Reg. No.										

Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

SEVENTH SEMESTER B.TECH (INSTRUMENTATION AND CONTROL ENGINEERING)

END SEMESTER EXAMINATION, NOV/DEC 2015

SUBJECT: MULTI SENSOR DATA FUSION [ICE 435]

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ANY FIVE FULL** questions.
- Missing data may be suitably assumed.

1A.	Define data fusion and explain the hypothesis of data fusion	**4**
1B.	Distinguish between different sensor configurations of sensor data fusion	**3**
1C.	List the sensor characteristics with respect to data fusion process	**3**
2A.	Explain the different data fusion model based on input/output	**4**
2B.	Explain stitching algorithm with an example	**3**
2C.	Discuss the sub space technique used in an estimator	**3**
3A.	Formulate the sequence of continuous dynamic time wrapping for a video compression problem	**3**
3B.	Explain the process of semantic alignment using assignment matrix	**3**
3C.	Compare the complexity theory and netcentric behavior model of data fusion	**4**
4A.	Explain the characteristic flow across data fusion levels with a diagram	**4**
4B.	Analyze the need for user refinement process in JDL framework	**3**
4C.	Write the difference between Luo &key's and Pau's framework	**3**
5A.	Discuss the steps involved in estimation stage of Esteban framework	**3**
5B.	Explain the meta-heuristic technique of data registration	**4**
5C.	Compare the different search tree data association algorithms	**3**
6A.	Explain the objectives of data fusion automation	**3**
6B.	Describe clustered architecture of multi sensors	**3**
6C.	Discuss the different fusion rules of decision making.	**4**