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**3rd Sem / Branch : Automation & Robotics**
**Subject:- Robotics**

Time : 3Hrs. M.M. : 60

## SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 There are _____laws of Robotics (CO1)

a) 2 b) 4

c) 3 d) 8

Q.2 Which of the following are applications of robotics (CO1)

a) Material handling b) Maintenance

c) Machining d) All of the above

Q.3 LVDT measures (CO4)

a) Distance b) Flow

c) PH value d) None



Q.20 Write short note on CAD (CO5)

Q.21 Explain working of stepper motor. (CO3)

Q.22 Write some applications of robots. (CO1)

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Discuss the classifications of Robots. (CO1)

Q.24 Explain external sensors used in Robotics. (CO4)

Q.25 Explain layout and interfacing sensors with Ardrnio. (CO5)

Q.4 Which following is a programming language in Robotics (CO5)

a) COBOL b) EORTRAN

c) RAIL d) None

Q.5 Robot word is derived from word (CO1)

a) Robota b) Rebota

c) Rabota d) Ribota

Q.6 Driver are also known as (CO3)

a) Controller b) Sensor

c) Manipulator d) Actuator

## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (6x1=6)

Q.7 Expand I.S.O (CO1)

Q.8 Define Robot (CO1)



Q.9 Write second law of Robotics (CO1)

Q.10 Joint of robot is_____ (CO5)

Q.11 Expand LVDT. (CO4)

Q.12 Define degree of freedom (CO2)

## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Discuss the special purpose robots in brief. (CO1)

Q.14 Explain closed and open kinomatic chains (CO2)

Q.15 What is Gripper? Discuss (CO2)

Q.16 Explain use of Solenoids in Robotics. (CO3)

Q.17 Discuss how sensors are selected? (CO4)

Q.18 Explain operation in joint mode. (CO5)

Q.19 Explain teaching robot wrist positions in brief. (CO5)