**AS Project**

**Title**

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#

# Problem Analysis and Solution Design – Write the Specification

## A a – Project Description

Aa 0/1/2

clearly defined the problem to be solved with minimal guidance.

## A b – Research

Ab 0/1/2

carried out relevant research from at least two named sources.

## A c – Practical Investigations

Ac 0/1/2

carried out practical investigations into at least two relevant factors.

## A d, e, C a – System Requirements and Test Planning

Ad 0/1/2

gave a detailed description of the requirements of the system.

Ae 0/1/2

specified at least three **numerical** and **realistic** parameters.

Ca 0/1/2

devised a test procedure for the complete system prior to making any system measurements.

## A f – Proposed Solutions

Af 0/1/2

considered two or more alternative solutions.

## A g – Chosen Solution

Ag 0/1/2

justified the choice of solution from the others considered.

# System Development – Build and Test the Subsystems

## B a, b, c – Subsystem Circuit Diagrams, Calculations, Assessment

Ba 0/1/2

devised circuit details of at least one sub-system with minimal guidance.

Bb 0/1/2

correctly calculated a component value for a sub-system.

Bc 0/1/2

assessed the performance at least one subsystem, using measurements.

## B d – Circuit Explanation

Bd 0/1/2

explained in detail how the whole system works. (QWCii)

## B e –Circuit Layout

Be 0/1/2

converted circuit diagrams into a well organised circuit board layout with minimal guidance.

## B f –Risk Assessment and Safe Construction

Bf 0/1/2

safely constructed two or more subsystems of the complete electronic system.

## B g - Neatly Constructed and Carefully Organised System

Bg 0/1/2

produced a neatly constructed electronic system.

## B h, i – Working Subsystems

Bh 0/1/2

made most of the system function.

Bi 0/1/2

made all of the system function with minimal guidance.

##

# Testing and Evaluation – Did it Meet the Specification?

## C b, c – Making Measurements

Cb 0/1/2

made and recorded basic numerical measurements on the complete system parameters.

Cc 0/1/2

made and recorded detailed numerical measurements on the complete system parameters.

## C d – Final System Assessment

Cd 0/1/2

assessed the working parts of the complete system and referred to the measurements made.

## C e – Limitations and Suggested Modifications

Ce 0/1/2 Depends on A(e), C(b) and C(c)

identified some limitations in the performance of the complete system and suggested modifications to overcome these limitations.

## C f – Modifications Carried Out

Cf 0/1/2 Depends on A(e), C(b), C(c) and C(e)

carried out the modifications and re-assessed the system.

# D a – Report Quality Marks

Da 0/1/2

details all stages of the development of the project. (QWC i and iii)

## D b – Circuit Diagram and Photographic Evidence

Db 0/1/2

contains clear photographic evidence and a complete circuit diagram.

## D c – Bibliography

Dc 0/1/2

contains an acknowledgement of **all** sources of information and help, including a bibliography