

**MACS (MASTER'S IN MATHEMATICS
WITH APPLICATIONS IN COMPUTER
SCIENCE)**

Term-End Examination

August, 2011

**MMT-008 (P) : PRACTICAL (PROBABILITY
AND STATISTICS)**

Time : 1½ hours

Maximum Marks : 40

*Note : There is one question in this paper worth 30 marks.
Remaining 10 marks are for viva-voce.*

1. Write a program in 'C' language to compute T^2 30
for testing $H_0 : \mu = [7, 11]$, using the data matrix
from a bivariate normal population :

$$X = \begin{bmatrix} 2 & 12 \\ 8 & 9 \\ 6 & 9 \\ 8 & 10 \end{bmatrix}$$

Also, extend this program to specify the
distribution of T^2 .