

Code No: R05222201

R05

Set No. 2

II B.Tech II Semester Examinations, April/May 2012
INDUSTRIAL INSTRUMENTATION
Instrumentation And Control Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. a) Discuss in detail how pendulum scale is used to measure force
b) What is four square dynamometer principle? Explain. [8+8]

2. (a) What is momentum transfer gauge? Explain.
(b) What is liquid barometer? Explain with neat sketch. [8+8]

3. With neat sketches explain how contact less type tachometers are used to measure rotational speed? [16]

4. Explain the Mechanical Resonance Type Frequency Meter with diagram. [16]

5. Explain the principle of measuring larger bore diameters. Explain four ball method for measuring diameter of bore. [16]

6. Write short notes on strain gauge load cell method. [16]

7. Explain the monochromatic-Brightness radiation thermometer and derive the expression for its % error. [16]

8. What are mechanical flow meters and how many groups are they divided into? Explain with diagrams, the positive displacement meters used for flow measurement. [16]

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R05

Set No. 4

II B.Tech II Semester Examinations, April/May 2012
INDUSTRIAL INSTRUMENTATION
Instrumentation And Control Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write short notes on strain gauge load cell method. [16]
2. (a) What is momentum transfer gauge? Explain.
(b) What is liquid barometer? Explain with neat sketch. [8+8]
3. Explain the Mechanical Resonance Type Frequency Meter with diagram. [16]
4. What are mechanical flow meters and how many groups are they divided in to explain with diagrams, the positive displacement meters used for flow measurement [16]
5. Explain the monochromatic-Brightness radiation thermometer and derive the expression for its % error. [16]
6. With neat sketches explain how contact less type tachometers are used to measure rotational speed. [16]
7. a) Discuss in detail how pendulum scale is used to measure force
b) What is four square dynamometer principle? Explain. [8+8]
8. Explain the principle of measuring larger bore diameters? Explain four ball method for measuring diameter of bore. [16]

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R05

Set No. 1

II B.Tech II Semester Examinations, April/May 2012
INDUSTRIAL INSTRUMENTATION
Instrumentation And Control Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the monochromatic-Brightness radiation thermometer and derive the expression for its % error. [16]
2. Explain the principle of measuring larger bore diameters? Explain four ball method for measuring diameter of bore. [16]
3. Explain the Mechanical Resonance Type Frequency Meter with diagram. [16]
4. Write short notes on strain gauge load cell method. [16]
5. a) Discuss in detail how pendulum scale is used to measure force
b) What is four square dynamometer principle? Explain. [8+8]
6. What are mechanical flow meters and how many groups are they divided in to explain with diagrams, the positive displacement meters used for flow measurement [16]
7. (a) What is momentum transfer gauge? Explain.
(b) What is liquid barometer? Explain with neat sketch. [8+8]
8. With neat sketches explain how contact less type tachometers are used to measure rotational speed. [16]

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R05

Set No. 3

II B.Tech II Semester Examinations, April/May 2012
INDUSTRIAL INSTRUMENTATION
Instrumentation And Control Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the principle of measuring larger bore diameters? Explain four ball method for measuring diameter of bore. [16]
2. a) Discuss in detail how pendulum scale is used to measure force
b) What is four square dynamometer principle? Explain. [8+8]
3. Explain the Mechanical Resonance Type Frequency Meter with diagram. [16]
4. (a) What is momentum transfer gauge? Explain.
(b) What is liquid barometer? Explain with neat sketch. [8+8]
5. What are mechanical flow meters and how many groups are they divided in to explain with diagrams, the positive displacement meters used for flow measurement [16]
6. Explain the monochromatic-Brightness radiation thermometer and derive the expression for its % error. [16]
7. With neat sketches explain how contact less type tachometers are used to measure rotational speed. [16]
8. Write short notes on strain gauge load cell method. [16]
