



APJ ABDUL KAMAL TECHNOLOGICAL UNIVERSITY

08 PALAKKAD CLUSTER

6242(A)-APRIL17-1

(pages: 2)

Name:

Reg No:

SECOND SEMESTER M.TECH DEGREE EXAMINATION MAY 2017

08EE6242(A) FACTS AND CUSTOM POWER DEVICES

Time: 3 hours

Max. Marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no	Module 1	Marks
1.a	explain the concept of FACTS.	3
	Answer b or c	
b	Explain the different types of FACTS Controllers.	6
c	Explain SPWM.	6
Q.no	Module 2	Marks
2.a	What are the different types of Multilevel inverters?	3
	Answer b or c	
b	Explain transformer connection for 12,24 and 48 pulse operation.	6
c	Explain the working of Diode Clamped Multilevel inverter with neat diagrams.	6
Q.no	Module 3	Marks
3.a	Explain the working of a shunt compensator.	3
	Answer b or c	
b	Explain the operation and control of TCR.	6

c Explain the working of STATCOM. 6

Q.no	Module 4	Marks
4.a	Explain voltage stability using series compensator.	3
Answer b or c		
b	Explain the operation and control of GCSC.	6
c	Explain the concept of voltage and phase angle regulation.	6

Q.no	Module 5	Marks
5.a	Explain the concept of Multifunctional FACTS devices.	4
Answer b or c		
b	Explain the operation and control of UPFC.	8
c	Explain the operation and control of IPFC.	8

Q.no	Module 6	Marks
6.a	What are custom power devices?	4
Answer b or c		
b	Explain the working of D-STATCOM.	8
c	Explain the working of DVR.	8