**Unit 4520-211 Technical fault diagnosis Assignment**

**Outcome 1 Know the process, methods and information that are used in the diagnostic process**

1.Write an explanation of each of the steps of the diagnostic process including:

• Fault validation-

• Information gathering-

• Information analysis-

• Solution identification-

2. Describe the types of diagnostic information that are commonly needed by technicians and why

3. Describe common diagnostic methods including:

• Substitution –

• Replication-

• Performance and functional testing-

• Environment change-

4. List typical considerations affecting fault diagnosis, eg

• Minimisation of service disruption during diagnostics-

• Individual responsibility and authority-

• Escalation procedure-

• Level of service-

**Outcome 2 Be able to apply processes to diagnose faults with a known range of causes and assist in the diagnosis of other faults**

1. Show images or screen shots of you correctly using appropriate diagnostic tools

• electrical/electronic test instruments (eg fluke tester)-

• on-board self-test programs (eg task manager)

• loopback devices (using loopback in a CLI)

• on-line/remote monitoring (skype remote support session)-

• diagnostic software (Windows drive and memory diagnostics)

2. Effectively use given sources of information to support diagnosis. [Show help guides you have used and explain what for]

3. Analyse information to identify the cause of faults, using two of the following approaches:

• gap analysis

• identification of cause and effect

• flow charts

**Outcome 3 Be able to select fault remedies from given alternatives**

1. Show how you would or have resolved a complex technical support ticket to rectify identified faults taking into account the following:
   * business or service impact
   * resource and skill availability
   * ease of implementation
2. Identify possible ways to prevent reoccurrence of diagnosed faults

**Outcome 4 Be able to maintain diagnosis and remedy records**

Using the example from Outcome 3 - accurately document the diagnosis activities undertaken including a section on each of the following:

• fault description

• supporting information

• diagnostic tools etc used

• cause of fault

• remedy selected