Course c	ode	Course Name	L-T-P -Credits	Year o Introduc	
EE46 2	2 Design of D	igital Control Systems	3-0-0-3	2016	
Prerequi	0	0 1			
Course C					
	v	and concept of digital control	ol system.		
		about different strategies add	•	controllers.	
		e design of different types of			
Syllabus		e design of anterent types of	digital controllers.	(
v	vital control system	n-Pulse transfer function-	Digital PID controller d	esign- comr	pensator
		onse - compensator desig	-	0 1	
		oller design - State space			
-	outcome.	oner design state space	analysis and controller de	51 <u>5</u> 11	
-		students will have the ability	vto		
i.	design digital cont		3111		
ii.	0 0	me system using state space	methods.		
iii.	•	ty of discrete time system.			
Text Bo					
1.	Benjamin C. Kuo, 1992.	Digital Control Systems, 2/	e, Saunders College Publish	ing, Philadel	phia,
2		. Nagle, Digital Control Sys	tame Prontice Unil Englau	ood Cliffe N	Jow
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3	Jersey, 1995. M. Gonal Digital	Control and State Variable N	Methods Tata McGraw-Hill	1997	
	M. Gopal, Digital	Control and State Variable A		, 1997	
4.	M. Gopal, Digital Ogata K., Discrete	Control and State Variable I e-Time Control Systems, Pea		, 1997	
4. Reference	M. Gopal, Digital Ogata K., Discrete	e-Time Control Systems, Pea	rson Education, Asia.		ardware
4.	M. Gopal, Digital Ogata K., Discrete ces: Constantine H. H	e-Time Control Systems, Pea Ioupis and Gary B. Lamor	rson Education, Asia. nt, Digital Control System		ardware
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VI	Digital state feedback controller design: Complete state and output Controllability, Observability, stabilizability and reachability - Loss of controllability and observability due to sampling.Pole placement design using state feedback for SISO systems.		20%					

END SEMESTER EXAM

QUESTION PAPER PATTERN:

Exam Duration: 3Hourrs.

Part A: 8 compulsory questions.

Maximum Marks: 100

One question from each module of Modules I - IV; and two each from Module V & VI.

Student has to answer all questions. $(8 \times 5)=40$

Part B: 3 questions uniformly covering Modules I & II. Student has to answer any 2 from the 3 questions: $(2 \times 10) = 20$. Each question can have maximum of 4 sub questions (a,b,c,d), if needed.

Part C: 3 questions uniformly covering Modules III & IV. Student has to answer any 2 from the 3 questions: $(2 \times 10) = 20$. Each question can have maximum of 4 sub questions (a,b,c,d), if needed.

Part D: 3 questions uniformly covering Modules V & VI. Student has to answer any 2 from the 3 questions: $(2 \times 10) = 20$. Each question can have maximum of 4 sub questions (a,b,c,d), if needed.

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