SELF STUDY PROFESSIONAL DEVELOPMENT ONLINE LEARNING RESOURCES MATERIALS AND SELF ASSESSMENT ONLINE TESTS FOR ASSISTING THE CANDIDATES TO PREPARE FOR PROFESSIONAL ENGINEER (ELECTRONICS) REGISTRATION WITH MYANMAR BOARD OF ENGINEERS

Prepared BY- U Kyaw Naing

Registered Professional Engineer of Queensland

RPEQ-Electrical (Registration Number 07661)

Board of Professional Engineers of Queensland State Government (Australia) www.bpeq.qld.gov.au

&

Electrical Engineering Teacher (TAFE-NSW) (Australia)

Based on 25 years experiences since BE (Electrical Power) Graduation from Yangon Institute of Technology in 1987 as electrical engineer, electrician and electrical engineering teacher in Myanmar, Fiji, Australia, New Zealand & Niue, these online electrical learning materials in line with the study materials being used to teach the engineering courses in Australia are prepared to assist Young Myanmar Engineers to participate in professional development programs of Myanmar Engineering Society to accomplish the aims & objectives of Myanmar Engineers Board in the process of Professional Engineers Registration in Myanmar.

Online tests and assessments are also included for the candidates to assess their self learning. The resources are not only theoretical studies but also industrial rules and regulations in Singapore, UK , Australia and New Zealand and practical resources of engineering practice. PEng registration competency report writing in Australia & New Zealand are also included in the resources.

Browse www.electricaldiploma2013.zoomshare.com for details of Australian Electrical Training.

Members of Myanmar Engineering Society at the grade of Junior Member can utilize the materials uploaded to this site at free of charge for online self learning & self assessment. The candidates should have good internet access to download the study support materials from this site. But for sending the materials in USB or copying them from the authorised representatives in Myanmar or assessing and providing individual professional support by e-mail, appropriate fees can be chargeable.

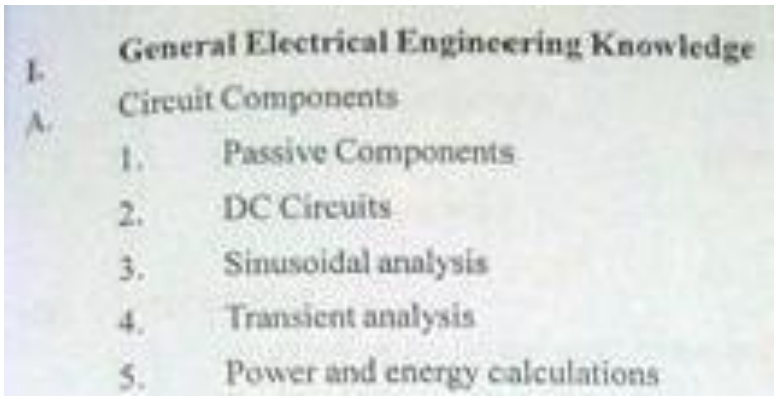
Further contact should be made to: U Kyaw Naing at highlightcomputergroup1@ gmail.com

SCOPE- Electrical PE (Building Services)

PART (1)

YEAR 1 & 2 (Minumum 3 to 4 years is required for a graduate to become a PE)

(Total PDP Points for Informal Learning Activities-Private Study Part Time) (Total 10 points per year maximum)(MEB-PE Regulation Appendix 3). Ctrl+Click the link & then allow to download the contents.



STUDY MATERIALS (DC Circuits)

DC_Circuit_E003_E004.zip

http://www.filefactory.com/file/c0cb8ab/n/Stage_1_Part_1.zip

The tests are based on your general knowledge on the subject. They are not designed to test the limited area of study that the candidate learns one paper & sits one test.

ONLINE MCQ TEST (1)

http://www.filefactory.com/file/58r3nfe1qieh/n/E003_E004_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/3ebb0fe603a748b6b2430e75fb07af4f#/InitializeTest.xaml

http://www.classroomclipboard.com/503511/Home/Test/3ebb0fe603a748b6b2430e75fb07af4f#/QuestionPresenter.xaml?id=11

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- G4UYTV

STUDY MATERIALS (AC Circuit 1)

G002

ONLINE MCQ TEST (2)

http://www.filefactory.com/file/7ebmnciqxmf3/n/G002_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/f7fb9a22d8ba413a8d39bc6ef7be4d20#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 8YGTHT

STUDY MATERIALS (AC Circuit 2)

G048_7769AC G048_Tutorials.zip

Notes for assignment/ tutorials

G048_Full_Part_1.zip G048Part2.zip

E025_Circuits_1 E025_Circuits_2

E025_Tutorial

Stage 2 Part 3.zip http://www.filefactory.com/file/c0ccb1f/n/Stage_2_Part_3.zip

Stage 3 Part 2.zip http://www.filefactory.com/file/c0ccdbc/n/Stage_3_Part_2.zip

ONLINE MCQ TEST (3)

http://www.filefactory.com/file/52h82a0t0f3f/n/E025_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/0d8e41400b24465b97e60b2a555d7cff#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- DCVK7

ONLINE MCQ TEST (4)

http://www.filefactory.com/file/713uvwk5vbel/n/G048_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/a03f83dbf40e4991800c44b484ae6a1d#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- G9PLM

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 4 HR x 0.5 = 2 HR

STUDY MATERIALS (Three Phase Circuits)

G049_7762AB_7761M_Notes G049_7762ABTutorial

E029_Motor_Control_1 E029_Motor_Control_2

Fault Calculation

7762AB_Fault_Calculation.zip

AB-Part1.zip AB-Part_2.zip AB-Part_3.zip AB-Part4.zip AB-Part5.zip AB-Part6.zip

ABFormula.zip

Power System Analysis

7761M-Part1.zip 7761MPart-2.zip 7761M-Part-3.zip 7761M-Part-4.zip 7761M-Part-5.zip

7761M-Part-6.zip 7761M-Part-7.zip

Phase AC Supply Handout

Connection of balanced three phase loads handout

Star delta conversion handout

Connection of unbalanced three phase loads

Power and energy in ac circuit handout

Watt meter handout

Three Phase Power Handout

Power factor correction handout

High voltage transmission line losses handout

Symmetrical components handout

Distribution of fault currents through power system handout

Phase sequence diagrams for power systems handout

Phase sequence detectors handout,

Fault calculations on power system handout

Power Circuits (Reference)

Part 1	**Part 2**	**Part 3**
Part 4	**Part 5**	**Part 6**
Part 7	**Part 8**	**Part 9**
Part 10	**Part 11**	**Part 12**
Part 13	**Part 14**	**Part 15**
Part 16	**Part 17**	**Part 18**

Stage 2 Part 3.zip http://www.filefactory.com/file/c0ccb1f/n/Stage_2_Part_3.zip

E029Tutorial

ONLINE MCQ TEST (5)

G049 Test 1

http://www.filefactory.com/file/5vhbs8sn20f3/n/G049_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/d5b2138544c74b709963660627046ffe#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- UE6FAG

G049 Test 2

http://www.filefactory.com/file/611ftvpa3dit/n/G049_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/797cac44d12248b9b3be8507518c9bc4#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- PS83

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 4 HR x 0.5 = 2 HR

B. Measurement and Instrumentation

1. Transducer and System Characteristics

2. Operational Amplifier

STUDY MATERIALS (Electrical Measurement)

EE 404 Electrical Measurement (1 pt)

EXERCISE ASSESSMENT (30)

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)

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 2 HR x 0.5 = 1 HR

C. Signal Processing

1. Sampling Theory

2. Analog-to-digital (A/D) and digital-to-analog (D/A) Conversions

Process control-I006+I008+I020.zip

http://www.filefactory.com/file/c0b7d9d/n/Process_control-I006_I008_I020.zip

I006

UEENEEI006B		Solve problems in process controllers, transmitters and converters
6032A	EA904	Control concepts
7761L	EA190	Electronic signals and systems

1.Process control transducer

2.Operational amplifier

3.Pnuematic

4.Digital control

5.PLC TL31

6.Encoder+Decoder

7.Digital signal processing

8.DAC+Flipflop+Sensor

9.Analogue to Digital Conversion

10.Temperature control

11.Industrial transducer

12.Control system evaluation

13.Proportional control

14.Electronic signal system

15.Types of transducers

16.Speed measurement

Stage 4 Part 18.zip
http://www.filefactory.com/file/c0cc793/n/Stage_4_Part_18.zip

Stage 4 Part 1A.zip
http://www.filefactory.com/file/c0cc226/n/Stage_4_Part_1A.zip

ONLINE MCQ TEST

I006Test 1

http://www.filefactory.com/file/46zzpcym7uqz/n/I006_H012_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/25f59f11b4584a23b3f564fe4041fb1d#/InitializeTest.xaml

SPHHMYT

I006Test 2

http://www.filefactory.com/file/78kbc9x2alx/n/I006_H012_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/7b0f9808d98a48d79e9d77ea4e2af721#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- F44J

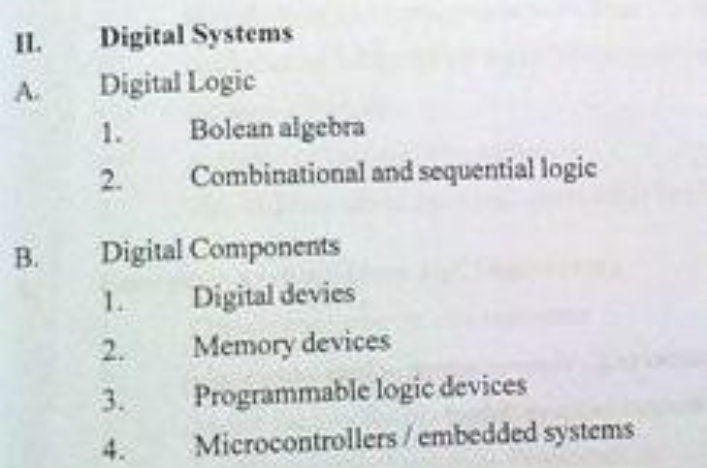
Advanced References

EE 403 Introduction to Electronic Engineering (1 pt)

EE 524 Introduction to Power Electronics (1 pt)

EE 524 Power Electronics

EE 524 Applied Electronics



II. **Digital Systems**

A. Digital Logic

1. Bolean algebra
2. Combinational and sequential logic

B. Digital Components

1. Digital devies
2. Memory devices
3. Programmable logic devices
4. Microcontrollers / embedded systems

Digital Electronics Notes

UEENEEH012B		Troubleshoot digital subsystems
UEENEEH043B		Diagnose and rectify faults in digital subsystems of electronic controls

http://kyawnaing325.zoomshare.com/files/6/DigitalElectronics.htm

http://kyawnaing325.zoomshare.com/files/6/7794CD-DigitalElectronics.htm

DE 1

Binary Number Binary_Number_Lesson.zip

D.A.C Encoder Multiplexer DAC-Encoder-Multiplexer.zip

Introduction to Digital Logic DE1-1.zip

Boolean Algebra DE1-2.zip

De Morgan Theorem DE1-3.zip

Karnaugh's Map DE1-5.zip

DE2

Timing Diagram + Operation of Discrete Equipments DE2-1_2_Notes.zip

7 Segments Display DE2-7_Segment_Display.zip

Logic Families Part 1 & Part 2 DE2_Logic_Families_Part_I_Part_II_Note_Exercise.zip

SR Flip Flop DE2-SR_Flip_Flop_Notes.zip

D J K Flip Flop DE2-D_J_K_Flip_Flop.zip

Data Transfer DE2-Data_Transfer_Note.zip

Encoder DE2-Encoder_Lesson.zip

Logic Level DE2-Logic_Level_Note_Exercise.zip

Logic Level + Totem Pole DE2-Logic_Level_TotemPole_Note_Exercise.zip

Multiplexer DE2-Multiplexer_Lesson.zip

Schmitt Trigger DE2-Schmitt_Trigger_Device_Exercise.zip

Shift Register DE2-Shift_Register.zip

ESD ESD_Review_Questions.zip

Digital Logic Simplification Digital_Logic_Simplification.zip

SR & D Latches **SRandDLatches.mht**

Simple Sequential **SimpleSequentialCircuit.mht**

Demorgan **DeMorganTheorm_0.mht**

Sequential State Diagram **SequentialCircuitStateDiagram.mht**

De Morgan Theorem **DeMorganTheorm.mht**

D & JK Flip Flop **DandJKFlipFlops_0.mht**

Basic Logic Gates **BasicLogicGates.mht**

Digital Electronics **DE.zip** **DE1.zip** **DE2Notes.zip**

Digital_logic_Simplification.zip

IC Reference

Digital_IC_Ref_1-Part_1.zip

Digital_IC_Ref_1-Part_2_0.zip

Digital_IC_Reference_2-Part_1.zip

Digital_IC_Reference_2-Part_2.zip

Digital Electronics Exercises

DE1 Exercise

DE1-1_Review_Question.zip

DE1-2Review_Questions.zip

DE1-3_Review_Question.zip

DE1-4_Review_Question.zip

ESD_Review_Questions.zip

Digital_Logic_Simplification.zip

DE2 Exercise

DE2-7_Segment_Display_Review_Q.zip

DE2_Shift_Register_Exercise.zip

DE2-Counter_Exercise.zip

DE2_SR_Flip_Flop_Q.zip

DE2-D_Flip_Flop_Q.zip

DE2-Data_Transfer_Q.zip

DE2-DecoderMultiplexer_Assignment.zip

Advanced References

BAE 408 Analogue & Digital Electronics

EE 405 Digital System (1 pt)

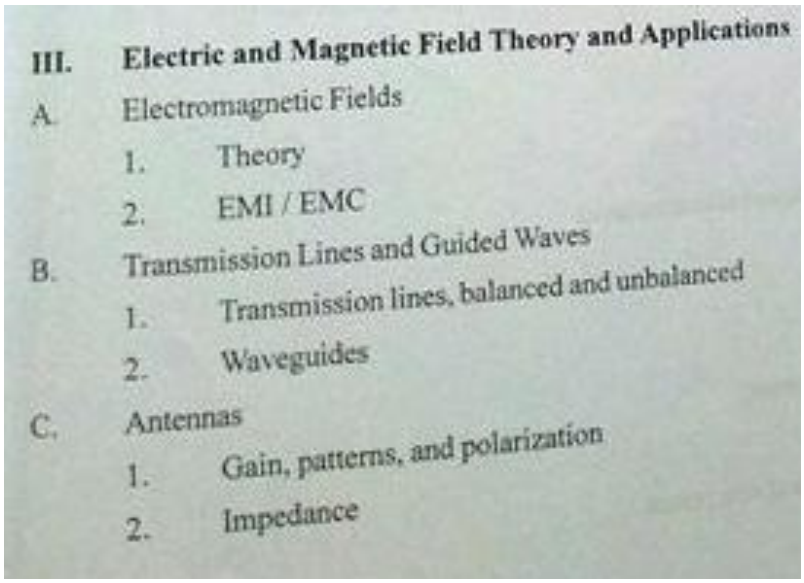
EE 405 Digital System (1 pt)

EE 526 Digital Signal Processing (1 pt)

EE 527 Digital Image Processing 1 (1 pt)

EE 527 Digital Image Processing 2

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 4 HR x 0.5 = 2 HR



III. **Electric and Magnetic Field Theory and Applications**

A. Electromagnetic Fields
   1. Theory
   2. EMI / EMC

B. Transmission Lines and Guided Waves
   1. Transmission lines, balanced and unbalanced
   2. Waveguides

C. Antennas
   1. Gain, patterns, and polarization
   2. Impedance

G042_Part_3_Notes

G037_G038_G030Pt1_7762AG_Notes

G015_G042_G037_G038_G039_Part_2_Notes

G015_G037_G038_G030Pt1_7762AG_Notes

Stage 4 Part 15.zip

http://www.filefactory.com/file/c0cc7cb/n/Stage_4_Part_15.zip

BAE 607 Radio Wave Propagation & Microwave Techniques

EE 625 Radio Wave Propagation (1 Pt)

EE 626 Microwave Technique (1pt)

ONLINE MCQ TEST

G042 Test 1

http://www.filefactory.com/file/12pcsbpgbkhx/n/G042_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/8c2511d53079456f9c5d159095ec766a#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- HPNYFFB

G042 Test 2

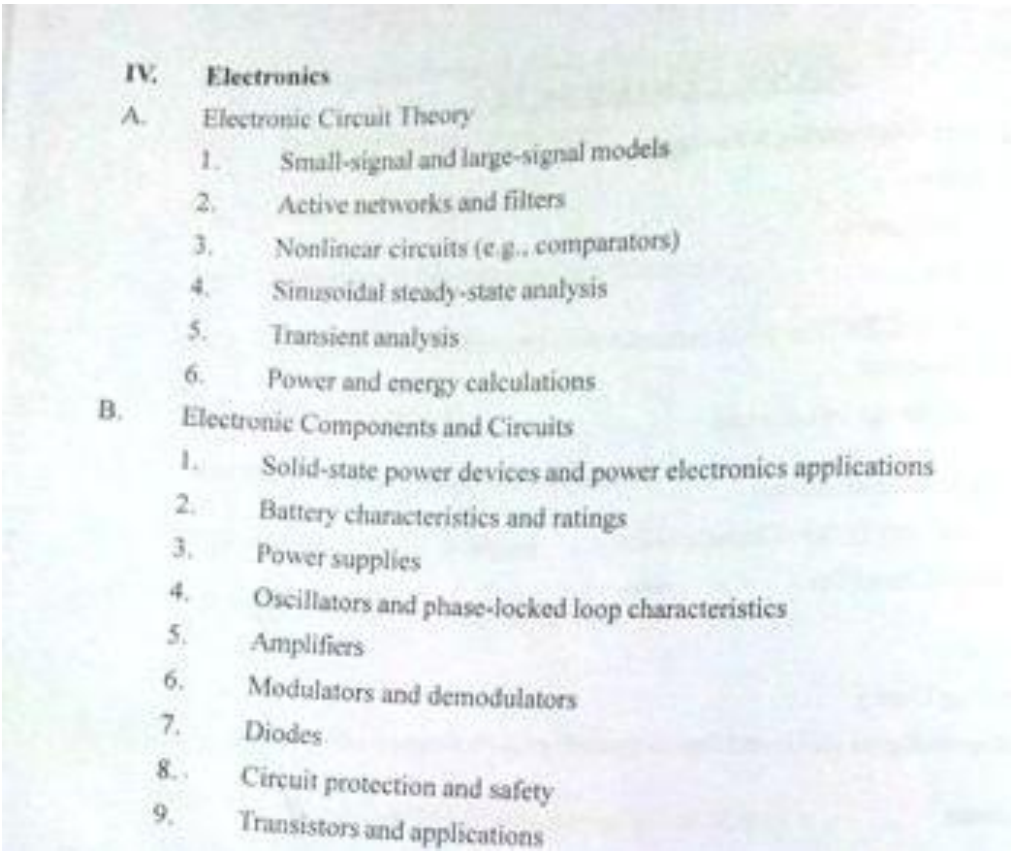
http://www.filefactory.com/file/3ol2dpyi4qm9/n/G042_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/cb5cd0dd19524431905d5519ad17ab67#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 35KCC

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 4 HR x 0.5 = 2 HR



IV. **Electronics**

A. Electronic Circuit Theory
   1. Small-signal and large-signal models
   2. Active networks and filters
   3. Nonlinear circuits (e.g., comparators)
   4. Sinusoidal steady-state analysis
   5. Transient analysis
   6. Power and energy calculations

B. Electronic Components and Circuits
   1. Solid-state power devices and power electronics applications
   2. Battery characteristics and ratings
   3. Power supplies
   4. Oscillators and phase-locked loop characteristics
   5. Amplifiers
   6. Modulators and demodulators
   7. Diodes
   8. Circuit protection and safety
   9. Transistors and applications

H045+7761A

UEENEEH045		Develop solutions to analogue electronic problems
7761A	EA100	Analogue electronics 1

Analog1

Analog2

Assessment-Test + Assignment for flexible study students

Electronics_H045_Tutorials

H025

UEENEEH025		Provide solutions to single phase electronic power control problems
8273Z	NE064	Variable speed drives

H025_Operational_Amplifier

Assessment-Test + Assignment for flexible study students

Electronics_H025_Tutorials

H026

UEENEEH026		Provide solutions to polyphase electronic power control problems
8273Z	NE064	Variable speed drives

H026_3_Ph_Power_Control_Electronics_1

H026_3_Ph_Power_Control_Electronics_2

H026_3_Ph_Power_Control_Electronics_3

H026_3_Ph_Power_Control_Electronics_4

Assessment-Test + Assignment for flexible study students

UEENEEH026_Tutorials.doc

Stage 3 Part 2.zip

http://www.filefactory.com/file/c0ccdbc/n/Stage_3_Part_2.zip

BAE 408 Analogue & Digital Electronics

Part 2 Competency units of the subject

Advanced References

EE 403 Introduction to Electronic Engineering (1 pt)

EE 524 Introduction to Power Electronics (1 pt)

EE 524 Power Electronics

EE 524 Applied Electronics

ONLINE MCQ TEST

H011Test 2

http://www.filefactory.com/file/3e54mrgli7ft/n/H011_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/367cc44c01944cb59982be0255dca5bd#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 65TG

H013Test 1

http://www.filefactory.com/file/4ze60r57ea9/n/H013_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/eaa8db99cb2b44c49d016f6c8eee5910#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- SN3T84

H013Test 2

http://www.filefactory.com/file/sutmaakz949/n/H013_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/957b751abb4641cf9ae0a79176936549#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 6LYXKLE

H025Test 1

http://www.filefactory.com/file/7j320hlrk6k9/n/H025_H045_I006_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/ab5d528d1ff742f7a3d632a61c210eb0#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 96T3TX3

H025Test 2

http://www.filefactory.com/file/20vzqp9mvm8p/n/H025_H045_I006_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/99835b7ab0c348e8a2fd0827394b60d8#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- HHH2HNC

H026Test 1

http://www.filefactory.com/file/fch86cnsrdp/n/H026_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/ee1e8307748441aeab67110c145a7d16#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- U585X6W

H045Test 1

http://www.filefactory.com/file/3vpq08cwj73/n/H045_Online_Test_1_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/bd50d0b35eb241518cdddc8e23c0b593#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 8S359V

H045Test 2

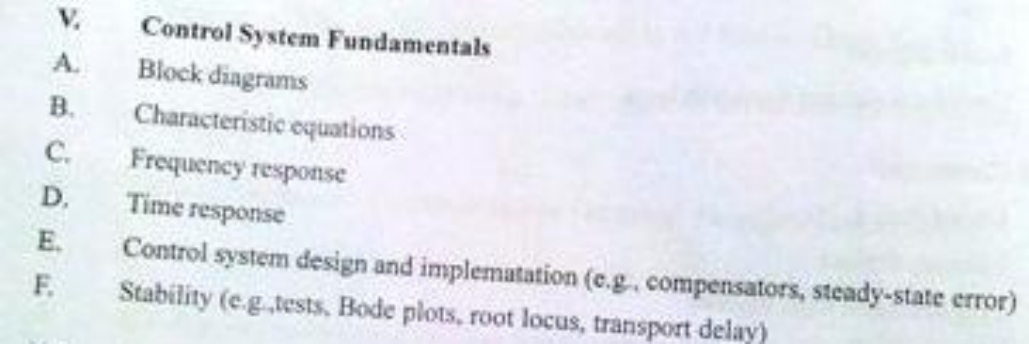
http://www.filefactory.com/file/6pxixn406w51/n/H045_Online_Test_2_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/f059c6212cc94ca098b61d5ef8188826#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- L9UMJM6

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 8 HR x 0.5 = 4HR



V. **Control System Fundamentals**

A. Block diagrams

B. Characteristic equations

C. Frequency response

D. Time response

E. Control system design and implemetation (e.g., compensators, steady-state error)

F. Stability (e.g.,tests, Bode plots, root locus, transport delay)

I006

UEENEEI006B		Solve problems in process controllers, transmitters and converters
6032A	EA904	Control concepts
7761L	EA190	Electronic signals and systems

AnalogDigitalSignalConditioning

H085_66_I006_Note_1_Sensors 1

H085_66_I006_Note_2_Sensors_2

H085_66_I006_Note_3_Sensors_3

H085_66_I006_Note_4_Control_Concept1

H085_66_I006_Note_5_Control_Concept2

H085_66_I006_Note_6_Electronics_Signal

H085_66_I006_Note_8_Process_Control_1

H085_66_I006_Note_9_Process_Control_2

PLC_Textbook1

PLC_Textbook2

PLC_Textbook3

PLC

6487E.zip

PLC References

User_Manuals.zip

TRILOGI5-purdue

SetupTL6Edu

Installation

Installation_Instruction

F_Nano-Product_Sheets

PID (Proportional Integral Derivative) Control

PID.zip

Assessment

I006_Tutorials.zip

UEENEEI001B		Install and set up transducers and sensing devices
UEENEEI002B		Solve problems in pressure measurement systems
UEENEEI004B		Solve problems in flow measurement systems

UEENEEI005B		Solve problems in temperature measurement systems

I001

H085_66_I006_Note_1_Sensors 1

H085_66_I006_Note_2_Sensors_2

H085_66_I006_Note_3_Sensors_3

I002+I004

I002I004PressureFlowPnuematicReference.zip

I005

I005TemperatureMeasurement.zip

Process Control Practicals

PLC_Application_Assignment.zip

Control_Circuit_Boards.zip

PLC_Hardware_Notes_1.zip

PLC_Hardware_Notes_2.zip

PLC_Hardware_Notes_3.zip

PLC_Hardware_Notes_4.zip

PLC_Hardware_Notes_5.zip

PLC_Hardware_Notes_6.zip

PLC_Trilogy_Advanced_Programs.zip

PLC_SCADA_Project_Example_1.zip

PLC_SCADA_Project_Example_2.zip

PLC_SCADA_Project_Example_3.zip

Process_Control_Equipment_Setup_1.zip

Process_Control_Equipment_Setup_2.zip

SCADA_PLC_Project_1.zip

SCADA_PLC_Project_2.zip

SCADA_PLC_Project_3.zip

SCADA_PLC_Project_4.zip

SCADA_PLC_Project_5.zip

MACHINE REPAIR+PROCESS CONTROL

MachineControlCkt1.zip MachineControlCkt2.zip MachineControlCkt3.zip

ProcessControlCkt1.zip ProcessControlCkt2.zip ProcessControlCkt3.zip

Stage 4 Part 1A.zip

http://www.filefactory.com/file/c0cc226/n/Stage_4_Part_1A.zip

Advanced References

BAE 503 Control System

BAE 503 Control System Part 1

Part 2 Competency units of the subject

Linear System + Control System

EE 601 Non Linear Control Applications (1 pt)

EE 601 Control Engineering (1 pt)

EE 601 Feedback and Control System

EE 601 PID_Control

EE 601 Non Linear Control

EE 624 Process Control (1 pt)

http://www.filefactory.com/file/34ha7biln93z/EE_624_Process_Control.pdf

ME 534 Numerical Control Part 1 (1 pt)

ME 534 Numerical Control Part 2

ONLINE MCQ TEST

I006Test 3

http://www.filefactory.com/file/hl6qx2ks1b1/n/I006_H012_Online_Test_3_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/ef761b3fa64a4ca783baa5dd986f24ab#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- 2J3PEH

I006Test 4

http://www.filefactory.com/file/3sbsdw1yu13h/n/I006_Online_Test_4_Question_pdf

http://www.classroomclipboard.com/503511/Home/Test/ae651477d73c4f5194abd42c8487095b#/InitializeTest.xaml

First Name-Enter your full name & Surname- Enter Myanmar Engineering Society Membership Number

Enter the code--- WKMM7

After you have done the test, the score can be printed out in PDF format The score with at least 50% or more for all tests, it will be record of 4 HR x 0.5=2HR

PART (2)

YEAR 3 & 4 (Minumum 3 to 4 years is required for a graduate to become a PE)

The practice reports need to write for each topics of the study materials included in Scope Part II.

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 l 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?

The candidate should use the following format in the practice exercise reports for each topics of the Scope II that are simulated practice tasks for preparing the Professional Experience and Competency Report to be submitted to Myanmar Engineers Board for Professional Engineer (PE) Registration.

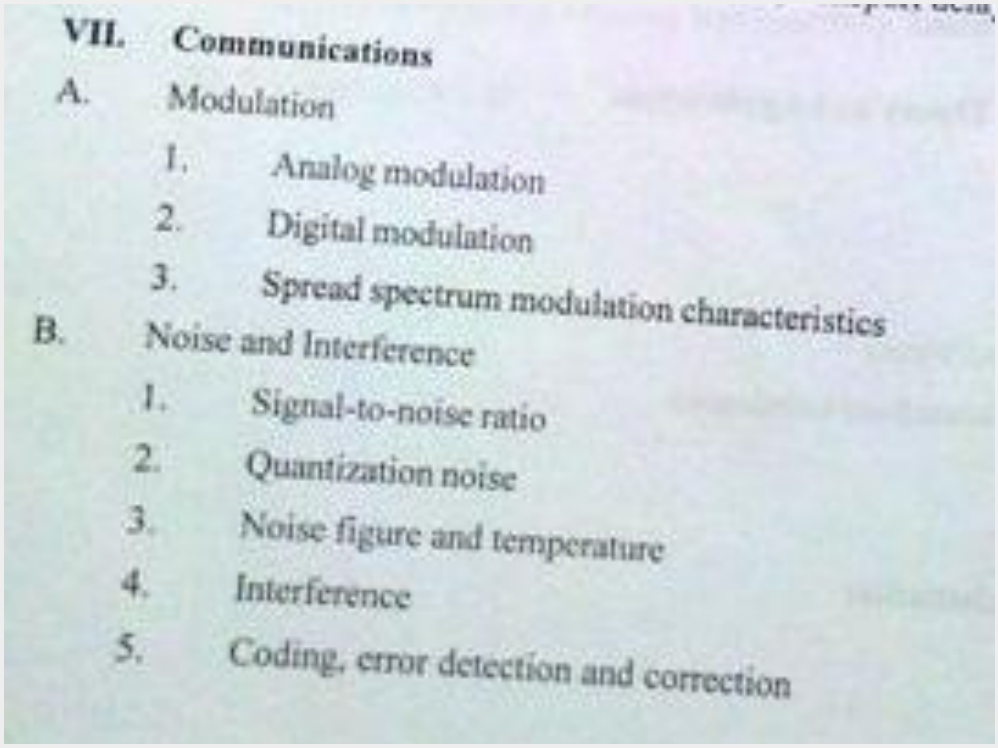
Section (1) Introduction

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. (Ref-MEB PEng Reg)



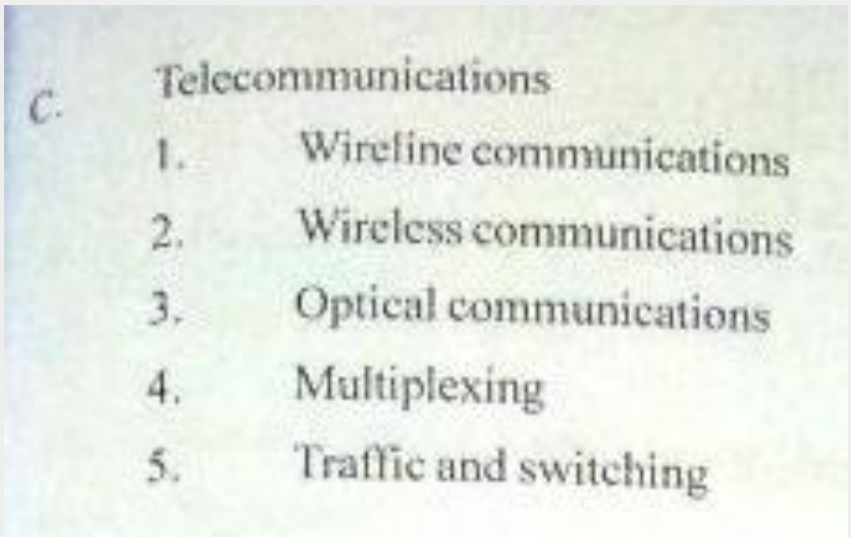
VII. Communications

A. Modulation

1. Analog modulation
2. Digital modulation
3. Spread spectrum modulation characteristics

B. Noise and Interference

1. Signal-to-noise ratio
2. Quantization noise
3. Noise figure and temperature
4. Interference
5. Coding, error detection and correction



C. Telecommunications

1. Wireline communications
2. Wireless communications
3. Optical communications
4. Multiplexing
5. Traffic and switching

H046 Telecommunication

UEENEEH046B		Solve fundamental problems in electronic communications system
7761AU	EA181	Communication fundamentals

H046TelecomNote1.zip

H046TelecomNote2.zip

H046TelecomNote3.zip

Stage 4 Part 16.zip

http://www.filefactory.com/file/c0cc703/n/Stage_4_Part_16.zip

Advanced References

BAE 604 Telecommunication Engineering

Part 2 Competency units of the subject

Electronics Communications

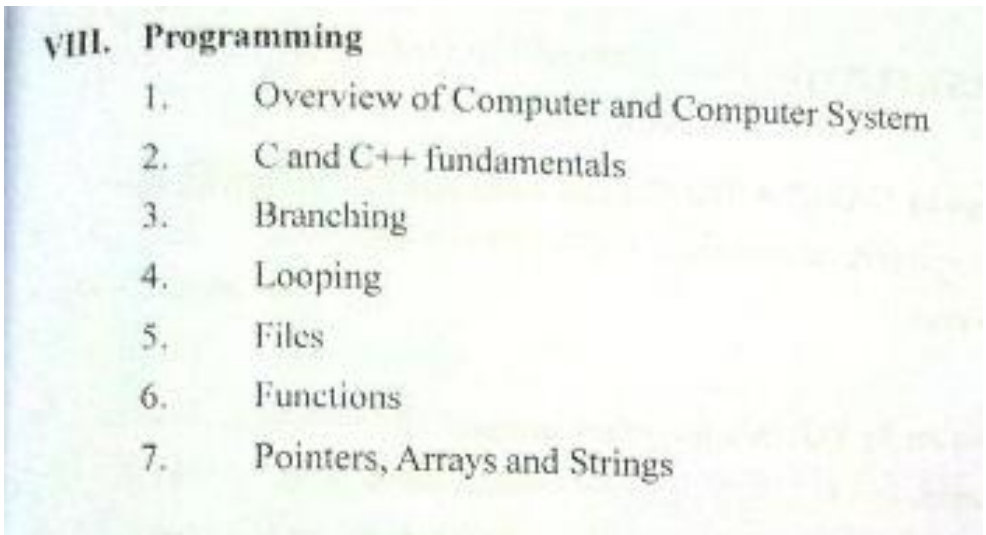
EE 525 Data Communication (1 pt)

EE 603 Electronics Telecommunication (1 pt)

Reflect your experience in the work place , write the technical report of 10 pages & submit it.

EXERCISE ASSESSMENT

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)



VIII. **Programming**

1. Overview of Computer and Computer System
2. C and C++ fundamentals
3. Branching
4. Looping
5. Files
6. Functions
7. Pointers, Arrays and Strings

BAE 601 Computer Programming

C++ Programming Part 1

C++ Programming Part 2

C++ Programming Part 3

C++ Programming Part 4

C++ Programming Part 5

C++ Programming Part 6

C # Programming

C # Programming

C++ & Java Programming Course

Speed_C_Programming.zip

Turbo_C.zip

C_Programming_1.zip

C_Programming_2.zip

C_Programming_3.zip

C_Programming_4.zip

C_Programming_5.zip

C_Programming_6.zip

C_Programming_7.zip

C_Programming_8.zip

Part 2 Competency units of the subject

IT + Programming 1

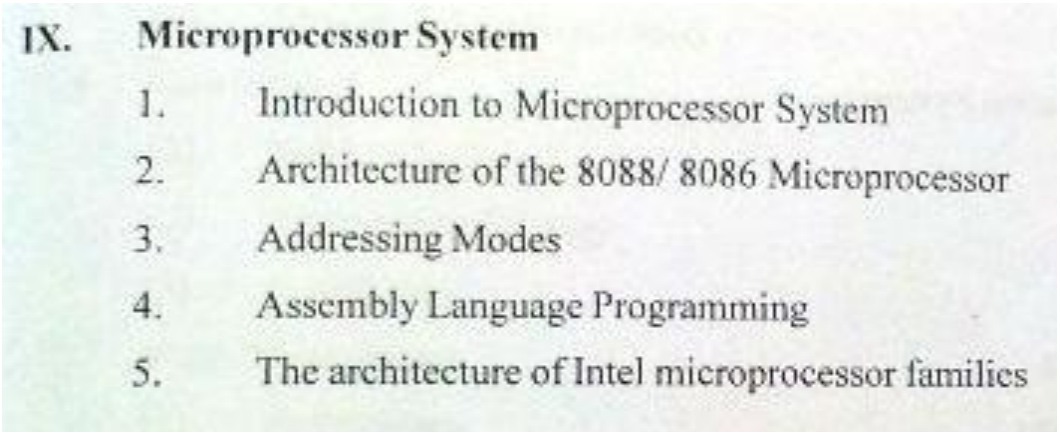
IT 401 Object Oriented Programming (1 pt)

IT 402 Structured Programming (1 pt)

IT 403 Visual Basic Programming (1 pt)

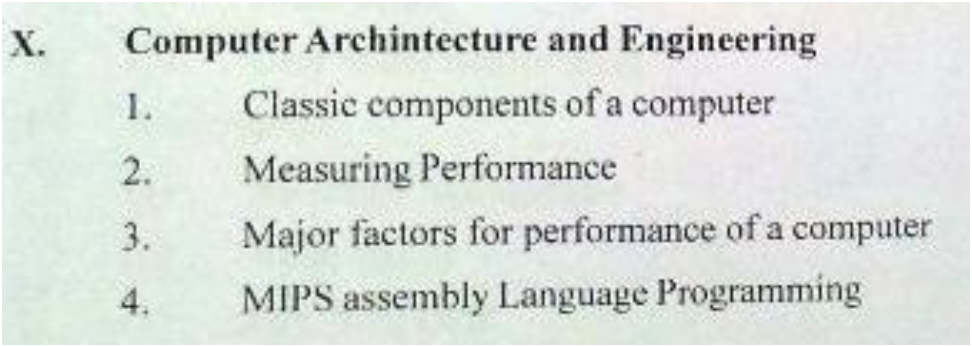
EXERCISE ASSESSMENT (20)

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)



IX. Microprocessor System

1. Introduction to Microprocessor System
2. Architecture of the 8088/ 8086 Microprocessor
3. Addressing Modes
4. Assembly Language Programming
5. The architecture of Intel microprocessor families



X. Computer Archintecture and Engineering

1. Classic components of a computer
2. Measuring Performance
3. Major factors for performance of a computer
4. MIPS assembly Language Programming

Computer Programming

UEENEED027B	Develop structured programs for control sub systems to access external devices

UEENEED009B	Develop, enter and verify programs for industrial control systems using high level instruction

Microprocessor_Notes_upload.zip

Microprocessor_Textbook_to_upload.zip

Microprocessor_References_to_upload.zip

Speed_C_Programming.zip

Turbo_C.zip

C_Programming_1.zip

C_Programming_2.zip

C_Programming_3.zip

C_Programming_4.zip

C_Programming_5.zip

C_Programming_6.zip

C_Programming_7.zip

C_Programming_8.zip

MP LAB

33014K.pdf

DS-51317H.pdf

DS-51761B.pdf

MPLAB_Integrated_Development_Environment.doc

MPLAB_IDE_8_50_Release_Notes.zip

MPLAB_User_Guide_51519c.pdf

Stage 4 Part 5A.zip

http://www.filefactory.com/file/c0cc4a1/n/Stage_4_Part_5A.zip

Stage 4 Part 5B.zip

http://www.filefactory.com/file/c0c3a6e/n/Stage_4_Part_5B.zip

EXERCISE ASSESSMENT

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)

STUDY MATERIALS (Electrical Engineering Code and Standard)

Myanmar Electrical Regulations

IEE2002

Electrical Building Services IEE based

Domestic Electric Wiring BS7671_2008

IEEE colored books

Handbook of Electrical Design Details

American Electricians' Handbook, 15th Edition

Electrical Eng Portable handbook NEC (2)

Newnes Electrical Power Engineer Handbook

Newnes_Electrical_Engineers_Handbook

Energy_Management_Handbook_6E

Handbook of Electrical Installation Practice UK

Power Fault Calculation & Protection Cable Selection_Note

Power Data Planning India