UEENEEE083A establish and follow a competency development plan in an electro-technology engineering discipline

SELF STUDY PROFESSIONAL DEVELOPMENT ONLINE LEARNING RESOURCES

Outlines

KS01-EE083A Engineering competency development

Evidence shall show an understanding of engineering competency development to an extent indicated by the following aspects:

T1 Components of a competency development plan encompassing:

- Competencies to be achieved
- Course work and timetable
- Assessment scheme
- Aspects of competency to be developed in the workplace
- Methods of monitoring and recording relevant workplace activities.

T2 Obligations and expectations under a competency development plan

T3 Scope for industry/enterprise policies and procedures

- Policies and procedure related to safety, effective work outcomes, customer relations, conflict resolution and competency development.
- Monitoring and reporting work activities.

The practice reports need to write for **one selected topic of your specialization** of the study materials included in the following outlines & resources (Please note that you do not need to study all resources. They are given to you for reference. Based on your specialization, write the competency demonstration report for one area of your choice .

The reports should include the followings:

- Professional topics----- You need to select the topic such as building electrical wiring or power distribution etc
- Fundamental of Engineering- What knowledge you got from the materials in your selected professional topic..
- Engineering Management--- How will you manage the project / workforce to implement the engineering tasks by applying those knowledge in actual workplace project or simulated work place and project?.
- Rules Regulations, Standards & Specifications- You need to refer the relevant engineering rules, regulations, standards and specifications in the tasks expressed in your report.
- Safety—How will you safeguard public safety in performing the engineering tasks?

- Ethics--- How will you apply professional code of ethics in performing the engineering tasks?

FORMAT

Section (1) Introduction

Section (2) Work experiences in brief and highlight the major important projects

Section 3 to 10 , the following competency should be addressed

- Apply engineering knowledge, methods and techniques
- Use of engineering technology , tools and equipments
- Safeguard public safety
- Recognition the impacts of engineering on the environment , economy and society.
- Manage engineering activities
- Communicate engineering information.
- Work collaboratively
- Main and enhance engineering skills and knowledge.

1.Electrical Power Supply

1. Generation, Transmission and Distribution
2. Application of Electricity
3. Solar Photovoltaic System
4. Design of Electrical Installation
5. Load Estimation
6. Power Factor Correction
7. Power Quality and Power System Harmonics
8. Consumer and Substation Switchboards and Switch Gears
9. Maintenance of Electrical Equipments, Switch Gears and Cables
10. Design of Energy Efficiency and Sustainability

STUDY MATERIALS (Electrical Power Supply)

G008 General Notes 1.zip G008 General Notes 2.zip MachineControlCkt1.zip MachineControlCkt2.zip

MachineControlCkt3.zip MachineRepair1.zip MachineRepair2.zip
MachineRepair3.zip ProcessControlCkt1.zip ProcessControlCkt2.zip
ProcessControlCkt3.zip

ESI_8_Insulation_1 ESI_8_Insulation_2
ESI_9.1_Protection_Relay_Construction

ESI_9.2Test_Equipment ESI_33.1_Power_Quality_Concept
ESI_33.2_Harmonic_in_capacitor

ESI_33.3_Harmoniceffect_on_machines ESI_3.1_HV_Measurement_Cable_Test.zip

ESI_3.2_Magnetic_measurement.zip ESI_3.3_Power_measurement.zip

ESI_3.4_RLC_measurement_1.zip ESI_3.4_RLC_measurement_2.zip
ESI_3.4_RLC_measurement_3.zip

ESI_3.5_Digital_equipments.zip ESI_3.6_V.A.W_meter.zip ESI_3.7T_and_M.zip
ESI_3.8_Thermography.zip

ESI_4_11_Power_Transformer.zip ESI_5_Machinery_Installation.zip
ESI_7_Drawing_Switching_Diagram.zip

ESI_7_Electrical_Installation_Design.zip ESI10.1_HV_equipments.zip

ESI10.2_Substation_equipments.zip ESI12_14_Harmonic.zip

ESI12_14_Reactor.zip ESI12_14_Syn_Motor_Generator.zip

ESI_13_Voltage_regulation_devices.zip

Power system 2-G037+G038+G039.zip

http://www.filefactory.com/file/c0b7a33/n/Power_system_2-G037_G038_G039.zip

ESI12_14_Harmonic ESI12_14_Reactor ESI12_14_Syn_Motor_Generator

ESI_19.1_Computer_Control ESI_19.4_Turbine_Control

ESI_19.2_Generator_Control_Load_Flow

ESI_19.3_Generator ESI_22.1_Generator_Study ESI_22.2_Voltage_surge_control

ESI_24_Modern_Power_System

2.bUnintentional_islanding_in_distribution_grids_with_a_high_penetration_of_inverter-based_DG.mht

2.Un intentional islanding in distribution grids-Part 2 2.c.pdf

2.Un intentional islanding in distribution grids-Part 3 2.d-1.pdf

2.Distribution Network 1 2b_Distribution_Network.pdf

2.Distribution Network 2 2d-2.pdf

2.Distribution Network 3 2d-3.pdf

Solar Inspector Training.zip

ESI_22.2_Voltage_surge_control.zip

ESI_33.5_Harmonic_in_transformer.zip

ESI_33.6_Power_Quality_Improvement_Capacitor_bank.zip

ESI_33.7_Power_Quality_Improvement-Filter.zip

ESI_33.8_Power_Quality_Improvement-General.zip

ESI_33.9_Power_Quality_Improvement-Power_Conditioner.zip

ESI_25_27_31_32_Part_2_Installation_and_testing_0.zip

ESI_25_27_31_32_Part_3_Electrical_Drawing.zip

ESI_25_27_31_32_Part_4_Data_Com_and_Wiring.zip

ESI_25_27_31_32_Part_5_Installation_Work_Books.zip

ESI_25_27_31_32_Part_6_Switching_1_2.zip

ESI_25_27_31_32_Part_7_Switching_3_4.zip

ESI_25_27_31_32_Part_8a_Electrical_Installation_Requirement_1.zip

ESI_25_27_31_32_Part_8b_Electrical_Installation_Requirement_2.zip

ESI_13_Voltage_Regulating_Devices.zip

ESI_27.7_CT_and_PT.zip

ESI_27.9_Comparator.zip ESI_27.10_Static_relay.zip
ESI_27.11_Test_and_maintenance.zip

Advanced Diploma in Electricity Supply Industry (ESI)

The LINK for

Study Package (2)-Power System Planning

Study Package (3)-Testing

The LINK for

Study Package (16+17)-OHS

Study Package (20) Transmission System

Study Package (28) Power Accessories

The LINK for

Study Package (23) Machine Rating

The LINK for

Study Package (5) Machine Installation

Study Package (9) Protection

ESI_9.2Test_Equipment.zip

The LINK for

Study Package (3)-Testing

Study Package (5) Machine Installation

Study Package (15) Electrical Estimating

The LINK for

Study Package (1)-OHS

Study Package (12) Harmonics

Study Package (19) Computer Control

Study Package (20) Transmission System

The LINK for

Study Package (4) Power Transformer

Study Package (7) Drawing

Study Package (21+34)-Electrical Distribution

The LINK for

Study Package (10) HV Equipments

Study Package (18) Sub station equipments

The LINK for

Study Package (12) Harmonics

Study Package (22) Generator

Study Package (24) Signal Communication

The LINK for

Study Package (19) Generator

Study Package (25+27+31+32) Installation & Testing

The LINK for

Study Package (9) Protection

Study Package (16+17)-OHS

The LINK for

Study Package (22) Generator

The LINK for

Study Package (34) Power Equipments Commissioning

Study Package (21+34)-Electrical Distribution

The LINK for

Study Package (26) (41)

The LINK for

Study Package (6+ 10) HV Equipments

The LINK for

Study Package (7) Drawing

Study Package (8) Insulation

Study Package (13) Voltage Regulation

The LINK for

Study Package (15) Electrical Estimating

Study Package (15) Transmission System

Study Package (25+27+31+32) Installation & Testing

The LINK for

Study Package (18) Sub station equipments

Study Package (28) Power Accessories

The LINK for

Study Package (24) Modern Power System

The LINK for

Study Package (33) Power Quality

The LINK for

Study Package (27) Relay

The LINK for

Study Package (13) Voltage Regulation

The LINK for

Study Package (35)

The LINK for

Study Package (34) Equipments Commissioning

The LINK for

Study Package (8) Insulation

Study Package (12) Harmonics

The LINK for

Study Package (25+27+31+32) Installation & Testing

Study Package (25+27+31+32) Installation & Testing

The LINK for

Study Package (27) Relay

The LINK for

Study Package (20) Transmission System

Competency Demonstration Report_Elective (1)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in electrical power supply in above mentioned format & submit it to the assessor.
(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

2.Lighting Requirement for Workplace , Indoor and Outdoor

1. Visual Needs for Safety and Security
2. Determine the Lighting Requirement for Indoor and Outdoor Workplaces

STUDY MATERIALS_(Lighting Requirement)

Lighting.zip E_trade_1.zip E_trade_2.zip E_trade_3.zip E_trade_4.zip

G008_General_Notes_1.zip G008_General_Notes_2.zip Hazard_Identification.zip

K041 Lesson 16-Energy efficiency+Lighting.zip

http://www.filefactory.com/file/c0b6e0f/n/K041_Lesson_16-Energy_efficiency_Lighting.zip

K041 Lesson 17-Illumination+Smoke alarm.zip

http://www.filefactory.com/file/c0b6fc5/n/K041_Lesson_17-Illumination_Smoke_alarm.zip

Competency Demonstration Report_Elective (2)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in workplace lighting in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

3.Energy Efficiency Requirement

1. Minimum Energy Efficiency Requirements for New Installation and Replacement of Systems and Equipments in Buildings
2. Replacement of Components of Systems and Equipments in Buildings
3. Criteria for Determining Compliance with Energy Efficiency in Building with regards to Air conditioning and Heat Rejection Equipments, Water Heater, Motor Drives and Lighting used in Buildings.

STUDY MATERIALS_(Energy Efficiency)

Building Design+Material Science-K041+E047.zip http://www.filefactory.com/file/c0b645d/n/Building_Design_Material_Science-K041_E047.zip
K041_Building_Design_1 K041_Building_Design_2 K041Airconditioning K041Energy_Management_Textbook E047Mech

UEENEEK041B_E047B_Tutorials

Energy_survey_assignment

K041Textbook1.zip **K041Textbook2.zip** **K041Textbook3.zip**

Competency Demonstration Report_Elective (3)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in energy efficiency in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

4.Protection for Safety

1. Principle of Operation of Protective Devices
2. Maximum Demand and Diversity Factors
3. Protection against Over Current and Short Circuit Currents
4. Protective Devices and Circuit Conductors
5. Discrimination in Protection of Electrical Circuits

STUDY MATERIALS (Protection for Safety)

http://www.filefactory.com/file/c0b67b7/n/Electrical_Workshop_Wiring_E001_2_3_4_5_7_8_33_G003_4_7.zip **G033** http://www.filefactory.com/file/1b2utxydvcx7/n/G033_zip
Wiring_Notes_1. Wiring_Notes_2 Switchboard_Wiring 1Wiring_E033_E008 2Wiring_E033_E008 Fixing Equipments E002_E005.zip Lighting.zip E_trade_1.zip E_trade_2.zip E_trade_3.zip E_trade_4.zip G008_General_Notes_1.zip G008_General_Notes_2.zip

Hazard_Identification.zip

G003_G004_Wiring_2_Part_1.zip

G003_G004_Wiring_2_Part_2.zip

Cable_CktProt_E_Accessories.zip

Cable_Conduit_E_Accessories.zip

Elect_Installation_Protection_Method_Devices.zip

Elect_Installation_Requirement_1.zip

Elect_Installation_Requirement_1.zip

Elect_Installation_Requirement_2.zip

ElectricInstallationDesign.zip

ElectSystSafety1.zip

ElectSystSafety2.zip

FireProtHeatingTestingEarthing.zip

GeneralWiring.zip

HazardLightingPanel.zip

PanelRCDWireSpecial_Installation.zip

ProtectionMethods.zip

G008_General_Notes_1.zip G008_General_Notes_2.zip MachineControlCkt1.zip MachineControlCkt2.zip

MachineControlCkt3.zip MachineRepair1.zip MachineRepair2.zip MachineRepair3.zip ProcessControlCkt1.zip ProcessControlCkt2.zip ProcessControlCkt3.zip

ESI_8_Insulation_1 ESI_8_Insulation_2 ESI_9.1_Protection_Relay_Construction

ESI_9.2Test_Equipment ESI_33.1_Power_Quality_Concept ESI_33.2_Harmonic_in_capacitor

ESI_33.3_Harmoniceffect_on_machines ESI_3.1_HV_Measurement_Cable_Test.zip

ESI_3.2_Magnetic_measurement.zip ESI_3.3_Power_measurement.zip

ESI_3.4_RLC_measurement_1.zip ESI_3.4_RLC_measurement_2.zip

ESI_3.4_RLC_measurement_3.zip

ESI_3.5_Digital_equipments.zip ESI_3.6_V.A.W_meter.zip ESI_3.7T_and_M.zip

ESI_3.8_Thermography.zip

ESI_4_11_Power_Transformer.zip ESI_5_Machinery_Installation.zip

ESI_7_Drawing_Switching_Diagram.zip ESI_7_Electrical_Installation_Design.zip

ESI10.1_HV_equipments.zip ESI10.2_Substation_equipments.zip

ESI12_14_Harmonic.zip ESI12_14_Reactor.zip

ESI12_14_Syn_Motor_Generator.zip ESI_13_Voltage_regulation_devices.zip

BACK UP FOR 4

Stage 3 Part 3.zip http://www.filefactory.com/file/c0ccd44/n/Stage_3_Part_3.zip

Stage 4 Part 15.zip http://www.filefactory.com/file/c0cc7cb/n/Stage_4_Part_15.zip

Stage 4 Part 17.zip http://www.filefactory.com/file/c0cc76b/n/Stage_4_Part_17.zip

Stage 4 Part 7.zip http://www.filefactory.com/file/c0cc479/n/Stage_4_Part_7.zip

Stage 4 Part 14.zip http://www.filefactory.com/file/c0cc684/n/Stage_4_Part_14.zip

Study Package (19) Generator

ESI_19.4_Generator_.zip

Study Package (28) Power Accessories

ESI_28.1_Power_Accessories_1.zip ESI_28.2_Power_Accessories_2.zip

ESI_28.3_Power_Accessories_3.zip ESI_28.4_Power_Accessories_4.zip

ESI_28.5_Power_Accessories_5.zip ESI_28.6_Power_Accessories_6.zip

Study Package (34) Equipments Commissioning

ESI_34.1_Background_theory_for_equipments_commissioning_1.zip

ESI_34.2_Background_theory_for_equipments_commissioning_2.zip

ESI_34.3_Background_theory_for_equipments_commissioning_3.zip

ESI_34.4_Background_theory_for_equipments_commissioning_4.zip

ESI_34.5_Background_theory_for_equipments_commissioning_5.zip

ESI_34.6_Background_theory_for_equipments_commissioning_6.zip

Study Package (27) Relay

ESI_27_1_Relay_Principle_1.zip ESI_27_1_Relay_Principle_2.zip

ESI_27_1_Relay_Principle_3.zip

ESI_27.2_Element_of_Relay_Protection.zip

ESI_27.3_Relay_operation_characteristics.zip ESI_27.4_Relay_connection_and_response.zip

ESI_27.5_Machine_and_busbar_protection_1.zip ESI_27.5_Machine_and_busbar_protection_2.zip

ESI_27.5_Machine_and_busbar_protection_3.zip

ESI_27.6_Feeder_protection.zip ESI_27.7_CT_and_PT.zip ESI_27.9_Comparator.zip

ESI_27.10_Static_relay.zip ESI_27.11_Test_and_maintenance.zip

ESI_27.12_Circuit_Breaker_1.zip ESI_27.12_Circuit_Breaker_2.zip

ESI_27.12_Circuit_Breaker_3.zip ESI_27.12_Circuit_Breaker_4.zip

ESI_27.8_Line_protection_1.zip ESI_27.8_Line_protection_2.zip

ESI_27.8_Line_protection_3.zip ESI_27.5_Machine_and_busbar_protection_2_0.zip

Competency Demonstration Report_Elective (4)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in protection and safety in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

5.Cables,Bus-ways and Distribution Boards

1. Types and Characteristics of Cables
2. Method Installation
3. Sizing of Conduit and Trunking
4. Factors Affecting the Current Carrying Capacities of Cables
5. Sizing of Cables and Bus-ways for use Under Different Types of Conditions
6. Connected Load, Maximum Demand and Circuit Breakers Ratings for an Electrical Distribution Board

STUDY MATERIALS (Electrical Installation)

http://www.filefactory.com/file/c0b67b7/n/Electrical_Workshop_Wiring_E001_2_3_4_5_7_8_33_G003_4_7.zip

AS3000-2007Overview.zip AS3000_AS3008TablesExtract.zip WiringRules.zip

Part (1) Study the following notes

Installation_Requirement_1-A.zip Installation_Requirement_1-B.zip

Installation_Requirement_2-A.zip Installation_Requirement_2-B.zip

Stage_2_Wiring.zip

G003_G004_Wiring_2_Part_1.zip

G003_G004_Wiring_2_Part_2.zip

Cable_CktProt_E_Accessories.zip

Cable_Conduit_E_Accessories.zip

Elect_Installation_Protection_Method_Devices.zip

Elect_Installation_Requirement_1.zip

Elect_Installation_Requirement_1.zip

Elect_Installation_Requirement_2.zip

ElectricInstallationDesign.zip

ElectSystSafety1.zip

ElectSystSafety2.zip

FireProtHeatingTestingEarthing.zip

GeneralWiring.zip

HazardLightingPanel.zip

PanelRCDWireSpecial_Installation.zip

ProtectionMethods.zip

Assessment

Read the above notes files and do the assignments for the following tutorial file.

WiringPracticals.zip

G003G004Tutorial.zip

PRACTICAL

Workshop 2+3

WorkShop_Part_2_Practical_1_to_6_.zip WorkShop_Part_2_Practical_7_to_12_.zip

WorkShop_Part_2_Practical_13_to_17_.zip WorkShop_Part_2_Practical_18_to_21_.zip

ElectricalWorkshopPart3_G008_Group1Machine_.zip

ElectricalWorkshopPart3_G008_Group2LineProtection_.zip

ElectricalWorkshopPart3_G008_Group3InstrumentsDevices_.zip

OTHER PRACTICALS

ELECTRICAL_WORKSHOP_PART_2_G003_G004_G009_.zip

Electrical_Workshop_Part_2_Practical_1_to_18.zip

Electrical_Workshop_Part_2_Practical_19_to_21.zip

G003_G004_G009Practicals.pdf

G005

UEENEEG005B		Verify compliance and functionality of general electrical installations

G005.zip

Power Distribution Trade

Power_Distribution_Trade.zip

Metering

Metering.zip

Switch Gear

Elect_Installation_Protection_Method_Devices.zip

ElectSystSafety1.zip ElectSystSafety2.zip

7762AH Power System Fundamental

AH_Day_1.zip AH_Day_2_3.zip AH_Day_4.zip AH_Day_5.zip AH_Day_6_7_8.zip

ESI_27.4Circuit_Breaker_1.zip ESI_27.5_Circuit_Breaker_2.zip

ESI_7_Switching_system_design_consideration.zip ESI_8.2_Site_Insulation_Surge_Protection.zip

Competency Demonstration Report Elective (5)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in electrical installation in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

6.Earthing

1. Purpose of Earthing
2. Methods of Earthing
3. Earth Fault Loop Impedance and Earth Fault Current
4. Suitable Sizes of Circuit Protective Conductor
5. Testing of Earthing

STUDY MATERIALS (Electrical Earthing)

G007

G007 Lesson 1 AS3000 Wiring rule overview.zip

http://www.filefactory.com/file/cf94220/n/G007_Lesson_1_AS3000_Wiring_rule_overview.zip

G007 Lesson 2 Maximum Demand calculation.zip

http://www.filefactory.com/file/cf9456f/n/G007_Lesson_2_Maximum_Demand_calculation.zip

G007 Lesson 3 Cable selection.zip

http://www.filefactory.com/file/cf9465c/n/G007_Lesson_3_Cable_selection.zip

G007 Lesson 4 Cable voltage drop calculation.zip

http://www.filefactory.com/file/cf9479e/n/G007_Lesson_4_Cable_voltage_drop_calculation.zip

G007 Lesson 5 Derating of cable part 1.zip

http://www.filefactory.com/file/cf95acb/n/G007_Lesson_5_Derating_of_cable_part_1.zip

G007 Lesson 6 Derating of cable part 2.zip

http://www.filefactory.com/file/cf95a6b/n/G007_Lesson_6_Derating_of_cable_part_2.zip

G007 Lesson 7 Derating of cable for HRC fuse protection.zip

http://www.filefactory.com/file/cf95cd7/n/G007_Lesson_7_Derating_of_cable_for_HRC_fuse_protection.zip

G007 Lesson 8 Final subcircuit fault loop impedance.zip

http://www.filefactory.com/file/cf95dd1/n/G007_Lesson_8_Final_subcircuit_fault_loop_impedance.zip

Electrical Installation requirement

FireProtHeatingTestingEarthing.zip

HazardLightingPanel.zip

PanelRCDWireSpecial_Installation.zip

ProtectionMethods.zip

ESI_8.2_Site_Insulation_Surge_Protection.zip

Power system 2-G037+G038+G039.zip

http://www.filefactory.com/file/c0b7a33/n/Power_system_2-G037_G038_G039.zip

G037+G038+G039 Lesson 2-Site Earthing.zip

http://www.filefactory.com/file/c0bb244/n/G037_G038_G039_Lesson_2-Site_Earthing.zip

G037+G038+G039 Lesson 8-Turbine Control+Power Line Earthing.zip

http://www.filefactory.com/file/c0bb521/n/G037_G038_G039_Lesson_8-Turbine_Control_Power_Line_Earthing.zip

G037+G038+G039 Lesson 9-Insulator.zip

http://www.filefactory.com/file/c221eff/n/G037_G038_G039_Lesson_9-Insulator.zip

Power System (2)

G037+G038+G039 Lesson 1-Power Flow.zip

http://www.filefactory.com/file/c0bb2a3/n/G037_G038_G039_Lesson_1-Power_Flow.zip

G037+G038+G039 Lesson 2-Site Earthing.zip

http://www.filefactory.com/file/c0bb244/n/G037_G038_G039_Lesson_2-Site_Earthing.zip

G037+G038+G039 Lesson 4-Auxiliary System+Harmonic.zip

http://www.filefactory.com/file/c0bb3c3/n/G037_G038_G039_Lesson_4-Auxiliary_System_Harmonic.zip

G037+G038+G039 Lesson 3-Power System Control Equipments.zip

http://www.filefactory.com/file/c0bced7/n/G037_G038_G039_Lesson_3-Power_System_Control_Equipments.zip

G037+G038+G039 Lesson 5-Harmonic.zip

http://www.filefactory.com/file/c0bb35b/n/G037_G038_G039_Lesson_5-Harmonic.zip

G037+G038+G039 Lesson 6-Harmonic Calculation.zip

http://www.filefactory.com/file/c0bb43f/n/G037_G038_G039_Lesson_6-Harmonic_Calculation.zip

G037+G038+G039 Lesson 7-Synchronous Generator Loading.zip

http://www.filefactory.com/file/c0bb49d/n/G037_G038_G039_Lesson_7-Synchronous_Generator_Loading.zip

G037+G038+G039 Lesson 8-Turbine Control+Power Line Earthing.zip

http://www.filefactory.com/file/c0bb521/n/G037_G038_G039_Lesson_8-Turbine_Control_Power_Line_Earthing.zip

G037+G038+G039 Lesson 9-Insulator.zip

http://www.filefactory.com/file/c221eff/n/G037_G038_G039_Lesson_9-Insulator.zip

G037+G038+G039 Lesson 10-Reliability of Power System.zip

http://www.filefactory.com/file/c0bb6e4/n/G037_G038_G039_Lesson_10-Reliability_of_Power_System.zip

G037+G038+G039 Lesson 11-Harmonic Reduction.zip

http://www.filefactory.com/file/c0bce89/n/G037_G038_G039_Lesson_11-Harmonic_Reduction.zip

G037+G038+G039 Lesson 12-Grounding + Power Quality.zip

http://www.filefactory.com/file/c0bb872/n/G037_G038_G039_Lesson_12-Grounding_Power_Quality.zip

G037+G038+G039 Lesson 13-Power Quality.zip

http://www.filefactory.com/file/c0bb98d/n/G037_G038_G039_Lesson_13-Power_Quality.zip

G037+G038+G039 Lesson 14-Harmonic Model.zip

http://www.filefactory.com/file/c0bcad7/n/G037_G038_G039_Lesson_14-Harmonic_Model.zip

G037+G038+G039 Lesson 15-Harmonic Losses in Transformer.zip

http://www.filefactory.com/file/c0bca73/n/G037_G038_G039_Lesson_15-Harmonic_Losses_in_Transformer.zip

G037+G038+G039 Lesson 16-Reliability Improvement.zip

http://www.filefactory.com/file/c0bcba0/n/G037_G038_G039_Lesson_16-Reliability_Improvement.zip

G037+G038+G039 Lesson 17-Preparation for emergency.zip

http://www.filefactory.com/file/c0bcbd7/n/G037_G038_G039_Lesson_17-Preparation_for_emergency.zip

G037+G038+G039 Lesson 18-Harmonic problems.zip

http://www.filefactory.com/file/c0bcb68/n/G037_G038_G039_Lesson_18-Harmonic_problems.zip

G037+G038+G039 Lesson 19-Synchronous machine problems.zip

http://www.filefactory.com/file/c0bccb8/n/G037_G038_G039_Lesson_19-Synchronous_machine_problems.zip

G037+G038+G039 Lesson 20-Power Generation + Generator Control.zip

http://www.filefactory.com/file/c0bcc20/n/G037_G038_G039_Lesson_20Power_Generation_Generator_Control.zip

G037+G038+G039 Lesson 21-Turbine Control+ Digital Excitation.zip

http://www.filefactory.com/file/c0bcdf6/n/G037_G038_G039_Lesson_21-Turbine_Control_Digital_Excitation.zip

G037+G038+G039 Lesson 22-Power System Protection.zip

http://www.filefactory.com/file/c0bcd4c/n/G037_G038_G039_Lesson_22-Power_System_Protection.zip

G037+G038+G039 Lesson 23-Switch Gear.zip

http://www.filefactory.com/file/c0bcea8/n/G037_G038_G039_Lesson_23-Switch_Gear.zip

Competency Demonstration Report_Elective (6)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in site earthing in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

7.Emergency Lighting

1. Exit and Emergency Lighting Requirements for Evaluation of Occupants
2. Types of Back-up Power Supply
3. Exit and Directional Signs

STUDY MATERIALS (Emergency Lighting)

EE 617 Building Electrical and Mechanical System Part 1 (1 pt)

EE 617 Building Electrical and Mechanical System Part 2

BAE 606 Building Service Electrical & Mechanical Engineering

Lighting.zip

E_trade_1.zip E_trade_2.zip E_trade_3.zip E_trade_4.zip

Competency Demonstration Report_Elective (7)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in emergency lighting in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

8.Standby Power Generator System

1. Types of Essential and Critical Loads
2. Sizing of Generator
3. Voltage Regulation and its Effects on Generator Sizing
4. Protection of Alternators and Prime Movers
5. Installation of Standby Generator System Including Day-tank Battery and Charger, Fuel Supply, Engine cooling system, Plant room ventilation and fresh air intake, contend instrumentation plant and automatic transfer switch.

STUDY MATERIALS_(Standby Power GeneratorSystem)

Study Package (22) Generator

ESI_22.1_Generator_Study.zip

ESI_22.2_Voltage_surge_control.zip

Study Package (23) Machine Rating

ESI_23.1_Generator_Rating.zip

ESI_23.1_Transformer_Rating.zip

Study Package (24) Modern Power System

ESI_24_Modern_Power_System.zip

EE 512 Electrical Power Generation System (1 pt)

EE 512 Principles of Power Systems

EE 512 Generation Transmission and Distribution of Electrical Power

Competency Demonstration Report_Elective (8)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in stand by power system in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

9.Automatic Fire Alarm System

1. Requirement for automatic and manual fire detection system and purpose of compartmentation as required by the fire code.
2. Interaction with other building services as emergency voice communication system, lifts, AHU, pressurization fans and auto-doors during alarm activation.

STUDY MATERIALS (Automatic Fire Alarm System)

Part 1 Over all Knowledge of the subject

BAE 606 Building Service Electrical & Mechanical Engineering

Part 2 Competency units of the subject

Building Electrical & Mechanical System

EE 617 Building Electrical and Mechanical System Part 1 (1 pt)

EE 617 Building Electrical and Mechanical System Part 2

HazardLightingPanel.zip

10.Emergency Voice Communication System

1. Requirement for public address system for building above 24 meters but less than 60 meters.
2. Requirements for emergency voice communication for building above 60 meters.
3. Requirement for fireman intercom.

STUDY MATERIALS (Emergency Voice Communication System)

Study Package (24) Signal Communication

ESI_26_Electronics_Signals.zip

FireProtHeatingTestingEarthing.zip

E071Hazard_Identification_Wk6_.zip

Competency Demonstration Report_Elective (9)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in emergency voice communication system in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

11.Inspection, Testing and Common Violation in Electrical Installation

1. Mandatory requirements for inspection and testing of electrical prior to energisation of electrical supply
2. Types of test instruments and standard methods of testing.

STUDY MATERIALS_(Electrical Testing & Inspection)

Electrical Risk Assessment

Project Risk Management References

Electrician Capstone unit.pdf

http://www.filefactory.com/file/c392ae1/n/Electrician_Capstone_unit.pdf

Electrician Capstone Test Old Questions

Electrician Capstone Unit Study Guide.zip

http://www.filefactory.com/file/c4bbf1b/n/Electrician_Capstone_Unit_Study_Guide.zip

SubstationEntry.zip

Construction ElectricalSafety.zip

InserviceTesting.zip

UEENEEE033

Electrical_safe_working.zip

NREL_Disconnect_Reconnect.zip

AS3000-2007Overview.zip

AS3000_AS3008TablesExtract.zip

WiringRules.zip

Part (1) Study the following notes

Installation_Requirement_1-A.zip

Installation_Requirement_1-B.zip

Installation_Requirement_2-A.zip

Installation_Requirement_2-B.zip

Stage_2_Wiring.zip

Cable_Installation.zip

Protection_1.zip Protection_2.zip

System_safety_1.zip System_safety_2.zip

Regulatory_Requirement.zip

FireProtHeatingTestingEarthing.zip

Competency Demonstration Report_Elective (10)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in electrical safety inspection and testing in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

12.Measuring Instruments

1. Principle of operation of Electrical Measuring Instruments
2. Essential of Indicating Instruments
3. Types of Instruments
4. Errors Common to All Types of Instruments
5. Moving Iron Instruments
6. Moving coil Instruments
7. Comparison Between Moving Iron and Moving Coil Instruments
8. Comparison Between Moving Iron and Dynometer Type Instrument
9. Extension of Instrument Range
10. Measurement of Power
11. Watt Meter, Dynometer Type Wattmeter
12. Energy Meter, Multi-meter or AVO Meter, Electronic Multi-meter
13. Digital Multi-meter

STUDY MATERIALS_(Electrical Measurement)

EE 404 Electrical Measurement (1 pt)

Competency Demonstration Report_Elective (11)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in electrical measurement and testing in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)

13.Electrical Engineering Codes/ Standards

1. Codes, Standards and Regulations
2. Codes and Standards for building services

STUDY MATERIALS (Electrical Engineering Code and Standard)

AUSTRALIA & NEW ZEALAND

Australian Electrical Wiring Rules Part 1

Australian Electrical Wiring Rules Part 2

Australian Electrical Wiring Rules Part 3

New South Wales Electrical Service Rules Australia

OTHERS

Switch Gear Manual

Energy Management Handbook

REFERENCES

Service_Rule_1 Service_Rule_2 Service_Rule_3

AS3000 Wiring Rules Overview

AS3000-2007Overview.zip

AS3000_AS3008TablesExtract.zip

WiringRules.zip

E071DesiE071HVOverheadConductors_Wk2-3_.zip

E071LVOverheadConductor_Wk4-5_.zip

E071Hazard_Identification_Wk6_.zip

E071General_Wiring_Wk7-8_.zip

E071UGCableSpecification_Wk9-10-11_.zip

E071TelecomDatacom_Wk12_.zip

E071Switching_Wk13_.zip

E071DesignStdOHDevelopment_Wk14-16_.zip

12-Specifications

13-BSpecifications

14-Specifications

E071DesiE071HVOverheadConductors_Wk2-3_.zip

6-ElectricalDrawing

BACK UP FOR 2, 6 & 10

Stage 4 Part 7.zip http://www.filefactory.com/file/c0cc479/n/Stage_4_Part_7.zip

Stage 4 Part 11.zip http://www.filefactory.com/file/c0cc540/n/Stage_4_Part_11.zip

Stage 4 Part 12.zip http://www.filefactory.com/file/c0cc566/n/Stage_4_Part_12.zip

Stage 4 Part 13.zip http://www.filefactory.com/file/c0cc6c1/n/Stage_4_Part_13.zip

Electrician Capstone unit.pdf

http://www.filefactory.com/file/c392ae1/n/Electrician_Capstone_unit.pdf

Electrician Capstone Test Old Questions

Electrician Capstone Unit Study Guide.zip

http://www.filefactory.com/file/c4bbf1b/n/Electrician_Capstone_Unit_Study_Guide.zip

OTHERS REFERENCES

E_trade_1.zip E_trade_2.zip E_trade_3.zip E_trade_4.zip

G008_General_Notes_1.zip G008_General_Notes_2.zip

Part (1) Study the following notes

Installation_Requirement_1-A.zip Installation_Requirement_1-B.zip

Installation_Requirement_2-A.zip Installation_Requirement_2-B.zip

Stage_2_Wiring.zip

Do the assignments from the following book & submit the assignment (1)

Cable_Installation.zip

Part (2) Study the following notes

Protection_1.zip Protection_2.zip System_safety_1.zip System_safety_2.zip

Do the assignments from the following book & submit the assignment (2)

Regulatory_Requirement.zip

Assignment: At the end of each chapter, there are review questions & exercises. You need to do all exercises & submit them as assignment

Tutorial review questions and answers

Electrical_trade_review_questions_and_answers.zip

Stage 2 Part 6.zip

http://www.filefactory.com/file/c0cccc0/n/Stage_2_Part_6.zip

Stage_1_Wiring_Practical

Stage_2_Wiring

System_Installation_Examples_-_NUER02_version

System_safety_1

System_safety_2

Stage_1_Wiring_Practical.zip

Electrical_safe_working.zip

OTHER REFERENCES

UEENEEG003B		Install wiring and accessories for low voltage circuits
UEENEEG004B		Install low voltage electrical apparatus and associated equipment

G003_G004_Wiring_2_Part_1.zip

G003_G004_Wiring_2_Part_2.zip

Stage 3 Part 1B.zip

http://www.filefactory.com/file/c0ccc42/n/Stage_3_Part_1B.zip

Cable_CktProt_E_Accessories

Cable_Conduit_E_Accessories

Stage 4 Part 8.zip

http://www.filefactory.com/file/c0cc5a1/n/Stage_4_Part_8.zip

Cable+CktProt+E Accessories

Cable+Conduit+E Accessories

Elect Installation Protection Method Devices

Stage 4 Part 9.zip

http://www.filefactory.com/file/c0cc5db/n/Stage_4_Part_9.zip

G003+G004 Notes Upload

Cable_CktProt_E_Accessories.zip

Cable_Conduit_E_Accessories.zip

Elect_Installation_Protection_Method_Devices.zip

Elect_Installation_Requirement_1.zip

Elect_Installation_Requirement_1.zip

Elect_Installation_Requirement_2.zip

ElectricInstallationDesign.zip

Stage 3 Part 5.zip

http://www.filefactory.com/file/c0ccefd/n/Stage_3_Part_5.zip

ElectSystSafety1

ElectSystSafety2

Energy survey assignment

FireProtHeatingTestingEarthing

G003_G004_G009Practicals

G003_G004_Wiring_2_Part_1

G003_G004_Wiring_2_Part_2

G003G004Tutorial

G005

ElectSystSafety1.zip

ElectSystSafety2.zip

FireProtHeatingTestingEarthing.zip

GeneralWiring.zip

HazardLightingPanel.zip

PanelRCDWireSpecial_Installation.zip

ProtectionMethods.zip

Assessment

Read the above notes files and do the assignments for the following tutorial file.

Stage 3 Part 9.zip

http://www.filefactory.com/file/c0ccf48/n/Stage_3_Part_9.zip

WiringPracticals

WorkShop_Part_2_Practical_1_to_6_

WorkShop_Part_2_Practical_7_to_12_

WorkShop_Part_2_Practical_13_to_17_

WorkShop_Part_2_Practical_18_to_21_

Competency Demonstration Report Elective (12)

Based on the study you got from the above resources, write a professional experiences and competency report for engineering tasks in electrical engineering codes and standards used in engineering work in above mentioned format & submit it to the assessor.

(Weighted informal learning time for CPD including study & report= 20Hr x 0.5= 10Hr)