

Roll No.....

2019
S. S. S.

B. Tech Food Technology
Semester V Examination, 2019
Paper Title: Instrumentation and Process Control
Paper Code: BFTC – 503

Time: 3 Hours

Max Marks 70

*Note: 1. It is compulsory to answer all the questions of Section-A.
2. Answer any four questions in Section- B.*

Section-A (5*6=30)

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- Q1.** (a) Briefly explain speed of response. (3)
(b) Draw a model of McLeod and U-Tube manometer? (3)
- Q2.** (a) Define system and instrument? (3)
(b) Briefly explain thermocouple? (3)
- Q3.** (a) Write factors influencing instrumentation system? (3)
(b) Draw a labelled diagram of a control valve? (3)
- Q4.** (a) Enlist physical and typical signal variables? (3)
(b) Briefly explain resistance hygrometer? (3)
- Q5.** (a) Briefly describe On/Off controllers? (3)
(b) Briefly explain PLC? (3)

Section- B (4*10=40)

- Q1.** Explain four major actuators? (10)
- Q2.** Discuss controllers, its types and principle of operation? (10)
- Q3.** Describe Electronic Nose Sensors, its working principle and design? (10)
- Q4.** Describe the classification of transducers? (10)
- Q5.** Explain Static and Dynamic characteristics? (10)
- Q6.** Describe the Resistance Thermometer, its construction and design? (10)
- Q7.** Explain explain Z-Transforms and Laplace Transforms? (10)

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