

337631(37)

B. E. (Sixth Semester) Examination,

April-May 2020

(Old Scheme)

(Mechanical Engg. Branch)

FLUIDICS & HYDRAULIC CONTROL

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

***Note : Part (a) of each question is compulsory.
Attempt any two parts from (b), (c) and (d)
of each question.***

1. (a) Define Fluidics. 2
- (b) Explain types of fluid logic elements. 7

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- (c) Write notes on logic states. 7
- (d) Explain methods of obtaining input signals and power outputs. 7
- 2. (a) Define properties of fluid. 2
- (b) Explain JIC/ISO symbols for hydraulic circuits. 7
- (c) Explain transmission of power at static and dynamic states. 7
- (d) Explain types of hydraulic fluids and write notes on selection of fluids. 7
- 3. (a) Give classification of pumps. 2
- (b) Explain selection of pumps for hydraulic transmission. 7
- (c) Explain motor types and construction methods of control of acceleration in the context of actuators. 7
- (d) Explain linear and rotary actuators and also explain types of cylinder and mountings. 7
- 4. (a) What do you mean by control of fluid power? 2
- (b) Explain principle and working of the pressure control valves. 7

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- (c) Differentiate between direction control and flow control valves. 7
- (d) Explain relief valves and sequence valves with its applications. 7
- 5. (a) Define accumulators and intensifiers. 2
- (b) Explain types, function and applications of accumulators. 7
- (c) Explain unloading valves with the use of electrical control and accumulators. 7
- (d) Explain meter in, meter out circuits and flow divider circuits. 7