(s):	Question Reference(s):
A	CX, LP 50, pg. 8	New

Explanation: The radiation release box is normally green and will change to flashing red when the alarm setpoint has been exceeded. The box will change from flashing red to solid red after the alarm is acknowledged. The box will change to blue if insufficient inputs are valid.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 18	295017	AK3.01	3.6/3.9	BOTH	118.00.05	2

Unit 1 has been operating with a known leaking fuel assembly.

An increase in the assembly leakage rate results in an Off Gas System automatic isolation.

Which of the following describes the purpose of the isolation and the initial plant response without operator action?

A. Prevent explosions due to ignitable concentrations of hydrogen; main generator output will decrease.

B. Prevent explosions due to ignitable concentrations of hydrogen; main generator output will increase.

C. Prevent radiation release to the environs in excess of short-term limits; main generator output will decrease.

D. Prevent radiation release to the environs in excess of short-term limits; main generator output will increase.

Answer:	Reference(s):	Question Reference(s):
C	LaSalle UFSAR Section 7.7.14.1.1.1.c	New

Explanation: A leaking fuel assembly will cause radiation levels to increase. The OG Post Treatment Monitor causes an isolation to prevent radiation release to the environs in excess of short-term limits

With OG isolated, noncondensibles will collect in the main condenser causing pressure to increase. This will cause the available work from the main turbine to decrease due to a lower differential pressure which will cause generator output to decrease.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 19	295020	AK1.02	3.5/3.8	BOTH	023.00.16	2

Unit 1 is at 80% power.

A Group II isolation was caused by an invalid signal.

The Unit Supervisor directs a 10% power reduction to reduce the containment heat load.

Which of the following describes the method(s), if any, AVAILABLE to the Unit NSO to reduce reactor power by only 10%?

A. Control rod insertion only.

B. Flow control valve closure only.

C. Both flow control valve closure and control rod insertion.

D. Neither flow control valve closure nor control rod insertion.

Answer:	Reference(s):	Question Reference(s):
A	RRFC, LP 23, Rev 1, pg. 32	New

Explanation: One of the results of a Group II isolation is the isolation of the RR FCV hydraulic lines. This prevents RR FCV motion. There would be no restriction to control rod insertion. Only Answer A meets these conditions.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 20	295020	AK3.02	3.3/3.5	BOTH	090.00.05	1

Unit 2 is at 100% power.

Group 1 AND Group 10 isolations are caused by an instrument failure.

The failure requires extended operation aligned to the backup instrument air supply.

The operators should monitor . . .

A. Drywell pressure because instrument air is less dense than nitrogen and drywell pressure may go negative.

B. Drywell oxygen concentration because use of drywell pneumatics or leaks in drywell pneumatic piping could raise oxygen levels.

C. IN Receiver pressure because low receiver pressure would be a predictor of inboard MSIV closure.

D. Bottle bank pressures because the bottles may depressurize due to leaks in 100 psig header piping.

Answer:	Reference(s):	Question Reference(s):
B	**LOA-IN-201, Rev1 pg.12**	**New**

Explanation: As referenced in LOA-IN-201, Continued use if Instrument Air to supply the Drywell Pneumatic System will gradually increase the Primary Containment atmosphere oxygen content and pressure. Bottle banks do not supply regulated head piping so leaks would not be a factor. The IA cross tie is after the IN receiver so it would not predict a loss of pressure.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 21	295021	AK1.04	3.6/3.7	BOTH	049.00.18	1

Unit 2 is in Condition 4 with the following conditions:

- Reactor water level is 40 inches on the Narrow Range.
- Reactor Recirculation pumps are off.
- A loss of shutdown cooling has occurred due to an erroneous signal.

The Unit Supervisor should direct the NSO to raise reactor water level to +75 inches on the Shutdown Range to . . .

A. Utilize the most accurate level indication to assist in trouble shooting.

B. Lower the bulk temperature of the vessel to prevent inadvertent mode change.

C. Limit temperature stratification by inducing natural circulation.

D. Provide additional inventory in anticipation of steam production.

Answer:	Reference(s):	Question Reference(s):
C	LOA-RH-101 Rev 3, pg.7	New

Explanation: Per reference, level must be verified to be above +50 inches on shutdown range with no forced cooling to prevent excessive temperature stratification.

LaSalle County Station
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Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 22	295023	AK2.07	3.6/3.9	BOTH	095.00.01	1

During Unit-2 core reload, a fuel bundle is inadvertently dropped while attempting to place it in the core.

Bubbles are observed rising from the area of the dropped bundle.

Alarms are received for:

- Div I and II Fuel Pool Ventilation Radiation (PRM reading 23 mr/hr)
- Refuel Floor Area High Radiation (ARM reading 1200 mr/hr)
- Reactor Building Overhead Crane Area Radiation Monitor (reading 250 mr/hr)

The operators should verify the . . .

A. Control Room Ventilation System automatically shifts to "purge" and VC/VE Emergency Makeup train starts.

B. Reactor Building Overhead Crane down motion stopped and automatically moves to South end of the refuel floor.

C. Fuel grapple automatically retracts to the "full up" position and Refuel Bridge moves to South end of refuel floor.

D. Reactor Building Ventilation System isolates and Standby Gas Treatment System auto starts.

Answer:	Reference(s):	Question Reference(s):
D	**LOP-VG-01, Rev 8. pg. 2** **LOA-FH-001, Rev 0., pg. 3,5**	**New**

Explanation: VC/VE have no automatic actions on FC rad or ARMs. Overhead crane upward movement, not lateral movement is halted. Fuel grapple and bridge have no automatic actions on FC rad or ARMs.

(22)

23. 295023G010 001

With a Unit-2 core reload in progress, a fuel bundle is inadvertently dropped while attempting to place it in the core. As a result, bubbles are rising from the dropped bundle. The Fuel Pool Ventilation HI-HI radiation alarms have been received in the control room.

What automatic actions are to be verified by the operator?

A. Reactor Building Ventilation System isolates and SBGT auto starts.

B. The overhead crane automatically moves toward the North or South end of the refuel floor.

C. The fuel grapple automatically retracts to the "full up" position.

D. The Unit-2 refuel bridge automatically moves to the North end of the refuel floor.

REF: LOA ZZ-08, page 1.
Answer: A

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 23	295025	EA1.01	2.9/3.0	BOTH	410.00.01	3

Unit One is in Condition 3 with the following conditions:

- Reactor water level is 68".
- Reactor pressure is 645 psig and increasing very slowly.
- A rupture in the drywell has depressurized all low pressure IN piping and accumulators.

The operator should control reactor pressure by . . .

A. Cycling SRVs using the hand switches on 1H13-P601.

B. Cycling Main Steam Line drain valves on 1H13-P601.

C. Controlling Main Turbine Bypass Valves using the bypass jack.

D. Placing Reactor Core Isolation Cooling in pressure control mode.

Answer:	Reference(s):	Question Reference(s):
B	**LGA-001 Rev 00**	**New**

Explanation: Only the MSL drains are available from the supplied list. With no low pressure IN available, the SRVs cannot be operated by the hand switches. The inboard MSIVs will close preventing use of the BPVs. RCIC is unavailable due to the high level.

LaSalle County Station
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Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 24	**295026**	**EK1.01**	**3.0/3.4**	**BOTH**	**413.00.04**	**2**

Which of the following conditions could be expected to cause RHR system damage?
Provide LGA Fig V

	Suppression Chamber Pressure (psig)	Suppression Pool Temperature (°F)
A.	0	195
B.	5	210
C.	10	230
D.	15	240

Answer:	Reference(s):	Question Reference(s):
C	**LGA Figure V**	**New**

Explanation: Only C will be above the RR NPSH limit.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 25	295028	2.4.18	2.7	RO	400.00.14	2

Unit 1 has just scrammed due to a large LOCA.

Drywell Temperature has risen to 350 degrees Fahrenheit.

What are the concerns, if any?

A. Core flow instrumentation is no longer reliable.

B. Drywell temperature instrumentation is no longer reliable.

C. The MSIVs may not function.

D. The SRVs may not function.

Answer:	Reference(s):	Question Reference(s):
D	LP LGA-003, Rev 14, pg. 22	090.00.24 001 (modified)

Explanation:

A. Incorrect — Core flow instrumentation is not affected by drywell temperature.

B. Incorrect — Drywell temperature instruments are not INOP at 340 Deg. F

C. Incorrect — MSIV's are not the limiting component.

D. Correct — The design limit for the Drywell is 340 Deg F. The SRV solenoids are not environmentally qualified above these temperatures and may not function.

25

090.00.24 001

(\. Point) Unit 1 has just scrammed due to a large LOCA. Drywell Temperature has risen to 350 degrees Fahrenheit. What are the concerns, if any?

✓A. Drywell Temperature has exceeded the design limit of 340 degrees Farenheit and the SRV's may not function.
B. At 340 degrees Farenheit all drywell temperature monitoring becomes INOP.
C. Drywell Temperature has exceeded the design limit of 135 degrees Farenheit and the MSIV's may not function.
D. At 135 degrees Farenhiet the RPV level instrumentation becomes INOP.

A. Correct The design limit for the Drywell is 340 Degrees F. The SRV solenoids are not environmentally qualified above these temperatures and may not function.
B. Incorrect Drywell temperature instruments are not INOP at 340 Deg. F
C. Incorrect 135 Deg F is not the design limit of the Drywell, and MSIV's are not the limiting component.
D. Incorrect RPV level instrumentation will not be INOP unless saturation conditions in the Dywell have been reached.

Tech. Spec. 3.6.1.7 Basis

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 26	**295030**	**EK1.03**	**3.8/4.1**	**BOTH**	**421.00.04**	**2**

Which of the following conditions violates the Heat Capacity Temperature Limit Curve?
Provide Detail M from LGA-003 Heat Capacity Temperature Limit

	Suppression Pool Level	Suppression Pool Temperature	Reactor Pressure
A.	0 ft	180°F	300 psig
B.	0 ft	200°F	500 psig
C.	-10 ft	170°F	700 psig
D.	-10 ft	190°F	600 psig

Answer:	Reference(s):	Question Reference(s):
D	**LGA-003 Rev 0**	**New**

Explanation: Only D will violate the HCTL. A & C are below both curves. B is below the NORMAL pool level curve.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 27	295032	EA1.05	3.7/3.9	BOTH	418.00.02	3

Unit 2 was at rated conditions.

The operators noted Main Steam Line Tunnel temperature had increased to 165°F.

The crew:

- Scrammed the reactor
- Closed all MSIVs and MSL drains.
- Closed the Feedwater Line Outboard Isolation Valves
- Started RCIC in level control mode.

The STA reports that tunnel temperature is NOT decreasing.

The Radwaste operator reports that the Aux. Bldg Floor Drain Sump 0DA01 is pumping down continuously.

Which of the following actions should be taken?

A. Cooldown at greater than 100°F/hr to reduce pressure boundary leakage.

B. Reset the reactor scram to stop potential leakage into the Steam Tunnel.

C. Shutdown and isolate RCIC to stop potential leakage into the Steam Tunnel.

D. Shutdown and isolate RWCU to stop potential leakage into the Steam Tunnel.

Answer:	Reference(s):	Question Reference(s):
D	LGA-002 Rev 00	New

Explanation: RWCU returns to the vessel via the feedwater line in the steam tunnel. RCIC and CRD could not discharge into this area. No area temperatures are above Max safe so exceeding 100°F/hr is not allowed by the EOPs.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 28	295033	EK3.05	3.6/4.5	BOTH	400.00.14	1

Why do radiation levels in the Secondary Containment in excess of Maximum Normal Radiation Levels require a GSEP Unusual Event be declared?

The radiation level would . . .

A. be indicative of a primary system leaking.

B. be indicative of a secondary system leaking.

C. impede plant operations.

D. impede system operation.

Answer:	Reference(s):	Question Reference(s):
A	LZP-1200-1, Rev 23, pg.38	New

Explanation: Readings of greater than the maximum normal temperature or radiation levels are indicative of the primary system discharging into the reactor building. Radiation levels in excess of 40 R/hr are determined to impede plant/system operation.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 29	295034	EK2.06	3.9/4.2	BOTH	091.00.08	2

Unit 1 is starting up with the following conditions:

- Drywell inerting is in progress.
- Drywell pressure is 0.3 psig.

The 'DIV 2 RB VENT RAD HI-HI' alarm energizes due to both Division 2 Reactor Building Ventilation Radiation trip units reaching their trip setpoint.

What would the automatic response of Primary Containment Vent and Purge Valves be, if any? (Consider ONLY the actions associated with this alarm.)

A. Neither the Inboard nor the Outboard Isolation Valves close.

B. Inboard Isolation Valves close.

C. Outboard Isolation Valves close.

D. Inboard and Outboard Isolation Valves close.

Answer:	Reference(s):	Question Reference(s):
B	**LOR-1H13-P601-E204, Rev 0.**	**53.00.15 001**

Explanation: With both C and D channels in the tripped condition, Reactor Building Ventilation System Inboard Isolation Dampers, 1(2)VR04YB and 1(2)VR05YA close, both Standby Gas Treatment System Trains start, and the Primary Containment Vent and Purge Inboard Isolation Valves close.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 30	295036	EK1.01	2.9/3.1	BOTH	121.00.20	2

Given a constant input of contaminated water to the Unit 1 RB Northeast Floor Drain Sump (1RE07) AND a failure of both associated sump pumps, contamination/radiation levels in the room will .....

A. increase because the sump will eventually overflow to the room floor.

B. increase because the sump will eventually overflow to the RBEDT which has minimal shielding.

C. not be affected because the sump will overflow to the RB raceway sumps before top of 1RE07 sump is reached.

D. not be affected because the sump is sealed and excess input will backup to the source.

Answer:	Reference(s):	Question Reference(s):
A	LaSalle UFSAR Appendix J LOR-1PM13J-A304 Rev 0	New

Explanation: Per references, input to corner room floor drain sumps in excess of sump pump capacity will overflow to room floor. The RBEDT is above the elevation of the floor drain sumps. There is no overflow from the 1RE07 to the raceway sumps. The 1RE07 is not a sealed sump.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 31	295037	EK2.14	3.6/3.9	BOTH	047.00.06	2

Unit 2 is experiencing an ATWS.

- RMCS has tripped.
- Actions were taken to rescram the reactor.

Which of the following can be utilized to determine if ALL control rods were inserted?

A. Full Core Display AND Rod Worth Minimizer CRT

B. Four-Rod Display AND Full Core Display

C. Rod Sequence Control Display AND Rod Worth Minimizer CRT

D. Rod Sequence Control Display AND Four-Rod Display

Answer:	Reference(s):	Question Reference(s):
A	LOA-RM-201 Rev 3, pg.18,19	New

Explanation: RPIS is still functional with RMCS tripped. Only the full core display and RWM CRT would be available for all control rod position determination. RSCS was recently abandoned in place. The Four-Rod display would only be able to show the currently selected four-rod group with RMCS tripped.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 32	295038	EA1.02	3.0/3.8	BOTH	721.02.20	1

The Shift Manager is filling out a NARS due to a High Off-site Release from the Unit 2 Reactor Building and has requested you to determine wind speed and wind direction.

Which of the following describes the control room panel(s) where the information must be obtained?

A. 1PM10J for both parameters.

B. 2PM10J for both parameters.

C. 1PM10J or 2PM10J for both parameters.

D. 1PM10J for Wind Direction and 2PM10J for Wind Speed.

Answer:	Reference(s):	Question Reference(s):
A	LOS-AA-S101, Rev 4, pg. 16	New

Explanation: The indications are only available on Unit 1 control room panel 1PM10J. This question addresses a difference between the units and the ability to determine meteorological data.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 33	295038	EA2.04	4.1/4.5	BOTH	427.00.01	3

A transient has occurred causing Unit 2 reactor fuel failure.

- The crew closed the MSIVs and MSL drains due to elevated steam line radiation ten minutes ago.
- Groups II, IV, VII, and X isolations initiated and were verified to be complete ten minutes ago.
- The STA reports that the SBGT WRGM value has increased in the last ten minutes to 7E6 µCi/sec.

The most likely source of the increasing release rate is leakage FROM the . . .

A. Reactor Coolant Pressure Boundary TO the Primary Containment.

B. Primary Containment TO the Secondary Containment.

C. Reactor Coolant Pressure Boundary TO Primary Containment Cooling System.

D. Secondary Containment TO the Auxiliary Building.

Answer:	Reference(s):	Question Reference(s):
B	**LOP-PC-03, Rev 12 pg.15**	**New**

Explanation: . The isolations that occurred are all actuated by elevated containment pressure. Leakage from the primary containment to the secondary containment (reactor building) would be expected. In order to be indicated on the SBGT WRGM, the leakage must be discharged into the reactor building. Neither answer A nor C meet this criteria. There would be no likely source of radiation entering the secondary containment from the Auxiliary Building.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 34	500000	EA1.03	3.4/3.2	BOTH	094.00.05	1

The procedure for Operation of the Post-LOCA Combustible Gas Control System provides a precaution that "during a LOCA Environment, flows may be increased up to 200 scfm."

Which of the following is the reason for this restriction on system flow?

A. Higher flow rates may result in excessive reaction chamber shell temperatures and an automatic shutdown of the HG System.

B. The electric heaters are sized to produce the temperatures necessary for recombination only at flow rates of 200 scfm or less.

C. Higher flow rates entrains moisture droplets in the gas steam, reducing the amount of hydrogen recombination that occurs.

D. The residence time of the gases in the reaction chamber may not be sufficient to provide proper recombination of the hydrogen.

Answer:	Reference(s):	Question Reference(s):
D	LOP-HG-02, Rev 8, pg. 2	094.00.20 002

Explanation: Flows should not exceed 200 scfm such that the gas residence time in the reaction chamber remains sufficient.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 35	600000	AK3.04	2.8/3.4	BOTH	125.00.20	1

Which of the following identifies the individual(s) and location to which they should be dispatched in response to a Unit 1 Red NON-CO2 fire panel alarm?

	Individual(s)	Location
A.	fire brigade	affected area
B.	operator	Turbine Building Fire Cage
C.	operator	affected area
D.	fire brigade	Turbine Building Fire Cage

Answer:	Reference(s):	Question Reference(s):
D	**LOA-FP-101, Rev 3, pg.6 & 51**	**125.02.20 001 (modified)**

Explanation: Only Answer D meets the requirements of LOA-FP-101.

35

125.02.20 001

The operator response to a fire panel alarm that is coded red is which of the following?

✓A. Dispatch the fire brigade to the affected area.

B. Declare equipment in the affected area inop.

C. Dispatch an operator to the affected area to investigate.

D. Declare an unusual event.

Dispatch the fire brigade to the affected area.

125.02.20
validated erv, 3/29/00

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	A	C	B	B	A	A	C	D	D

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 36	600000	AA1.08	2.6	RO	125.00.01	1

Which of the following Unit 2 fire alarms would indicate that a Halon system had an initiation signal present?

A. H2 Seal Oil Unit Deluge Trouble

B. MPT 2E Deluge Trouble

C. QA Archives Room Deluge Trouble

D. Turb Brg Area Deluge Trouble

Answer:	Reference(s):	Question Reference(s):
C	LOA-FP-201, Rev 3 pg.63,81,83,84	New

Explanation: The three distracters listed are all lube oil fire concerns. Only the archives room is a class A fire concern. Of the alarms listed, only the QA Archives room is protected by a Halon fire suppression system. All others listed are water systems.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 37	201001	K1.10	2.8/2.8	BOTH	024.00.16	1

Following a reactor scram, the pressure equalization valves associated with the CRD Hydraulic system function to ...

A. Repressurize the scram discharge volume to minimize introduction of air and foreign materials into the system.

B. Equalize pressure between the scram supply header and the cooling water header to ensure cooling flow is not lost during a scram.

C. Equalize pressure between the drive water header and scram discharge volume to prevent inadvertent rod movement.

D. Repressurize the CRD HCU exhaust header to prevent excessively high control rod velocity during subsequent normal rod movement.

Answer:	Reference(s):	Question Reference(s):
D	**RD Hyd LP-25, pg. 6**	**25.00.05 006**

Explanation: D is correct per the reference. Answer A is incorrect as the valves only allow water into the exhaust header. Answer B and C are incorrect as these valves have nothing to do with scram supply header, drive water header or SDV pressure.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 38	202002	K2.02	2.6/2.6	BOTH	023.00.16	1

Given that a Backup Subloop is available, which of the following conditions will cause the reactor recirc hydraulic system to be shutdown with the FCV hydraulically locked in position?

A. Loss of Control Signal to the Servo Controller

B. Loss of pump outlet pressure

C. Loss of DC power

D. Low Low Reservoir Level

Answer:	Reference(s):	Question Reference(s):
C	LOP-RR-03, Rev 8, pg.5	New

Explanation: Only a loss of DC power will result in a direct HPU shutdown and FCV lockup. The distracters listed will cause a transfer to the backup subloop.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 39	202002	A2.07	3.3/3.3	BOTH	023.00.14	2

Unit 2 is at rated conditions when an electrician inadvertently disconnects the 2A TDRFP discharge valve open limit switch causing alarm 2H13-P603-A410, 2A/2B TDRFP NOT READY, to annunciate in the control room.

Which of the following describes the response of the RR FCVs to this event?

A. ONLY the 'A' RR FCV will run back to minimum position.

B. ONLY the 'B' RR FCV will run back to minimum position.

C. Both 'A' and 'B' RR FCVs will run back to minimum position.

D. Both 'A' and 'B' RR FCVs will remain at their present position.

Answer:	Reference(s):	Question Reference(s):
D	LOR-1H13-P603-A410	New

Explanation: The event would not cause a level transient. As such, the FCV runback circuit would not be energized and both FCVs would remain at their present position. The 2A TDRFP M/A station would transfer to manual but the transfer should be bumpless.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 40	203000	A2.17	3.3/3.3	BOTH	064.00.21	1

Immediately following exercising of a 1A RHR system valve for post maintenance testing, a low pressure alarm is received for the 1A RHR system.

With respect to the 1A RHR system, which of the following actions is appropriate?

A. The crew should wait until the water leg pump restores system pressure and should make an entry in the unit log that the alarm was received and subsequently cleared.

B. The crew should verify the water leg pump restores system pressure and should send an operator to check the high point vent to verify piping filled and vented.

C. The crew should verify the 1A RHR pump is still operable by running it per the applicable portions of the quarterly surveillance.

D. The crew should lineup the CY fill system to the 1A RHR injection line piping and keep system in this configuration until the water leg pump can be repaired.

Answer:	Reference(s):	Question Reference(s):
B	LOS-RH-Q2, Rev 30, pg.4	New

Explanation: Per the reference procedure, if a LPCI low pressure alarm annunciates while exercising valves, system, shall be vented per applicable steps of LOS-RH-M1 to verify discharge piping to injection valve is filled.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 41	203000	A4.02	4.1	RO	064.00.14	2

Unit 1 experienced a LOCA including the following:

- Drywell pressure reached 5 psig.
- The operator opened 1E12-F027B, B RHR SP Spray Isol.
- The operator throttled 1E12-F024B, B RHR Test to SP Vlv until flow indicated 6000 gpm.
- Several minutes later Annunciator 1H13-P601- B405, DIV 2 RHR INJ VLV LO RX PRESS PERMISSIVE is received.

Which of the following statements describes the response of the RHR valves following receipt of the alarm?

	1E12-F024B B RHR Test to SP Vlv	1E12-F027B B RHR SP Spray Isol
A.	Closes	Closes
B.	Remains Open	Closes
C.	Closes	Remains Open
D.	Remains Open	Remains Open

Answer:	Reference(s):	Question Reference(s):
B	**LOR-1H13-P601-B405**	**New**
	RHR System Lesson Plan pg.29-31	

Explanation: With an initiation signal present and the valve open, the 1E12-F024B would have the 'manual override' function of the logic present. The 1E12-F024B will remain "as is" until the operator repositions the valve. When the alarm is received, and the initiation signal present, the injection valve, 1E12-F042B, will open causing the 1E12-F027B to close. If the initiation signal was not present, the valve would remain open.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 42	204000	A3.03	3.6/3.6	BOTH	027.00.05	1

Regarding the Reactor Water Cleanup system, what automatic actions take place when reactor water level drops to –60 inches?

A. Two suction line valves close

B. Two discharge line valves close

C. Two suction line AND two discharge line valves close

D. One suction line AND one discharge line valve close

Answer:	Reference(s):	Question Reference(s):
A	LP-27 Section IV.A	New.

Explanation: Two suction valves, the 1G33-F001 and 1G33-F004 isolate (close) on a Low Reactor Water Level isolation of –50 inches.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 43	209001	K2.02	2.5/2.7	BOTH	063.00.16	1

135Y-2 has tripped.

Which of the following valves are affected?

A. 'C' RHR Minimum Flow Valve

B. HPCS Injection Valve

C. LPCS Injection Valve

D. RCIC Minimum Flow Valve

Answer:	Reference(s):	Question Reference(s):
C	LPCS LP pg.23	New

Explanation: 135Y-2 is a Div 1 powered MCC. Only the LPCS Injection valve would be affected. HPCS is Division 3. 'C' RHR is Division 2. RCIC Minimum Flow valve is DC powered.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 44	209001	A1.03	3.8/3.9	BOTH	063.00.05	2

Unit 1 was operating at 100% reactor power when a LOCA occurs resulting in the following:

- The reactor has scrammed
- RPV pressure is 480 psig
- RPV level is –140 inches
- HPCS and RCIC are injecting to the RPV

Based on these conditions, the LPCS pump is _____(1)_____ and the LPCS injection line check valve is _____(2)_____.

A. (1) not running (2) closed

B. (1) not running (2) open

C. (1) running (2) closed

D. (1) running (2) open

Answer:	Reference(s):	Question Reference(s):
C	**LaSalle UFSAR Section 7.3.1.2.3.6** **LaSalle Systems Description Manual, Chapter 63, Low Pressure Core Spray System**	**From LaSalle ILT Systems Questions Bank Objective No. SYS-38-06B**

Explanation: LPCS will initiate and pump will start when RPV level is < -129 inches. The injection check valve will not open until RPV pressure falls below pump shutoff head of 440 psig.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 45	209002	K4.07	3.5/3.0	BOTH	061.00.05	2

Unit 2 has scrammed due to a LOCA.

HPCS initiated on Level 2 and re-filled the RPV to a level above Level 8.

Level subsequently decreased to -25 inches and is stable.

Which of the following describes the action(s) the operator must take to re-establish HPCS flow to the RPV?

A. Arm and depress the HPCS System Manual Initiation Pushbutton.

B. Shutdown the HPCS Pump, then restart it and open the injection valve.

C. Depress the HPCS High Water Level Reset pushbutton, then open the Injection Valve.

D. Take the Injection Valve to close to break the seal in, then take the switch to open.

Answer:	Reference(s):	Question Reference(s):
C	HPCS Lesson Plan pp 10	061.00.05 006

Explanation: The injection valve will automatically close (if open) anytime a Reactor high water level signal is present. When Reactor water level increases to the high level setpoint, the high level signal seals itself in until it is either manually reset or another low level signal automatically resets it. The High Water Level Reset pushbutton resets the Reactor high water level interlock if level is below the high level setpoint.

The manual initiation signal will not reset the high water level trip, only another level 2 signal will automatically reset it.

Stopping the pump will not break the High Water Level Seal-In.

Taking the control switch for the injection valve to closed will not break the High Water Level Seal-In.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 46	211000	K5.06	3.0/3.2	BOTH	028.00.16	1

Unit 2 is shutdown with the following conditions:

- SBLC has been initiated.

Which of the following describes how SBLC will respond to a loss of Instrument Air?

A. Remote tank level indication would be lost.

B. Remote flow indication would be lost.

C. The pulsation dampers would fail open.

D. The tank heaters would fail to energize.

Answer:	Reference(s):	Question Reference(s):
A	SBLC LP, pg.5, 18	New

Explanation: Tank level indications will decrease as air pressure decreases. Flow indication is local only. Pulsation dampers do not require IA. Tank heaters are not interlocked with SBLC tank level.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 47	211000	K3.02	3.0	RO	028.00.18	2

A manufacturing defect provides a flow path between the outer tube of the SBLC injection line and the bottom head area. **Provide Figure 28-08 w/o labels.**

Which of the following describes the consequences of this failure?

A. RWCU Bottom Head Drain Flow indication would be inaccurate.

B. CRD Drive Water flow indication would fail downscale.

C. SBLC solution will not inject into the proper vessel area.

D. HPCS Line Break detection would be unavailable.

Answer:	Reference(s):	Question Reference(s):
D	**SBLC LP pg.18-19**	**New**

Explanation: HPCS line break detection utilizes the outer tube of the injection line. A failure in the line would cause a failure of the detection. RT bottom head drain flow would still be accurate since it utilizes the inner tube pressure for its input. SBLC solution is injected through the inner tube and would not be affected. CRD drive water flow may be slightly (less than a 10% change) inaccurate but would not fail downscale as the change in pressure sensed would only be the dP across the core plate.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 48	212000	K1.10	3.2/3.4	BOTH	049.00.10	2

Unit 2 is operating at 35% reactor power with the following conditions:

- MSV-1 slowly drifted close.
- CV-1 RETS pressure is 0 psig.

All others valves remain in their normal position.

Which one of the following describes the effect of these conditions on the RPS logic?

A. Neither a ½ scram, nor a full scram will be received.

B. A ½ scram on 'A' RPS channel is received.

C. A ½ scram on 'B' RPS channel is received.

D. A full scram is received.

Answer:	Reference(s):	Question Reference(s):
B	**RPS LP pg.23** **LOS-TG-W1 Rev 30, pg.13** **LOS-RP-M5, Rev 2, pg.14**	**NEW**

Explanation: CV-1 fast closure will give a ½ scram on 'A' RPS. MSV-1 closing will not give any RPS trip since a minimum of TWO MSVs must close to give a ½ scram.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 49	212000	K4.02	3.5/3.7	BOTH	049.00.14	2

Unit 2 is starting up.

Which of the following would occur if the 'A' IRM were to fail upscale?

RPS will generate. . .

A. a half scram due to the shorting links being installed.

B. a full scram due to the shorting links being installed.

C. a half scram due to the shorting links being removed.

D. a full scram due to the shorting links being removed.

Answer:	Reference(s):	Question Reference(s):
A	RPS Lesson Plan pg.26 & 35	New

Explanation: RPS will generate a half scram only. The shorting links are normally installed. Removal of the shorting links would cause RPS to generate a full scram.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 50	214000	K5.01	2.7	RO	047.00.21	1

Unit 2 is at rated conditions.

A control rod is at its withdraw limit at position 46.

The control rod has a complete failure of its collet fingers.

Which of the following will FIRST indicate the condition to the operators?

A. The CRD OVERTRAVEL alarm will annunciate.

B. The ROD OUT BLOCK alarm will annunciate.

C. The associated ROD DRIFT light will illuminate.

D. The associated FULL-OUT light will illuminate.

Answer:	Reference(s):	Question Reference(s):
C	RMCS, LP No. 47, pg. 25	New

Explanation: Failure of the collet fingers will cause the rod to drift out of the core. The first indication will be a ROD DRIFT light (and alarm) as the odd reed switch is picked up with no rod motion selected. The ROD OUT BLOCK alarm would not be generated until the rod reached the next even reed switch. The FULL OUT light will not illuminate until the rod reaches position 48. The CRD OVERTRAVEL alarm will not come in until the rod exceeds position 48.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 51	**215002**	**K2.03**	**2.8/2.9**	**BOTH**	**045.00.16**	**2**

Which of the following identifies the APRM channel and its power supply that can provide a reference power input to the 'A' RBM?

	APRM Channel	Power Supply
A.	A	A RPS
B.	E	A RPS
C.	A	111Y
D.	E	111Y

Answer:	Reference(s):	Question Reference(s):
B	**RBM LP pg.32; APRM LP pp22**	**New**

Explanation: RBM reference inputs are from APRM C or E (if C is bypassed). APRM E is powered from RPS Bus 'A'.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 52	215002	K2.01	2.5	RO	045.00.16	1

What is the power supply to the A and B channels of the Rod Block Monitoring (RBM) system?

A. Channel A from RPS Bus A and Channel B from RPS Bus B.

B. Channel A from RPS Bus B and Channel B from RPS Bus A.

C. Channel A from Bus 111Y and Channel B from Bus 112Y.

D. Channel A from Bus 112Y and Channel B from Bus 111Y.

Answer:	Reference(s):	Question Reference(s):
A	LP No.45, Section V.C.	045.00.16 003

Explanation: A is correct, B is incorrect because the inputs are reversed, C and D are incorrect because they are not the power supplies to the RBM system.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 53	215003	A2.07	2.5/2.7	BOTH	042.00.21	2

Unit 1 is starting up with the following conditions:

- The Reactor Operator has just stopped withdrawing control rods and determined that the reactor is critical.
- The 'A' IRM / 'C' IRM RECORDER is accidentally de-energized.

Which of the following describes how the 'A' and 'C' IRM alarms and trips are affected by this failure and the actions, if any, which are required?

The 'A' and 'C' IRM alarms and trips are . . .

A. Functional; The startup can continue without further action.

B. Non-functional; A manual scram must be inserted.

C. Functional; Stop power changes until cause determined.

D. Non-functional; A half scram must be inserted.

Answer:	Reference(s):	Question Reference(s):
C	IRM LP Fig 42-2 1E-1-4210AP LOA-NR-101, Rev 1, pg.9	New

Explanation: Recorders provides indication only. Other control room recorders provide alarm functions. All alarms and trip functions are provided by the logic modules contained within the IRM drawer. Operators are directed to check IRM indications on 1H13-P635/636.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 54	215003	2.2.22	3.4	RO	042.00.22	2

Unit 1 is in Operational Condition 3.

An explosion occurs in the 1A 24/48 VDC battery that results in a loss of power to the distribution panel.

Which of the following Technical Specifications LCOs is affected?

A. 3.3.1 Reactor Protection System Instrumentation

B. 3.3.5 Reactor Core Isolation Cooling System Actuation Instrumentation

C. 3.8.2.3 D.C. Distribution – Operating

D. 3.8.2.4 D.C. Distribution – Shutdown

Answer:	Reference(s):	Question Reference(s):
A	Technical Specification 3.3.1	New

Explanation: The 1A 24/48 VDC batteries provide power to the A, C, E, & G IRMs. With the power supply gone, the IRMs would need to be declared inoperable and T.S. 3.3.1 LCO would not be met. The 1A 24/48 VDC batteries do not supply RCIC actuation instrumentation. T.S. 3.8.2.3 and 3.8.2.4 only address 250 VDC and 125 VDC distribution. RCIC was chosen as a distracter because of its reliance on DC power.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 55	215004	A3.01	3.2/3.2	BOTH	041.00.15	1

During a reactor startup, the NSO can more closely monitor the SRMs by. . .

A. changing the recorder speed.

B. changing the indicated range.

C. adjusting the discriminator voltage.

D. selecting the process computer screen.

Answer:	Reference(s):	Question Reference(s):
A	LOP-NR-01, Rev 9, pg. 5	New

Explanation: Recorder speed is placed in fast during a startup. Only IRM ranges are selectable. Operators do not adjust the discriminator voltage. The process computer SRM readings are not utilized.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 56	215005	K5.04	2.9/3.2	BOTH	043.00.14	2

Unit 2 is shutting down.

An NSO is driving a control rod from 48 to 00.

The NSO should expect the B LPRM meters to noticeably decrease as the rod passes through positions _____.

A. 08 to 04

B. 16 to 20

C. 32 to 28

D. 44 to 40

Answer:	Reference(s):	Question Reference(s):
C	LPRM LP pg.6 and Fig 43-6	New

Explanation: The B LPRMs are located axially about the same location as rod position 30. As the rod passed the LPRM, the local flux would be suppressed and the LPRM reading would drop sharply.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 57	216000	K6.02	2.8/3.0	BOTH	040.00.16	2

Unit 2 is at 100% power with the following conditions:

- B Narrow Range is selected for RWLC.
- Power is lost to the 'C' Narrow Range.

Reactor water level will...

A. increase until two narrow range instruments reach Level 8.

B. decrease until restored by HPCS and RCIC.

C. remain stable and part of the Level 8 logic will be made up.

D. remain stable and part of the Level 8 logic will NOT function.

Answer:	Reference(s):	Question Reference(s):
C	NB Inst LP pg.30 RWLC LP pg.30	New

Explanation: Loss of power to a narrow range level instrument causes its trip function to fail safe (providing the T.S. Level 8 trip). Since 'C' Narrow range is not selected, reactor water level will remain stable.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 58	216000	A3.01	3.4/3.4	BOTH	040.00.05	3

Unit 1 is scrammed with the following conditions:

- Feedwater flow has been lost.
- Drywell pressure is 2.5 psig.
- Reactor water level is stable.
- Wide Range Level instruments are indicating –120 inches.
- Fuel Zone Level instruments are indicating –194 inches.
- Reactor pressure is 510 psig and decreasing at 220 psig/hr.
- 'A' and 'B' RHR are aligned for containment cooling.

When possible, 'A' and 'B' RHR should be . . .

A. aligned for LPCI injection because adequate core cooling is NOT assured.

B. aligned for LPCI injection because initiation conditions have been met.

C. left in containment cooling because adequate core cooling is assured.

D. left in containment cooling because initiation conditions have NOT been met.

Answer:	Reference(s):	Question Reference(s):
C	LPGP-PSTG-01S08, Rev1, pg. 10 LGA-001, Rev 0	New

Explanation: Fuel zone indication can read up to 115 inches lower than actual level due to calibration . As such, Wide Range instrument should be used instead of an uncorrected Fuel Zone. Top of Active Fuel is –161". Initiating conditions for LPCI have been met with drywell pressure >1.69 psig.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 59	218000	2.1.28	3.2	RO	062.00.01	1

When the ADS system 9 minute timer times out, automatic initiation of ADS can occur without the...

A. Level 1 low water level signal.

B. ECCS pressure permissive.

C. high drywell pressure signal.

D. confirmatory low water level permissive.

Answer:	Reference(s):	Question Reference(s):
C	ADS LP pg.10	062.00.05D 001 (modified)

Explanation: The 9 minute timer allow the actuation of ADS without the drywell pressure signal. Answer C correctly identifies the signal that is bypassed. Answers A,B and D are all incorrect because these signals must be present for automatic actuation of ADS.

(59)

062.00.05D 001

Which of the following describes the function provided by the 9 minute timer in the ADS system? When the timer times out the automatic initiation of ADS can occur without the...

✓A. high drywell pressure signal.
B. confirmatory low water level of +12.5.
C. low water level of -129".
D. ECCS pressure permissive.

The 9 minute timer allow the actuation of ADS without the drywell pressure signal. Answer A correctly identifies the signal that is bypassed. Answers B, C and D are all incorrect because these signals must be present for automatic actuation of ADS.

Reference: LP62 Section IV.B.
Source: New

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 60	223001	K3.01	3.6	RO	94.00.20	2

Unit 2 has suffered a major accident with the following conditions:

- Containment pressure is 12 psig.
- HG system is in operation.
- Instrument air pressure in the reactor building has been lost.
- The STA reports that pressure spiked to 16 psig in the containment and then returned to 12 psig.
- Reactor building area radiation monitor values are now increasing.

Which of the following describes the probable cause for the increasing area radiation monitor values?

The pressure spike caused the . . .

A. BP 70 blowout panel to rupture.

B. Hydrogen recombiner loop seal to be lost.

C. Primary Containment Vent and Purge ductwork to rupture.

D. Suppression Chamber manway seal to be lost.

Answer:	Reference(s):	Question Reference(s):
B	**HG LP pg.17** **PC LP pg.27**	**New**

Explanation: Containment pressure above 15.3 psig is sufficient cause the loop seal to be lost allowing the drywell atmosphere a direct path to the Reactor building. VQ would remain isolated if no IA pressure were available. The suppression chamber manway is the weakest component of the primary containment but is designed to withstand 45 psig. The BP 70 blowout panel would only rupture if Reactor Building pressure exceeded 1 psid relieving pressure to the Auxiliary Building roof area.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 61	223002	K6.06	2.8/2.9	BOTH	096.00.12	2

Unit 2 is in STARTUP with the following conditions:

- Reactor pressure is 150 psig.
- RWCU blowdown is open 25% to maintain level during the heatup.

The disk of the RBCCW inlet valve to the in-service non regenerative heat exchanger fails stopping flow.

Which one of the following describes the direct response of the listed valves to this failure?

	RWCU Inboard Isolation Valve 2G33-F001	RWCU Outboard Isolation Valve 2G33-F004	RWCU Blowdown Header Control Valve 2G33-F033
A.	Remains Open	Remains Open	Closes
B.	Remains Open	Closes	Remains Open
C.	Closes	Remains Open	Closes
D.	Closes	Closes	Remains Open

Answer:	Reference(s):	Question Reference(s):
B	**RWCU LP pg. 22**	**027.00.21 001 (Significantly modified)**

Explanation: With a loss of RBCCW flow to the non-regenerative heat exchanger (NRHX), outlet temperature will increase. NRHX high outlet temperature will close the Outboard isolation valve.

027.00.21 001

(\. Point) Which one of the following correctly states the Reactor Water Cleanup (RT) system automatic isolation action or actions that take place when there is a High Non-Regenerative Heat Exchanger Outlet Temperature trip?

NOTE: 1. G33-F001 is the Inboard Isolation Valve.
2. G33-F004 is the Outboard Isolation Valve.
3. G33-F033 is the Blowdown Flow Control Valve.

✓A. Closes the G33-F004 valve ONLY.
B. Closes the G33-F001 valve ONLY.
C. Closes BOTH the G33-F001 and the G33-F004 valves.
D. Closes the G33-F033 valve ONLY.

The non-regenerative heat exchanger high temperature trip will close only the Outboard isolation valve.

Reference: LP-27 Section IV.A

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	A	D	D	B	C	A	C	B

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 62	226001	K3.01	3.6/3.7	BOTH	064.00.21	3

Unit 2 has experienced a LOCA with the following conditions:

- Reactor pressure is 175 psig.
- The condenser hotwell is empty.
- HPCS is OOS.
- RCIC and 'C' RHR are maintaining reactor water level at 36 inches.
- 'A' RHR is supplying Drywell and Suppression Chamber sprays.
- 'B' RHR is in Suppression Pool cooling.

Which of the following describe the primary concern if 241Y were lost?

A. Reactor water level due to insufficient makeup.

B. Suppression chamber pressure due to a bypass path.

C. Drywell pressure due to the inability to re-establish drywell spray.

D. Reactor pressure due to the loss of steam loads.

Answer:	Reference(s):	Question Reference(s):
B	RH LP, Figure 64-05 T.S 4.5.1.b pg.¾ 5-4	New

Explanation: With a loss of 241Y, the 'A' RHR containment spray valves would remain open providing a bypass path from the drywell to the suppression chamber. 'C' RHR would be able to maintain reactor water level. 'B' RHR could be aligned for containment sprays. RCIC and SRVs would still be available for pressure control.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 63	230000	K1.05	3.2	RO	064.00.05	3

Unit 1 is scrammed due to a LOCA with the following conditions:

- Containment pressure 5 psig
- Reactor pressure 250 psig
- '1A' RHR is aligned for Suppression Chamber Spray and Suppression Pool Cooling a grid transient causes a loss of off-site power.

How will the RHR Test To Suppression Pool valve and the Suppression Chamber Spray Isolation valve respond if 141Y is re-energized?

	RHR Test To Suppression Pool Valve 1E12-F024A	Suppression Chamber Spray Isolation Valve 1E12-F027A
A.	Closes	Closes
B.	Remains Open	Closes
C.	Closes	Remains Open
D.	Remains Open	Remains Open

Answer:	Reference(s):	Question Reference(s):
D	RHR LP	New

Explanation: Since initiation logic did not clear, nor did the logic power become de-energized, the valves will remain in their present position until manually closed.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 64	230000	A1.10	3.7	RO	064.00.15	3

RHR loop A has automatically initiated in the LPCI mode on a high drywell pressure condition.

It is injecting to the core through 1E12-F042A (RHR loop A injection valve).

Which one of the following describes the response when the 1E12-F027A control switch is placed in the OPEN position?

	A RHR Suppression Chamber Spray Isolation Valve 1E12-F027A	A RHR Injection Valve 1E12-F042A
A.	OPENS	Remains OPEN
B.	Remains CLOSED	Remains OPEN
C.	OPENS when 1E12-F042A gets full CLOSED	CLOSES
D.	OPENS	CLOSES when 1E12-F027A gets full OPEN

Answer:	Reference(s):	Question Reference(s):
B	**RHR LP pg.31**	**064.00.014 007 (modified)**

Explanation: 1E12-F027A can only be opened if 1E12-F042A is closed. The action will have no effect.

064.00.14 007

(64)

(1 Points) RHR loop A has automatically initiated in the LPCI mode on a high drywell pressure condition. It is injecting to the core through 1E12-F042A (RHR loop A injection valve). Under the present condition, which one of the following statements describes the response of 1E12-F027A (Suppression Pool Spray Valve) when its handswitch is taken to the OPEN position?

✓A. F027A will NOT move as long as F042A is OPEN.
B. F027A will OPEN, and F042A will automatically CLOSE when the full open limit is reached on F027A.
C. F027A and F042A will both OPEN and stay OPEN.
D. F027A valve will open after a 10 minute time delay interlock is satisfied.

A. Correct F027A is closed during RHR standby mode and can be cycled for surveillance testing. F027A is interlocked with the LPCI initiation logic and receives a close signal when an LPCI initiation occurs. With an LPCI initiation present, F027A can only be opened if the respective F042 valve is closed.

Choices B,C, & D are all incorrect since they indicate that the E12-F027A will open, also there is no 10 min delay interlock associated with the E12-F027A.

RHR System Lesson Plan Section IV.I.1 & IV.I 2

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 65	233000	A1.01	2.6/2.9	BOTH	029.00.05	2

Which of the following describes the expected change in skimmer surge tank level if the first fuel pool cooling pump is started with the discharge valve full open AND the wier gate set at its highest position?

Skimmer surge tank level . . .

A. increases until the tank overflows.

B. increases and then returns to the level that existed prior to starting the pump.

C. decreases and then increases to the level that existed prior to starting the pump.

D. decreases until the pump trips on low suction pressure.

Answer:	Reference(s):	Question Reference(s):
D	FC LP pg.46	New

Explanation: Without throttling the pump discharge valve and the weir gate restricting the input to the skimmer surge tank, the level will lower down so low as to cause a low suction pressure trip.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 66	239001	K4.02	3.1/3.2	BOTH	091.00.05	1

With the plant operating at power what effect, if any, would depressing the B Manual Isolation pushbutton, located on 1(2)H13P601, have on PCIS Group 1 valves?

A. Inboard MSIVs Close

B. Outboard MSIVs Close

C. MSL Drain Valve(s) Close(s)

D. No Valves reposition as only half the logic is tripped.

Answer:	Reference(s):	Question Reference(s):
C	PCIS LP pg.22	091.00.05B.1 002

Explanation: B Manual Isolation Arm and depress pushbutton, located on 1(2)H13P601, closes the outboard isolation valves for Groups II through VII, X and the MSL Drains. Inserts a half isolation (B1) for the MSIVs, initiates Division I Post LOCA H2/O2 Monitor and both units of Standby Gas Treatment. Answer C correctly identifies the only action that would occur for PCIS Group 1. Answers A and B are incorrect as neither the Inboard nor the Outboard MSIVs will close. Answer D is incorrect because the inboard MSL drain will close.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 67	239002	A1.05	3.7/3.8	BOTH	070.02.20	2

Unit 2 is shutdown with the following conditions:

- Reactor pressure 1000 psig
- MSIVs are closed.
- MDRFP is in single element control.
- Reactor water level is approximately 45" on the Narrow Range.

Which of the following describes the expected response if an SRV were opened?

Reactor water level will . . .

A. increase causing a trip of the MDRFP.

B. increase slightly and then return to near the original level.

C. decrease slightly and then return to near the original level.

D. decrease causing a Reactor scram.

Answer:	Reference(s):	Question Reference(s):
A	LPGP-PSTG-01S04A Rev 1	New

Explanation: Level swell following SRV operation can cause RPV water level to exceed 55.5 in., resulting in loss of the MDRFP, RCIC, and HPCS. The level swell is greatest from no steam flow conditions at high pressures. If MSIVs were open and reactor at power, level would decrease slightly and then return to near the original level as RWLC and EHC would compensate.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 68	241000	K1.08	3.6/3.7	BOTH	074.00.05	2

Unit 2 is in Run with the following conditions:

- Reactor power - 30%
- LOAD SELECT - 40%

If reactor power were increased by 20%, which of the following would occur?

	Turbine Control Valves	Turbine Bypass Valves
A.	Would open further	Remain closed
B.	Would open further	Would open
C.	Remain at their present position	Remain closed
D.	Remain at their present position	Would open

Answer:	Reference(s):	Question Reference(s):
B	EH LP #74	New

Explanation: With a 20% increase in reactor power, TCVs would open until turbine load reached 40%. Bypass valves would then open to control reactor pressure.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 69	245000	A4.07	2.9/2.9	BOTH	071.00.10	1

Which of the following identifies the expected positions of the turbine control valves (TCVs), intermediate control valves (ICVs), and extraction steam dump valves (ESDVs) following a turbine trip?

	TCVs	ICVs	ESDVs
A.	Closed	Closed	Closed
B.	Closed	Closed	Open
C.	Closed	Open	Closed
D.	Open	Closed	Closed

Answer:	Reference(s):	Question Reference(s):
B	**Mn Turb LP No.71, pg. 29**	**071.00.14 001 (modified)**

Explanation: TCVs and ICVs close on a turbine trip. ESDVs open.

69

071.00.14 001

(\. Point) Which of the following identifies the expected positions of the turbine control valves, intermediate control valves, and extraction emergency drain valves following a turbine trip?

	TCVs	ICVs	EDVs
A.	closed	closed	closed
B.	closed	open	closed
C.	open	open	open
✓D.	closed	closed	open

closed closed open

071.00.14
Validated by E. Volling, 3/30/00

ANSWERS:
Single

Points: 1

Version Answers:
0 1 2 3 4 5 6 7 8 9
D C D A B A B A C D

☒ Scramble Choices
Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 70	259001	K5.03	2.8/2.8	BOTH	077.00.05	2

Unit 2 is at 20% Reactor Power conducting a normal Unit Startup.

- The MDRFP is not running.
- One Turbine Driven Reactor Feedwater Pump (TDRFP) is in automatic controlling reactor water level.
- The main turbine is on the line with all of the turbine bypass valves closed.
- The main turbine unexpectedly trips.

The TDRFP High Pressure control valve will ....

A. CLOSE due to the increasing reactor pressure

B. OPEN due to the loss of low pressure steam supply.

C. OPEN due to the increased steam flow through the bypass valves.

D. CLOSE due to the decreased low pressure steam flow without the main turbine running.

Answer:	Reference(s):	Question Reference(s):
B	FW LP pp 14	77.00.14 001 (modified)

Explanation:

As a result of the loss of the LP steam supply (Crossover Steam), the TDRFP control valve must open to allow HP Steam to maintain the demanded TDRFP Speed.

Reactor pressure should remain not increase since reactor power is within the capacity of the BPVs.

The amount of Bypass Valve steam flow has no effect on the demanded position of the TDRFP control valve.

With the loss of LP Steam, the TDRPF Control valve must Open to maintain the demanded TDRFP speed .

077.00.14 001

(70)

(1 Point) The Unit is in Operational Condition 1 at 20% Reactor Power conducting a normal Unit Startup. The MDRFP had to be taken off line due to a lube oil system leak. One Turbine Driven Reactor Feedwater Pump (TDRFP) is now in automatic controlling reactor water level. The main turbine is on the line with all of the turbine bypass valves closed. The main turbine unexpectedly trips. The TDRFP High Pressure control valve will ....

✓A. OPEN due to the loss of low pressure steam supply.
B. OPEN due to the increased steam flow through the bypass valves.
C. CLOSE due to the decreased low pressure steam flow without the main turbine running.
D. CLOSE due to the reduced steam flow to the main turbine.

A. Correct	As a result of the loss of the LP steam supply (Crossover Steam), the TDRFP control valve must open to allow HP Steam to maintain the demanded TDRFP Speed.
B. Incorrect	The amount of Bypass Valve steam flow has no effect on the demanded position of the TDRFP control valve.
C. Incorrect	With the loss of LP Steam, the TDRPF Control valve must Open to maintain the demanded TDRFP speed .
D. Incorrect	In automatic control the TDRFP Control vale would continue to Open in attemps to maintain demanded TDRFP speed.

Feedwater System Description Section III.C.5.d

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 71	259001	A1.06	2.7/2.7	BOTH	079.00.05	2

Unit 1 is at rated conditions.

The high high level switch for the 11C heater fails in the tripped condition.

In fifteen seconds the running feed pump _____ will be MUCH lower.

A. differential pressure

B. speed

C. suction pressure

D. suction temperature

Answer:	Reference(s):	Question Reference(s):
C	HD LP pg.38 & 52	New

Explanation: After ten seconds, the high high level switch will cause an isolation of the C low pressure heater string by closing the Condensate Booster Inlet and Outlet valves (1CB005C & 1CB006C), the associated Heater Drain Pump forward valve 1HD045C, and the 12C normal drain valve. This will reduce the flow to the reactor feed pumps causing their suction pressure to decrease. As the suction pressure decreases, the feed pump's speed, and differential pressure, will increase in order to maintain feedwater flow. Suction temperature will not be changed greatly since the other LP heater strings are still in operation and the LP Heater String Bypass does not automatically open.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 72	259002	K3.07	3.4/3.4	BOTH	031.00.21	2

Unit 2 is at 40% power with the following conditions:

- 'B' Turbine Driven Reactor Feedwater Pump (TDRFP) is operating in Single Element Automatic control
- One of the Main Steam Line Flow inputs to the Reactor Water Level Control (RWLC) system fails low.

At a later period of time, the final reactor water level will be . . .

A. dependent upon the initial steam flow rate.

B. higher than the reference tape setpoint.

C. lower than the reference tape setpoint.

D. the same as the reference tape setpoint.

Answer:	Reference(s):	Question Reference(s):
D	RWLC LP pg.34	031.00.21 002

Explanation: The failure of the steam line flow input to the RWLC system when in single element control would have no effect on operation. When in single element control only reactor water level is used.

Answer D is correct as it indicates that the reactor water level will remain at the level set on the setpoint tape.

Answer C is incorrect because a reduction in water level is not expected for this failure when in single element control as steam flow is not used to control level.

Answer B is incorrect because again the steam flow is not used in when in single element and therefore would not effect level.

Answer A is incorrect because the initial steam flow will have no effect on level for this failure. Since the failure does not effect any inputs to the system when in single element control.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 73	262001	A4.05	3.3/3.3	BOTH	001.00.07	3

A trainee is synchronizing the '0' DG to bus 141Y.

While synchronizing the generator the following indications are present:

- The incoming voltage is slightly HIGHER than the running voltage.
- The synchroscope is rotating slowly (45 seconds beat) in the FAST (clockwise) direction.
- The trainee turns the '0' DG output breaker to the close position when the synchroscope is at the 3 o'clock position.

Which of the following describe the expected breaker response?

The '0' DG output breaker will . . .

A. close and then trip due to overspeed as the DG shifts pole alignment.

B. close and then trip due to overcurrent as the DG shifts pole alignment.

C. remain open due to the sync-check relay sensing excessive phase differential.

D. remain open due to the sync-check relay sensing excessive voltage differential.

Answer:	Reference(s):	Question Reference(s):
C	DG LPNo. 11, pg. 52	005.00.20 001 (modified)

Explanation: The breaker will not attempt to close due to the sync-check relay sensing >7° phase differential. The voltage differential is within the 5% limit of the sync-check relay.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 74	262002	K6.01	2.7/2.9	BOTH	012.00.16	2

The station is experiencing a station blackout.

Which of the following is energizing the U-1 process computer?

A. 111Y

B. 211Y

C. 121Y

D. 221Y

Answer:	Reference(s):	Question Reference(s):
C	UPS LP pg.22	New

Explanation: The process computer is supplied by the U-1 Process Computer UPS. The normal power supply is 135X-3 fed from 141Y. 141Y would be de-energized with the given conditions. The DC input is from 121Y.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 75	262002	K1.02	2.8	RO	078.00.16	2

Unit 1 is at rated conditions.

A fire in the TSC UPS caused it to de-energize.

Which of the following describe the effect this will have on TDRFP operation?

The TDRFP's . . .

A. flow instrumentation will fail low resulting in a level transient.

B. remote trip will not function requiring a local manual trip.

C. vibration instrumentation will de-energize tripping the TDRFPs.

D. speed control will transfer to its redundant power supply.

Answer:	Reference(s):	Question Reference(s):
D	**TDRFP Speed Control LP, pg.25**	**New**

Explanation:

The TSC UPS is the primary source of power for the TDRFP Speed Control system power supplies.
MCC 136Y-3(236Y-3) is provided as the redundant power supply.
TDRFP flow instrumentation is powered by 135X-3. The TDRFP trip logic is 125 VDC.
Vibration instrumentation is supplied by the main turbine TSI which is not supplied by the TSC UPS.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 76	263000	K5.01	2.6/2.9	BOTH	006.00.05	1

LOP-VX-01, "Switchgear Heat Removal System Startup" has a precaution which states in part that "the Battery Exhaust Fans should be operated continuously."

Which of the following describes the reason for this precaution?

A. Exhaust fan operation ensures that the room temperature is maintained above 50 degrees F, even during winter months.

B. Operation of the exhaust fans prevents the buildup of hydrogen gas which is generated as the batteries are charged.

C. Without fan operation, room temperature would exceed 104 degrees F due to the heat load generated by the switchgear.

D. The RPS MG Set cooling requirements cannot be met without continuous operation of the battery exhaust fans.

Answer:	Reference(s):	Question Reference(s):
B	LOP-VX-01 Rev 7	119.00.20 001

Explanation:
B. is correct. Battery Room Exhaust Fans should be operated continuously to prevent the build-up of H_2 gas due to charging the batteries.
A., C., and D. are incorrect. Adequate heat removal and temperature control is provided by supply fan operation, heat recovery fan operation, and damper control to use outside air or recirculated air.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 77	264000	K1.04	3.2/3.3	BOTH	011.00.21	2

The 1A DG Cooling Water pump trips while the 1A DG is running under load for a surveillance.

Assuming no operator action, which of the following describes the expected impact on continued 1A DG operation?

A. The 1A DG will trip on high cooling water temperature.

B. The pump trip will directly actuate the DG lockout which will trip the 1A DG.

C. The 1A DG will continue to heat up and eventually fail with possible damage due to lack of cooling.

D. The 1A DG governor will runback the load limiter to 10%, which is within the DG's cooling capacity.

Answer:	Reference(s):	Question Reference(s):
A	LOP-DG-01 Rev 25 pg. 5	011.00.21 004 (slightly modified)

Explanation: With no ECCS signal present, the DG will heat up and trip on high cooling water temperature of 208 degrees F. There is no direct trip or runback associated with the cooling water pump.

011.00.21 004

(\. Point) The 1A DG Cooling Water pump trips while the 1A DG is running under load for a surveillance. Assuming no operator action occurs, which one of the following correctly describes the expected impact on continued 1A DG operation?

✓A. The 1A DG will trip on high cooling water temperature.
B. The pump trip will directly actuate the DG lockout which will trip off the 1A DG.
C. The 1A DG will continue to heat up and eventually fail with possible damage due to lack of cooling.
D. The 1A DG governor will runback the load limiter to 10%, which is within the DG's cooling capacity.

LSCS NRC Exam 10/07/91 see KW#4
Reference: LOA-1DG03J-2-1, Rev.
LOP-DG-02, Rev. 18
264000K6.07 3.5/3.7

ANSWERS:
Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	C	B	B	A	C	A	D	D	C

☒ Scramble Choices
Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 78	264000	A4.01	3.3	RO	011.00.14	1

The '0' Diesel Generator is paralleled to the SAT and Bus 141Y and loaded as follows:
1,000 kW
200 KVARS

Assuming the load on the system was constant, how would Real load (kW) and Reactive load (KVARS) be expected to respond if the '0' Diesel Generator Voltage control switch was momentarily placed in the 'Raise' position?

	Real Load (kW)	Reactive load (KVARS)
A.	Increase	Increase
B.	Increase	Decrease
C.	Remain approximately the same	Increase
D.	Remain approximately the same	Decrease

Answer:	Reference(s):	Question Reference(s):
C	DG LP pg.75	New

Explanation: With a constant load, real load would remain constant. Increasing the excitation of the generator would cause its reactive load to increase.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 79	271000	A4.01	2.8	RO	080.00.12	1

Unit 2 is at rated conditions.

The flow switch for the OG 2nd Stage Steam Flow fails resulting in an OG isolation.

The NSO has verified the isolation signal is invalid.

Which of the following describes the action necessary to re-open the valves that closed?

A. De-energize the valve's motor operator and open the valves manually.

B. Place the control switches for the affected valves in the OPEN position.

C. Turn the Low-Flow keylock bypass switch to BYPASS.

D. Place the control switches for the affected valves in the BYPASS position.

Answer:	Reference(s):	Question Reference(s):
B	**OG LP pg.21** **LOA-OG-101 Rev 1**	**New**

Explanation: On low 2nd Stage Steam flow, the 1N62-F300A/B will close. Placing the control switches in the OPEN position bypasses the low flow interlock and allows the valve to open. The valves are air operated. There is no keylock bypass switch. The BYPASS position is on the OG charcoal adsorber train control switch not the 1N62-F300A/Bs.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 80	271000	A1.12	3.1	RO	080.00.05	1

Unit 1 is at rated condition.

Which of the following describe the listed valve's position if BOTH Unit 1 OG Post Treatment PRMs go downscale?

	Off Gas Air Ejector Suction Valves (1N62-F300A and B)	Off Gas Discharge Valve (1N62-F057)
A.	Open	Open
B.	Closed	Open
C.	Open	Closed
D.	Closed	Closed

Answer:	Reference(s):	Question Reference(s):
C	PRM LP #80 pg. 18.	New

Explanation: BOTH OG Post Treatment PRMs will cause an isolation of the 1N62-F057. The 1N62-F300A/B auto close on insufficient second stage steam flow.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 81	286000	K3.02	3.2/3.4	BOTH	125.00.05	1

Automatic fire suppression is delayed from activation in the DG rooms to . . .

A. allow the fire brigade time to extinguish the fire without having to secure the DG.

B. allow personnel in the DG room time to exit prior to activation.

C. ensure that a signal spike would not cause unneeded loss of the DG.

D. ensure that a signal spike would not cause unneeded activation..

Answer:	Reference(s):	Question Reference(s):
B	FP LP pg.44	New

Explanation: The predischarge timer (delay) allows evacuation of personnel from the hazard area before discharge of CO_2.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 82	288000	K1.06	2.7/2.7	BOTH	118.00.16	2

Unit 2 is in Run with the following conditions:

- Reactor Building Exhaust Air Flow has increased.
- Reactor Building to Outside Differential Pressure is –1"WC and getting more negative. (the pointer is moving toward the bottom of the meter).
- '2A' and '2B' VR Supply fans are running.
- '2A' and '2B' VR Exhaust fans are running.

Which of the following identifies the potential cause of this event?

Loss of Instrument Air pressure to the . . .

A. Supply Duct Isolation Dampers

B. Exhaust Duct Isolation Dampers

C. Exhaust Air Flow Control Dampers

D. Supply Fan Check Dampers

Answer:	Reference(s):	Question Reference(s):
C	VR LP pg.9, 16, 17, 31	New

Explanation: On loss of air, the air modulating dampers, 2VR07YA/B/C/D, fail open. With the 2VR07YA/B/C/D dampers failing open, the running exhaust fans flow would increase. The exhaust fans design flow is 400 cfm more than the supply fans. The Supply Fan Check Dampers are not supplied by IA. The isolation dampers, 2VR04YA/B and 2VR05YA/B, fail closed on loss of IA. Closure of any isolation damper would cause a trip of the associated fans.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 83	290002	A2.05	3.7	RO	020.00.21 021.00.24	2

During a loss of feedwater heating transient MFLCPR exceeds a value of 1.003.

The number of fuel clad failures will . . .

A. Increase significantly and reactor power must be reduced within the next fifteen minutes.

B. Increase significantly and all control rods must be inserted within the next 2 hours.

C. Remain relatively stable and reactor power must be reduced within the next fifteen minutes.

D. Remain relatively stable and all control rods must be inserted within the next 2 hours.

Answer:	Reference(s):	Question Reference(s):
C	Tech Spec 3.2.3	New

Explanation: With a value of 1.003, MFLCPR would be exceeding the T.S. LCO limit requiring initiation of corrective actions within fifteen minutes (reduce reactor power). The value is less than 1% over the limit so the safety limit would not be expected to be violated nor would fuel damage be expected.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 84	290002	K4.01	3.7	RO	020.00.01	2

Unit 1 is in Run with the following conditions:

- The plant is operating at 40% power
- The Jet Pump operability surveillance indicates that one jet pump has failed
- Technical Specifications require the plant to be in hot shutdown within 12 hours

Which of the following describes why such a severe restriction is placed on continued operation for the given conditions?

A. A jet pump failure at this low power level will significantly affect the core flows and result in unacceptable thermal limits (MCPR).

B. A jet pump failure may limit reactor water level restoration capability during the reflood portion of a Loss Of Coolant Accident.

C. A jet pump failure combined with the flow restricting orifices may adversely affect core flow to the higher power fuel bundles.

D. A jet pump failure results in less conservative protective action setpoints for instrumentation using recirculation loop flow as an input signal.

Answer:	Reference(s):	Question Reference(s):
B	LaSalle UFSAR, App G.3.2.2.3	Hope Creek 2/98 NRC exam

Explanation: Design bases: jet pump integrity is required to maintain a refloodable volume.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 85	290003	K4.01	3.1/3.2	BOTH	117.00.08	1

The Control Room Ventilation System is aligned for normal operations (not in purge) and smoke is detected in the RETURN AIR supply duct.

Which of the following describes the response of the VC System?

A. The Emergency Make Up Train automatically comes on line and the Minimum Outside Air Damper remains open.

B. The Emergency Make Up Train automatically comes on line and the Outside Air Supply isolates.

C. The VC Charcoal Filter is automatically placed on line and the Minimum Outside Air Damper remains open.

D. The VC Charcoal Filter is automatically placed on line and the Minimum Outside Air Damper closes.

Answer:	Reference(s):	Question Reference(s):
C	VC LP, pg.4,5	117.00.08 001

Explanation: High return air smoke detection sensed upstream of the VC return fan suction isolation dampers aligns the VC System recirculation charcoal filter dampers to insure smoke removal. The alignment is as follows:

0VC11YA(B), Inlet, OPENS; 0VC12YA(B), Outlet, OPENS; 0VC13YA(B), Bypass, CLOSES.

EMU comes on line when smoke is detected in outside air supply not return air.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 86	290003	A2.02	3.1	RO	117.00.15	1

Excess control room intake radiation levels will . . .

A. automatically places the EMU train AND the charcoal filter in service to maintain control room habitability.

B. automatically places the EMU train in service and require the operator to manually place the charcoal filter in service to maintain control room habitability.

C. automatically places the charcoal filter in service and require the operator to manually place EMU train in service to maintain control room habitability.

D. require the operator to manually place the EMU train AND charcoal filter in service to maintain control room habitability.

Answer:	Reference(s):	Question Reference(s):
B	**LOR-1PM13J-B401 Rev**	**New**

Explanation: High radiation in outside air automatically places the EMU train in service. Operators are required by LOR-1PM13J-B401 to place the charcoal filter in service. .

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 87	300000	A2.01	2.9	RO	120.00.21	2

A transient has resulted in a loss of power to the in-service station air dryer, 0SA02D.

Which of the following describes the air dryer's response to the loss of power?

A. both towers will be placed in service.

B. both towers will be isolated.

C. the towers will remain in the condition they were in when power was lost.

D. the tower bypass automatically opens.

Answer:	Reference(s):	Question Reference(s):
A	IA/SA LP pg.11	New

Explanation: On loss of power to the dryer, BOTH towers are placed in service providing dry compressed air for about four hours.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 88	GENERIC	2.1.25	2.8/3.1	BOTH	028.00.22	2

Unit 1 is in Run with the following conditions

Provide Tech Spec pages 1-19 to 1-22 AND LOS-AA-S101 Figures C-3 and C-4

- SBLC tank volume 4800 gal
- SBLC tank concentration 13%
- SBLC tank temperature 70°F

Which of the following describes the status of the system?

A. A one hour LCO is in effect

B. An eight hour LCO is in effect.

C. A seven day LCO is in effect.

D. Technical Specifications requirements are satisfied.

Answer:	Reference(s):	Question Reference(s):
D	**Technicial Specifications LCO 3.1.5.**	**28.00.022 001 (Sig Modified)**

Explanation: LCO is met per reference

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 89	GENERIC	2.1.7	3.7/4.4	BOTH	041.00.14	2

Unit 2 is in STARTUP with the following conditions:

- It has been 24 hours following a scram from an extended full-power run.
- Reactor temperature is 138°F.
- Source range counts have been allowed to stabilize at 30,000 cps while the second verifier checks rod positions.
- You notice that source range counts begin to SLOWLY increase above 30,000 cps.

The increasing counts are . . .

A. Expected, the startup should continue.

B. Expected, rod withdrawal is prohibited until count rate stabilizes.

C. Unexpected, rods should be inserted to stabilize the count rate.

D. Unexpected, Shift Manager permission is required to continue the startup.

Answer:	Reference(s):	Question Reference(s):
A	Rx Theory LGP-1-1, Rev 62, pg.7	Dresden 1998 NRC ILT Exam

Explanation: Xenon is burning out 24 hours following a scram. The increasing count rate would be expected and the startup should continue.

89

Question Topic:	High xenon startup

A reactor startup is being performed 24 hours following a scram from an extended full-power run. Reac temperature is 138 F. Source range counts have been allowed to stabilize at 30,000 cps while the secon verifier checks rod positions. You then notice that source range counts are increasing above 30,000 cps.

Which of the following accounts for the increasing counts?

a. The reactor became supercritical due to xenon decay.

b. ALL Main Steam Line drain valves were opened.

c. ALL Main Steam Line drain valves were closed.

d. The Shutdown Cooling System was removed from service.

Ans:	a	Exam Level:	R	Cognitive Level:	Memory	

Explanation of Answer	Xenon is burning out 24 hours following a scram. Answers b and c are not correct because at the given temperature positioning of these valves would not affect reactivity. Answer d is incorrect, SDC is removed fr service prior to commencing a startup, even if this were not done, decay heat would cause temperature to incr which would NOT produce increasing counts.

Tier:	Generic Knowledge and Abilities	RO Group:	1	SRO Group:

System/Evolution Number:	GENERIC	System/Evolution Title:	

Category:	1	Conduct of Operations

KA:	2.1.7	Ability to evaluate plant performance and make operational judgments based on operating characteri reactor behavior, and instrument interpretation.

RO Value:	3.7	SRO Value:	4.4	CFR:	43.5, 45.12, 45.13

Reference	Reference Number	Reference Section	Page Number(s)	Revision	Learn Obj
Unit Startup	DGP 01-01	Att. A	61	79	

Comment	Comment
Facility	Need learning objective.

Question Source	New	Question Modification Method	

Question Source Comments:	

Material Required for Examination:	

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 90	GENERIC	2.1.21	3.1	RO	769.00.01	1

You are getting ready to perform a task and have just copied the procedure you are going to use from the Work Execution Center.

You are . . .

A. allowed proceed as long as the copy is the same revision as the one listed in the procedure index on the Intranet.

B. allowed to proceed as the copy you have should be the current revision.

C. required to compare the procedure revision with the one in the Control Room BEFORE proceeding.

D. required to compare the procedure revision with the one listed in EWCS BEFORE proceeding.

Answer:	Reference(s):	Question Reference(s):
B	AD-AA-104-101, Rev 0, pg.2 LAP-820-2T, Rev 20, pg.4	New

Explanation: The WEC is one of the locations that is an Authorized set. No further verification is required.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 91	GENERIC	2.2.12	3.0/3.4	BOTH	032.00.20	1

The Plant Supervisor has ordered you to perform a RCIC operability test following maintenance using LOS-RI-Q3, Reactor Core Isolation Cooling (RCIC) System Pump Operability and Valve Inservice Tests In Conditions 1, 2, and 3.

LOS-RI-Q3 requires the performance of ?

A. Chemistry analysis on the Suppression Pool water.

B. Suppression Pool Temperature Monitoring Checks.

C. RCIC Monthly Valve Operability on the RCIC Exhaust Rupture Diaphragm.

D. Remote Shutdown Panel Post Accident Instrumentation Operability Checks.

Answer:	Reference(s):	Question Reference(s):
B	LOS-RI-Q3 Rev 31	INPO Q No.821

Explanation: With RCIC System adding heat to the Suppression Pool, Suppression Pool temperatures must be verified less than or equal to 105°F at least once per 5 minutes and documented in LOS-AA-S101[201], Att G.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 92	GENERIC	2.2.28	2.6/3.5	BOTH	30.077	1

Unit 1 is in a refueling outage.

A single fuel bundle is being loaded into the core.

The signal-to-noise ratio is 15 to 1.

The MINIMUM count rate to verify the required SRMs operable is ___ counts per second.

A. 0.7

B. 1.0

C. 2.0

D. 3.0

Answer:	Reference(s):	Question Reference(s):
D	LFS-100-4, Rev 16, pg. 12	New

Explanation: With the signal-noise-ratio .less than 20 to 1, the minimum count rate is 3 CPS.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 93	GENERIC	2.2.26	2.5	RO	030.00.20	1

Which of the following describe the required communication between the Control Room and the Refueling Bridge during core alterations?

A. Dialed Telephone

B. PA System (speaker phone)

C. Sound Powered Phones

D. Station Radio (operator frequency)

Answer:	Reference(s):	Question Reference(s):
B	LFP-600-2, Rev 8	New

Explanation: Control Room and Refuel Bridge communicators are required to use the P.A. System (Speaker phone).

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 94	GENERIC	2.2.13	3.6	RO	OOS Obj 3.1, 4.1, 5.1, 6.1, 7.1	1

Regarding station Out Of Services, which situation would utilize a Dual Function Checklist?

Performing . . .

A. both HANG and LIFT steps on the same checklist.

B. both HANG and VERIFY steps on the same checklist.

C. the LIFT and the normal Mechanical Lineup using a common checklist.

D. the VERIFY and the normal Mechanical Lineup using a common checklist.

Answer:	Reference(s):	Question Reference(s):
A	OP-AA-101-201, Rev 2, pg.4	OOS Exam bank (Sig Mod)

Explanation: a Dual Function Checklist performs both hang and lift steps on the same checklist.

OOS Exambank

94

Objective: 3.1, 4.1, 5.1, 6.1, 7.1
26. The OOS process cards that are attached to zone of protection isolation points to prevent manipulation are called:

A. OOS Master Cards
B. Auxiliary OOS Cards
C. OOS ZOP (Zone of Protection) Cards
D. OOS Hold Cards

Answer: B, Auxiliary OOS cards are attached to points of isolation to prevent manipulation. These are the OOS cards that create the zone of protection on an OOS.

Objective: 3.1, 4.1, 5.1, 6.1, 7.1
27. Which of the following is an Operator going to do when assigned the task of performing a Boundary Verification of an OOS?

A. Follow the requirements of AD-AA-104-103 Verification Practices to verify the equipment status of the OOS conditions.
B. Walk down the boundaries of the building in which the OOS is placed to verify safe conditions.
C. Verify that the OOS was developed within the administrative boundaries set forth in the OOS procedure.
D. Verify that the work hazards at the OOS boundaries are acceptable to perform the work safely.

Answer: A, The Boundary Verification is the process Ops uses to aid in verifying the OOS is hung on the correct OOS points. This can be an independent verification or a concurrent verification as delineated in the AD-AA-104-103 Verification Practices procedure.

Objective: 3.1, 4.1, 5.1, 6.1, 7.1
28. An OOS checklist that is used to perform both HANG and LIFT OOS activities is called:

A. A Double Use checklist.
B. A Dual Function checklist.
C. An Exceptional OOS checklist.
D. A Scope Change checklist.

Answer: B, Dual Function checklists have both Lift actions and Hang actions on them.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 95	GENERIC	2.3.9	2.5/3.4	BOTH	93.00.20	1

Which of the following must be in service prior to performing a containment purge when the unit is at power?

A. MCR AND AEER Emergency Makeup Trains

B. ONLY the MCR Emergency Makeup Train

C. MCR AND AEER Recirculation Charcoal Filter Units

D. ONLY the MCR Recirculation Charcoal Filter Unit

Answer:	Reference(s):	Question Reference(s):
C	LOP-VQ-04, Rev 12, Pg. 34	New

Explanation: If the unit is in OC 1,2, or 3, BOTH MCR and AEER Recirculation Charcoal Filters are to be verified in service prior to purging the drywell.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 96	GENERIC	2.3.2	2.5	RO		2

You have been directed to independently verify the closed position of a system drain valve.

To complete the task you will have to spend approximately 10 minutes in the general area of the valve.

The dose rate in the general area of the valve is 50 mRem/hr.

Which of the following is the correct approach to fulfilling this task?

A. Have Shift Manager approve using process parameters as a verification since estimated dose will likely exceed 15 mRem.

B. Have Shift Manager waive the independent verification since estimated dose will likely exceed 5 mRem.

C. Perform the independent verification since total individual dose is expected to be less than 15 mRem.

D. Perform the independent verification after installing shielding to reduce your dose to less than 5 mRem.

Answer:	Reference(s):	Question Reference(s):
B	AD-AA-104-103, Rev 2 pg.7 & 9	Hope Creek 12/98 ILT NRC exam (Significantly modified)

Explanation: The use of alternate verification techniques is applicable whenever doses in excess of 5 mRem are expected. The distractors test the candidate's recollection of the value associated with the independent verification waiver, as well as their recognition of the appropriate value of other ALARA concepts such as planning and shielding. Neither is appropriate in this circumstance due to the basic nature of the task and because the installation of shielding would result in further exposure to the workers installing the shielding.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 97	GENERIC	2.3.11	2.7	RO	052.00.05	1

Unit one Radwaste Discharge Tank 1WF05T is being discharged to the lake blowdown line.

While hanging an outage for service water, the inlet and outlet valves for the liquid Radwaste PRM are mistakenly closed.

Which of the following describes actions that will occur due to this valve operation?

A. The Lake Blowdown Flow Control Valve CLOSES AND the Radwaste Discharge Pump TRIPS.

B. The Radwaste Discharge Line Isolation Stop Valve CLOSES AND the Radwaste Discharge Recirculation Valve OPENS.

C. The Lake Blowdown Flow Control Valve CLOSES AND the Radwaste Discharge Recirculation Valve OPENS.

D. The Radwaste Discharge Line Isolation Stop Valve CLOSES AND the Radwaste Discharge Pump TRIPS.

Answer:	Reference(s):	Question Reference(s):
D	**LOP-WF-20 Rev 34 pg. 5**	**LOP-WF-20 001 (modified)**

Explanation: The Radwaste Discharge Line Isolation Stop will automatically close and the Radwaste Discharge Pumps will trip on Radwaste Effluent sample panel low flow. The Lake Blowdown Flow Control valve and the Radwaste Discharge Recirculation valve are not affected.

LOP-WF-20 001

Unit one Radwaste Discharge Tank 1WF05T is being discharged to the lake blowdown line. While hanging an outage for service water, the inlet and outlet valves for the liquid Radwaste PRM are mistakenly closed. Which one of the following describes an automatic action that will occur due to this inadvertent valve operation?

✓A. The radwaste discharge valve auto closes.
B. The Howell Bunger flow control valve auto closes.
C. The clean condensate flush valve auto closes.
D. The discharge recirculation pump auto starts.

LOP-WF-20, Rev. 19, Page 3, Step E.2.

(Verified by jdh, added solution text, 06/05/95, jer.)
(Verified no changes,04/16/96, jer.)

Objective & KA: C272000-7.02; KA272000K4.02 R3.7/S4.1

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	D	A	C	A	C	B	D	A	B

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 98	GENERIC	2.4.6	3.1/4.0	BOTH	400.00.18	1

Unit 2 is shutdown with the following conditions:

- A large LOCA has occurred.
- Containment pressure quickly exceeded the Pressure Suppression Pressure Limit.

Which of the following describes the sequence of steps to be attempted to mitigate the containment pressure increase?

A. Align VQ for venting the Drywell IAW LGA-VQ-02;
Align RHR for Suppression Chamber Spray IAW LGA-RH-101;
Align RHR for Drywell Spray IAW LGA-RH-101;
Initiate ADS IAW LGA-04.

B. Align RHR for Suppression Chamber Spray IAW LGA-RH-101;
Align RHR for Drywell Spray IAW LGA-RH-101;
Initiate ADS IAW LGA-04;
Align VQ for venting the Drywell IAW LGA-VQ-02;

C. Align VQ for venting the Drywell IAW LGA-VQ-02;
Align RHR for Drywell Spray IAW LGA-RH-101;
Align RHR for Suppression Chamber Spray IAW LGA-RH-101;
Initiate ADS IAW LGA-04.

D. Align RHR for Drywell Spray IAW LGA-RH-101;
Align RHR for Suppression Chamber Spray IAW LGA-RH-101;
Initiate ADS IAW LGA-04;
Align VQ for venting the Drywell IAW LGA-VQ-02;

Answer:	Reference(s):	Question Reference(s):
B	LGA-003, Rev 0	New

Explanation: Suppression chamber sprays are always attempted prior to DW sprays. ADS is always performed prior to venting per LGA-VQ-02. The initial venting of the containment to control pressure is LGA-VQ-01 and cannot be performed if VQ has isolated on high containment pressure.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 99	GENERIC	2.4.17	3.1	RO	400.00.15	1

A reactor scram has occurred and not all rods have inserted.

Which of the following conditions would allow the SRO to make the determination that the "Reactor will remain shutdown under all conditions?"

A. No more than one rod remains withdrawn in any 5 x 5 array.

B. One control rod remains withdrawn at 48. ALL other rods are at 00.

C. Power is in the source range and decreasing on ALL channels.

D. The only rods which remain withdrawn are at position 04 or 02.

Answer:	Reference(s):	Question Reference(s):
B	**Tech Spec**	**Dresden 1998 Exam Q**

Explanation: all rods at 02 or 00; "Shutdown margin check"- one rod can be fully withdrawn form the core provided all others are at 00. Answer C and D don't meet this check. Answer A would allow multiple rods to be withdrawn.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 100	GENERIC	2.4.12	3.4/3.9	BOTH	702.06	2

- Both Unit-1 and Unit-2 are at normal rated full power conditions.
- You were the off-going NSO on Unit-2.
- You were properly relieved.

While sitting in your car you remember that you left your lunch box in the Service Building. You re-enter the protected area and as you approach the Service Building a passer-by informs you that a Site Emergency has been declared and the station is about to perform a site assembly. You then hear the Assembly Siren.

Based on the above information, you must . . .

A. Assemble in the Operational Support Center.

B. Assemble in the Service Building Trackway.

C. Report immediately to the Unit-2 Control Room and offer your assistance.

D. Return to your vehicle and wait at home to be called back as a relief crew member.

Answer:	Reference(s):	Question Reference(s):
B	LZP-1170-2, Revision 8, Page 6 and 7, Step E.4	LOR Bank LZP-1170-2 006 (modified)

Explanation: The individual should report to the Service Building Trackway since they do not meet the other criteria listed in Step E.4.

100

LZP-1170-2 006

Given the following plant conditions:
- Both Unit-1 and Unit-2 are at normal rated full power conditions
- You are the off-going NSO on Unit-2
- You were properly relieved

While sitting in your car you remember that you left your lunch box in the Service Building. You re-enter the protected area and as you approach the Service Building a passer-by informs you that a Site Emergency has been declared and the station is about to perfrom a site assembly. You then hear the Assembly Siren.

Based on the above information, you should ...

✓A. assemble in the South Service Building Trackway.
B. assemble in the Operational Support Center.
C. return to your vehicle and call the Unit-2 Control Room before leaving the parking lot.
D. report immediately to the Unit-2 Control Room and offer your assistance.

LZP-1170-2, Revision 8, Page 6 and 7, Step E.4

(New question written for 99m6 LORT Annual Exams, 12/16/99, jer.)

Objective: 702.06
K/A (revision 2): For ROs 2.4.39 3.3/3.1, and
For SROs 2.4.40 2.3/4.0

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 101	295019	AA2.01	3.6	SRO	120.00.18	2

Unit 2 is at rated power with the following conditions:

- HD tank level increasing.
- HD Pump Minimum Flow Valves opening.
- HD Pump Forward Valves closing.
- LP Heater Emergency Spills Valve opening.

Which of the following is responsible for all of the conditions AND which procedure(s) should be implemented?

A. LP Heater 23 Level transmitter failing high, enter LOA-HD-201.

B. HD Pump Flow Transmitter failing low, enter LOA-HD-201.

C. Loss of Misc. Auto Control System, enter LOA-HD-201 and LOA-GC-201.

D. Loss of Instrument Air, enter LOA-HD-201 and LOA-IA-201.

Answer:	Reference(s):	Question Reference(s):
D	LOA-IA-201, Rev 1, pg.14	New

Explanation: Only a loss of instrument air would result in all of these conditions. LP Htr 23A level transmitter failing high would open the 23A Emer spill valve and cause the pump forward valves to close slightly but would not cause HD tank level to increase. Loss of 2PA06J and HD pump flow transmitter would not cause Emer spill valves to open. LOA-HD-201 should be utilized to address the changing HD flows. LOA-IA-201 should be utilized to address the loss of IA.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 102	241000	2.1.11	3.8	SRO	073.00.24	2

Unit 2 is operating near full power when instrument maintenance technicians discovered that three turbine stop valve closure channels that input to RPS are inoperable.

PROVIDE T.S. 3.3.1.

Which of the following actions is required?

A. Within one hour, verify sufficient channels remain operable or tripped to maintain trip capability in the Functional Unit.

B. Within one hour, initiate a reduction in reactor power to less than 25% thermal power within two hours.

C. Within six hours restore the inoperable channels or reduce power to less than 25% within the following 12 hours.

D. Within six hours place the remaining operable channel in the tripped condition.

Answer:	Reference(s):	Question Reference(s):
A	**LP 73 Section VII.A and T.S. 3.3.1**	**73.00.24 001**

Explanation: T.S. 3.3.1 requires that when you have less than the required operable channels you must trip one RPS channel in 12 hours. If you have 2 or more channels inop, as specified in this question, then the following actions apply:

a. within 1 hour, verify sufficient channels remain Operable or tripped to maintain trip capability in the Functional Unit and,

b. Within 6 hours place the inop channel(s) in one trip system, and/or that trip system in the tripped condition,

and

Within 12 hours, restore the inop channels in the other trip system to operable or tripped.

Only answer A is correct as it specifies that within one hour verify sufficient channels remain operable or tripped to maintain trip capability in the functional unit. Answer B is incorrect because if action 6 of table 3.3.1-1 were taken it specifies that the reduction of reactor power happen within 15 minutes, not one hour as specified in this answer. Answer C is incorrect as action prior to the six hours specified in this answer is required. Answer D is incorrect because again action is required prior to the six hours specified in this answer.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 103	295035	2.4.1	4.6	SRO	400.00.01	2

Unit 2 is in Hot Shutdown with the following conditions:

- Both of the running VR exhaust fans have tripped.
- Reactor building differential pressure is +0.01 inch H_2O.

Which of the following is the overriding document for this situation?

A. LGA-002, Secondary Containment Control.

B. The associated annunciator response procedures.

C. Tech Spec 3.6.5.1, Secondary Containment Integrity.

D. LOA-VR-201, Unit 2 Recovery from a Group 4 Isolation or Spurious Trip of Reactor Building Ventilation.

Answer:	Reference(s):	Question Reference(s):
A	LGA-002, Rev 0	New

Explanation: LGA-002 entry is required when differential pressure is at or above 0 in (H_2O). LGAs when entered override LORs and LOAs.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 104	262001	2.1.11	3.8	SRO	005.00.24	1

- Unit 1 startup is in progress after a short outage to repair a leak inside the drywell.
- Reactor power is currently 7% with the mode switch in STARTUP and containment inerting in progress.
- Shift plans are to continue the power ascension and transfer the mode switch to RUN.
- A report is received that the drywell lighting circuits are energized.

The lighting circuits must be deenergized...

A. within 1 hour.

B. prior to placing the mode switch to RUN.

C. within 1 hour after placing the mode switch to RUN.

D. before drywell oxygen concentration is less than 16%.

Answer:	Reference(s):	Question Reference(s):
A	LP05 Section VII.A. and T.S. 3.8.3.1	005.00.24 002

Explanation: This question tests the students ability to RECALL one-hour or less T.S. Do Not use this question on exams where Technical Specifications are given as a reference.

Technical Specification 3.8.3.1 requires that during Operational Conditions 1, 2, and 3 the drywell lighting circuits be deenergized. The action statement requires that if the circuits are energized they be deenergized within 1 hour. Answer A is correct as it identifies this 1 hour requirement. Answer B is incorrect because even in mode 2 the circuit must be deenergized within one hour. Answer C is incorrect because the 1 hour clock starts now not when the mode switch is transferred to RUN. Answer D is incorrect because the circuit must be deenergized within 1 hour irrespective of the drywell oxygen concentration.

104

005.00.24 002

Unit 1 startup is in progress after a short outage to repair a leak inside the drywell. Reactor power is currently 7% with the mode switch in STARTUP and containment inerting in progress. Shift plans are to continue the power ascension and transfer the mode switch to RUN. A report is received that the drywell lighting circuits are energized. What actions/impacts will this have?

✓A. The lighting circuits must be deenergized within 1 hour.
B. The lighting circuits must be deenergized prior to placing the mode switch to RUN.
C. The lighting circuits must be deenergized within 1 hour after placing the mode switch to RUN.
D. The lighting circuits must be deenergized until drywell oxygen concentration is less than 4%.

This question tests the students ability to RECALL one-hour or less T.S. Do Not use this question on exams where Technical Specifications are given as a reference.

Technical Specification 3.8.3.1 requires that during Operational Conditions 1, 2, and 3 the drywell lighting circuits be deenergized. The action statement requires that if the circuits are energized they be deenergized within 1 hour. Answer A is correct as it identifies this 1 hour requirement. Anwer B is incorrect because even in mode 2 the circuit must be deenergized within one hour. Answer C is incorrect because the 1 hour clock starts now not when the mode switch is transferred to RUN. Answer D is incorrect because the circuit must be deenergized within 1 hour irrespective of the drywell oxygen concentration.

Reference: LP05 Section VII.A. and T.S. 3.8.3.1

Source: New

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 105	263000	2.1.12	4.0	SRO	006.00.22	2

Provide T.S. 3.4.8.2

Unit One is at rated condition.

- The DIV 2 125V DC BATT CHARGER TROUBLE alarm has come in.
- The Battery Charger voltage indicates 120 volts.

Which of the following describes the impact this situation has on the continued operation of the plant?

A. Action must be taken within 1 hour to be in at least STARTUP within the next 6 hours, at least HOT SHUTDOWN within the following 6 hours and at least COLD SHUTDOWN within the subsequent 24 hours.

B. Action must be taken within 2 hours to be in at least STARTUP within the next 6 hours, at least HOT SHUTDOWN within the following 6 hours and at least COLD SHUTDOWN within the subsequent 24 hours.

C. The battery charger must be restored to operable status within 1 hour or the unit must be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 12 hours.

D. The battery charger must be restored to operable status within 2 hours or the unit must be in at least HOT SHUTDOWN within the next 12 hours and COLD SHUTDOWN within the following 24 hours.

Answer:	Reference(s):	Question Reference(s):
D	**Tech Spec,Amendment No. 74, pg.3/4 8-14, 8-15**	**TS-3/4.8.2 001**

Explanation: Voltage must be ≥125 volts per 4.8.2.3.1 requiring battery charger to be declared INOP and 3.8.2.3 Action a. performed.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 106	295008	AA2.02	3.4	SRO	031.00.16	3

Unit 1 is at rated power with the following conditions:

- 'A' Narrow Range Level instrument is selected.
- Both TDRFPs are in 3-element control.

Which of the following, without operator intervention, would trip the TDRFPs and require entry into LGP-3-2?

De-pressurization over fifteen minutes of the . . .

A. high pressure leg to the 'A' MSL flow instrument.

B. high pressure leg to the 'A' TDRFP flow instrument.

C. low pressure leg to the 'A' FW Header flow instrument.

D. variable leg to the 'A' Narrow Range level instrument.

Answer:	Reference(s):	Question Reference(s):
D	**RL LP pg.28**	**New**

Explanation: Loss of the high pressure tap to the flow instruments would cause those instruments to fail low. Loss of the low pressure tap to the flow instruments would cause those instruments to fail high. Loss of the variable leg to the level instrument would cause it to fail low. With the Narrow Range instrument failing downscale, RWLC would increase feed flow until Level 8 trips from B and C narrow range level instruments tripped the TDRFPs and the Main Turbine. Furthermore, as the instrument indicated less than 12.5", the RR pumps would downshift further increasing the steamflow-feedflow mismatch. LGP-3-2 entry would be required due to the resultant reactor scram on the main turbine trip.

With the TDRFP flow signal failing low, RWLC would increase the signal to the 'A' TDRFP until the feedpump was at its high speed limit. The 'B' TDRFP would back down to maintain level.

With the MSL flow signal failing low, RWLC would decrease feedflow causing level to initially drop but then recover as the Dynamic Compensator adjusted to the level error.

With the FW Header flow signal failing high, the RR interlock would occur at lower flow than it should.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 107	GENERIC	2.4.11	3.6	SRO	24.048	1

Unit two is at 50% power

- A high-high level in the 23A heater has occurred
- The NSO reports that feedwater temperature has decreased by ten degrees.
- The Assist NSO reports:
  - the associated Extraction Steam Inlet have failed to close.
  - the associated Extraction Non-Return valves have failed to close.
- The NSO scrams the reactor and trips the Main Turbine.

The NSO's actions were...

A. CORRECT to prevent possible backflow of water into the main turbine causing damage.

B. CORRECT to prevent possible fuel damage due to the decreasing feedwater temperature.

C. INCORRECT without first checking the minimum feedwater temperature for the current power.

D. INCORRECT without first attempting a manual isolation of the valves.

Answer:	Reference(s):	Question Reference(s):
A	LOA-HD-201 Rev 3, pg.10 & 14	New

Explanation: A high-high level in the heater should close the ES isolation and non-return check valve. Failure of both to close could result in water induction into the turbine. Actions are taken to prevent turbine damage.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 108	259002	2.1.12	4.0	SRO	027.00.22	2

Unit 2 is operating at rated power with the following conditions: **Provide T.S. pg.3-86 to3-89**

Instrument Maintenance is performing calibration checks of the 'C' Narrow Range Level instrument and reports that the trip setpoint is currently 55.7 inches and cannot be adjusted lower at this time.

Which one of the following describes the applicable requirements?

A. 'C' Narrow Range instrument is still OPERABLE, no action is required.

B. Declare the channel INOP immediately and verify sufficient channels remain OPERABLE or tripped to maintain trip capability.

C. Within two hours, declare the channel INOP and verify sufficient channels remain OPERABLE or tripped to maintain trip capability.

D. Restore 'C' Narrow Range within seven days or place it in the tripped condition.

Answer:	Reference(s):	Question Reference(s):
A	**T.S. 3.3.8**	**New**

Explanation: 55.7 inches is outside the TRIP SETPOINT of <55.5 inches but within the allowable value of <56.0 inches. The instrument is still considered OPERABLE.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 109	GENERIC	2.1.33	4.0	SRO	022.00.22	1

Unit 1 is in Run with recirculation loop flow mismatch of 3000 gpm

Which of the following is the MAXIMUM percentage of core flow that is allowed to exist WITHOUT entering a Technical Specification Action statement?

A. 64%

B. 69%

C. 74%

D. 79%

Answer:	Reference(s):	Question Reference(s):
B	Tech Spec 3.4.1.3, pg.3/4 4-3 LOA-RR-101, Rev5, pg. 15	New

Explanation: Recirc loop flow mismatch must be within 5% (2360 gpm)of rated loop flow if core flow is greater than or equal to 70% rated core flow (76 Mlbm/hr) and within 10% (4720 gpm) of rated loop flow if core flow is less than 70% rated core flow (76 Mlbm/hr). With a loop flow mismatch of 3000 gpm, the maximum core flow that could be achieved is 70 %.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 110	GENERIC	2.1.32	3.8	SRO	02.00.20	2

LOP-MP-05, Isolating the Main Transformers, the Unit 1(2) Generator and the Unit Auxiliary Transformer, provides a precaution to notify the Load Dispatcher prior to placing the sudden pressure cutout switch to the OFF position or restoring the switch to the ON position.

Which of the following describes the reason for this precaution?

The Load Dispatcher . . .

A. will receive an alarm at the Load Dispatcher control center as operation of the sudden pressure cutout switch will bypass an important main transformer protective function.

B. must coordinate with the Unit Supervisor to inhibit the trip function while the switch is moved to the ON position when restoring the sudden pressure relay to service.

C. will take action to reduce the loading of the main transformer so a sudden pressure condition is less likely to occur while the function is bypassed.

D. must give permission since an important transformer function which could affect the availability of the unit is being removed from or restored to service.

Answer:	Reference(s):	Question Reference(s):
D	**Lesson Plan for System 02, Sections VI.A and VIII.**	**002.00.20 001 (modified)**

Explanation:

A. is incorrect since the action will not result in an alarm at the Load Dispatch control center.

B. is incorrect since the Load Dispatcher cannot inhibit the sudden pressure relay trip.

C. is incorrect because transformer loading is not related to the sudden pressure relay function.

D. is correct since the availability of the unit could be affected by operation with the sudden pressure trip bypassed or while returning the function to service.

002.00.20 001

(\. Point) LOP-MP-05, Isolating the Main Transformers, the Unit 1(2) Generator and the Unit Auxiliary Transformer, provides a precaution to notify the Load Dispatcher prior to placing the sudden pressure cutout switch to the OFF position or restoring the switch to the ON position. Which of the following best describes the reason for this precaution?

A. Operation of the sudden pressure cutout switch will bypass an important Main Transformer protective function and produces an alarm at the Load Dispatch control center.
B. When restoring the sudden pressure relay function to service, coordination with the Load Dispatcher is required to inhibit the trip function while the switch is moved to the ON position.
C. The Load Dispatcher will take action to reduce the loading of the Main Power Transformer so that a sudden pressure condition is less likely to occur while the function is bypassed.
✓D. Permission of the Load Dispatcher is required since an important transformer protective function which affects the availability of the unit is being removed from or restored to service.

A. is incorrect since the action will not result in an alarm at the Load Dispatch control center.
B. is incorrect since the Load Dispatcher cannot inhibit the sudden pressure relay trip.
C. is incorrect because transformer loading is not related to the sudden pressure relay function.
D. is correct since the availability of the unit could be affected by operation with the sudden pressure trip bypassed or while returning the function to service.

Lesson Plan for System 02, Sections VI.A and VIII.

ANSWERS:

Single

Points | 1 |

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 111	295024	2.4.1	4.6	SRO	400.00.01	2

Unit 1 is shutdown with the following conditions:

- Drywell pressure is 1.8 psig and increasing due to a small coolant leak.
- Drywell temperature is 175°F and increasing slowly.

Which of the following lists the MINIMUM set of actions to be completed?

A. Enter LGA-001, "Reactor Pressure Vessel Control" and reduce drywell pressure utilizing LGA-VQ-01.

B. Enter LGA-003, "Primary Containment Control" and reduce drywell temperature utilizing LGA-VP-01.

C. Enter LGA-001, "Reactor Pressure Vessel Control" and LGA-003, "Primary Containment Control" and reduce drywell pressure utilizing LGA-VQ-01.

D. Enter LGA-001, "Reactor Pressure Vessel Control" and LGA-003, "Primary Containment Control" and reduce drywell temperature utilizing LGA-VP-01.

Answer:	Reference(s):	Question Reference(s):
D	**LGA-001, Rev 0** **LGA-003, Rev 0**	**New**

Explanation: LGA-001 and LGA-003 entry conditions are met by high drywell pressure of 1.69 psig. LGA-VQ-01 can not be used to vent the drywell if drywell pressure is >1.69 psig as it does not allow for bypassing of the isolation signals. LGA-VP-01 can be utilized since drywell temperature is <212°F

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 112	295026	EA2.01	4.2	SRO	421.00.02	2

Unit 1 was at rated power when an earthquake occurred resulting in the following conditions:

- Suppression Pool Level has decreased to 698' 4" and is stable
- The Reactor Operator reported that initially, six SRVs were open simultaneously.
- 'A' RHR is in drywell spray mode.

Which of the following lists (1) the procedure to correct the Suppression Pool Level condition AND (2) the best indication of the average Suppression Pool temperature?

A. (1) LGA-RH-101 (2) Average suppression pool temperature off of 1TR-CM037A (Div 1).

B. (1) LOP-RH-16 (2) Bulk Average Temperature from the respective NUMAC, 1UY-CM037.

C. (1) LGA-RH-101 (2) RHR DISCH HX A from recorder 1E12-R601.

D. (1) LOP-RH-16 (2) RHR INLET TO HX A from recorder 1E12-R601.

Answer:	Reference(s):	Question Reference(s):
D	**LOP-CM-03, Rev 11, pg.3 & 8** **LGA-003, Rev 0**	**New**

Explanation: With Suppression Pool level below –1 foot (<698'11"), only Step E.2 methods are to be used eliminating 1TR-CM037A and 1UY-CM-37. With 'A' RHR in drywell spray mode, there should be good flow through the heat exchanger making RHR INLET TO HX A the best indication of the average Suppression Pool water temperature. LGA-003 directs use of LOP-RH-16 to control suppression pool level. LGA-RH-101 used to place the RHR Heat Exchangers in service to support LPCI, Drywell Spray, Suppression Chamber Spray, and Suppression Pool Cooling.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 113	295034	2.4.1	4.6	SRO	400.00.01	3

Unit 2 is shutdown with the following conditions:

PROVIDE LGA-002 (with entry conditions blanked out)

- A Group I isolation occurred due to personnel error.
- Reactor pressure is being controlled from 900-1000 psig by RCIC in the pressure control mode.
- RB North HCU radiation level has increased to 20 mr/hr.
- RCIC pipe route temperature has increased to 175°F.

Which of the following describes the required actions?

A. Enter LGA-002 immediately BUT leave RCIC running.

B. Enter LGA-002 immediately AND isolate RCIC steam lines.

C. Delay LGA-002 entry until pipe route temperature increased by 5°F AND THEN RCIC could be left running.

D. Delay LGA-002 entry until pipe route temperature increased by 5°F AND THEN RCIC isolation would be required.

Answer:	Reference(s):	Question Reference(s):
D	LGA-002 Rev 0	New

Explanation: LGA-002 entry is not required for the Unit 2 RB North HCU until 30 mr/hr. With RCIC pipe route temperature above Max Normal, Step 27 of LGA-002 requires isolating all discharges into affected areas except systems needed for: Fire fighting or LGA actions. RCIC in pressure control could be replaced by operation of SRVs or clearing of the Group 1 isolation and would be required to be isolated.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 114	201001	2.1.11	3.8	SRO	774.010	1

With the plant at rated power, Control Rod Accumulator Trouble alarms are received for two fully-withdrawn Control Rods within one minute.

Investigation revealed that the alarms are both due to low accumulator pressures.

The operators must ...

A. declare BOTH control rods inoperable AND immediately verify one CRD pump is operating OR place the mode switch in SHUTDOWN due to the indication of a systemic problem with the drive mechanisms.

B. declare BOTH control rods inoperable AND immediately verify one CRD pump is operating OR place the mode switch in SHUTDOWN to insure sufficient negative reactivity insertion on a scram.

C. insert and electrically disarm one control rod within one hour OR be in at least HOT SHUTDOWN within 12 hours due to the indication of a systemic problem with the drive mechanisms.

D. insert and electrically disarm one control rod within one hour OR be in at least HOT SHUTDOWN within 12 hours to insure sufficient negative reactivity insertion on a scram.

Answer:	Reference(s):	Question Reference(s):
B	**Tech Specs 3.1.3.5., ACTION a.2.(a. AND Bases 3/4.1.3, pg.B 3/4 1-3.**	**025.00.24 001 (Modified)**

Explanation: Answer B is correct. 'A' is incorrect because the shutdown margin license requirement is not met by placing the mode switch in shutdown. 'C' and 'D' are incorrect because Tech Specs do NOT allow one hour to insert the control rod.

025.00.24 001

(\. Point) With the plant at full power, Control Rod Accumulator Trouble alarms are received for 2 fully withdrawn Control Rods annuniciate within one minute of each other. Investigations revealed that the annunciators are due to low accumulator pressures.
Which ONE of the following is the required action AND the bases per Technical Specifications for that action?

A. Immediately place the mode switch in shutdown to prevent a possible shutdown margin T.S. violation.
✓B. Declare the associated CR inoperable AND Immediately verify one CRD pump is operating OR place the mode switch in Shutdown to prevent less reactivity insertion on a scram than has been anlayzed.
C. Immediatly insert BOTH CRs or place the mode switch in shutdown to prevent less reactivity insertion on a scram than has been analyzed.
D. Immediatly disarm the directional control valves and be in at least Hot Shutdown within 12 hours to prevent a possible LSSS.

Answer B is correct , all other answers are incorrect since they are not required immediatly.

New Question
Reference: Tech Specs 3.1.3.5., ACTION a.2.(a. AND Bases 3/4.1.3, pp B 3/4 1-3.

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 115	GENERIC	2.4.8	3.7	SRO	400.00.05	3

Unit 1 has just scrammed due to a loss of the SAT.

LGP-3-2, "Reactor Scram" is being performed.

LOA-AP-101, "Unit 1, AC Power System Abnormal" is being performed.

Two minutes later suppression pool temperature is 106°F and increasing.

Which of the following actions are required?

A. Continue LOA-AP-101 and LGP-3-2 and monitor suppression pool temperature.

B. Exit LOA-AP-101 and enter LGA-003, "Primary Containment Control."

C. Exit LGP-3-2 and enter LGA-003, "Primary Containment Control."

D. Concurrently enter LGA-003, "Primary Containment Control."

Answer:	Reference(s):	Question Reference(s):
D	LGA-003, Rev 0	New

Explanation:LOA-AP-101 and LGP-3-2 are not exited but performed concurrently. 106°F is above the 105°F entry condition for LGA-003. The distracters represent common misconceptions for license candidates since other plants have different philosophies.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 116	288000	2.1.12	4.0	SRO	118.00.22	1

Unit 1 is at rated power. **PROVIDE Tech Spec pages 3/4 6-38 and 3/4 6-39**

Reactor Building Ventilation supply damper 1VR04YA is found to have an isolation time of 90 seconds.

Which of the following describes the response to this situation?

A. No Action is required since there is an at least one operable damper in the effected penetration.

B. Maintain 1VR04YB operable and put it on an increased surveillance frequency.

C. Declare Unit 1 VR INOP and take actions to be in Hot Shutdown within 12 hours.

D. Restore the inoperable damper to operable status within 8 hours.

Answer:	Reference(s):	Question Reference(s):
D	**Tech Spec 3/4.6.5.2 pg. 3/4 6-38**	**090.00.22 002 (modified)**

Explanation: Tech. Spec 3.6.5.2 Action a. allows 8 hours to restore the damper to operable status. Actions to be in hot shutdown would only be taken if one of the conditions in Action a. could not be met. There is no provision for only one operable damper in this penetration without taking some action. Maintaining 1VR04YB is a requirement, however there is no provision for continued operation by performing increased surveillance activities.

090.00.22 002

(\. Point) During a surveillance in Condition 1, Reactor Building Ventilation supply damper 1VR-04YA is found to have an isolation time of 2 minutes. What is the appropriate application of the Tech Specs for this situation?

✓A. Restore the inoperable damper to operable status within 8 hours.
B. Declare Unit 1 VR INOP and take actions to be in Hot Shutdown within 12 hours.
C. No Action is required since there is an at least one operable damper in the effected penetration.
D. Maintain 1VR-04YB operable and put it on an increased surveillance frequency.

A. Correct — Tech. Spec 3.6.5.2 Action a. allows 8 hours to restore the damper to operable status.
B. Incorrect — Actions to be in hot shutdown would only be taken if one of the conditions in Action a. could not be met.
C. Incorrect — There is no provision for only one operable damper in this penetration without taking some action.
D. Incorrect — Maintaining 1VR-04YB is a requirement, however ther is no provision for continued operation by performing increased surveillance activities.

Tech Spec 3.6.5.2

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 117	GENERIC	2.2.18	3.6	SRO	660.02	1

Unit 2 is shutdown.

While returning the '2A' RHR pump to service, the control power fuse for the breaker can not be located.

The preferred method for determining a replacement fuse is by using the . . .

A. Placards placed near the fuse.

B. Vendor manuals.

C. EWCS Data Panels.

D. Station fuse list.

Answer:	Reference(s):	Question Reference(s):
C	CC-AA-206 Rev 0 pg.4	Dresden 1997 ILT exam

Explanation: Per the reference, EWCS is the controlling database for fuses that are shown on station drawings and that have EPN numbers assigned. The other answers were chosen as plausible distracters. Answers B and D have been correct in older procedures before the computer screen was available.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 118	295037	2.4.1	4.6	SRO	400.00.01	2

Unit 1 was at rated power when the following occurred:

- A station blackout occurred.
- Reactor water level is below the narrow range.
- Five control rods are fully withdrawn.
- The HPCS DG is running

Which of the following describes the expected crew response?

Scram, Turn Mode Switch to Shutdown, . . .

A. Inhibit ADS and attempt start of the remaining Diesel Generators.

B. Inhibit ADS and prevent ECCS injection.

C. Initiate Division 3 ECCS and attempt start of the remaining Diesel Generators.

D. Initiate Division 3 ECCS and Inhibit ADS.

Answer:	Reference(s):	Question Reference(s):
B	LGA-001, Rev 0 & LGA-010, Rev 0	New

Explanation: With level no longer on the narrow range, entry conditions have been met for LGA-001 and with not all control rods inserted, entry into LGA-010 is required. The initial steps of LGA-010 are to Inhibit ADS and prevent ECCS injection.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 119	GENERIC	2.3.6	3.1	SRO		1

What is the HIGHEST level of station management that must review and approve the ODCM prior to purging the containment?

A. Unit Supervisor

B. Health Physics Supervisor

C. Shift Manager

D. Health Physics Manager

Answer:	Reference(s):	Question Reference(s):
A	LOP-VQ-04, Rev 12, pg. 4 LYP-1300-1, Rev 11, pg. 7	New

Explanation: The Unit Supervisor must review and approve the ODCM prior to a radioactive materials release.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 120	GENERIC	2.3.4	3.1	SRO		1

Authorization to receive radiological exposures in excess of 10CFR20 limits is the responsibility of the _____.

A. Station Director

B. Recovery Manager

C. Com Ed Medical Director

D. Radiation Protection Director

Answer:	Reference(s):	Question Reference(s):
A	LZP-1260-5, Rev 1, pg.2	CPS 2000 ILT SRO Exam Q# 100

Explanation: The decision to authorize personnel exposure beyond 10CFR20 limits under emergency conditions is the responsibility of the Acting Station Director or Station Directory and may not be delegated.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 121	GENERIC	2.3.10	3.3	SRO	30.100	1

LOS-RH-R1-R2, LPCI Injection Line Check Valve Inservice Test can be utilized to perform which of the following?

A. Reduce the radiation exposure of personnel working on the refueling bridge.

B. Reduce the radiation exposure of personnel working in the Drywell.

C. Increase core flow to prevent thermal stratification during Refueling.

D. Increase core cooling to assist Fuel Pool Cooling during periods of increased heat loads.

Answer:	Reference(s):	Question Reference(s):
B	LOS-RH-R1, Rev 10, pg.3	New

Explanation: A secondary purpose of this surveillance is to flush the A/B/C LPCI Injection Lines inside the Drywell in order to minimize personnel radiation exposure.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 122	GENERIC	2.2.7	3.2	SRO		1

Unit 2 is in a refueling outage.

It is a weekend.

A new system engineer has requested that the Unit 2 HPCS pump be started with the full flow test valve throttled to 75% open to determine starting current.

The evolution is not described in current procedures or the Safety Analysis Report.

Which of the following would describes the correct response to the request?

The Shift Manager may . . .

A. approve the evolution without restrictions.

B. only approve the test if another SRO with an engineering degree agrees.

C. not approve the test until a written safety evaluation has been performed and approved.

D. not approve the test under any conditions.

Answer:	Reference(s):	Question Reference(s):
C	RS-AA-104, Rev 0, pg.5	New

Explanation: 10CFR50.59 specifies that a written safety evaluation be performed where a licensee plans to conduct tests or experiments not described in the Safety Analysis Report.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 123	295031	EA2.02	4.2	SRO	434.00.01	1

Unit 2 is experiencing an ATWS with the following conditions:

- Reactor water level is –10 inches and is being rapidly lowered.
- The Reactor operator reports that APRMs are oscillating between two and sixteen percent.

Which of the following actions should be taken?

A. Reduce the rate of level decrease.

B. Raise reactor water level until oscillations stop.

C. Maintain reactor water level at –10 inches.

D. Continue with the level decrease.

Answer:	Reference(s):	Question Reference(s):
D	LGA-010, Rev 0	New

Explanation: Power oscillations are expected due to the level decrease but are to be ignored.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 124	295028	2.4.1	4.6	SRO	400.00.01	2

Unit 2 is operating at rated power with the following conditions:

- Primary Containment Vent Fan 2VP02CB is OOS.

Primary Containment Vent Fan 2VP02CA trips.

Which of the following describe the expected crew response to this event.

Enter LGA-003 . . .

A. immediately and start hydrogen and oxygen monitors.

B. immediately and start containment venting IAW LGA-VQ-02.

C. if Drywell temperature exceeds135°F on 2TR-CM037A or B. Then start hydrogen and oxygen monitors.

D. if Drywell temperature exceeds135° F on 2TR-CM037A or B. Then start containment venting IAW LGA-VQ-02.

Answer:	Reference(s):	Question Reference(s):
A	LOP-CM-04, Rev 8, pg.1 LGA-003, Rev 0	New

Explanation: If no Primary Containment Vent Fan is running, Drywell average air temperature is assumed to be greater than 135°F and LGA-003 is to be entered. Hydrogen and oxygen monitors are to be started whenever LGA-003 is entered.

Q_ID	System:	K/A:	Importance	Exam:	Objective:	Cognitive Level:
# 125	GENERIC	2.2.24	3.8	SRO	061.00.22	3

Unit 1 is at rated conditions with NO LCO action statements in effect.

Provide Tech Specs 3.5.1 ,3.6.1.1, and 3.6.3.

Electrical maintenance has requested permission to de-energize the LPCS minimum flow valve in the closed position while they perform a required breaker inspection.

Which of the following describes the shortest time clock that would be entered if you allowed the maintenance to start?

A. 1 hour

B. 4 hours

C. 12 hours

D. 7 days

Answer:	Reference(s):	Question Reference(s):
D	**Tech Spec 3.5.1**	**New**

Explanation: By de-energizing the minimum flow valve in the closed position, Primary Containment Integrity would be met. However, LPCS would have to declared inoperable requiring a 7 day time clock to be entered.