

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 1
(1 point)

Given the following Unit 1 conditions:

- The Unit entered EP/1/A/5000/ECA-1.1, (Loss of Emergency Coolant Recirculation) following a LOCA outside containment
- Safety Injection Termination criteria is NOT met
 - The crew has been directed to determine minimum SI flow per Enclosure 4 (Minimum S/I Flowrate Versus Time After Trip)

Current conditions:

- Unit 1 Reactor was tripped 60 minutes ago
- NCS pressure is 1000 psig.
- 1B NI pump is running with flow indicated at 380 gpm
- 1A NV pump is running with flow indicated at 400 gpm

The MINIMUM S/I Flowrate required to remove current reactor decay heat is _____(1)_____.

The _____(2)_____ pump is required to be secured.

Which ONE of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. 340 gpm
2. 1A NV
 - B. 1. 360 gpm
2. 1A NV
 - C. 1. 340 gpm
2. 1B NI
 - D. 1. 360 gpm
2. 1B NI
-

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Question: 2
(1 point)

Given the following Unit 1 initial conditions:

- The Unit is at 100% RTP
- A Pressurizer Safety Valve begins leaking by its seat
- AP/1/A/5500/010 (Reactor Coolant Leak) Case II (NC System Leak) is entered
- 1NV-294 (NV Pmps A&B Disch Flow Ctrl) is throttled to the full open position, to establish 150 gpm charging line flow

Subsequently:

- Pressurizer Level is at 53% and decreasing at a rate of 0.3%/minute
- Letdown flow is 75 gpm and stable
- Pressurizer Pressure is 2215 psig and decreasing slowly

Per AP/10, the crew will NEXT adjust 1NV-849 (Letdn Flow Var Orif Ctrl) to establish a MAXIMUM of ____ (1) ____ Letdown Flow.

____ (2) ____ will be energized due to the current Pressurizer Pressure.

Which ONE of the following completes the statements above?

- A. 1. 0 gpm
2. "C" Pressurizer heaters ONLY
 - B. 1. 45 gpm
2. "C" Pressurizer heaters ONLY
 - C. 1. 0 gpm
2. ALL Pressurizer heaters
 - D. 1. 45 gpm
2. ALL Pressurizer heaters
-

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Question: 3
(1 point)

Given the following Unit 1 timeline:

1015

- Unit at 100% RTP
- A Small Break LOCA occurs

1045

- The crew is in EP/1/A/5000/ES-1.2 (Post LOCA Cooldown and Depressurization)
- The CRS is reading the step to initiate NC System cooldown to Cold Shutdown
- Current NC System T-Colds are at 480 °F and decreasing slowly

Per ES-1.2, if the OATC maintains the MAXIMUM required cooldown rate, at 1145 S/G Pressures will be _____ .

Which ONE of the following completes the statement above?

- A. 710 psig
 - B. 434 psig
 - C. 330 psig
 - D. 181 psig
-

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Question: 4
(1 point)

Given the following Unit 1 conditions:

- A Large Break LOCA occurred 30 minutes ago **from 100% RTP**
- NC System Tcolds are 249° F and decreasing slowly

Based on these conditions:

EP/1/A/5000/FR-P.1 (Response to Imminent Pressurized Thermal Shock) entry conditions ____ (1) ____ met.

OMP 1-7 (Emergency/Abnormal Procedure Implementation Guidelines) MINIMUM monitoring requirements states that CSF Status Trees shall be monitored ____ (2) ____ .

Which ONE of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. are
2. continuously
 - B. 1. are
2. every 10 to 15 minutes
 - C. 1. are NOT
2. continuously
 - D. 1. are NOT
2. every 10 to 15 minutes
-

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Question: 5
(1 point)

Given the following Unit 2 conditions:

- The Unit is at 100% RTP
- The BOP observes that vibration readings on the 2C NCP are increasing as follows:

<u>Time</u>	<u>2100</u>	<u>2105</u>	<u>2110</u>	<u>2115</u>
Shaft Vibration (mils)	5	15	19	22
Frame Vibration (mils)	2	4	6	8

Per 2AD-6 B/5 (NCP HI-HI VIBRATION), which ONE of the following indicates the EARLIEST time that the 2C NCP must be secured?

- A. 2100
 - B. 2105
 - C. 2110
 - D. 2115
-

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Question: 6

(1 point)

Given the following Unit 1 initial conditions:

- The Unit is at 100% RTP
- The crew has entered AP/1/A/5500/012 (Loss of Charging or Letdown), Case I (Loss of Charging) following a trip of 1A NV Pump

Subsequently:

- The crew is in the process of re-establishing charging
 - 1B NV Pump has been started
 - 1NV-294 (NV Pmps A&B Disch Flow Ctrl) has been throttled to proper flow

In accordance with AP/12, the BOP will next throttle 1NV-309 (Seal Water Injection Flow) in the _____(1)_____ direction to establish a MINIMUM of _____(2)_____ "Total Seal Water Flow".

Which ONE of the following completes the statement above?

- A. 1. OPEN
2. 32 gpm
 - B. 1. CLOSED
2. 32 gpm
 - C. 1. OPEN
2. 40 gpm
 - D. 1. CLOSED
2. 40 gpm
-

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Question: 7
(1 point)

Given the following Unit 2 initial conditions:

- The Unit is in MODE 5 and drained to Mid Loop
- ND Train 2A is in service
- ND system flow rate is 3200 gpm
- NC system level is 6.5% and stable

Subsequently:

- 2A ND pump amps and discharge pressure begin to oscillate
- The crew has entered AP/2/A/5500/019 (Loss of Residual Heat Removal System), Case IV (Loss of ND in Mid Loop or S/G Manway Removed)

Per AP/19 Case IV, the BOP will FIRST _____ to mitigate this issue.

Which ONE of the following completes the statements above?

- A. secure 2A ND pump
 - B. reduce ND flow to less than a MAXIMUM of 2000 gpm
 - C. reduce ND flow to less than a MAXIMUM of 1500 gpm
 - D. reduce ND flow to less than a MAXIMUM of 1000 gpm
-

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Question: 8
(1 point)

Given the following Unit 1 timeline:

1000

- The Unit is at 100% RTP
- 1A2 KC Pump is in service
- 1A KC flow is 5000 gpm and stable

1005

- 1KC-9 (1A2 KC Pump Disch) is inadvertently closed

1007

- 1KC-9 is reopened
- No additional KC pumps have been started

Following closure of 1KC-9, 1KC-C37A (Train A Miniflow Isol) opened as flow decreased to a MINIMUM value of _____(1)_____ .

Assuming no operator action, once 1KC-9 is reopened 1AD-9 F/5 "KC Train A Single Pump Runout" _____(2)_____ alarm.

Which ONE of the following completes the statement above?

- A. 1. 1100 gpm
2. will
 - B. 1. 3150 gpm
2. will
 - C. 1. 1100 gpm
2. will NOT
 - D. 1. 3150 gpm
2. will NOT
-

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Question: 9
(1 point)

Given the following Unit 1 initial conditions:

- The Unit was at **72% RTP** and increasing following a refueling outage

Subsequently:

- The main turbine has tripped due to a low condenser vacuum
- DRPI indicates Control Bank "D" at 178 steps and inserting

One of the required Immediate Action Steps is to _____.(1)_____ .

Following completion of this step, control rod speed will indicate _____.(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. Insert Control Rods in MANUAL
2. 48 steps per minute
 - B. 1. Insert Control Rods in MANUAL
2. 72 steps per minute
 - C. 1. Verify Control Rods IN "AUTO" AND STEPPING
2. IN 48 steps per minute
 - D. 1. Verify Control Rods IN "AUTO" AND STEPPING
2. IN 72 steps per minute
-

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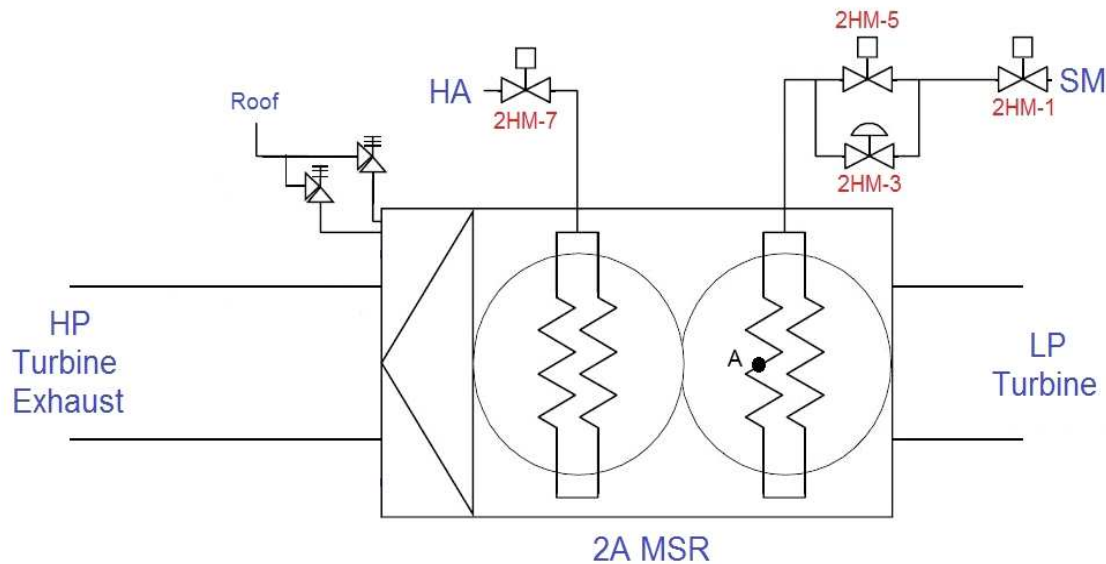
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Question: 10

(1 point)

Given the following Unit 2 conditions:

- The Unit is at 45% RTP
- The crew has entered AP/2/A/5500/028 (Secondary Steam Leak)



A steam leak at location A, will cause Main Turbine Megawatts to ____ (1) ____ .

In order to isolate the leak, AP/28 will direct the crew to ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. increase
2. trip the Main Turbine
- B. 1. increase
2. trip the Reactor and close MSIVs
- C. 1. decrease
2. trip the Main Turbine
- D. 1. decrease
2. trip the Reactor and close MSIVs

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Question: 11

(1 point)

Given the following Unit 1 initial conditions:

- A feedwater line break on the 1A S/G inside containment and a total loss of feedwater occurred
- EP/1/A/5000/FR-H.1 (Response to Loss of Secondary Heat Sink) was entered and bleed and feed of the NC system was initiated
- All CA Flow Control Valves have been closed

Subsequently:

- The Turbine Driven CA pump is returned to service and a source of feedwater is available
- CETs are stable
- All S/G WR levels are indicating 8%

In accordance with FR-H.1, Enclosure 6 (S/G CA Flow Restoration), CA flow is required to be restored to ____ (1) ____ .

This limit ____ (2) ____ based on minimizing thermal stress to S/G components.

Which ONE of the following completes the statements above?

- A. 1. ALL intact S/Gs at a rate not to exceed 100 gpm per S/G
2. is
 - B. 1. only ONE intact S/G at a rate not to exceed 100 gpm
2. is
 - C. 1. ALL intact S/Gs at a rate not to exceed 100 gpm per S/G
2. is NOT
 - D. 1. only ONE intact S/G at a rate not to exceed 100 gpm
2. is NOT
-

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Question: 12

(1 point)

Given the following Unit 2 timeline:

1000

- A Loss of All Offsite Power has occurred
- Both Unit 2 D/Gs started and loaded their associated bus

1005

- While monitoring D/G operating parameters, the Unit 2 BOP notes that D/G 2B "VOLTS" indicates 3925 V

1007

- Voltage is adjusted to within the normal operating range by operation of the "D/G 2B Volt Adjust" controls on 2MC-11

As a result of the 2B D/G voltage adjustment at 1007:

2B D/G "AMPS" ____ (1) ____ .

2B D/G "P/F" ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. decreased
2. remained the same
 - B. 1. decreased
2. became more lagging
 - C. 1. increased
2. remained the same
 - D. 1. increased
2. became more lagging
-

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Question: 13

(1 point)

Given the following initial conditions:

- 1B RN Pump in service
- 1B1 KC Pump in service
- 2A1 KC Pump in service

Subsequently:

- Both units enter AP/0/A/5500/030 (Plant Flooding), Enclosure 8 (Flooding From RN) following discovery of a large RN leak on the 1A Essential Header
- Per AP/30 guidance, the crew has isolated the 1A RN Essential Header (ONLY)

Based on current conditions:

Cooling water supply ____ (1) ____ available to the 1A KD Heat Exchanger.

Mini-Flow protection ____ (2) ____ available for the 1B RN Pump.

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is
2. is NOT
 - C. 1. is NOT
2. is
 - D. 1. is NOT
2. is NOT
-

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Question: 14

(1 point)

Given the following Unit 1 initial conditions:

- A Loss of Instrument Air occurred while at 100% RTP

Subsequently:

- The reactor has been manually tripped due to low VI pressure
- The crew has transitioned to EP/1/A/5000/ES-0.1 (Reactor Trip Response)
- The OATC has been given S/G level guidance

In accordance with the design of the CA system, the OATC will maintain control of CA flow for a MINIMUM of ____ (1) ____ from the Control Room.

The purpose for this design feature is to protect from ____ (2) ____ with a Loss of VI.

- A. 1. 30 minutes
2. S/G overfill during a S/G Tube Rupture
 - B. 1. 30 minutes
2. runout of the CA pumps during a Main Feedwater Line Rupture
 - C. 1. 60 minutes
2. S/G overfill during a S/G Tube Rupture
 - D. 1. 60 minutes
2. runout of the CA pumps during a Main Feedwater Line Rupture
-

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Question: 15

(1 point)

Given the following conditions:

- AP/1/A/5500/037 (Generator Voltage and Electric Grid Disturbances), Case I (Abnormal Generator or Grid Voltage) has been entered following a Grid Disturbance
- The TCC has reported that "Real Time Contingency Analysis" (RTCA) indicates CNS switchyard voltage would NOT be adequate if the unit should trip
- SPOC is making preparation for installation of Jumpers per AM/1/A/5100/008 (4KV Essential Power System Degraded Voltage Logic)

Unit 1 ECCS is currently ____ (1) ____ .

Once jumpers are installed, LOCA sequencer actuation will cause a Blackout ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. operable
2. immediately
 - B. 1. operable
2. after 5 seconds
 - C. 1. inoperable
2. immediately
 - D. 1. inoperable
2. after 5 seconds
-

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Question: 16

(1 point)

In accordance with EP/1/A/5000/ECA-1.2 (LOCA Outside Containment):

The crew will FIRST attempt to isolate the leak by isolating the ____ (1) ____ system from the NC system.

The parameter used to verify the leak is isolated is ____ (2) ____.

Which ONE of the following completes the statements above?

- A. 1. ND
2. PZR level
 - B. 1. NI
2. PZR Level
 - C. 1. ND
2. NC pressure
 - D. 1. NI
2. NC pressure
-

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Question: 17

(1 point)

EP/1/A/5000/FR-H.1 (Loss of Secondary Heat Sink) step 9 states "**Stop all NC pumps**".

Prior to stopping the NC pumps in this step, Steam Dumps are ensured to be in _____(1)_____ mode.

The primary reason for stopping the NC pumps in this step is to _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. T-AVG
2. extend the time to align a feed source prior to meeting Bleed and Feed criteria
 - B. 1. T-AVG
2. preserve the NC pumps for long term core cooling once a heat sink is restored
 - C. 1. PRESS
2. extend the time to align a feed source prior to meeting Bleed and Feed criteria
 - D. 1. PRESS
2. preserve the NC pumps for long term core cooling once a heat sink is restored
-

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Question: 18
(1 point)

From the given "List of Reasons", which ONE of the following includes ALL correct reasons for performing a cooldown/depressurization in accordance with EP/1/A/5000/ECA-1.1, (Loss of Emergency Coolant Recirculation)?

List of Reasons

1. To inject Cold Leg Accumulators
2. Minimize reactor coolant break flow
3. To establish conditions for ND system operation
4. Minimize NC dilution potential in case of a subsequent tube rupture

- A. 1, 2, and 3
 - B. 2, 3, and 4
 - C. 1, 3, and 4
 - D. 1, 2, and 4
-

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Question: 19
(1 point)

Given the following Unit 1 conditions:

- The refueling crew is lowering an irradiated fuel assembly next to a new fuel assembly in the core
- The assembly inadvertently drops completely into the core
- 1RAD-3 D/2 (1EMF-17 REACTOR BLDG REFUEL BRIDGE) alarms
- No other annunciators have been received
- The crew has entered AP/1/A/5500/025 (Damaged Spent Fuel)

As a result of this event:

The Containment Evacuation Alarm ____ (1) ____ automatically initiate.

AP/25 ____ (2) ____ direct VP to be manually secured.

Which ONE of the following completes the statements above?

- A. 1. will
2. does
 - B. 1. will
2. does NOT
 - C. 1. will NOT
2. does
 - D. 1. will NOT
2. does NOT
-

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Question: 20
(1 point)

Given the following Unit 2 conditions:

- AP/2/A/5500/010 (Reactor Coolant Leak), Case I (S/G Tube Leak) has been entered due to indications of a 2B S/G tube leak.
- Current conditions are as follows:
 - Pressurizer level has been stabilized
 - Letdown flow is 75 GPM
 - Charging flow is 150 GPM

Based on the above conditions, the estimated leak rate is ____ (1) ____ GPM.

If leak rate increases, a S/G Tube Rupture will be indicated by the inability to maintain Pressurizer level above a MINIMUM of ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. 63
2. 2%
 - B. 1. 63
2. 4%
 - C. 1. 75
2. 2%
 - D. 1. 75
2. 4%
-

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Question: 21

(1 point)

Given the following Unit 2 conditions:

- A leak has developed in the Spent Fuel Pool area
- Water leaking from an overhead pipe is collecting on the floor
- RP reports that the water is a Beta dose concern

The primary biological concern for this spill is dose to ____ (1) ____ .

The normal occupational dose limit for this body location is ____ (2) ____ per year.

Which ONE of the following completes the statements above?

- A. 1. skin
2. 15 rem
 - B. 1. skin
2. 50 rem
 - C. 1. internal organs
2. 15 rem
 - D. 1. internal organs
2. 50 rem
-

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Question: 22

(1 point)

Which ONE of the following statements represents a loss of Containment Integrity?

- A. Both lower personnel airlock doors closed with all seals deflated
 - B. Annulus doors blocked open for maintenance work
 - C. Submarine hatch is found open
 - D. Engineering discovery of major divider barrier seal degradation
-

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Question: 23

(1 point)

In accordance with the following step of EP/1/A/5000/ES-0.0 (Rediagnosis):

2. Verify entry conditions:

A previous Safety Injection signal actuation _____(1)_____ required to proceed in ES-0.0.

Completion of EP/1/A/5000/E-0 (Reactor Trip or Safety Injection) _____(2)_____ required to proceed in ES-0.0.

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is
2. is NOT
 - C. 1. is NOT
2. is
 - D. 1. is NOT
2. is NOT
-

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Question: 24
(1 point)

Given the following Unit 1 conditions:

- A Small-Break LOCA has occurred
- EP/1/A/5000/ES-1.2 (Post LOCA Cooldown and Depressurization) has been implemented
- Containment pressure is 2.8 PSIG and STABLE
- 1AD-9, C/8 "FWST Pre-Lo Level" is illuminated
- 1AD-20, B2 "Cont Sump Level >2.5 ft" is DARK
- 1AD-21, B2 "Cont Sump Level >2.5 ft" is DARK

In accordance with the requirements of ES-1.2, Enclosure 1 (Foldout Page), the BOP ____ (1) ____ secure Unit 1 ND Pumps because ____ (2) ____ .

Which ONE of the following completes the statement above?

- A. 1. will
2. ND Heat Exchanger cooling is NOT aligned
 - B. 1. will
2. 1AD-20, B/2 and 1AD-21, B/2 are NOT LIT
 - C. 1. will NOT
2. 1AD-9, D/8 "FWST 2/4 Lo Level" is NOT LIT
 - D. 1. will NOT
2. EP/1/A/5000/ES-1.3 (Transfer to Cold Leg Recirculation) entry requirements are met
-

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Question: 25
(1 point)

Given the following Unit 2 conditions:

- The crew has reached the following step in EP/2/A/5000/FR-C.2 (Response to Degraded Core Cooling):

18. Isolate CLAs as follows

In accordance with FR-C.2, closing Cold Leg Accumulator Discharge valves will require a MINIMUM of _____(1)_____ NC $T_{\text{hot(s)}} < 370$ degrees F and _____(2)_____ require AO support for local power alignment.

Which ONE of the following completes the statements above?

- A. 1. one
2. will
 - B. 1. one
2. will NOT
 - C. 1. two
2. will
 - D. 1. two
2. will NOT
-

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Question: 26

(1 point)

Given the following Unit 1 conditions:

- The Reactor tripped following an inadvertent Main Steam Isolation
- The crew has entered EP/1/A/5000/FR-H.2 (Response to Steam Generator Overpressure) immediately following the transition from EP/1/A/5000/E-0 (Reactor Trip or Safety Injection)
- The OATC has been directed to manually operate 1SV-19 (S/G 1A PORV) in order to decrease 1A S/G pressure

In order to operate 1SV-19, in MANUAL, the Main Steam Isolation signal _____(1)_____ required to be RESET.

Once 1SV-19 is opened, 1A S/G NR Level indication will initially change due to _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. is
2. SHRINK
 - B. 1. is
2. SWELL
 - C. 1. is NOT
2. SHRINK
 - D. 1. is NOT
2. SWELL
-

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Question: 27

(1 point)

Given the following Unit 1 conditions:

- The CRS has elected to enter EP/1/A/5000/FR-Z.3 (Response to High Containment Radiation) following an event causing a Containment Radiation level of 37 R/hr
- Containment Sump level instruments indicate bottom of scale

In accordance with FR-Z.3, the BOP _____(1)_____ start the Containment Auxiliary Charcoal Filters (CACFU).

If required for inventory control, _____(2)_____ letdown must be placed in service.

Which ONE of the following completes the statements above?

- A. 1. will
2. excess
 - B. 1. will
2. normal
 - C. 1. will NOT
2. excess
 - D. 1. will NOT
2. normal
-

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Question: 28
(1 point)

Given the following Unit 1 conditions:

- The Unit is at 100% RTP
- Total charging flow is currently 90 gpm
- 1NV-294 (NV Pmps A&B Disch Flow Ctrl) is in MANUAL
- 1NV-309 (Seal Water Injection Flow) is in AUTO

Assuming stable plant conditions, as 1NV-294 is throttled OPEN, 1NV-309 will throttle in the ____ (1) ____ direction.

In order to restore automatic control of the Pressurizer Level Control system ____ (2) ____ must be placed in AUTO.

Which ONE of the following completes the statements above?

- A. 1. OPEN
2. 1NV-294 ONLY
 - B. 1. CLOSED
2. 1NV-294 ONLY
 - C. 1. OPEN
2. 1NV-294 AND PZR Level Master
 - D. 1. CLOSED
2. 1NV-294 AND PZR Level Master
-

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Question: 29

(1 point)

The 1A Boric Acid Transfer Pump receives power from _____ .

Which ONE of the following completes the statement above?

- A. 1MXW
 - B. SMXG
 - C. 1EMXA
 - D. 1EMXG
-

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Question: 30
(1 point)

Given the following Unit 1 initial conditions:

- The Unit is in MODE 5
- NC temperature is 112°F
- LTOP is in service
- 1B NV pump is running
- 1A NV pump is tagged out for maintenance
- Both NI pumps are tagged out

Subsequently:

- 1A NV pump breaker is racked in following maintenance

Entry into the Action statement of Technical Specification 3.4.12 (LTOP SYSTEM)
_____(1)_____ required at this time.

ND Suction Relief Valves will open if NC Pressure exceeds the MINIMUM listed
value of _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. is
2. 400 psig
 - B. 1. is
2. 450 psig
 - C. 1. is NOT
2. 400 psig
 - D. 1. is NOT
2. 450 psig
-

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Question: 31

(1 point)

Given the following Unit 1 initial conditions:

- The Unit is at 100% RTP
- 1B NV Pump is running
- 1A NV Pump is OFF

Subsequently:

- KC cooling flow to the Unit 1 NV pumps is lost
- The crew enters AP/1/A/5500/021 (Loss of Component Cooling), and has dispatched an operator to align backup cooling to an NV Pump
- The crew is performing Enclosure 5 (Maximize NV Pump Run Time)

NV Pump alternate cooling water will be supplied by the ____ (1) ____ system.

While the alternate cooling alignment is being performed, the operating pump will be ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. YD
2. secured immediately
 - B. 1. YD
2. operated for a maximum of 10 minutes
 - C. 1. YM
2. secured immediately
 - D. 1. YM
2. operated for a maximum of 10 minutes
-

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Question: 32

(1 point)

Given the following Unit 1 conditions:

- ND is aligned in RHR mode

A failure of _____(1)_____ will cause a PRT pressure increase.

If the input continues, PRT pressure will increase until rupture disc actuation at a MINIMUM value of _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. 1ND-31 (1A ND Train Cold Leg Inj Return Safety Relief)
2. 50 psig
 - B. 1. 1ND-31 (1A ND Train Cold Leg Inj Return Safety Relief)
2. 100 psig
 - C. 1. 1ND-3 (1A ND Pump Suction From NC Loop B Header Relief)
2. 50 psig
 - D. 1. 1ND-3 (1A ND Pump Suction From NC Loop B Header Relief)
2. 100 psig
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 33

(1 point)

Given the following Unit 1 conditions:

- The Unit is cooling down in Mode 4
- 1A1 and 1A2 KC Pumps are in service
- 1A ND is being aligned for RHR
- 1AD-9 F/7 "KC Train A Two Pump Runout" has alarmed

Aligning cooling water flow to 1A ND Heat Exchanger increased KC system flow by a MINIMUM of ____ (1) ____ .

The setpoint for 1AD-9 F/7 is ____ (2) ____ .

Which ONE of the following correctly completes the statements above?

- A. 1. 5,000 gpm
2. 10,800 gpm
 - B. 1. 5,000 gpm
2. 11,400 gpm
 - C. 1. 5,600 gpm
2. 10,800 gpm
 - D. 1. 5,600 gpm
2. 11,400 gpm
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 34

(1 point)

Given the following Unit 1 conditions:

- The Unit is at 100% RTP
- 1NC-36B (PZR PORV) failed to the intermediate position
- Attempts to manually close 1NC-36B (PZR PORV) were unsuccessful
- The BOP closed 1NC-35B (PZR PORV Isol)
- NC Pressure is currently 2150 psig and increasing slowly

Current PZR Pressure Error (psi) indicates a ____ (1) ____ value.

In accordance with TS 3.4.11 (Pressurizer Power Operated Relief Valves), 1NC-35B ____ (2) ____ required to be de-energized.

Which ONE of the following completes the statements above?

- A. 1. positive
2. is
 - B. 1. negative
2. is
 - C. 1. positive
2. is NOT
 - D. 1. negative
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 35

(1 point)

Given the following Unit 1 initial conditions:

- The Unit was at 100% power
- 1NC-35B (PZR PORV Isol) is in the "CLOSE" position due to a leak from 1NC-36B (PZR PORV)

Subsequently:

- A pressure transient resulted in an NC system pressure increase
- 1NC-34A (PZR PORV) opened but did not re-close
- NC pressure is 2200 psig and decreasing
- The BOP places the 1NC-33A (PZR PORV Isol) control switch to "CLOSE"

1NC-33A is currently ____ (1) ____.

____ (2) ____ provides a BLOCK signal to 1NC-34A on decreasing pressure.

Which ONE of the following completes the statements above?

- A. 1. OPEN
2. Selected Pressurizer Pressure 1 (SPP-1)
 - B. 1. OPEN
2. Selected Pressurizer Pressure 2 (SPP-2)
 - C. 1. CLOSED
2. Selected Pressurizer Pressure 1 (SPP-1)
 - D. 1. CLOSED
2. Selected Pressurizer Pressure 2 (SPP-2)
-

Catawba Nuclear Station

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Question: 36

(1 point)

Given the following Unit 2 initial conditions:

- The Unit is at 45% RTP for 2A CFPT repairs
- Control Rod select switch is in "AUTO"

Subsequently:

- Power Range Channel N-41 Control Power fuse has blown

Following this failure:

control rods _____(1)_____ be inserting in automatic.

manual control rod withdrawal _____(2)_____ blocked.

Which ONE of the following completes the statements above?

- A. 1. will
2. is
 - B. 1. will
2. is NOT
 - C. 1. will NOT
2. is
 - D. 1. will NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 37

(1 point)

Given the following Unit 2 conditions:

- The Unit is at 3% RTP following a refueling outage

Per Technical Specifications, which ONE of the following reactor trips is required to be operable to provide protection against DNB from the current power level to 100% RTP?

- A. OTDT
 - B. OPDT
 - C. Low NC loop flow
 - D. Pressurizer low pressure
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 38
(1 point)

Given the following Unit 1 initial conditions:

- A Reactor Coolant System leak has developed inside Containment
- The CRS has provided direction to the OATC for manually tripping the Reactor and the BOP for initiating Safety Injection

Subsequently:

- Attempts to trip the Reactor have failed
- Containment pressure is 0.55 psig and increasing slowly
- PZR Pressure is 1950 psig and decreasing slowly

Given the above conditions, EP/1/A/5000/F-0 (Critical Safety Function Status Trees) _____(1)_____ required to be implemented.

The BOP _____(2)_____ initiate Safety Injection at this time.

Which ONE of the following completes the statements above?

- A. 1. is
2. will
 - B. 1. is
2. will NOT
 - C. 1. is NOT
2. will
 - D. 1. is NOT
2. will NOT
-

Catawba Nuclear Station

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Question: 39

(1 point)

Given the following Unit 2 conditions:

- Containment Pressure Channel III has failed high

Following this malfunction, a High Containment Pressure Safety Injection signal will be generated if a MINIMUM of ____ (1) ____ of the remaining channels exceed the setpoint of ____ (2) ____ .

Which ONE of the following completes the statement above?

- A. 1. one
2. 1.2 psig
 - B. 1. one
2. 3.0 psig
 - C. 1. two
2. 1.2 psig
 - D. 1. two
2. 3.0 psig
-

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Question: 40
(1 point)

Concerning the Containment Chilled Water System (YV):

Chilled water cooling ____ (1) ____ supplied to the Containment Pipe Tunnel
Booster Fans.

YV cooling water supply to NC Pump Motor Air Cooler will isolate upon a
____ (2) ____ signal.

Which ONE of the following completes the statements above?

- A. 1. is
2. Phase A
 - B. 1. is
2. Phase B
 - C. 1. is NOT
2. Phase A
 - D. 1. is NOT
2. Phase B
-

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Question: 41

(1 point)

Given the following Unit 1 conditions:

- 1AD-13, D/8 "GLYCOL EXPANSION TNK LO-LO LVL" has alarmed

1NF-228A (Glycol Sup Cont Isol Otsd) _____(1)_____ closed.

The Glycol Expansion Tank Lo-Lo Level Interlock bypass switch is located on the _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. is
2. main control board
 - B. 1. is
2. local NF control panel
 - C. 1. is NOT
2. main control board
 - D. 1. is NOT
2. local NF control panel
-

Catawba Nuclear Station

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Question: 42
(1 point)

Given the following Unit 1 conditions:

- The Unit is at 10% RTP
- 1AD-13 A/7 "ICE COND LOWER INLET DOORS OPEN" alarm is lit
- The lower inlet door position display panel indicates that a door is open
- The door is confirmed to be cracked opened. The door will not move further open and cannot be closed
- No other alarms related to the ice condenser, NF system or AHUs are lit

The Action Statement of Tech Spec 3.6.12 (Ice Bed) _____(1)_____ required to be entered.

The Action Statement of Tech Spec 3.6.13 (Ice Condenser Doors) _____(2)_____ required to be entered.

Which ONE of the following completes the statement above?

- A. 1. is
2. is
 - B. 1. is
2. is NOT
 - C. 1. is NOT
2. is
 - D. 1. is NOT
2. is NOT
-

Catawba Nuclear Station

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Question: 43

(1 point)

Concerning operation of the Containment Spray System (NS):

Aligning suction from the _____(1)_____ with a specific _____(2)_____ limits post-accident Iodine concentration and minimizes stress corrosion.

Which ONE of the following completes the statement above?

- A. 1. FWST
2. pH
 - B. 1. FWST
2. boron concentration
 - C. 1. containment sump
2. pH
 - D. 1. containment sump
2. boron concentration
-

Catawba Nuclear Station

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Question: 44

(1 point)

Given the following Unit 1 conditions:

- The Unit is at 35% RTP
- The crew has entered AP/1/A/5500/010 (Reactor Coolant Leak) due to a 1C S/G Tube leak

1EMF-73 (S/G C Leakage) _____(1)_____ provide accurate indication of S/G tube leakage at the current power level.

If the leak size increases, EP/1/A/5000/E-3 (Steam Generator Tube Rupture) will FIRST direct closure of _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. will
2. 1C MSIV
 - B. 1. will
2. All MSIVs
 - C. 1. will NOT
2. 1C MSIV
 - D. 1. will NOT
2. All MSIVs
-

Catawba Nuclear Station

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Question: 45
(1 point)

Given the following Unit 1 initial conditions:

- The Unit is at 25% RTP following a refueling outage.
- AP/1/A/5500/028 (Secondary Steam Leak) has been entered following a discovery of a leak on the Unit 1 Main Turbine Crossover line

Subsequently:

- The Unit 1 Main Turbine is tripped to isolate the leak
- Reactor power is currently 11%

At this time, _____(1)_____ ~~operating~~ ^{modulating} steam dumps are ~~operating~~ to control NC temperature at _____(2)_____ degrees F.

Which ONE of the following completes the statement above?

- A. 1. ONLY condenser
2. 557
 - B. 1. ONLY condenser
2. 560
 - C. 1. condenser AND atmospheric
2. 557
 - D. 1. condenser AND atmospheric
2. 560
-

Catawba Nuclear Station

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Question: 46

(1 point)

Given the following Unit 1 initial conditions:

- EP/1/A/5000/E-0 (Reactor Trip or Safety Injection) was entered following a Small Break LOCA
- Both trains of Safety Injection automatically actuated
- 1B Reactor Trip Breaker (RTB) failed to open from the Control Room
- All CA pumps failed to start

Subsequently:

- The crew has entered EP/1/A/5000/FR-H.1 (Response to Loss of Secondary Heat Sink) and is attempting to align feed flow from 1A CFPT

In order to reset 1B ECCS, 1B RTB _____(1)_____ required to be locally opened.

1A CFPT will be reset _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. is
2. locally
 - B. 1. is NOT
2. locally
 - C. 1. is
2. at 1MC-10
 - D. 1. is NOT
2. at 1MC-10
-

Catawba Nuclear Station

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Question: 47
(1 point)

Given the following Unit 1 conditions:

- EP/1/A/5000/FR-H.1 (Response to Loss of Secondary Heat Sink) has been implemented
- Following Bleed and Feed initiation, CA flow has been restored from CAPT #1
- Containment pressure peaked at 3.2 psig and is now 2.1 psig

In accordance with FR-H.1, which ONE of the following indicates the MINIMUM heat sink requirements that must be met to allow termination of NC system bleed and feed?

- A. NR level in at least ONE S/G > 11%
 - B. NR level in at least ONE S/G > 29%
 - C. WR level in at least ONE S/G > 24%
 - D. WR level in at least ONE S/G > 36%
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 48

(1 point)

Given the following conditions:

Unit 1 and Unit 2 are at 100% RTP when the following switchyard PCBs open:

- PCB 17
- PCB 18

_____(1)_____ will experience a Turbine Runback due to loss of the associated
_____(2)_____ offsite power.

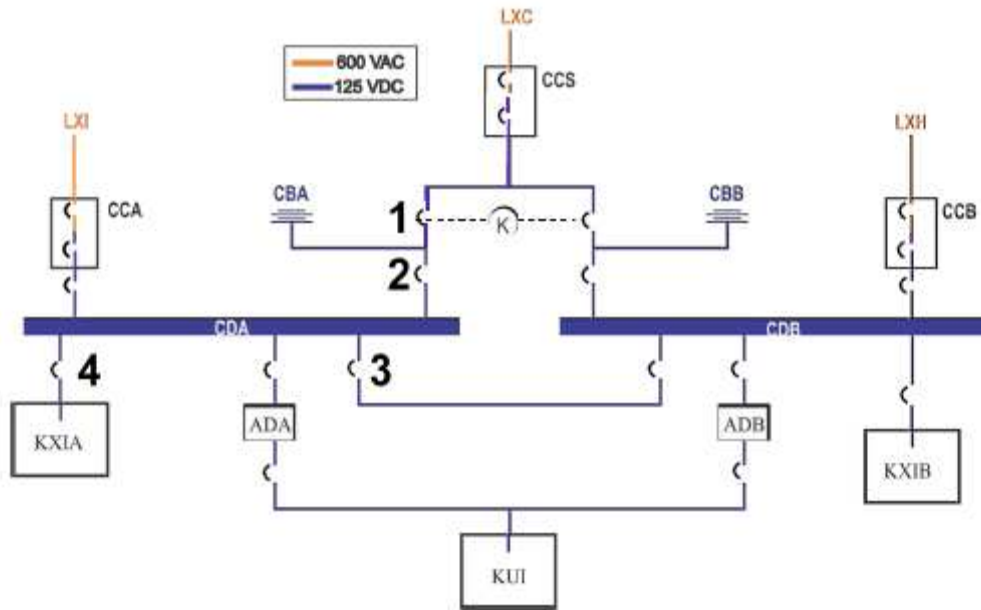
Which ONE of the following completes the statement above?

- A. 1. Unit 1
2. "A" train
 - B. 1. Unit 1
2. "B" train
 - C. 1. Unit 2
2. "A" train
 - D. 1. Unit 2
2. "B" train
-

Catawba Nuclear Station

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Question: 49
(1 point)



Which ONE of the following describes which of the DC breakers (labeled 1, 2, 3, 4 in the drawing above) that will cause an alarm to be received in the Control Room when the breakers OPEN?

- A. Any one of the four breakers
 - B. Breakers 1 and 3 ONLY
 - C. Breakers 2 and 3 ONLY
 - D. Breakers 2 and 4 ONLY
-

Catawba Nuclear Station

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Question: 50

(1 point)

Given the following Unit 2 conditions:

- 2ETB has experienced a Blackout while at 100% RTP
- No operator action has been taken

Which ONE of the following lists parameters which will cause a trip of the 2B D/G if a setpoint is exceeded?

- A. Engine Speed
Jacket Water Temperature
 - B. Engine Speed
Lube Oil Pressure
 - C. Lube Oil Temperature
Jacket Water Temperature
 - D. Lube Oil Temperature
Lube Oil Pressure
-

Catawba Nuclear Station

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Question: 51

(1 point)

Given the following Unit 2 conditions:

- The Unit is in Mode 5 with Reactor Coolant System vented
- 2EMF-39 has been declared Non-Functional
- 2EMF-36 is in service

In accordance with SLC 16.11-7 (Radioactive Gaseous Effluent Monitoring Instrumentation):

An in-progress Containment Purge (VP) release ____ (1) ____ continue.

A new Containment Purge (VP) release ____ (2) ____ be initiated.

Which ONE of the following completes the statements above?

- A. 1. may
2. may
 - B. 1. may NOT
2. may
 - C. 1. may
2. may NOT
 - D. 1. may NOT
2. may NOT
-

Catawba Nuclear Station

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Question: 52

(1 point)

Given the following conditions:

- Unit 1 and 2 are at 100% RTP
- "A" and "B" RL pumps are in service
- "C" RL pump is tagged out while the pump is being rebuilt
- RL Pressure Controller malfunctions and causes all turnaround valves to fail full open

As a result of this failure, RL flow to the ____ (1) ____ will ____ (2) ____ .

Which ONE of the following completes the statement above?

- A. 1. KR heat exchangers
2. increase
 - B. 1. KR heat exchangers
2. decrease
 - C. 1. IPB air coolers
2. increase
 - D. 1. IPB air coolers
2. decrease
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 53

(1 point)

The power supply for Instrument Air (VI) Compressor E is _____.

Which ONE of the following completes the statement above?

- A. 1SLXC
 - B. 2SLXC
 - C. 1LXI
 - D. 2LXH
-

Catawba Nuclear Station

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Question: 54

(1 point)

Given the following Unit 2 initial conditions:

- The Unit is in Mode 4

In accordance with Tech Spec 3.6.4 (Containment Pressure), the MINIMUM Containment air pressure is ____ (1) ____ .

In accordance with Tech Spec 3.6.5 (Containment Air Temperature), the MINIMUM Lower Containment air temperature is ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. - 0.1 psig
2. 60° F
 - B. 1. - 0.1 psig
2. 100° F
 - C. 1. - 0.3 psig
2. 60° F
 - D. 1. - 0.3 psig
2. 100° F
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 55

(1 point)

Given the following Unit 1 conditions:

- A rapid downpower is in progress due to a secondary steam leak inside Containment
- 1A, 1B, and 1D Lower Containment Vent Units (LCVU) are in operation
- Current Unit 1 Containment pressure is 0.58 psig and increasing slowly

Assuming no operator action,

1RN-473 (LCVU A Full Flow Valve) _____(1)_____ currently open.

1A LCVU _____(2)_____ operating in "Hi Speed".

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is
2. is NOT
 - C. 1. is NOT
2. is
 - D. 1. is NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 56

(1 point)

Given the following Unit 1 initial conditions:

- A unit shutdown to Mode 5 is in progress for a refueling outage
- Containment Purge (VP) system startup is in progress

Subsequently:

- The crew enters AP/1/A/5500/019 (Loss of Residual Heat Removal System) following indications of a NC system leak inside Containment
- 1EMF-39 (Containment Gas Hi Rad) has exceeded Trip 2 actuation
- Containment pressure is 0.28 psig and increasing slowly

Based on current conditions:

The VP system ____ (1) ____ isolated.

Phase "A" containment isolation ____ (2) ____ occurred.

Which ONE of the following completes the statements above?

- A. 1. is
2. has
 - B. 1. is
2. has NOT
 - C. 1. is NOT
2. has
 - D. 1. is NOT
2. has NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 57

(1 point)

Given the following Unit 1 conditions:

- The Unit is at 100% RTP
- Control Banks A, B, & C are 228 steps withdrawn
- Control Bank D is 215 steps withdrawn
- 1AD-2 E/10 "RPI Non-Urgent Failure" is illuminated
- DRPI displays "Data A Failure"

Subsequently:

- The OATC performs the following evolution in accordance with PT/1/A/4600/001 (RCCA Movement Test)
 - Withdraws Control Bank "B" to 238 steps as indicated by the applicable step demand counter
 - Inserts Control Bank "B" to 228 steps as indicated by the applicable step demand counter

Following completion of this step (and plant stabilization):

DRPI will indicate within _____(1)_____ of actual control rod position.

~~DRPI accuracy is _____(1)_____.~~

NC system temperature will be _____(2)_____ (as compared to temperature prior to testing).

Which ONE of the following completes the statements above?

- A. 1. -10/+4 steps
2. lower
 - B. 1. -10/+4 steps
2. the same
 - C. 1. +10/-4 steps
2. lower
 - D. 1. +10/-4 steps
2. the same
-

Catawba Nuclear Station

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Question: 58

(1 point)

Given the following Unit 1 initial conditions:

- PZR Pressure Channel 1 has failed HIGH
- A Unit plant transient results in a cooldown of the NC system causing the PZR Backup Heaters to energize and "C" Heaters to be full ON

Subsequently:

- No Tech Spec actions have been taken related to PZR Pressure Channel 1
- Unit 1 PZR Pressure Channel 3 fails LOW
- Annunciator 1AD-2, F/9 "DCS ALTERNATE ACTION" alarms

Following this event:

The "C" Heaters ____ (1) ____ remain full ON.

The PZR Backup Heaters ____ (2) ____ remain energized.

Which ONE of the following completes the statements above?

- A. 1. will
2. will
 - B. 1. will
2. will NOT
 - C. 1. will NOT
2. will
 - D. 1. will NOT
2. will NOT
-

Catawba Nuclear Station

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Question: 59

(1 point)

Which ONE of the following is the power supply for the 1A VE Fan?

- A. 1MXK
 - B. 1MXJ
 - C. 1EMXB
 - D. 1EMXI
-

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ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 60
(1 point)

Given the following Unit 1 initial conditions:

- 1A1 KC Pump is in service
- 1A KF Pump is in service

Subsequently:

- 1KC-50A (Aux Bldg Non-Ess Hdr Isol) has spuriously closed

1KC-149 (KF Hx 1A Cool Wtr Otlt) _____(1)_____ AUTOMATICALLY reposition in order to maintain Spent Fuel Pool temperature.

If 1AD-13, E/1 "SPENT FUEL POOL TEMP HI" alarms, entry into the actions of SLC 16.7-9 (Standby Shutdown System) _____(2)_____ be required.

Which ONE of the following completes the statements above?

- A. 1. will
2. will
 - B. 1. will
2. will NOT
 - C. 1. will NOT
2. will
 - D. 1. will NOT
2. will NOT
-

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Question: 61

(1 point)

Which ONE of the following describes the effect of 1EMF-15, Spent Fuel Building Refueling Bridge Monitor losing power?

- A. The Auxiliary Hoist cannot be raised
 - B. New fuel elevator cannot be operated in the UP direction
 - C. SFP Ventilation System automatically swaps to filter mode
 - D. Fuel movement in the Spent Fuel Pool must be stopped immediately
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 62
(1 point)

Given the following Unit 1 conditions:

- The Unit is at 100% RTP
- A DCS failure has caused the 1A S/G CF Main Feed Reg Valve to transfer to MANUAL and begin opening
- The crew enters AP/1/A/5500/006 (Loss of S/G Feedwater), Case III (CF Control Not in Auto) to address the failure

If 1A S/G level control is not established, AP/06 will direct the crew to trip the reactor prior to reaching the S/G Hi-Hi Level setpoint of _____(1)_____ .

AP/06 _____(2)_____ direct the crew to place 1A S/G CF Feed Reg Bypass Valve in Manual.

Which ONE of the following completes the statements above?

- A. 1. 77%
2. will
 - B. 1. 77%
2. will NOT
 - C. 1. 83%
2. will
 - D. 1. 83%
2. will NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 63

(1 point)

Given the following conditions:

- A release has been initiated from "C" Waste Gas Decay Tank
- A calculation error resulted in improper determination of EMF setpoints for the release
 - The release has been secured following EMF Trip 2 actuation of the Unit Vent Gas Monitor

Following this event (assuming no operation action):

ABUXF-1A (1A Auxiliary Building Ventilation Unfiltered Exhaust Fan)
_____ (1) _____ be in operation.

ABUXF-2A (2A Auxiliary Building Ventilation Unfiltered Exhaust Fan)
_____ (2) _____ be in operation.

Which ONE of the following completes the statements above?

- A. 1. will
2. will
 - B. 1. will NOT
2. will
 - C. 1. will
2. will NOT
 - D. 1. will NOT
2. will NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 64
(1 point)

Given the following conditions:

- 1AD-8 A/7 (VI Lo Press) is received
- 0VIP5260 (VI Pressure) indicates 74 psig and slowly decreasing

Which ONE of the following describes the position of VI system valves (and correct setpoint) in response to the lowering VI header pressure?

- A. VS-78 (VS Supply to VI) opens at 80 psig
 - B. VI-500 (VI Supply to VS) closes at 76 psig
 - C. VS-78 (VS Supply to VI) opens at 76 psig
 - D. VI-500 (VI Supply to VS) closes at 78 psig
-

Catawba Nuclear Station

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Question: 65

(1 point)

Given the following Unit 2 conditions:

- 2ETA has experienced a blackout

Following sequencer loading, the _____(1)_____ Main Fire Pump will be operating.

The "Main Fire Pumps Running" annunciator will alarm on annunciator panel _____(2)_____.

Which ONE of the following completes the statements above?

- A. 1. "A"
2. 1AD-13
 - B. 1. "A"
2. 2AD-13
 - C. 1. "C"
2. 1AD-13
 - D. 1. "C"
2. 2AD-13
-

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Question: 66
(1 point)

Which ONE of the following describes an appropriate example of information to be communicated to the shifts by use of an OPS Guide, in accordance with the requirements of SOMP 01-13 (Operations Work List, Routine Task List, and OPS Guides)?

- A. Notification that engineering has determined a Tech Spec inoperability may exist under certain conditions due to new analyzed failure scenarios
 - B. SM direction to verify 1A D/G Lube Oil Temp two times per shift due to an annunciator failure
 - C. Temporary procedure instructions for a system which is currently being modified, while a procedure change is being completed
 - D. Direction, from the unit lead, concerning work (or evolutions) that need(s) to be completed on a particular shift
-

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Question: 67

(1 point)

Given the following Unit 1 initial conditions:

- IAE is scheduled to perform a calibration of 1A S/G NR Level Channel I
- A Pre-Job Brief has been completed with all affected Control Room personnel and IAE technicians
- The OATC has received a "Tear Sheet" and reviewed Annunciator Response Procedures for expected alarms

Subsequently:

- IAE has begun the calibration procedure
- An annunciator listed on the provided Tear Sheet alarms for the FIRST time

In accordance with AD-OP-ALL-1000 (Conduct of Operations):

The OATC _____(1)_____ required to communicate receipt of this alarm to the CRS.

Receipt of this alarm _____(2)_____ required to be documented in the Narrative Log.

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is
2. is NOT
 - C. 1. is NOT
2. is
 - D. 1. is NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 68

(1 point)

Upon a Loss of All AC Power, a subgroup of bank ____ (1) ____ Pressurizer Heaters can be powered from the SSF D/G.

When controlled from the SSF, this subgroup of heaters ____ (2) ____ automatically de-energize if Pressurizer level decreases below the low level setpoint.

Which ONE of the following completes the statement above?

- A. 1. D
2. will
 - B. 1. B
2. will
 - C. 1. D
2. will NOT
 - D. 1. B
2. will NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 69

(1 point)

Given the following Unit 1 conditions:

- The unit is at 100% RTP

In accordance with Tech Spec 2.1.1 (Reactor Core SLs), Departure from Nucleate Boiling Ratio (DNBR) shall be maintained greater than or equal to _____.(1)_____. If this Safety Limit is exceeded, DNBR must be restored within limits in a MAXIMUM of _____.(2)_____.

Which ONE of the following completes the statements above?

- A. 1. 1.14
2. 1 hour
 - B. 1. 1.14
2. 5 minutes
 - C. 1. 1.3
2. 1 hour
 - D. 1. 1.3
2. 5 minutes
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 70

(1 point)

Given the following Unit 1 timeline:

1000

- The Unit has experienced a runback, from 100% power, following a trip of 1A CFPT

1003

- Main Turbine target load has been reached
- 1AD-2 A/9 (Control Rod Bank Lo Limit) illuminates

1005

- 1AD-2 B/9 (Control Rod Bank Lo-Lo Limit) illuminates
- Steam Dumps have closed
- Temperature Error meter indicates (+) 1.8° F

Entry into the Action Statement of Tech Spec 3.1.6 (Control Bank Insertion Limits) is FIRST required at ____ (1) ____ .

Per the conditions provided at **1005**, OMP 1-7 ____ (2) ____ state that control rods should be placed in MANUAL.

Which ONE of the following completes the statements above?

- A. 1. 1003
2. does
 - B. 1. 1003
2. does NOT
 - C. 1. 1005
2. does
 - D. 1. 1005
2. does NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 71

(1 point)

Consider the following Unit 1 conditions:

- EMF-50 (WG Disch Monitor - Waste Gas) Trip 2 actuated
- EMF-31 (Turbine Building Sump) Trip 2 actuated

Consider Each Statement Separately

Re-initiation of the Waste Gas release at least once WITHOUT resampling
____(1)____ allowed.

Re-initiation of the Turbine Building Sump release at least once WITHOUT
sampling ____ (2) ____ allowed.

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is NOT
2. is
 - C. 1. is
2. is NOT
 - D. 1. is NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 72

(1 point)

An Operator needs to access an area with a general area radiation dose rate of 1100 mREM/hr to hang a clearance tag

In accordance with PD-RP-ALL-0001 (Radiation Worker Responsibilities):

the correct radiation posting for this area is a ____ (1) ____.

continuous RP coverage ____ (2) ____ be required.

Which ONE of the following completes the statements above?

- A. 1. High Radiation Area
2. will
 - B. 1. High Radiation Area
2. will NOT
 - C. 1. Locked High Radiation Area
2. will
 - D. 1. Locked High Radiation Area
2. will NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 73

(1 point)

Given the following Unit 1 initial conditions:

- Unit is at 100% RTP
- A Steam Line Rupture occurs inside containment
- The CRS direct a Unit 1 reactor trip and S/I based on increasing containment pressure

Subsequently:

- A Main Steam Isolation occurs
- All MSIVs are closed
- 1A S/G is depressurized
- 1A S/G N/R level is off-scale low
- All other S/G N/R levels are 30% and increasing
- EP/1/A/5000/E-0 (Reactor Trip or Safety Injection) is entered

Which ONE of the following describes the FIRST time that the OATC is authorized to throttle CA flow to the 1A S/G to minimize NC system cooldown?

- A. When any S/G reaches the normal level setpoint
 - B. When E-0 Enclosure 1 (Foldout Page) is given to the OATC
 - C. When direction is provided by E-0 Enclosure 4 (NC Temperature Control)
 - D. When direction is provided by EP/1/A/5000/E-2 (Faulted Steam Generator Isolation)
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 74

(1 point)

Given the following Unit 2 conditions:

- An automatic Safety Injection has occurred following a LOCA
- The crew has entered EP/2/A/5000/E-0 (Reactor Trip or Safety Injection)
- While performing a board walkdown, the BOP notes the following equipment did not position/actuate as required
 - 2NV-252A (NV Pumps Suct from FWST) failed to OPEN
 - 2B NI Pump failed to start

Approval and guidance from the CRS ____ (1) ____ required to open 2NV-252A.

Approval and guidance from the CRS ____ (2) ____ required to reset the 2B D/G sequencer and start 2B NI Pump.

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is
2. is NOT
 - C. 1. is NOT
2. is
 - D. 1. is NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 75

(1 point)

Given the following Unit 1 conditions:

- The Unit is in Mode 6. The following indications are noted:
 - 1AD-10 C/1 "ND & NS Rooms Sump Level Emerg Hi" - LIT
 - 1AD-10 C/2 "ND & NS Rooms Sump Level Hi-Hi" - LIT
 - NC System WR level indication - decreasing
 - EMF-41 (Aux Bldg Ventilation) reading 5×10^5 cpm

Based on listed symptoms, _____(1)_____ contains the proper guidance for mitigation of this event.

Based on current EMF-41 indication (ONLY), Site Assembly initiation _____(2)_____ required.

Which ONE of the following completes the statements above?

- A. 1. AP/1/A/5500/027 (Shutdown LOCA)
2. is
 - B. 1. AP/1/A/5500/027 (Shutdown LOCA)
2. is NOT
 - C. 1. AP/1/A/5500/019 (Loss of Residual Heat Removal System)
2. is
 - D. 1. AP/1/A/5500/019 (Loss of Residual Heat Removal System)
2. is NOT
-

Catawba Nuclear Station

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Question: 76

(1 point)

Given the following initial conditions on Unit 1:

- A Reactor Trip and Safety Injection has occurred due to a Small Break LOCA

Subsequently:

- The crew has transitioned to EP/1/A/5000/ES-1.1 (Safety Injection Termination)
- The CRS has reached step 10 of ES-1.1 - "Determine if NI pumps should be stopped"
- NC pressure and PZR level begin to decrease

Per ES-1.1:

To stabilize Pressurizer level, the crew will increase charging line flow to less than a MAXIMUM of ____ (1) ____ .

The CRS will direct transition to ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. 120 gpm
2. EP/1/A/5000/E-1 (Loss of Reactor or Secondary Coolant)
 - B. 1. 180 gpm
2. EP/1/A/5000/E-1 (Loss of Reactor or Secondary Coolant)
 - C. 1. 120 gpm
2. EP/1/A/5000/ES-1.2 (Post LOCA Cooldown and Depressurization)
 - D. 1. 180 gpm
2. EP/1/A/5000/ES-1.2 (Post LOCA Cooldown and Depressurization)
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 77

(1 point)

Given the following Unit 1 initial conditions:

- The Unit is at 100% RTP
- The crew entered AP/1/A/5500/010 (Reactor Coolant Leak), Case II (NC System Leak) due to an NC leak inside containment

15 minutes later:

- Letdown has been isolated
- Charging flow is stable at 110 gpm
- PZR level is 55% and stable
- 1AD-7 I/1 "VCT Lo Lvl" annunciator is lit
- An Automatic VCT makeup is in progress
- Containment pressure is 0.4 psig and slowly increasing

In accordance with AP/10 guidance, the CRS ____ (1) ____ direct a reactor trip.

In accordance with EAL Wall Chart specific criteria (i.e. not EC Judgment), the SM will determine that an EAL threshold ____ (2) ____ been exceeded.

Which ONE of the following completes the statements above? (**Assume the leak size has remained constant since the initial conditions**)

REFERENCE PROVIDED

- A. 1. will
2. has
 - B. 1. will
2. has NOT
 - C. 1. will NOT
2. has
 - D. 1. will NOT
2. has NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 78

(1 point)

Given the following Unit 1 conditions:

- The Unit is at 100% RTP
- Annunciator 1AD-2 F/9 (DCS Alternate Action) is received
- The OATC determines Selected PZR Pressure-2 (SPP-2) is in Alternate Action

In accordance with Tech Spec 3.4.11 (Pressurizer PORVs) and the associated Basis,

1NC-32B (PZR PORV) _____(1)_____ operable.

PZR PORV operability is required to mitigate the effects of a _____(2)_____ .

Which ONE of the following completes the statements above?

- A. 1. is
2. Locked NCP Rotor
 - B. 1. is
2. Steam Generator Tube Rupture
 - C. 1. is NOT
2. Locked NCP Rotor
 - D. 1. is NOT
2. Steam Generator Tube Rupture
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 79

(1 point)

Given the following Unit 1 initial conditions:

- The Unit is at 100% RTP
- Containment Pressure Channel 1 failed High
- Pressurizer Pressure Channel 1 failed High
- All required Tech Spec actions have been completed

Subsequently:

- A loss of 1ERP occurs

1FO-1, D/5 "Hi Cont Press S/I Rx Trip" _____(1)_____ be lit.

If the Unit 1 Reactor does NOT trip, an ATWS _____(2)_____ in progress.

Which ONE of the following completes the statements above?

- A. 1. will
2. is
 - B. 1. will
2. is NOT
 - C. 1. will NOT
2. is
 - D. 1. will NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 80

(1 point)

Given the following conditions:

- AP/0/A/5500/020 (Loss of Nuclear Service Water), Case I (Loss of RN Train) has been entered due to a leak in the 2B RN Essential Header

AP/20 will direct closure of RN Supply crossover isolation valves if operating RN pump discharge flow exceeds a MINIMUM value of ____ (1) ____ .

Once the 2B RN Essential Header is isolated, the **RN system** ____ (2) ____ have sufficient flow to support post LOCA loads on one unit and shutdown and cooldown on the other unit.

Which ONE of the following completes the statements above?

- A. 1. 19,000 gpm
2. does
 - B. 1. 19,000 gpm
2. does NOT
 - C. 1. 23,000 gpm
2. does
 - D. 1. 23,000 gpm
2. does NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 81

(1 point)

Given the following Unit 2 conditions:

- Safety Injection termination is in progress per EP/2/A/5000/ECA-2.1 (Uncontrolled Depressurization Of All Steam Generators)
- OATC reports that 2B S/G MSIV has closed and that 2B S/G pressure is increasing

Based on the conditions above, which ONE of the following indicates the response directed by the CRS?

Procedure Legend:

EP/2/A/5000/E-2 (Faulted S/G Isolation)

EP/2/A/5000/ES-1.1 (SI Termination)

- A. Immediately transition to E-2 to verify that 2B S/G is intact
 - B. Immediately transition to step 10 of ES-1.1 to complete Safety Injection termination
 - C. Complete Safety Injection termination per ECA-2.1 and then transition to E-2
 - D. Complete Safety Injection termination and initiate a cooldown to cold shutdown per ECA-2.1
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 82

(1 point)

Given the following Unit 1 conditions:

- A Unit startup in progress
- All Power Range Instruments indicate 6%
- Intermediate Range Detector N35 fails low
- The CRS enters AP/1/A/5500/016 (Malfunction of Nuclear Instrumentation System)

In accordance with Tech Spec 3.3.1 (Reactor Trip System (RTS) Instrumentation), the power increase _____(1)_____ continue.

Loss of N35 Control Power _____(2)_____ result in a Reactor trip.

Which ONE of the following completes the statements above?

- A. 1. may
2. will
 - B. 1. may
2. will NOT
 - C. 1. may NOT
2. will
 - D. 1. may NOT
2. will NOT
-

Catawba Nuclear Station

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Question: 83

(1 point)

Given the following Unit 2 conditions:

- A spurious Safety Injection has occurred due to an instrument malfunction

The CRS will direct SI termination sequence per ____ (1) ____ .

SI Termination must be completed within a MAXIMUM of ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. EP/2/A/5000/E-0 (Reactor Trip or Safety Injection)
2. 15 minutes
 - B. 1. EP/2/A/5000/E-0 (Reactor Trip or Safety Injection)
2. 50 minutes
 - C. 1. EP/2/A/5000/ES-1.1 (Safety Injection Termination)
2. 15 minutes
 - D. 1. EP/2/A/5000/ES-1.1 (Safety Injection Termination)
2. 50 minutes
-

Catawba Nuclear Station

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Question: 84
(1 point)

Given the following Unit 2 conditions:

- The crew has entered EP/2/A/5000/ECA-3.2 (SGTR With Loss of Reactor Coolant Saturated Recovery Desired)
- All NCPs are secured
- Subcooling indicates (-) 8 °F
- Core Exit Thermocouples indicate 670 °F
- RVLIS lower range level is 48%

Based on listed conditions,

EP/2/A/5000/FR-C.3 (Response to Saturated Core Cooling) entry conditions _____(1)_____ met.

Increasing Safety Injection flow _____(2)_____ desired.

Which ONE of the following completes the statements above?

- A. 1. are
2. is
 - B. 1. are
2. is NOT
 - C. 1. are NOT
2. is
 - D. 1. are NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 85
(1 point)

Given the following Unit 1 initial conditions:

- A LOCA occurred

Current conditions:

- Containment pressure is 2.5 PSIG
- ECCS suction has been swapped to the Cold Leg Recirculation alignment
- FWST level is 4% and slowly decreasing
- NC pressure is 2 PSIG and stable
- CETs are 600°F and slowly increasing
- Reactor Vessel Lower Range level is 49% and slowly decreasing
- Containment Sump level is 16.1 feet and increasing

Based on the current conditions, which ONE of the following states the required procedure transition AND the reason for implementation of this procedure?

- A. Implement FR-C.2 (Response to Degraded Core Cooling).
The level of water in the core region has been reduced such that a challenge exists to core cooling.
 - B. Implement FR-C.2 (Response to Degraded Core Cooling).
Core exit temperatures and NC pump status indicate that a challenge exists to core cooling.
 - C. Implement FR-Z.2 (Response to Containment Flooding).
Containment sump levels are higher than expected, indicating a potential for a ruptured RN or KC pipe inside containment.
 - D. Implement FR-Z.2 (Response to Containment Flooding).
Containment sump levels are higher than expected, indicating a potential secondary line (feedwater or main steam) break inside containment along with the input from the NC system and the FWST.
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 86

(1 point)

Given the following conditions on Unit 1:

- The Unit is stable at 100% RTP
- Operators are performing PT/1/A/4150/001 A (NC Pump Seal Injection Flow Verification)
- 1NV-294 is fully open
- Seal Injection flow is 42 gpm and stable

Based on the conditions above, the Action Statement of Tech Spec 3.5.5 (Seal Injection Flow) _____(1)_____ required to be entered.

In accordance with the Bases of Tech Spec 3.5.5, the Seal Injection Flow Limit _____(2)_____ based on the safety analysis assumptions for minimum ECCS Injection flow.

Which ONE of the following completes the statements above?

- A. 1. is
2. is
 - B. 1. is NOT
2. is
 - C. 1. is
2. is NOT
 - D. 1. is NOT
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 87

(1 point)

Given the following Unit 2 conditions:

- The Unit is at 100% RTP
- A loss of 2ERPD has occurred
- The crew has entered AP/2/A/5500/029 (Loss of Vital or Aux Control Power)
- NO Tech Spec actions have been addressed

The current Containment Pressure channel logic for the remaining Containment Pressure channels which will cause a **Phase B** actuation is ____ (1) ____ .

In accordance with Tech Spec 3.3.2 (ESFAS Instrumentation) LCO Actions, when the failed channel is removed from service, I&E will place the Containment Pressure **Hi-Hi** Bistable in ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. 2/3
2. Trip
 - B. 1. 2/3
2. Bypass
 - C. 1. 1/3
2. Trip
 - D. 1. 1/3
2. Bypass
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 88

(1 point)

Given the following Unit 1 conditions:

- The Unit was manually tripped from 100% RTP following a loss of both Main Feedwater Pumps
- An Auxiliary Operator has reported a rupture of the Main Feed Common Discharge Header
- All CA Pumps failed to automatically start and cannot be manually started
- The crew has implemented EP/1/A/5000/FR-H.1 (Response to Loss of Secondary Heat Sink)
- S/G WR level is 40% in all S/Gs and decreasing

Consider Each Statement Separately

In accordance with FR-H.1:

The CRS ____ (1) ____ perform the steps to initiate Bleed and Feed at this time.

If required, Bleed and Feed must be initiated within a MAXIMUM of ____ (2) ____ after reaching initiation criteria.

Which ONE of the following completes the statements above?

- A. 1. will
2. 4 minutes
 - B. 1. will
2. 8 minutes
 - C. 1. will NOT
2. 4 minutes
 - D. 1. will NOT
2. 8 minutes
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 89
(1 point)

Given the following Unit 1 conditions:

- The Unit is at 12% power and preparing to roll the main turbine
- An OAC alarm associated with 1CA-37 (CA Pmp #1 Disch to S/G 1D Check) has been received
- The CRS has directed completion of OP/1/A/6250/002 (Auxiliary Feedwater System), Enclosure 4.11 (Cool Down of Turbine Driven CA Pump Piping)
- As required by this enclosure, the BOP must position the following controller to 0%:
 - 1CA-36 (CA Pump #1 Flow to S/G 1D)

In accordance with OP/1/A/6250/002, Enclosure 4.11:

the purpose of this enclosure is to prevent void formation _____(1)_____ of the CA Pump discharge check valve.

prior to repositioning 1CA-36 controller, the CRS _____(2)_____ required to declare CAPT #1 inoperable.

Which ONE of the following completes the statements above?

- A. 1. upstream
2. is
 - B. 1. upstream
2. is NOT
 - C. 1. downstream
2. is
 - D. 1. downstream
2. is NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 90

(1 point)

Following an earthquake impacting Catawba Nuclear Station, plant conditions are as follows:

- Unit 1 Conditions:
 - Safety Injection has been initiated following a NC System leak
 - The crew is performing EP/1/A/5000/E-0 (Reactor Trip or Safety Injection)
- Unit 2 Conditions:
 - Unit 2 remains at power
 - 2ETB has experienced a blackout with failure of 2B D/G to start
 - 2A1 and 2A2 KC Pumps have been secured due to piping rupture
 - The crew is performing AP/2/A/5500/021 (Loss of Component Cooling)
 - 2A NV Pump remains in service
 - VCT level is 20% and decreasing slowly

In accordance with AP/21:

The Unit 2 CRS ____ (1) ____ direct performance of AP/21, Enclosure 2 (Alternate Cooling to NV Pump 2A).

The Unit 2 CRS ____ (2) ____ direct performance of AP/21, Enclosure 6 (Rx Trip Sequence).

Which ONE of the following completes the statements above?

- A. 1. will
2. will
- B. 1. will
2. will NOT
- C. 1. will NOT
2. will
- D. 1. will NOT
2. will NOT

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 91

(1 point)

Given the following Unit 1 conditions:

- The crew is performing steps in EP/1/A/5000/E-1 (Loss of Reactor or Secondary Coolant) following LOCA
- Containment Pressure is 2.2 psig
- Containment Sump Level is 10.6 ft
- Containment Radiation is 28 R/Hr
- Containment Hydrogen Concentration is 6.8%

Per the Containment CSF status tree, MINIMUM requirements for entry into EP/1/A/5000/FR-Z.4 (Response to High Containment Hydrogen Concentration) _____(1)_____ met.

Based on above listed conditions, the crew _____(2)_____ energize Hydrogen Ignitors.

Which ONE of the following completes the statements above?

- A. 1. are
2. will
 - B. 1. are
2. will NOT
 - C. 1. are NOT
2. will
 - D. 1. are NOT
2. will NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 92

(1 point)

Given the following Unit 1 conditions:

- Condenser Hotwell temperature is increasing following a malfunction of the Condenser Air Ejectors

Assuming this trend continues, the CRS will declare the CA system inoperable, per TS 3.7.5 (Auxiliary Feedwater System), when Hotwell temperature reaches a MINIMUM value of ____ (1) ____ .

Once TS 3.7.5 actions are entered, the CRS ____ (2) ____ apply the Required Actions of LCO 3.0.3.

Which ONE of the following completes the statements above?

- A. 1. 134 degrees F
2. will
 - B. 1. 134 degrees F
2. will NOT
 - C. 1. 136 degrees F
2. will
 - D. 1. 136 degrees F
2. will NOT
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 93

(1 point)

Given the following Unit 1 conditions:

- The Unit is at 100% RTP
- Channel 4 PZR Pressure has failed low
- All required Tech Spec actions have been completed

Subsequently:

- 1B NC Loop T_{cold} detector fails low

Channel 2 $OT_{\text{delta}T}$ setpoint will ____ (1) ____ .

Assuming no other actions are taken, the latest time that Unit 1 will be required to reach Mode 3 is in ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. decrease
2. 7 hours
 - B. 1. decrease
2. 78 hours
 - C. 1. increase
2. 7 hours
 - D. 1. increase
2. 78 hours
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 94

(1 point)

Given the following Unit 1 initial conditions:

- The Unit experienced a complete loss of the switchyard
- The crew was performing steps in EP/1/A/5000/ES-0.2, (Natural Circulation Cooldown)
- Station management recommended a rapid cooldown due to secondary inventory concerns
- The crew transitioned to EP/1/A/5000/ES-0.3, (Natural Circulation Cooldown) with Steam Void in the Vessel

Subsequently:

- Pressurizer level is 92% and increasing
- Reactor vessel Upper Range (UR) level is 70% and decreasing
- The STA notes a YELLOW path on NC INVENTORY and confers with the SM regarding whether to transition to EP/1/A/5000/FR-I.3, (Response to Voids in Reactor Vessel)

In order to control void growth, the CRS will direct the BOP to _____(1)_____ per the direction provided in _____(2)_____ .

Which ONE of the following completes the statement above?

- A. 1. open reactor vessel head vents
2. FR-I.3
 - B. 1. open reactor vessel head vents
2. ES-0.3
 - C. 1. energize pressurizer heaters
2. FR-I.3
 - D. 1. energize pressurizer heaters
2. ES-0.3
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 95

(1 point)

Given the following Unit 1 conditions:

- The Unit is in Mode 6
- 1AD-4 B/1 "S/G A LEVEL DEVIATION" will not illuminate. IAE has Blocked the inputs for outage related activities
- 1AD-9 B/7 "FWST EMERG LO TEMP" will not illuminate. IAE has disconnected the associated transmitter in order to temporarily change the alarm setpoint for an upcoming test

In accordance with OMP 2-31 (TMs Affecting Control Room Annunciators):

Attachment 8.1 will be used to track the inoperability of ____ (1) ____ .

Attachment 8.1 will be filed in the ____ (2) ____ .

Which ONE of the following completes the statements above?

- A. 1. 1AD-9 B/7
2. Ops Shift Routine Logbook
 - B. 1. 1AD-4 B/1
2. Ops Shift Routine Logbook
 - C. 1. 1AD-9 B/7
2. Shift Work Manager Logbook
 - D. 1. 1AD-4 B/1
2. Shift Work Manager Logbook
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 96
(1 point)

Which ONE of the following changes requires a 10CFR50.59 screen?

- A. A change to the Site Physical Security Plan that reduces the shift staffing requirements for security guards.
 - B. A system modification that adds a backup Nitrogen accumulator to an air operated containment isolation valve.
 - C. A revision to the Site Emergency Plan that changes the designated assembly areas for accountability.
 - D. A change to the Nuclear Quality Assurance Plan.
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 97

(1 point)

In accordance with SLC 16.11-19 (Gas Storage Tanks):

Waste Gas Decay Tanks (WGDT) are monitored to ensure radioactivity is limited to a MAXIMUM of ____ (1) ____.

This limit is based on exposure received by a ____ (2) ____ during an accidental release.

Which ONE of the following completes the statements above?

- A. 1. 97,000 Curies
2. member of the public
 - B. 1. 97,000 Curies
2. plant worker
 - C. 1. 10 Curies
2. member of the public
 - D. 1. 10 Curies
2. plant worker
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 98

(1 point)

Given the following conditions:

- An Auxiliary Building waste monitor tank liquid waste release (LWR) package has been delivered to the Control Room
- All RN Pumps are ON
- 1AD-12 B/1 RN Pump Intake Pit A Lo Level is LIT
- 1AD-12 E/2 RN Pit-A Swap to SNSWP is LIT
- A and B RL pumps are on and RL flow is greater than required for WL release
- EMF-57 (Monitor Tank Building Liquid Discharge Monitor) is NOT Functional
- EMF-49 (Liquid Waste Discharge Lo Range) is Functional

The CRS ____ (1) ____ approve this release because ____ (2) ____ .

Which ONE of the following completes the statement above?

- A. 1. will NOT
2. EMF-57 is NOT Functional
 - B. 1. will NOT
2. RN is aligned to the SNSWP
 - C. 1. will
2. RL flow is greater than required for WL release ONLY
 - D. 1. will
2. EMF-49 is Functional AND RL flow is greater than required for WL release
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 99

(1 point)

Given the following conditions:

- A fire event has occurred inside the Protected Area

In accordance with RP/0/B/5000/029 (Fire Brigade Response), the "Fire Emergency Report" is completed by the ____ (1) ____ .

If required, ____ (2) ____ will direct a partial transfer to the SSF.

Which ONE of the following completes the statements above?

- A. 1. Shift Manager
2. AP/0/A/5500/045 (Plant Fire)
 - B. 1. Shift Manager
2. RP/0/B/5000/029 (Fire Brigade Response)
 - C. 1. Fire Brigade Leader
2. AP/0/A/5500/045 (Plant Fire)
 - D. 1. Fire Brigade Leader
2. RP/0/B/5000/029 (Fire Brigade Response)
-

Catawba Nuclear Station

ILT-17 NRC Written Exam CNS SRO NRC Examination

Question: 100

(1 point)

Given the following conditions on Unit 1:

- A Loss of Offsite Power occurs following a LOCA
- No ECCS injection flow is available
- EP/1/A/5000/FR-C.1 (Inadequate Core Cooling) has been entered from EP/1/A/5000/E-0 (Reactor Trip or Safety Injection)
- All S/G N/R levels are < 0% with no feed flow available
- "A" train NC vent path aligned by opening 1NC-250A (Rx Head Vent Block) and 1NC-251B (Rx Head Vent)
- Core Exit Thermocouple temperatures are 1205°F and INCREASING

Based on current conditions, the CRS will _____ to further mitigate this event.

Which ONE of the following completes the statement above?

- A. Enter EP/1/A/5000/E-1 (Loss of Reactor or Secondary Coolant)
 - B. Enter EG/1/A/CSAM/SACRG1 (Severe Accident Control Room Guideline Initial Response)
 - C. Enter EP/1/A/5000/FR-H.1 (Loss of Secondary Heat Sink)
 - D. Remain in FR-C.1 until Core Exit Thermocouples indicate < 1200°F
-

Examination KEY for: ILT-17 NRC Written Exam CN

<i>Question Number</i>	<i>Answer</i>
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1	B
2	B
3	D
4	A
5	C
6	B
7	D
8	B
9	A
10	B
11	B
12	A
13	A
14	C
15	C
16	C
17	C
18	A
19	A
20	B
21	B
22	A
23	A
24	B
25	C

Examination KEY for: ILT-17 NRC Written Exam CN

<i>Question Number</i>	<i>Answer</i>
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26	D
27	A
28	C
29	C
30	D
31	B
32	D
33	A
34	B
35	B
36	C
37	A
38	B
39	A
40	D
41	B
42	C
43	C
44	C
45	B
46	C
47	B
48	A
49	D
50	B

Examination KEY for: ILT-17 NRC Written Exam CN

<i>Question Number</i>	<i>Answer</i>
51	C
52	B
53	C
54	A
55	B
56	B
57	A
58	B
59	D
60	C
61	B
62	C
63	B
64	C
65	C
66	A
67	B
68	C
69	A
70	C
71	C
72	C
73	B
74	C
75	D

Examination KEY for: ILT-17 NRC Written Exam CN

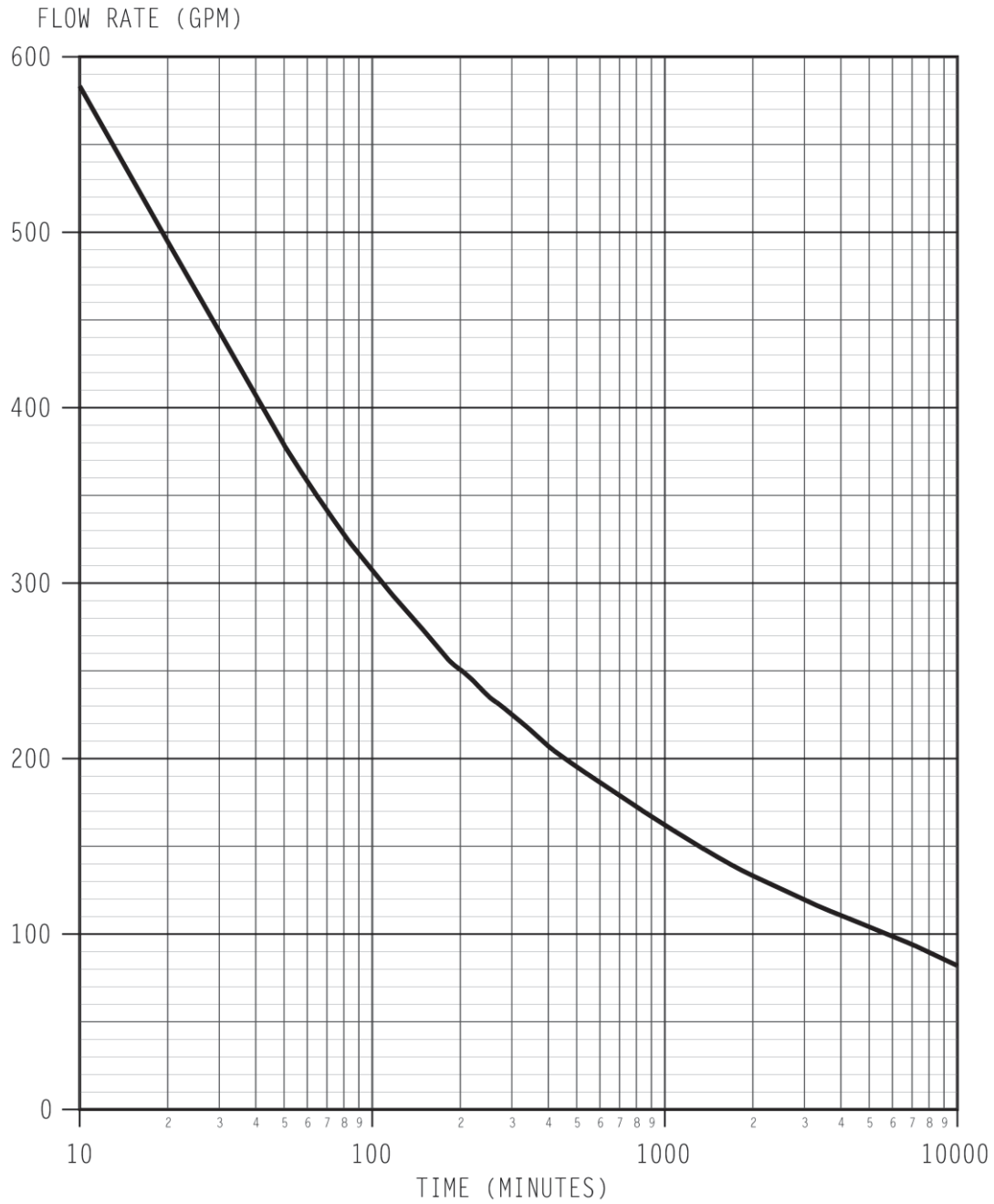
<i>Question Number</i>	<i>Answer</i>
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76	D
77	A
78	B
79	D C
80	C
81	C
82	A
83	A
84	A
85	C
86	A
87	B
88	C
89	A
90	C
91	B
92	D
93	C
94	D
95	A
96	B
97	A
98	B
99	C
100	B

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Provided Reference: Emergency Classification Tables

S/I FLOW REQUIRED TO MATCH DECAY HEAT



- Page 1 of 1
PTS LIMIT CURVE - SETPOINT

