

QUESTION BANK UT2

Subject-Mechanical Engineering Measurement

subject code-22443

Course- mechanical engineering (ME4I)

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**Topic – 4 Flow Measurement**

**(12 marks)**

**2 mark questions.**

- Q1. Define flow .state the classification of flow transducers.
- Q2. Define Reynolds number. State the equation for it.
- Q3. State advantages & disadvantages of venturi meter.
- Q4. Draw neat sketch coriolis flow meter.
- Q5. List suitable applications of ultrasonic flow meter.
- Q6. List advantages & disadvantages of hot wire anemometer.

**4 mark questions.**

- Q7. Draw neat sketch of orifice flow meter & explain its working.
- Q8. Draw & explain working of Pitot tube.
- Q9. Draw neat sketch of Dall tube & explain its working.
- Q10. Explain the working of Rotameter with help of neat diagram.
- Q11. Explain the working of Rotary Vane flow meter with neat sketch.
- Q12. Draw neat sketch of transit time (time difference type) ultrasonic flow meter.

**Topic –5 Vibration and Strain measurement**

**(10 marks)**

**2 mark questions.**

- Q13. Define free vibrations and forced vibrations.

Q14. List advantages & disadvantages of inductive type transducer.

Q15. Draw block diagram of FET analyzer.

Q16. What are materials used for strain gauges?

Q17. State the criteria on which strain gauges are selected.

**4 mark questions.**

Q18. Explain working of velocity pick-up with neat sketch.

Q19. Draw neat sketch of accelerometer & explain its working.

Q20. Explain the working principle of capacitive pick-up for vibration measurement.

Q21. Explain Bounded type strain gauge with neat diagram.

Q22. Draw & explain semiconductor strain gauge.

**Topic –6 Miscellaneous measurement, Sound, Speed &  
Humidity measurement (12 marks)**

**2 mark questions.**

Q23. Write any four sound characteristics.

Q24. Draw neat sketch of carbon microphone.

Q25. What is tachometer? State different types of tachometers.

Q26. Define humidity & state the units for humidity.

**4 mark questions.**

Q27. Explain with neat sketch sound measurement using electrodynamic microphone.

Q28. Draw neat sketch of sling psychrometer & write its working.

Q29. Explain with neat sketch the working of slipping clutch tachometer.

Q30. Explain with neat sketch working of contact less electrical tachometer. (inductive pick-up tachometer).