UKA TARSADIA UNIVERSITY
Maliba Pharmacy College
B. Pharm. 1st Semester Internal Examination 2013 (*Mid-Sem 1*)
030020105- Elementary (Remedial) Mathematics

Time: 9:30 a.m. To 10:30 a.m.   Max. Marks: **20**

Date: 29/10/2013

Q-1   **Do as directed.(Any 4)**   **[4]**

1   Convert $30°$ to radians measure.

2   Convert $\frac{\pi}{2}$ to degree measure.

3   Define: Symmetric matrix

4   Write the order of matrices :

(a) $\begin{bmatrix} 1 & 2 \\ 2 & 4 \\ 7 & 8 \end{bmatrix}$, (b) $\begin{bmatrix} 1 & 3 \\ 4 & 5 \end{bmatrix}$

5   Fill the identities

(a) $1 + tan^2\theta =$-------------------

(b) $1 + cot^2\theta =$-------------------

Q-2   **Answer the following in brief.(any 5)**   **[10]**

1   Evaluate : $sin^2 45° + cos^2 45° + tan^2 30°$

2   Find the value of $sin75°$

3   Find the value of following trigonometric ratios. (a) $sin120°$, (b) $cos120°$

4   Find the value of determinant $\begin{vmatrix} 5 & 2 & 1 \\ 3 & 0 & 2 \\ 8 & 1 & 3 \end{vmatrix}$

5   If A=$\begin{bmatrix} 2 & -1 \\ 3 & 5 \end{bmatrix}$ and B=$\begin{bmatrix} 2 & 0 \\ 0 & 2 \end{bmatrix}$ then verify AB=BA

6   Show that A+B=B+A ,for

A=$\begin{bmatrix} 2 & 3 & 1 \\ 6 & 8 & 9 \end{bmatrix}$, B=$\begin{bmatrix} 3 & 9 & 5 \\ 4 & 2 & 0 \end{bmatrix}$

Q-3   **Answer the following in detail.**   **[6]**

1   If $sin\theta = \frac{3}{5}$, then find the value of $cosec\theta, cos\theta, tan\theta$ and $cot\theta$ if θ lies in 2nd quadrant.

OR

If ABCD is a cyclic quadrilateral, then show that $cosA + cosB + cosC + cosD = 0$

2   Solve the system of equation by Cramer's rule : 4x+3y=11, 3x+2y=8

OR

Find All the cofactors of $\begin{vmatrix} 3 & -2 & 3 \\ 1 & 1 & -1 \\ 4 & -3 & 2 \end{vmatrix}$