

IES COLLEGE OF TECHNOLOGY, BHOPAL
M.E./ M.Tech.(1th SEM) Assignment -1 (Unit 1&2)
Advanced Mathematics (MEDC-101)

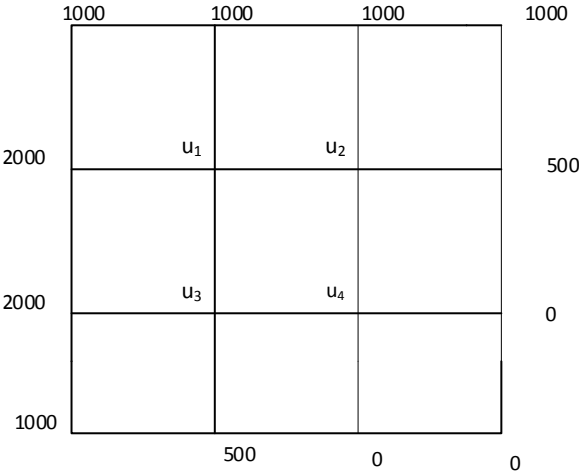
Date of Assignment:18/09/2014

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	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: <div style="text-align: center;">  </div>	Dec., 2010
Q.5	Find the Fourier transform of : $f(x) = \begin{cases} 1 & \text{for } x < 1 \\ 0 & \text{for } x > 1 \end{cases}$ Hence evaluate: $\int_0^{\infty} \frac{\sin x}{x} dx$	Mar., 2010

IES COLLEGE OF TECHNOLOGY, BHOPAL
M.E./ M.Tech (1st SEM) Assignment -1(Unit 1 & 2)
Micro Controller System Design (MEDC-102)

Date of Assignment: 18/09/2014

Date of Submission:17/10/2014

Note: Minimum 300 Word Limit for each Question.

Q.1	Explain the single chip microcomputer architecture? (R.G.P.V. June 2014)	
Q.2	Explain hardware architecture of 8051 microcontroller. (R.G.P.V. June 2014)	
Q.3	Discuss in brief about the supporting chip used with 16-bit microprocessor. (R.G.P.V. June 2013)	
Q.4	Discuss about the addressing modes of microcontroller 8051.(R.G.P.V. June 2013)	
Q.5	Describe interfacing techniques in detail. .(R.G.P.V. Dec.2010)	

IES COLLEGE OF TECHNOLOGY, BHOPAL
M.E./ M.Tech (1st SEM) Assignment -1(Unit 1 & 2)
DSP Application (MEDC-103)

Date of Assignment:18/09/2014

Date of Submission:17/10/2014

Note: Minimum 300 Word Limit for each Question.

Q.1	Determine impulse response $h(n)$ for the system described by second order difference equation $y(n)-3y(n-1)+4y(n-2)=x(n)+2(x(n-1))$ (R.G.P.V. Dec 2012)	
Q.2	Prove the convolution property of Z-Transform. (R.G.P.V. Dec 2010)	
Q.3	Differentiate between a recursive and non recursive system (R.G.P.V. Dec 2010)	
Q.4	Determine the Z-transform of the following graph $X(n)=-n a^n u(-n-1)$ (R.G.P.V. June 2014)	
Q.5	Write a short note on- (1) Filtering of long data sequence (2) Relationship between DCT and DFT (R.G.P.V. Dec.2014)	

IES COLLEGE OF TECHNOLOGY, BHOPAL
M.E./ M.Tech. (1st SEM) Assignment 1(Unit 1&2)
VLSI Design (MEDC-104)

Date of Assignment:18/09/2014

Date of Submission:17/10/2014

Note: Minimum 300 Word Limit for each Question.

Q.1	What do you mean by integrated circuits? Explain its basic concepts. Write all its manufacturing steps and elaborate any one with the help of suitable example (R.G.P.V. June 2014)	
Q.2	What are the various processes of fabrication of CMOS? Explain any one of them with neat diagram (R.G.P.V. Dec 2010)	
Q.3	What are the consequences of power and delay in basic physical design of any CMOS circuit? (R.G.P.V. June 2014)	
Q.4	Explain the following: i. Oxidation ii. Ion implantation in brief (R.G.P.V. Dec 2010)	
Q.5	What do you mean by simulation? Which software proves to be suitable for the simulation in VLSI design ? (R.G.P.V. Dec.2011)	

IES COLLEGE OF TECHNOLOGY, BHOPAL
M.E./ M.Tech (1st SEM) Assignment -1(Unit 1 & 2)
Data Communication AND Computer Network (MEDC-105)

Date of Date of Assignment: 18/09/2014

Date of Submission:17/10/2014

Note: Minimum 300 Word Limit for each Question

Q.1	Explain the transmission using packet switching techniques. (R.G.P.V. June 2014)	
Q.2	Explain vertical and longitudinal redundancy check (R.G.P.V. Dec 2010)	
Q.3	Explain the X.21 standards used in data communication. (R.G.P.V. June 2014)	
Q.4	What is the advantage of sliding window flow protocol compared to stop and wait flow control (R.G.P.V. June 2013)	
Q.5	Discuss the flow in point to point and multipoint links(R.G.P.V. Dec.2014)	