UNIT–III

CONTROL SYSTEM (23EE503)

S.No		Questions	BT	CO	PO
Part–A(ShortAnswerQuestions)					
1		Define frequency response of a control system.	L1	CO3	PO1
2		What is the relationship between time response and frequency response?	L1	CO3	PO1
3		What is a polar plot?	L1	CO3	PO1
4		What information can be obtained from a polar plot?	L1	CO3	PO1
5		Define a Bode plot.	L2	CO3	PO1
6		What are the two components of a Bode plot?	L1	CO3	PO1
7		State the Nyquist Stability Criterion.	L1	CO3	PO1
8		What is meant by relative stability?	L1	CO3	PO1
9		Define gain margin (GM).	L1	CO3	PO1
10		Define phase margin (PM).	L1	CO3	PO1
Part–B(LongAnswerQuestions)					
11	a)	Explain the relationship between time response and frequency response of a control system.	L2	CO3	PO1, PO2
	b)	Discuss the significance of frequency response analysis in control system design.	L2	CO3	PO2
12	a)	Define a Polar Plot and explain the procedure for its construction.	L2	CO3	PO2
	b)	Draw and explain the Polar Plot of a first-order control system.	L3	CO3	PO2
13	a)	Explain the characteristics and properties of Polar Plots.	L2	CO3	PO2
	b)	Discuss the applications of Polar Plots in control system analysis.	L3	CO3	PO2
14	a)	Define Relative Stability and explain its importance.	L2	CO3	PO2
	b)	Discuss the role of Gain Margin and Phase Margin in assessing relative stability.	L3	CO3	PO2
15	a)	Explain the concept of Bode Magnitude Plot.	L2	CO3	PO2
	b)	Explain the concept of Bode Phase Plot and discuss its significance.	L2	CO3	PO2