



1<sup>st</sup> Year

Beni Swief Technological University  
Egyptian-Korean Faculty of Technological Industry and Energy  
Program of Autotronics

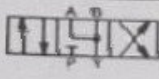


## Final Exam: Basics of hydraulics

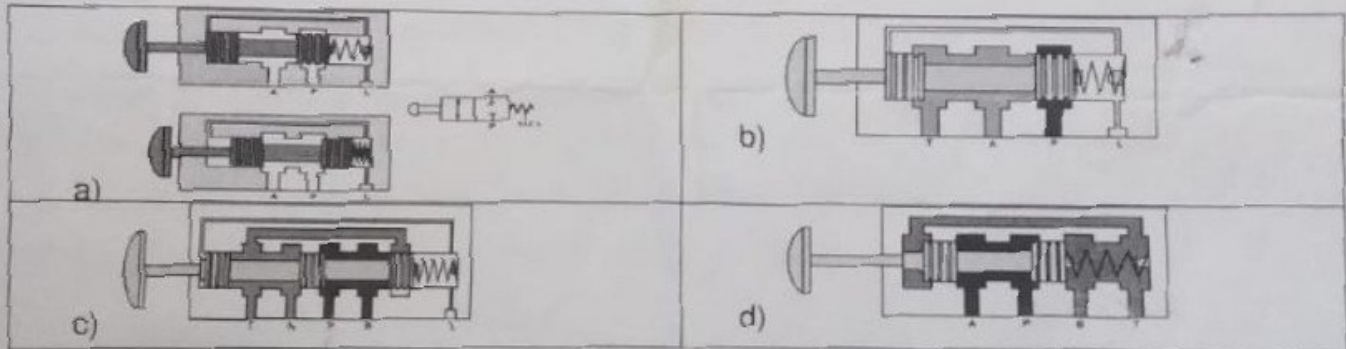
*Answer*

### Answer All Questions (Five Questions)

**Question (1):** Put "True" or "False".

1- Pressure sensors are used for regulating the level of fluid and detecting fluid leakages.	False
2- A non-return valve is a single-way valve that allows fluid to flow only in 1 direction.	True
3- Double acting cylinders just have one port	False
4- In a hydraulic circuit, the power control units are pumps	False
5- The symbol  is 4/3 pressure valve.	True

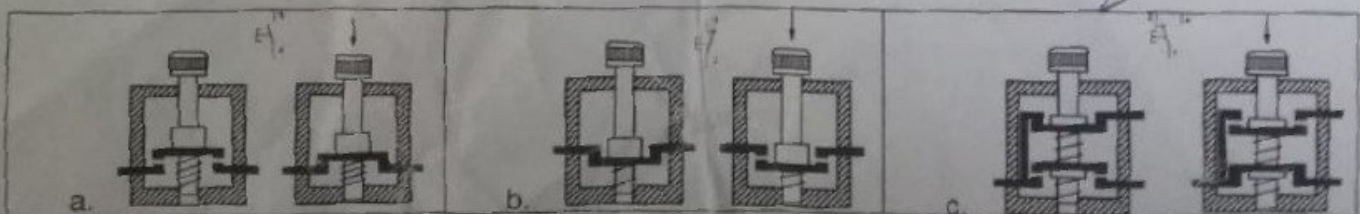
**Question (2):** Define the directional control valves then explain the normal and actuated positions for each of the following:



**Question (3):** Explain the differences between the following: -

- Hydraulic and pneumatic system.
- Advantages and disadvantages of a pneumatic actuator.
- Hydraulic pumps and actuators.
- Relief valves and safety valves.
- Piston, vane and gear pumps.

**Question (4):** Compare between the mechanism of working for the following contacts:



**Question (5):** Define the relay and how does it work?