

III B. Tech II Semester Supplementary Examinations, February-2022
INSTRUMENTATION & CONTROL SYSTEMS
 (Automobile Engineering)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
 2. Answer **ALL** the question in **Part-A**
 3. Answer any **FOUR** Questions from **Part-B**

PART -A**(14 Marks)**

1. a) What are the basic principles of measurement? [2M]
- b) What are the types of temperature scales? [2M]
- c) What is the function of rotameter? [2M]
- d) Differentiate the unbonded and bonded gauges. [3M]
- e) What is the function of dew point meter? [3M]
- f) What is the need of a control system? [2M]

PART -B**(56 Marks)**

2. a) What are the various sources of errors? [7M]
- b) What are the generalized configurations of measuring instruments? [7M]
3. a) Discuss the principle of McLeod gauge. [7M]
- b) Describe the constructional features of diaphragm gauges. [7M]
4. a) Discuss about the magnetic and cryogenic fuel level indicator. [7M]
- b) Briefly describe about the mechanical and electrical tachometers. [7M]
5. a) How the resistance strain gauge are used for bending and tensile strains. [7M]
- b) What are the functions of multiple grid rosettes? [7M]
6. a) How does the elastic force meter work? [7M]
- b) Describe the constructional features of mechanical torsion meter. [7M]
7. a) What are the features of closed loop system? [7M]
- b) What are the characteristic features of servomechanism? [7M]

