GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Medical and Allied Sciences

Bachelor of Pharmacy
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 30

Sem I - BP106RMT - Remedial Mathematics

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) Find the logarithm of 128 to the base 2. K1 (2)

2) Explain the minor of a matrix by using example. K2 (2)

3) Change the following logarithmic to exponential form K2 (2)

1. $\log_4 64 = 3$
2. $\log_5 \frac{1}{625} = -4$.

4) Define degree of a polynomial and improper rational function. K1 (2)

5) If A= $\begin{pmatrix} 1 & 2 & 0 \\ 1 & 1 & 0 \\ -1 & 4 & 0 \end{pmatrix}$ and B= $\begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 1 & 4 & 9 \end{pmatrix}$ estimate AB. K2 (2)

6) Solve $\lim_{x\to 0} \frac{(\sqrt{1+x}\ -1)}{x}$. K3 (5)

7) If $A = \begin{pmatrix} 1 & -2 & 3 \\ 4 & 5 & -4 \end{pmatrix}$ and $B = \begin{pmatrix} 3 & 0 & 2 \\ -1 & 1 & 8 \end{pmatrix}$ then analyze the values of (i) A+B (ii) AB^T. K4 (5)

OR

Determine the limit of $\lim_{x\to 1} \left(\frac{1}{x-1} - \frac{2}{x^2-1}\right)$ K4 (5)

8) Suppose that the functions F and G are defined for all real numbers t by the formula F(t)=3t +5, G(t)=t2-2t+8, then find the values of (i) F(10) (ii)G(5) (iii FoG(t) (iv) GoF(t) (v) FoG(2) (vi) GoF(3). K5 (10)

OR

Verify Cayley-Hamilton theorem for the matrix $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$. K5 (10)