D   02000MR202052001   Pages: 1
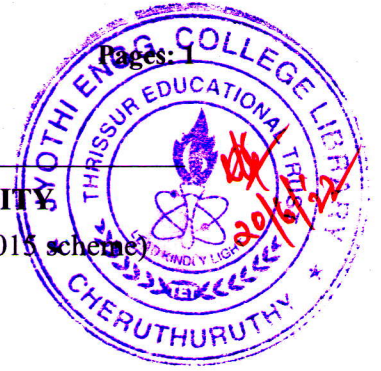
Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fourth Semester B.Tech Degree (S,FE) Examination June 2022 (2015 scheme)

Course Code: MR202

COURSE NAME: SENSORS AND ACTUATORS

Max. Marks: 100   Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks.   Marks

1	Elucidate in detail about hydraulic pump	(5)
2	Explain about relief valve	(5)
3	Draw the 2 types of check valve	(5)
4	Discuss about impact cylinder with neat sketch	(5)
5	What is fail-up actuator? Investigate its working	(5)
6	Sketch the current to pressure or I-P converter and explain	(5)
7	Draw the fluidic logic gates and discuss about it	(5)
8	Picturize interruptible jet sensor and elucidate its features	(5)

PART B

Answer any three full questions, each carries 10 marks.

9	a)	Describe Radial piston pump with neat sketch	(10)
10	a)	With neat sketch elucidate the working of two stage compressor	(10)
11	a)	Estimate about two way spool valve	(10)
12	a)	Explain the construction of a sequence valve with a neat sketch	(10)
13	a)	Exemplify cylinder cushioning by sketching neatly	(10)

PART C

Answer any two full questions, each carries 15 marks.

14	a)	Judge air relay and force balance principle with neat sketch.	(15)
15	a)	Investigate about the volume boosters or air amplifiers	(15)
16	a)	Distinguish resolvers and encoders with a neat sketch	(15)
17	a)	Justify about all the fluidic sensors. Mention its advantages and applications.	(15)

*****