



National 5
coursework
assessment task



National 5 Engineering Science Assignment

Worksheets: Airport

Valid for session 2025-26 only.

This is given to centres in strictest confidence. You must keep it in a secure place until it is used.

This edition: January 2026 (version 1.0)

© Qualifications Scotland 2026

Introduction

This document contains worksheets for candidates to use for the current National 5 Engineering Science assignment. They must be used in conjunction with the assignment document.

Instructions for candidates

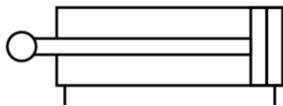
This document contains all the worksheets that you need for the current assignment. The assignment document tells you when you need to use a worksheet.

Anything you handwrite or draw must be in blue or black permanent ink only.

Task 1 – worksheet 1a

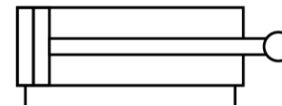
door open

door closed



door closed

door open



Scottish Candidate Number:

Version 1.0

2

Task 1 – worksheet 1b

Scottish Candidate Number:

Version 1.0

3

Task 1 – worksheet 1c

Planned test	Expected result	Test result
Test 1 Actuate valve 1 only.	The piston should outstroke.	
Test 2 Actuate valve 2 only.	The piston should outstroke.	
Test 3 Actuate valve 1 and valve 2 at the same time.	The piston should outstroke.	

Scottish Candidate Number:

Task 1 – worksheet 1d

Specification point	Met? Yes/ No	Explanation
i.		
ii.		
iii.		

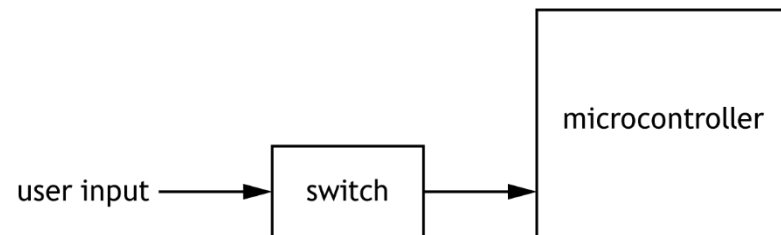
Scottish Candidate Number:

Task 2 – worksheet 2a(i)



Scottish Candidate Number:

Task 2 – worksheet 2a(ii)



Scottish Candidate Number:

Version 1.0

7

Task 2 – worksheet 2b

Specification point	Met? Yes/ No	Justification
i.		
ii.		
iii.		

Scottish Candidate Number:

Task 3 – worksheet 3a

Scottish Candidate Number:

Version 1.0

9

Task 3 – worksheet 3b

Scottish Candidate Number:

Version 1.0

10

Task 3 – worksheet 3c

Planned test	Expected result	Initial test result	Planned amendment to circuit/ flowchart	Re-test result
Test 1 Press the start switch.	The buzzer will sound for 1 second and then switch off for 1 second.	The buzzer sounded for 1 second and then switched off for 1 second.	No amendments required.	No retest required.
Test 2 Press the luggage sensor switch.	The LED and motor turn on for 10 seconds. The LED then switches off and the motor slows down and stops.			
Test 3 Release the luggage sensor switch.	The system should return to the start.			

Scottish Candidate Number:

Task 3 – worksheet 3d

Scottish Candidate Number:

Version 1.0

12

Task 4 – worksheet 4a

You must not construct or use simulation software to complete this task.

B ○ —

P ○ —

— ○ M

W ○ —

Scottish Candidate Number:

Version 1.0

13

Task 4 – worksheet 4b

Scottish Candidate Number:

Version 1.0

14

Task 4 – worksheet 4c

B	P	W	M
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

Scottish Candidate Number:

Version 1.0

15

Task 5 – worksheet 5a

Scottish Candidate Number:

Version 1.0

16

Task 5 – worksheet 5b

Planned test 1	Input direction	Output direction
Observe and record the direction of the input and output gears.		

Planned test 2	Input speed/ turns	Output speed/ turns	Actual velocity ratio
Measure the input speed (or number of turns) and output speed (or number of turns) of the gear system and calculate the actual velocity ratio.			

Scottish Candidate Number:

Task 5 – worksheet 5c

Specification point	Met? Yes/ No	Justification
i.		
ii.		

Scottish Candidate Number:

Task 5 – worksheet 5d

You must not construct or use simulation software to complete this task.

Scottish Candidate Number:

Administrative information

Published: January 2026 (version 1.o)

History of changes

Version	Description of change	Date

Security and confidentiality

This document can be used by practitioners in Qualifications Scotland approved centres for the assessment of National Courses and not for any other purpose.

This document may only be downloaded from Qualification Scotland’s designated secure website by authorised personnel.

© Qualifications Scotland 2026