

Certification Examination Content Outline

Reliability Coordinator Operator (RC)

Effective March 15, 2022

| Knowledge Area | | Score Questions |
|----------------|---|-----------------|
| 1 | Resource and Demand Balancing | 26 |
| 1.a | Interchange Scheduling and Coordination | 3 |
| 1.b | Reserves (Spinning and Non-Spinning) | 4 |
| 1.c | Automatic Generation Control (AGC) | 3 |
| 1.d | Area Control Error (ACE) | 4 |
| 1.e | Frequency | 4 |
| 1.f | Load Forecasting | 3 |
| 1.g | Generation Equipment | 3 |
| 1.h | Energy Sources (e.g., hydroelectric, solar, thermal) | 2 |
| 2 | Transmission | 27 |
| 2.a | Protection and Control | 4 |
| 2.b | Voltage and Reactive | 5 |
| 2.c | Electrical Current | 4 |
| 2.d | Reconfiguration and Switching | 4 |
| 2.e | Operating Limits | 5 |
| 2.f | Transmission Equipment | 5 |
| 3 | Emergency Preparedness | 12 |
| 3.a | Current and Next-Day Planning | 4 |
| 3.b | Severe Weather, Natural Disasters, and Geomagnetic Disturbances | 4 |
| 3.c | Anticipated Capacity Deficiency | 4 |
| 4 | Emergency Response | 18 |
| 4.a | System Restoration | 5 |
| 4.b | Response to System Disturbances | 4 |
| 4.c | Response to Capacity Emergencies | 4 |
| 4.d | Response to Loss of Control Center | 2 |
| 4.e | Response to Loss of Analysis and Monitoring Tools | 3 |
| 5 | Contingency Analysis and Reliability | 25 |
| 5.a | Contingency Analysis | 5 |
| 5.b | Network Analysis Tools (e.g. State Estimators) | 5 |
| 5.c | Response to Results of Contingency Analysis | 5 |
| 5.d | System Operating Limits (SOL) | 5 |
| 5.e | Interconnection Reliability Operating Limits (IROL) | 5 |
| 6 | Communications and Data | 12 |
| 6.a | Reporting Requirements | 3 |
| 6.b | Communication Methods (e.g. Three-Part Communication, RCIS) | 3 |
| 6.c | Data Validity and Verification | 4 |
| 6.d | Telemetry and Communications Equipment | 2 |

In addition to the 120 scored questions, there will be an additional 20 experimental questions that do not count toward an examinee's score.

Certification Examination Content Outline: Reliability Coordinator Operator (RC)

| Tasks | |
|-------|--|
| 1 | Adjust flow control devices within the transmission area to maintain reliability. |
| 2 | Approve Arranged Interchange from ramping ability perspective. |
| 3 | Calculate and monitor area control error. |
| 4 | Curtail Confirmed Interchange that adversely impacts reliability. |
| 5 | Deploy reliability-related services. |
| 6 | Determine reliability-related services requirements for balancing generation and load, and transmission reliability. |
| 7 | Develop emergency procedures. |
| 8 | Develop Interconnection Reliability Operating Limits to protect from instability and Cascading. |
| 9 | Develop system limitations such as System Operating Limits and Total Transfer Capabilities, and operate within those limits. |
| 10 | Develop system restoration plans. |
| 11 | Direct and coordinate system restoration. |
| 12 | Direct implementation of emergency procedures including load shedding. |
| 13 | Direct revisions to generation maintenance plans as permitted by agreements. |
| 14 | Direct revisions to transmission maintenance plans as permitted by agreements. |
| 15 | Formulate an operational plan (generation commitment, outages, etc.) for reliability evaluation. |
| 16 | Identify, communicate, and direct actions if necessary to relieve reliability threats and limit violations. |
| 17 | Implement Confirmed Interchange. |
| 18 | Implement emergency procedures. |
| 19 | Implement system restoration plans. |
| 20 | Interpret actual and contingency reliability analyses. |
| 21 | Monitor and adjust reactive resources to maintain transmission voltage within defined limits. |
| 22 | Monitor and deploy transmission assets, protective relaying systems, and Special Protection Systems (SPS/RAS). |
| 23 | Monitor and report control performance and disturbance recovery. |
| 24 | Monitor and update all reliability-related parameters within the reliability area. |
| 25 | Monitor and update telemetry of reliability-related parameters within the reliability area. |
| 26 | Operate in the Balancing Authority Area to maintain load-interchange-generation balance. |
| 27 | Operate within established Interconnection Reliability Operating Limits. |
| 28 | Perform actual and contingency reliability analyses. |
| 29 | Provide balancing and energy accounting, and administer inadvertent energy paybacks. |
| 30 | Review generation commitments, dispatch, and load forecasts. |

Revision History

| Date | Revisions |
|------------|---------------------------------------|
| 02/13/2017 | Initial Release |
| 05/20/2020 | Template Updated |
| 03/15/2022 | Score totals for each section updated |