

CIT SANDWICH POLYTECHNIC COLLEGE, COIMBATORE – 641014

Department of Mechanical Engineering

Function of Mechanical Engineering Association

Venue : Lecturer hall -10

Date : 09.01.2019

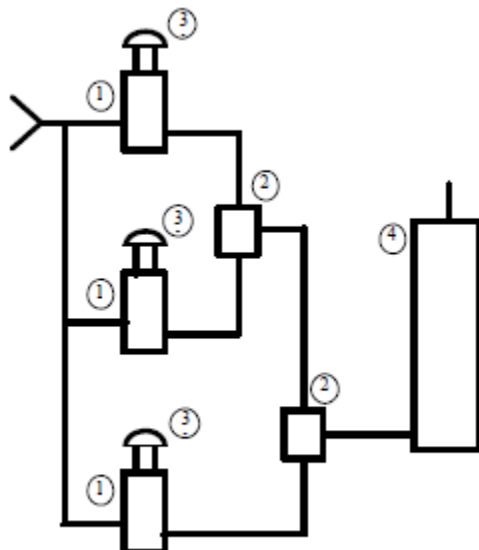
Time : 4.00 Pm

Mechanical Engineering Students Association (MESA) conducts an event every alternate week for the students of 2nd and 3rd year Mechanical Engineering Students. As part of this, MESA conducted Industrial Automation Circuit Designing Competition for the 2nd year students of the Department on 25-01-2019.

Event publicity: Event publicity was carried out by the co-coordinators of 3rd year. The circular was taken class to class and the students were informed about the event.

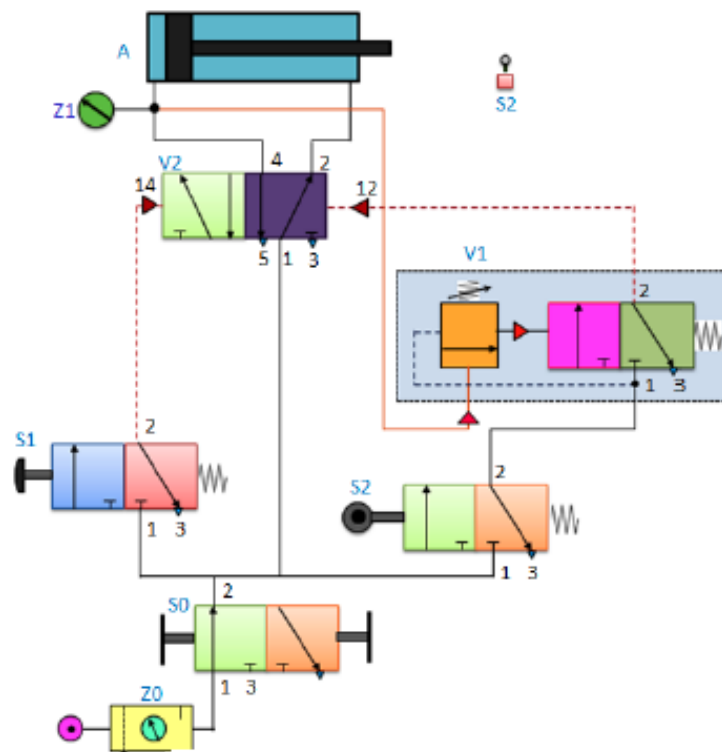
Questions :

1. Parts are accumulating on a conveyor belt and waiting to be released and transferred to the next phase of assembly. Technicians at multiple stations need to control the gate release mechanism to have parts sent to their assembly station.

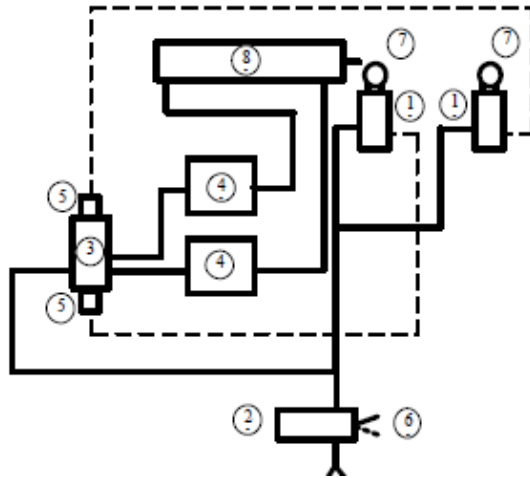


Part #	Component Description	Qty
1	2-position, spring offset, 3-way valve	3
2	shuttle valve	2
3	push button actuator	3
4	Single acting, spring return cylinder	1

2. A plastic component is to be embossed by using a die which is powered by a double acting cylinder. The return of the die is to be effected when the cylinder rod has fully extended to the embossing position and the preset pressure is reached. A roller lever valve is is to be used to confirm full extension. The signal for retracting must only be generated when the piston rod has reached the embossing position. The pressure in the piston chamber is indicated by a pressure gauge.



3. The machine head of a precision grinder needs to continuously reciprocate over a cylinder head surface being finished. The speed of the stroke must be controlled in both directions.



Part #	Component Description	Qty
1	2-position, spring offset, 3-way valve	2
2	2-position, 3-way valve	1
3	2-position, detented, 4-way valve	1
4	flow control valve	2
5	air pilot actuator	2
6	manual actuator	1
7	mechanical actuator	2
8	double acting cylinder	1

This Circuit Designing Competition students will be able to calculate pneumatic problems using basic gas laws, as well as explain the pneumatic systems and components. For the pneumatic circuit design section, students will be able to design and analyze basic and multiple pneumatic circuits as well as electro-pneumatic circuits.

Industrial Automation Circuit Designing Competition conducted in Lecturer hall -10



Industrial Automation Circuit Designing Competition conducted in Lecturer hall -10



Prize Winners

1. DIVIN KUMAR .S

MANOJ PRABHU .R

VIKRAM .R

GOPALAKRISHNAN .J

- II YAER Mechanical Engg

2. ALWYN JOSHUA .J

PRAGADESH .A

PREM KUMAR .K

SANTHANU .K.J

SUBRAMANIAN .S

- II YAER Mechanical Engg