MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

SEVENTH SEMESTER B. TECH (ELECTRONICS AND INSTRUMENTATION)
PROCTORED ONLINE MAKE-UP EXAMINATION - Feb/March. 2022

SUBJECT: Multi-Sensor Data Fusion (ICE 4057)

TIME: 2.20-3:35 PM **DATE: 24/02/2022** **MAX MARKS 20**

Note: Answer All questions

1	A	Describe Esteban data fusion model with necessary diagram.	4M
	B	Explain the parallel and cascade data fusion networks with an example for each.	3M
	C	Explain the process of video compression process with an example and also explain the constraints for warping path.	3M
2	A	Describe TRIP model with necessary diagram.	4M
	B	Briefly explain the following i) Kalman filtering ii) Bayesian filtering	4M
	C	Let $X=(x_1, x_2, x_3, x_4)^T$ denote an input vector. By partitioning X using two different clustering algorithms, resulting identity vectors are: A= ($\alpha1$ $\alpha1$ $\alpha2$ $\alpha2$)^T, B= ($\beta1$ $\beta2$ $\beta2$ $\beta1$) ^{T}, $\alpha1$= [1 1 0 0], $\alpha2$= [0 0 1 1], $\beta1$= [1 0 0 1], $\beta2$= [0 1 1 0]. Find the corresponding two co-association matrices and mean co-association matrix...	2M