

FOR OFFICIAL USE



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National  
Qualifications  
2024

Mark

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**X823/77/01**

**Engineering Science  
Answer booklet**

FRIDAY, 17 MAY

9:00 AM – 11:30 AM



\* X 8 2 3 7 7 0 1 \*

Fill in these boxes and read what is printed below.

Full name of centre

--

Town

--

Forename(s)

--

Surname

--

Number of seat

--

Date of birth

Day

--	--

Month

--	--

Year

--	--

Scottish candidate number

--	--	--	--	--	--	--	--	--	--

Write your answers clearly in this answer booklet. You must clearly identify in the margin the question number you are attempting.

**Worksheets for questions 1 (a), 4 (a) and 8 (e) are included.** Write your answers to these questions clearly in the spaces provided.

Use **blue** or **black** ink. Sketches, diagrams and graphs may be drawn in pencil.

Before leaving the examination room you must give this booklet to the Invigilator; if you do not, you may lose all the marks for this paper.



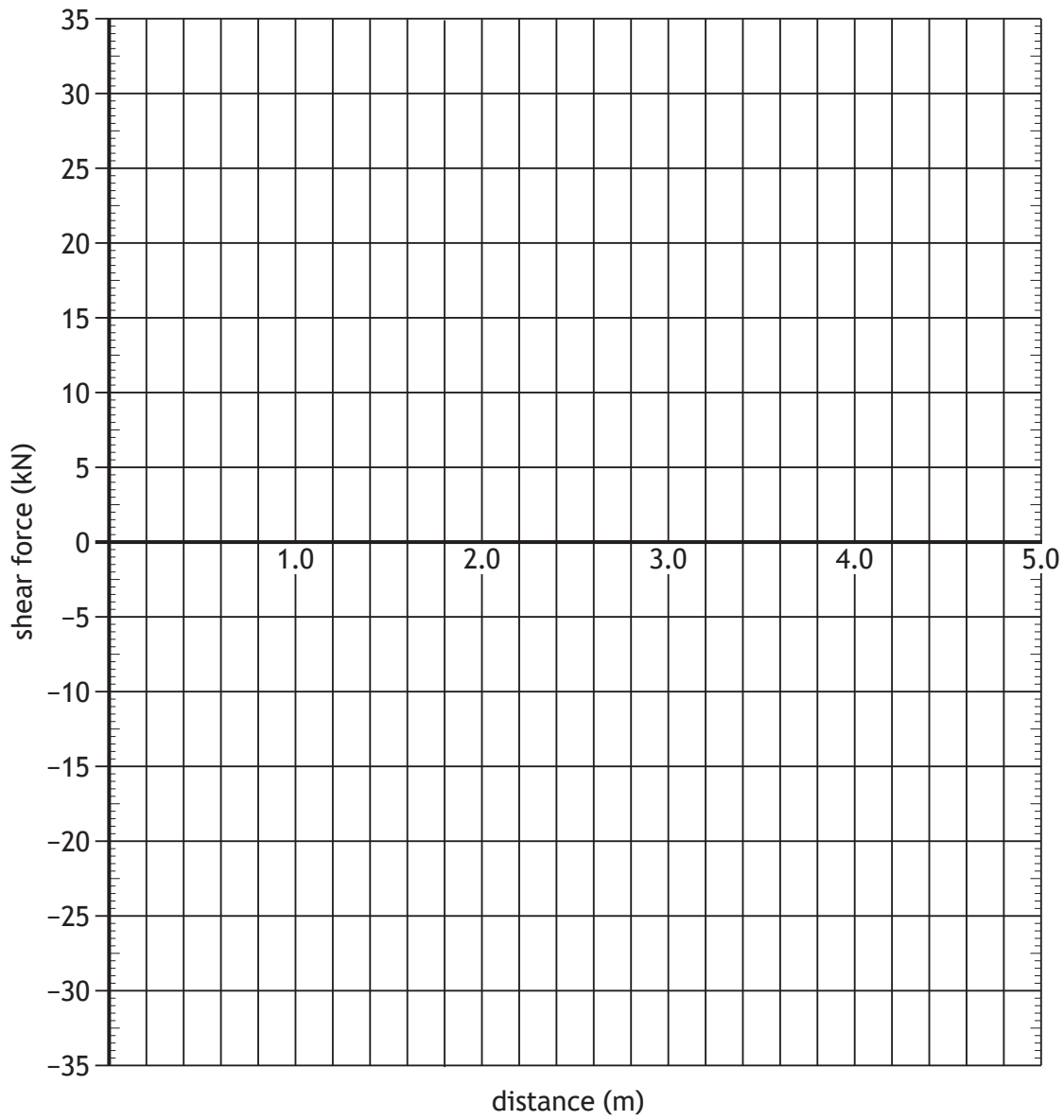
\* X 8 2 3 7 7 0 1 0 1 \*

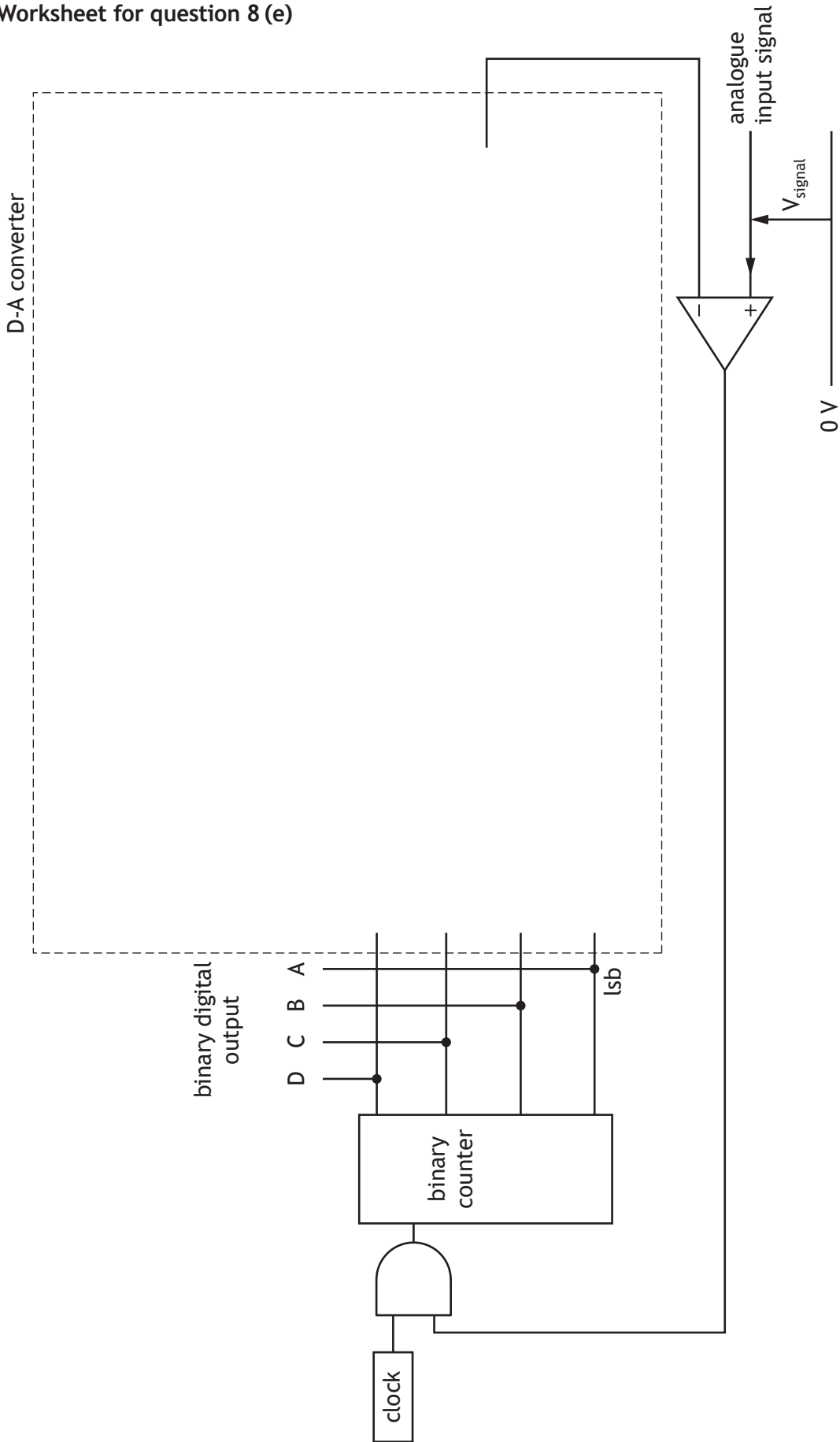
Worksheet for question 1 (a)

Stage	Precedence	Duration (weeks)
A	--	4
B	--	5
C	--	3
D	B	3
E	B, C	7
F	A, D	3
G	E, F	3
H	F	5

Stage	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A					F	F	F	F								
B																
C				F	F	F										
D																
E																
F																
G																
H																

Worksheet for question 4 (a)





[END OF WORKSHEETS]



\* X 8 2 3 7 7 0 1 0 4 \*



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\* X 8 2 3 7 7 0 1 0 6 \*



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\* X 8 2 3 7 7 0 1 2 3 \*

