No. of Printed Pages : 2
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202031

3rd year / Branch: Advance Diploma in Tool and Die Making

Subject : Hydraulics & Pneumatics

Time : 3 Hrs. M.M. : 50

SECTION-A

Note: Very short answer questions. Attempt all ten questions. (10x1=10)

Q.1 Define Jigs

Q.2 Define die-casting process.

Q.3 Define pressure head and its units.

Q.4 Give the general gas equation.

Q.5 Define density and its SI units.

Q.6 Define surface tension.

Q.7 What is the function of pressure control valve?

Q.8 Give the function of shuttle valve.

Q.9 Define actuators.

Q.10 What is an energy supply elements?

SECTION-B

Note: Short answer type questions. Attempt any six questions out of eight questions. (6x5=30)

Q.11 Explain low cost automation in hydraulic system

Q.12 Explain the principle and working of Bourdans pressure gauge.

Q.13 Define Pascals law, explain the working of any one device working on that principle.

Q.14 What are the types of control valve and their function?

Q.15 Explain the construction and working of non-return valve.

Q.16 What is the function of rotory motion actuators? Explain its working.

Q.17 Write short note on two pressure valve.

Q.18 Describe the selection criteria for a suitable cylinder.

SECTION-C

Note: Long answer questions. Attempt any one question out of two questions. (1x10=10)

Q.19 Make a circuit diagram for a press logic having fixture for a job. Use a suitable cylinder or motor, valve/NRV, and energy supply element. The job is held in fixture, press tool is operated and then the job is ejected.

Q.20 Design a circuit for speed control of hydraulic cylinder with Fail-Safe System and Overload Protection.