Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

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

END SEMESTER EXAMINATIONS, NOV - 2017

SUBJECT: MULTI SENSOR DATA FUSION [ICE 4011]

Duration: 3 Hour | Max. Marks:50

Instructions to Candidates:

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

1A	Explain fusion node and its properties with necessary diagrams.	**5**
1B	With an example, explain each type of sensor configuration	**3**
1C	Distinguish between sensor fusion and sensor data fusion	**2**
2A	Explain the different network topologies used in data fusion.	**4**
2B	What is sensor uncertainty? List the different types of sensor uncertainty.	**3**
2C	Explain any two methods for sampling common training data set used in fusion	**3**
3A	When is semantic alignment used in data fusion? Explain clustering algorithm of semantic alignment.	**4**
3B	Describe spatial – temporal transformation in sensor data fusion.	**3**
3C	With a neat diagram discuss the characteristic functional flow across data fusion levels.	**3**
4A	Describe the role of resource management in information processing cycle.	**4**
4B	Compare the working of Thompoulo's and Pau's framework with an example	**4**
4C	List the key features of Dasarathy's data fusion I/O model.	**2**
5A	Explain nearest neighbor, track splitting and multiple hypothesis methods of data association	**4**
5B	Describe the process of data flow in omnibus framework	**3**
5C	Illustrate the working of evidence combination type of decision making	**3**