

ASUTOSH COLLEGE
(Affiliated to University of Calcutta)

Semester III – Practical Examination, 2020

Electronics – Honours

Paper – CC-7

Full Marks – 30

Time – 1hr 30 minutes

Send your answer scripts to: asutoshelta@gmail.com

Answer any one question:

1 X 30 = 30

Q1) Write a program in Scilab/Matlab to determine unit vectors to \vec{u}, \vec{v} and w

- a) dot product between \vec{u} and \vec{v}
- b) $\vec{u} \times (\vec{v} \times \vec{w})$
- c) $\vec{u} \cdot (\vec{v} \times \vec{w})$
- d) Angle between vectors \vec{u} and \vec{v}

where $\vec{u} = 5\hat{i} + 2\hat{j} - 7\hat{k}$, $\vec{v} = -\hat{i} - 3\hat{k}$, $\vec{w} = 10\hat{i} - 35\hat{j} - 14\hat{k}$

Q2) Write a program in Scilab/Matlab to convert a vector \vec{A} into Cylindrical co-ordinates at point (2,3,1) where \vec{A} given in Cartesian coordinates as $\vec{A} = 6\hat{x} + 3\hat{y} - 5\hat{z}$.
