

Next Steps
 Apprenticeships
 Foundation Degrees
 Undergraduate Degrees

P3 Factorise by extraction and grouping of a common factor from expressions with two, three and four terms respectively

P4 Solve circular and triangular measurement problems involving the use of radian, sine, cosine and tangent functions

P5 Sketch each of the three trigonometric functions over a complete cycle

P7 Use standard formulae to find surface areas and volumes of regular solids for three different examples respectively

P9 Determine the mean, median and mode for two statistical problems and explain the relevance of each average as a measure of central tendency

Assignment 2

Assignment 3

Assignment 4

POST 18

P6 Produce answers to two practical engineering problems involving the sine and cosine rule

P8 Collect data and produce statistical diagrams, histograms and frequency curves

P10 Apply the basic rules of calculus arithmetic to solve three different types of function by differentiation and two different types of function by integration.

P2 Solve a linear equation by plotting a straight-line graph using experimental data and use it to deduce the gradient, intercept and equation of the line

P10 Use appropriate equipment, procedures and documentation to confirm system integrity

P8 Carry out rectification procedures on two different faulty mechanical systems, conforming with manufacturers' specifications and safety and legal requirements

Assignment 1

Unit 18

Assignment 2

P1 Manipulate and simplify three algebraic expressions using the laws of indices and two using the laws of logarithms

P9 Carry out rectification procedures on two different faulty electrical/electronic systems, conforming with manufacturers' specifications and safety and legal requirements

P7 Describe an alternative rectification procedure for two faults on different electrical/electronic systems

P10 Carry out a major engine repair following given instructions

P1 Identify two mechanical system faults on each of two different vehicles from given symptoms

P4 Use appropriate diagnostic equipment and procedures to diagnose faults on two different mechanical systems on each of two different vehicles

P6 Describe an alternative rectification procedure for two faults on different mechanical systems

Assignment 5

Unit 3

Assignment 1

P9 Carry out a routine engine service by following given instructions

P8 Explain the layout, system components and operation of two different engine lubrication systems

P2 Identify two electrical system faults on each of two different vehicles from given symptoms

P3 Prepare two vehicles for fault diagnosis

P5 Use appropriate diagnostic equipment and procedures to diagnose faults on two different electrical systems on each of two different vehicles

Assignment 4

Assignment 3

P7 Explain the principles of operation and difference between air-and water-cooled engine

P5 Explain the diesel combustion process

P3 Explain the function, operation and construction of the components/assemblies of one type of engine

P2 Explain the vehicle design and performance implications of an engines configuration and layout

Assignment 2

Assignment 1

Unit 2:

Sk5
 YEAR
13

P6 Describe an application of an alternative fuel/power supply system

P4 Explain the effects of different air-fuel ratios on the petrol combustion process and exhaust emissions

P1 Explain the operating cycles of two different internal combustion engines