

ASSIGNMENT-1
BRANCH: EX
SEM: 6th
LAST DATE OF SUBMISSION: 12/02/2015

IES COLLEGE OF TECHNOLOGY, BHOPAL

B.E. (Sixth Semester) Assignment I

(Electrical & Electronics Engg.)

Communication Engineering (EX-601)

Date of Assign: 27/01/2015

Date of submission:12/02/2015

1.	Prove that Dirac comb is its own Fourier transform.	2
2.	Explain Autocorrelation.	2
3.	Differentiate analog and digital signal.	2
4.	Explain fourier Transform and its properties.	3
5.	Explain mean and variance with its properties.	3
6.	(a) State and prove frequency shifting property. (b) State and prove time scaling property of Fourier transform. (c) Explain central limit theorem with Rayleigh probability density function.	7
7.	Find the Fourier transform of:- (i) $e^{-bt}u(t)$ (ii) $\text{Sgn}(t)$ (iii) $\text{Sin}2\pi ft$	7

IES COLLEGE OF TECHNOLOGY, BHOPAL

B.E. (Fourth Semester) Assignment 1

(Electrical & Electronics Eng.Branch)

Control system (EX-602)

Date of Assign: 27/01/2015

Date of submission:12/02/2015

1	What is transfer function (RGPV-DEC 2011)	2
2	Write the Masson's gain formula. (RGPV-JUNE2010)	2
3	Write the basics properties of signal flow graph .	3
4	Write the properties of block diagram reduction. (RGPV-DEC 2012)	7
5	What is the difference in between open loop and closed loop control system.(RGPV-DEC 2011)	7

IES COLLEGE OF TECHNOLOGY, BHOPAL

B.E. (Sixth Semester) Assignment I

(Electrical & Electronics Eng.)

Switchgear & Protection (EX-603)

Date of Assign: 27/01/2015

Date of submission:12/02/2015

1.	Discuss the possible fault on overhead lines.	2
2.	Define short circuit kVA.	2
3.	Explain positive, Negative and Zero sequence network in power system.	2
4.	What is the difference between symmetrical and unsymmetrical fault.	3
5.	A 3-phase, 20MVA, 10 kV alternator has internal reactance of 5 % and negligible resistance. Find the external reactance per phase to be connected in series with the alternator so that steady current on short circuit does not exceed 8 times the full load current.	7
6.	A 3-phase, 11 kV, 10 MVA alternator has sequence reactance of $X_0 = 0.05$ p.u., $X_1 = 0.15$ p.u. and $X_2 = 0.15$ p.u. If the generator is on no load, find ratio of fault currents for L-G fault to that when all the 3-phases are dead short circuited.	7
7.	Write short note on current limiting reactors? Classify them on the basis of their type and location.	7

IES COLLEGE OF TECHNOLOGY, BHOPAL

B.E. (Sixth Semester) Assignment I

(Electrical & Electronics Eng.)

Electronic Instrumentation (EX-604)

Date of Assign: 27/01/2015

Date of submission:12/02/2015

Q1	What is oscilloscope and describe its parts?	2
Q2	Draw block diagram of CRO?	2
Q3	Derivation of electrostatic focusing?	2
Q4	What are lissajous figure? How are they obtained on CRO?	3
Q5	Write application and advantages of CRO?	3
Q6	Discuss the following-: (a) Vertical & Horizontal deflection system (b) Post deflection acceleration	7
Q7	Explain dual beam and sampling CRO?	7

IES COLLEGE OF TECHNOLOGY, BHOPAL

BE (Sixth Semester) Assignment –I

Electrical and Electronics Engineering

Energy Conservation and Management (EX-605)

Date of Assign: 27/01/2015

Date of submission:12/02/2015

1.	What is Energy Audit?	2
2.	Why there is Always loss of energy in material flow?	2
3.	Explain the different Type of energy audit.	3
4.	What are important parameters generally monitored during energy audit.	3
5.	Describe briefly the various instruments used for energy audit.	7
6.	Describe the role of energy manager for energy management in an organization.	7
7.	Suppose you have energy manager in an institutional organization. Explain the steps for energy auditing and energy management in an institutional management.	7