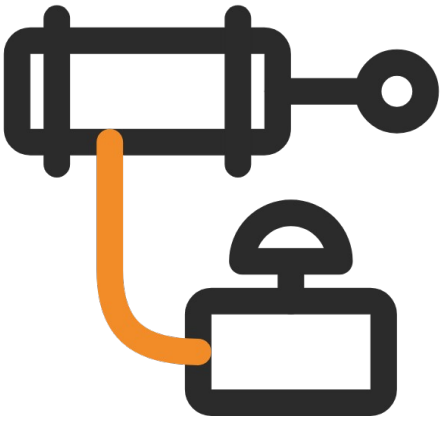
Lesson Pn6 Review Questions

AND and OR Control



Answer every question in your jotter. Show your working. Tap a question below to go to it. Tap **Show answer** under a question to mark it.

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Answers	Review Questions: marking instructions	5

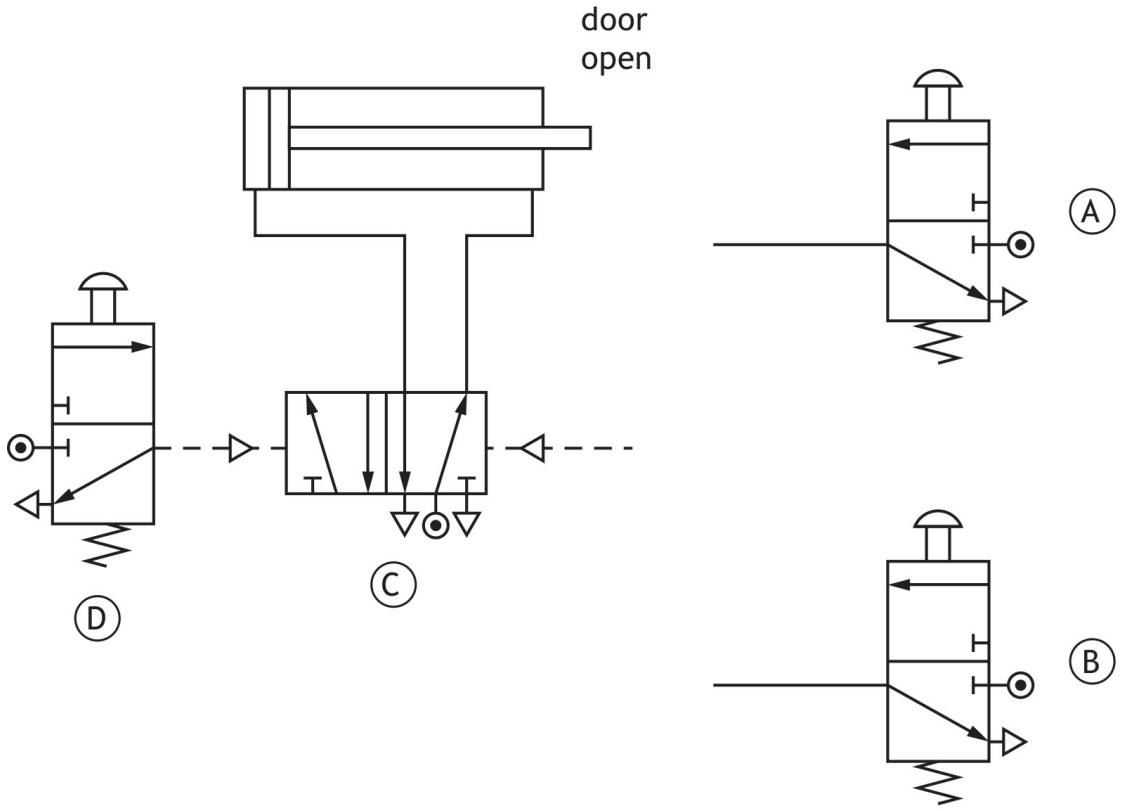
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Questions

2016 Section 1 Question 4

1. A pneumatic door in a factory is being designed.

(a) Complete the diagram below to allow the door to open when valve A **or** B is actuated. **2**



(b) State the name of the type of actuator used to control valve C. **1**

_____

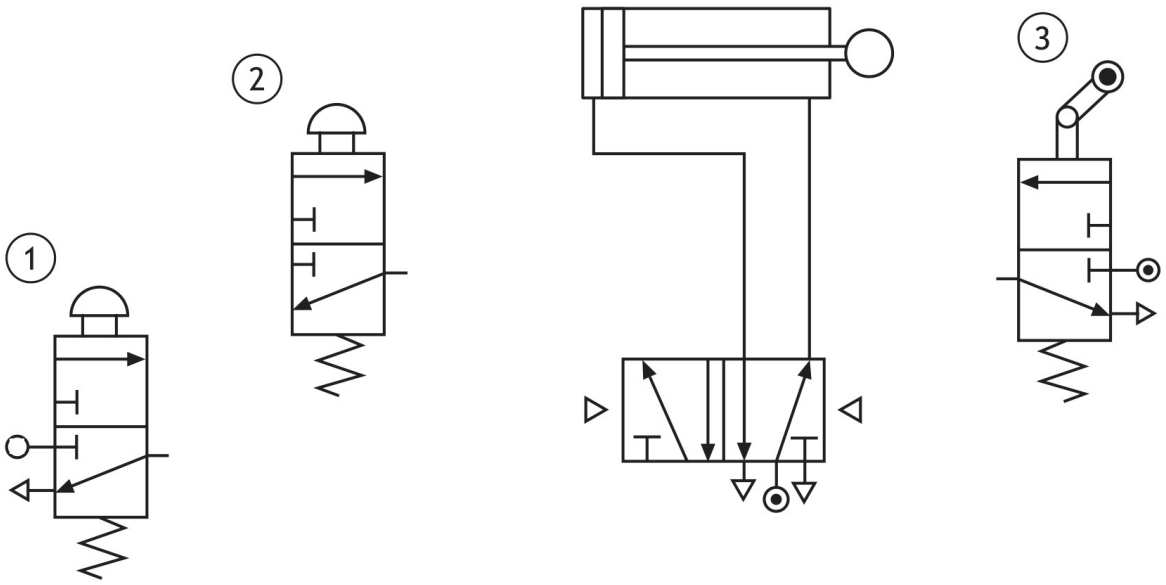
Show answer ›

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2. A pneumatic circuit used to crush materials in a recycling factory is shown below.

The piston should only outstroke when valve ① **and** valve ② have been actuated. It will then instroke when valve ③ has been actuated.

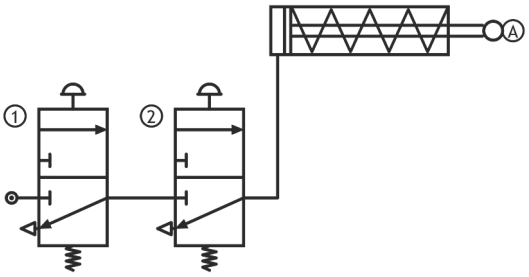
Complete the piping of the pneumatic circuit shown below. **3**



Show answer ›

Exam-style question (not from a past paper)

3. Part of a pneumatic circuit is shown below. **1**



State the type of control created by the piping of valve 1 and valve 2.

Show answer ›

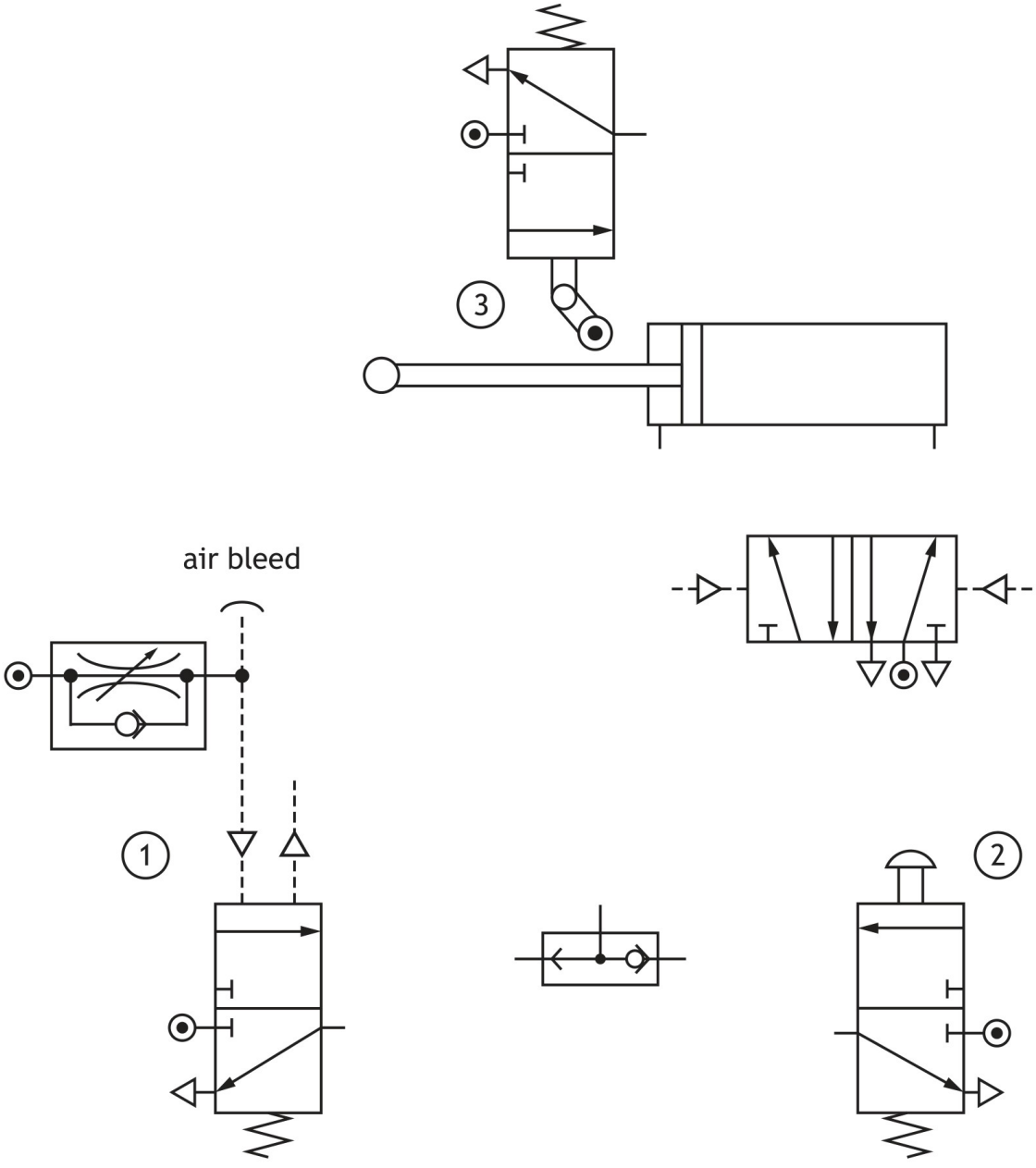
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4. Pneumatics is used in part of a food production factory.

An incomplete pneumatic circuit is shown below.

(a) (i) Complete the piping of the pneumatic circuit to instroke the piston in the cylinder when valve (1) **or** when valve (2) is actuated.

The piston will outstroke when valve (3) is actuated. **5**



(ii) State the name of the actuator that is operated by the signal from the air bleed. **1**

Show answer ›

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Answers

Check your understanding (booklet)

1 AND control.

2 In series: the output of valve 1 is the main air supply for valve 2.

3 A shuttle valve.

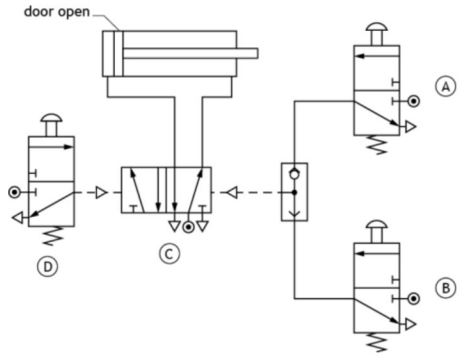
4 The air would go out through the other valve's exhaust, so it would not reach the output.

5 Both hands must be on the buttons (cause), so they are kept away from the moving piston (effect).

Answer to question 1

2016 Section 1 Question 4

Marking instructions

Question			Expected Answer(s)	Max Mark	Additional Guidance
4.	(a)			**2**	1 Mark for correct shuttle valve symbol. 1 Mark for all piping (port to port). If no shuttle drawn then ignore lack of T piece. Do not accept two pipes to 5/2 actuator. Ignore pilot lines.
	(b)		Pilot	**1**	

‹ Back to question 1

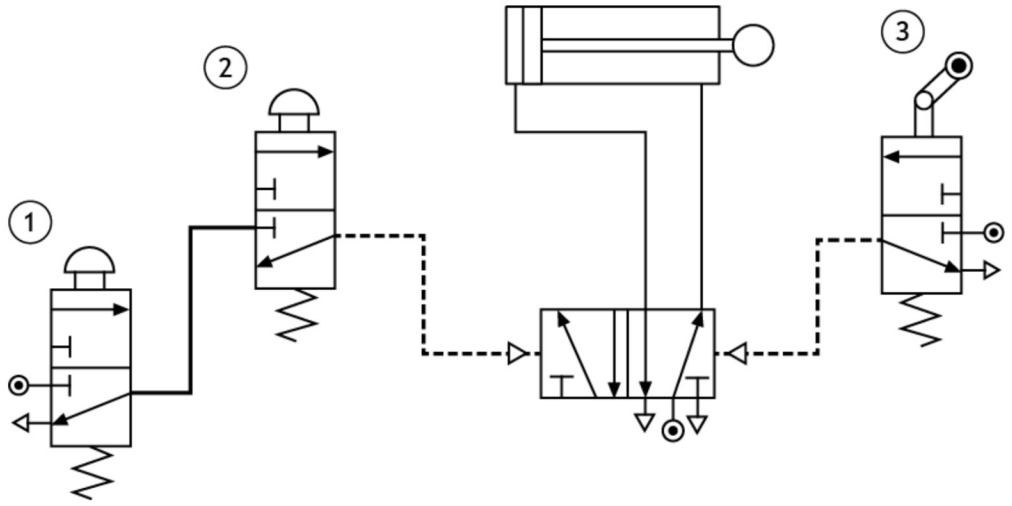
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Answer to question 2

2017 Section 1 Question 6

Marking instructions

Question	Expected answer(s)	Max mark	Additional guidance
6.		3	1 mark for **both** lines creating AND control. 1 mark for line from valve (3) to 5/2 valve. 1 mark for a pilot air line type to 5/2. Piping must be port to port Ignore any additional pipes



‹ Back to question 2

Answer to question 3

Exam-style question (not from a past paper)

Marking (MI style)

Expected answer(s)	Max mark	Additional guidance
AND (control)	1	Valves 1 and 2 are piped in series.

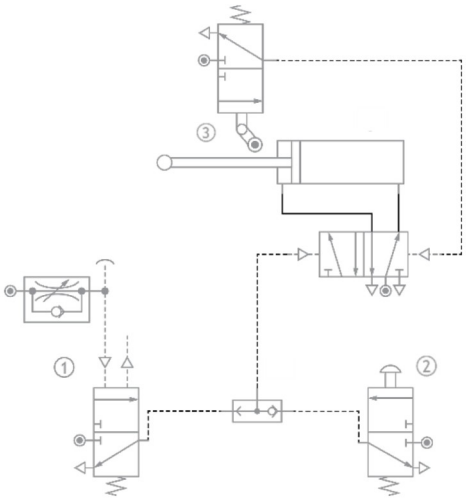
‹ Back to question 3

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Answer to question 4

2026 Section 2 Question 14 (a)(i), (a)(ii)

Marking instructions

Question			Expected response	Max mark	Additional guidance
14.	(a)	(i)		5	Port to port pipe connections. **1 mark** for piping valve 1 **and** valve 2 to the shuttle valve. **1 mark** for piping up the shuttle valve to left hand pilot actuator on the 5/2 valve. **1 mark** for piping valve 3 to right hand pilot actuator on 5/2 valve. (Apply FTE for 5/2 actuator piping). **1 mark** for piping 5/2 to **both** DAC ports. **1 mark** for all airline types to 5/2 valve correct.
		(ii)	Diaphragm.	1	

‹ Back to question 4

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