

B.Tech. SEM -VI Production 2014 Course (CBCS) : WINTER - 2018
SUBJECT: FLUID MECHANICS AND MACHINE TOOL CONTROL SYSTEM

Day : Friday
Date : 16/11/2018

W-2018-2503

Time : 10.00 AM TO 01.00 PM
Max Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labeled diagram **WHEREVER** necessary.
 - 4) Assume suitable data, if necessary.
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Q.1 Explain with neat sketch the working of Bourdon Tube Pressure Gauge. (10)

OR

Q.1 Discuss in detail with neat sketch the total pressure on horizontal Plane surface immersed in liquid. (10)

Q.2 Name the applications of Bernoulli's equation and explain in detail with neat sketch any one of its applications. (10)

OR

Q.2 Derive the equation of continuity and state its applications. (10)

Q.3 Give the general classification of hydraulic pumps. Explain with neat sketch the gear pump. (10)

OR

Q.3 Explain with neat sketch the construction and working of centrifugal pump. (10)

Q.4 Discuss in detail the construction of direct acting type pressure control valve. (10)

OR

Q.4 Discuss with neat sketch the 4/3 solenoid operated spring return direction control valve (10)

Q.5 a) Explain in detail with neat sketch the intensifier. (05)

b) Discuss with neat sketch the hydraulic accumulator. (05)

OR

Q.5 Design an hydraulic circuit for meter-in circuit of a double acting cylinder. (10)

Q.6 a) Explain with neat sketch the basic pneumatic circuit for operation of a single acting cylinder. (05)

b) Explain in detail with neat sketch the FRL unit. (05)

OR

Q.6 Draw a suitable circuit diagram to represent a sequence of motion in an pneumatic circuit. (10)

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