Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

SEVENTH SEMESTER B.TECH. (INSTRUMENTATION AND CONTROL ENGG.)

END SEMESTER EXAMINATIONS, DEC- 2017

SUBJECT: MULTI SENSOR DATA FUSION [ICE 4011]

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ALL** questions.
- Missing data may be suitably assumed.

1A.	Discuss the role of data fusion.	**4**
1B.	Describe general multi sensor data fusion system with necessary diagram.	**4**
1C.	Brief about sensor observation model.	**2**
2A.	Briefly explain stitching algorithm with example.	**3**
2B.	Discuss the different scales of measurement used in radiometric normalization	**4**
2C.	Briefly describe the need for common representation format in sensor data fusion process.	**3**
3A.	Explain the steps involved in derivative dynamic time warping.	**3**
3B.	Write a note on data fusion and resource management duality key concepts.	**3**
3C.	Explain the information processing cycle of data fusion process.	**4**
4A.	Explain basic JDL framework with necessary diagram.	**5**
4B.	Explain the process of validation in Esteban multi sensor framework.	**2**
4C.	Explain search tree data association algorithm.	**3**
5A.	With the block diagram explain the working of Waterfall data fusion framework.	**4**
5B.	Compare the function of lou-key and omnibus model.	**3**
5C.	Compare puzzle solving and command-control Metaphor techniques of data fusion automation.	**3**