B.TECH. SEM -VI PRODUCTION 2014 COURSE (CBCS) : SUMMER - 2018

SUBJECT: FLUID MECHANICS & MACHINE TOOL CONTROL SYSTEM

Day: **Friday** | **S-2018-2448** | Time: **02.30 PM TO 05.30 PM**

Date: **08/06/2018** | Max. Marks: 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Use of non-programmable **CALCULATOR** is allowed.

Q.1 Classify the different types of manometers. Explain with neat sketch the U tube manometer? **(10)**

OR

Q.1 Derive the equation for the total pressure exerted by liquid on vertical plane surface. **(10)**

Q.2 Explain with neat sketch the procedure to measure the discharge through rectangular notch? **(10)**

OR

Q.2 Define the following: **(10)**

i) Steady
ii) Unsteady flow
iii) Uniform flow
iv) Non- uniform flow
v) Laminar flow

Q.3 Draw the ISO symbols for following: **(10)**

i) Hydro pump
ii) Single acting cylinder return by spring
iii) 2/2 Direction content valve
iv) 4/2 Dc valve
v) Shuttle valve

OR

Q.3 Explain the construction and working of single acting reciprocating pump. **(10)**

Q.4 Discuss with neat sketch the 3/2 DC value spool type. **(10)**

OR

Q.4 Explain with neat sketch the working of single Acting Cylinder (Actuator) **(10)**

Q.5 Explain with neat sketch the working of pneumatic press? **(10)**

OR

Q.5 Distinguish between hydraulic and pneumatic system? **(10)**

Q.6 Explain with neat sketch the FRL unit? Why is it necessary in pneumatic circuits? **(10)**

OR

Q.6 Explain the Air oil reservoir circuit in control system? **(10)**

* * * *

080618-e-engineering-pune