29/03/2022

Girijananda Chowdhury Institute of Pharmaceutical Science

B.Pharm 1st semester,

End Semester Examination, March 2022

Subject: Remedial Mathematics (Subject Code: BP106RMT)

Full Marks-35 Time-1.5 hr

1. Answer Any one 1×10=10

   a. Resolve into partial fraction.

   $$\frac{x^2+8x+13}{(x+3)(x+2)}$$

   b. Find the cofactors of the matrix.

   $$\begin{bmatrix} 1 & 4 & -1 \\ 5 & 2 & 3 \\ 7 & 1 & 2 \end{bmatrix}$$

2. Answer any 5 of the following: 5x5=25

(i) If f(x)= sinx and g(x)= (1- cosx) then find (f+ g)(π/4), (f- g)(π/2) and (fg)(π/3) (ii) Factorise: $x^4 + 2x^3 - 13x^2 - 14x + 24$ using factor theorem

(ii) Resolve $\frac{(x-5)}{(x-3)(x-4)}$ into partial fractions.

(iii) If $log\frac{(x+2)}{2} = \frac{1}{2}(logx + logy)$, prove that x= y

(iv) Solve the equation: log(2y+1)- log(2y-1)= 1

(v) Define Function with the help of an example. What is Domain and Range?

(vi) What are two matrices equal? Under what condition is it possible to perform matrix multiplication?

(vii) If f(x)=3x+1, g(x)= x-2, h(x)= x²/3, find fog(1); gof(-1), fogoh(x) and gohof(3).