Khudiram Bose Central College
Final Examination - 2020
Semester-V
Advanced Mathematics [H & G]
Total Marks – 25

Group – A

Answer any two [2 ½ X 2 = 5]:

1. If f(x) = $[x]$ - 2x, find f (-1) and f(1).
2. A = $\begin{pmatrix} 2 & 4 & -3 \\ 6 & -5 & 1 \end{pmatrix}$, B = $\begin{pmatrix} -7 & 3 & 6 \\ -2 & -1 & 5 \end{pmatrix}$, Find A + B.
3. Find the value of $\begin{pmatrix} 2 & 3 & 4 \\ 3 & 4 & 5 \\ 4 & 5 & 6 \end{pmatrix}$

Group – B

Answer any Two: **[2 X 10 = 20]**

4. Prove $\begin{pmatrix} 2 & 3 & 4 \\ 3 & 4 & 5 \\ 4 & 5 & 6 \end{pmatrix}$ = (x - a) (x - b) (x – a + b)
5. A = $\begin{pmatrix} 0 & 2 & 3 \\ 2 & 1 & 4 \end{pmatrix}$, B = $\begin{pmatrix} 7 & 6 & 3 \\ 1 & 4 & 5 \end{pmatrix}$ Find 2A + 3B.
6. A = $\begin{pmatrix} 4 & 2 & -1 \\ 3 & -7 & 1 \end{pmatrix}$, B = $\begin{pmatrix} 2 & 3 \\ -3 & 0 \\ -1 & 5 \end{pmatrix}$, Find A.B
7. If f(x) = a. $\frac{x-b}{a-b}$ + b. $\frac{x-a}{a-a}$, Show f(a) + f(b) = f(a + b)