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Question Paper Code: 39504

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Elective

Electronics and Instrumentation Engineering

01UEI904 - ADVANCED SENSORS

(Regulation 2013)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. List the types of electrochemical sensor.
2. Draw the structure of an ion selective electrode.
3. What is echolocation?
4. Write the types of optical sensor.
5. List any two disadvantages of purified enzymes.
6. What is biosensor?
7. What is silicon accelerometer? Mention its uses.
8. What are the types of altimeter?
9. List the few excitation signals for sensing elements in a smart sensor.
10. Mention the applications of smart sensors.
11. Differentiate chemical and biochemical sensor.

12. Define solid electrolyte.
13. What is echolocation?
14. List the sensors used in instrumentation system.
15. State the principle of biosensor.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Which sensor is mainly used for gas sensing? Explain in detail. (10)
17. Summarize the application of optical sensor in space and environment. (10)
18. Derive the expression for the response time of the biosensor in a transient state. (10)
19. Mention the steps involved in fabricating the high pressure sensor. Explain with a neat sketch. (10)
20. With suitable diagram, explain the general architecture of smart sensor. (10)