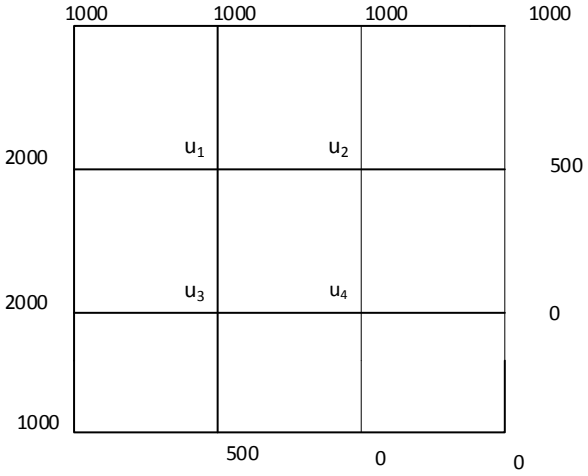
BRANCH: POWER ELECTRONICS
IES COLLEGE OF TECHNOLOGY, BHOPAL

M.E./ M.Tech.(1th SEM) Assignment -1

Advanced Mathematics (MEPE-101)

Units Cover-(I-II)

Date of Assignment:18/09/2014 **Date of Submission:17/10/2014**

Q.1	Using method of separation of variables, solve: $$\frac{\partial u}{\partial x} = 2\frac{\partial u}{\partial x} + u$$ where, $u(x,0) = 6e^{-3x}$	Mar., 2010
Q.2	Define binomial distribution. The probability the pen manufactured by a company will be defective is $\frac{1}{10}$. If 12 such pens are manufactured, find the probability that a. Exactly two will be defective b. At least two will be defective c. None will be defective.	Mar. ,2010
Q.3	Find the solution of two- dimensional heat equation.	June, 2011
Q.4	Solve the elliptic equation $u_{xx} + u_{yy} = 0$ for the following square mesh with boundary values as shown: 	Dec., 2010
Q.5	Find the Fourier transform of : $$f(x) = \begin{cases} 1\ for\ \lvert x\rvert < 1 \\ 0\ for\ \lvert x\rvert > 1 \end{cases}$$ Hence evaluate: $$\int_0^\infty \frac{\sin x}{x}\,dx$$	Mar., 2010

IES COLLEGE OF TECHNOLOGY, BHOPAL

M. TECH. (1ST SEM) Assignment -1

POWER ELECTRONICS (MEPE-102) (UNIT 1 TO 2.5)

DATE OF ASSIGN: 18/09/2014 DATE OF SUBMISSION: 17/10/2014

Note: 1.Question should be written in plain A-4 Size Paper.

2. Minimum 300 Word Limit for each Question.

3. Assignment will submit in stick file.

Q.1	Explain Power Electronics Devices? Thyristors, Bjt, Mosfet Dec2010	5
Q.2	Natural And Forced Commutation Of Scr? June 2010	5
Q.3	Configuration Of Phase Controlled Rectifier? Dec. 2009	5
Q.4	Reduction On Harmonics Using Multiple Pulse Control? June 2009	5
Q.5	Operation Of Single Phase And 3 Phase Controllers? Dec. 2007	5

IES COLLEGE OF TECHNOLOGY, BHOPAL

M. TECH (1ST SEM) Assignment -1(UNIT 1 TO 2.5)

POWER ELECTRONICS (MEPE-103)

DATE OF ASSIGN: 18/09/2014 DATE OF SUBMISSION: 17/10/2014

Note: Minimum 300 Word Limit for each Question

Q.1	Modeling Through Diff. Equetion? Dec.2009	5
Q.2	Effect Of Load Disturbance Upon Control Action? June 2009	5
Q.3	Laws Of Development Of Feedback Control ?June2008	5
Q.4	Explain About Pole Placement Problem? Dec 2008	5
Q.5	Variable Structure Control And Its Application**?** June 2011	5

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M. TECH . (1ST SEM) Assignment -1

POWER ELECTRONICS (MEPE-104) (UNIT 1 TO 2.5)

DATE OF ASSIGN: 18/09/2014 **DATE OF SUBMISSION: 17/10/2014**

Note: Minimum 300 Word Limit for each Question

Q.1	Describe About Inverter Principles? June 2009	5
Q.2	Explain About Diff. Type Of Single Phase And 3 Phase Inverters? Dec, 2009	5
Q.3	Explain Various Techniques Of Voltage Control? Dec,2008	5
Q.4	Principle And Classification Of Chopper Ckt? June 2008	5
Q.5	Write About Current Source And Voltage Source Inverter?Wave Form Synthesis And Phase Control**?** Dec. 2010	5

IES COLLEGE OF TECHNOLOGY, BHOPAL

M. TECH . (1ST SEM) Assignment -1

POWER ELECTRONICS (MEPE-105) (UNIT 1 TO 2.5)

DATE OF ASSIGN: 18/09/2014 **DATE OF SUBMISSION: 17/10/2014**

Note: Minimum 300 Word Limit for each Question

Q.1	Concept Of Elect. Drives And Types Of Elect. Drives? June 2010	5
Q.2	Starting Methods Of Dc Shunt And Series Motor?June 2007	5
Q.3	Fundamental Parameters Of Speed Control Of Dc Motor? Dec. 2009	5
Q.4	Explain Voltage Injection In The Rotor Ckt And Characteristics Also? Dec, 2009	5
Q.5	Write About Transient Behavior Of Phase Induction Drives While Starting And Braking? Dec 2010	5