MANIPAL INSTITUTE OF TECHNOLOGY
Manipal University

FOURTH SEMESTER B. Tech. (E & C) DEGREE END SEMESTER EXAMINATION
MAY/JUNE 2016
SUBJECT: CONSUMER ELECTRONICS (ECE 3281)

TIME: 3 HOURS   **MAX. MARKS: 50**

Instructions to candidates
- Answer **ALL** questions.
- Missing data may be suitably assumed.

1A.	With a neat diagram explain the working of Dynamic loudspeaker. Compare its merits and demerits with other loudspeakers.
1B.	A microphone has an output of -60db connected to 0.5MΩ input of a preamplifier. The preamplifier has a gain of +40db. The signal then passes through an equalizer of with insertion loss of -15db and through the main amplifier with a gain of +65db. If the output of the speaker is 6W. Find the total power gain and input voltage to the pre amplifier.
1C.	Discuss flicker noise in television. How it is eliminated.
	(5+3+2)
2A.	Explain the internal organisation of a calculator with neat diagram.
2B.	Discuss various properties of sound waves. The intensity of waves at a distance of 20m from the source is 25W \ m^2. What is the intensity at a distance of 50m and how do the amplitude of the wave compared at two places.
2C.	Give the principle of blue ray technology.
	(5+3+2)
3A.	Discuss the working of an Electronic washing machine with its data and program control.
3B.	Explain cell splitting and cell sectoring in mobile communication.
3C.	Explain interlaced scanning and its error in Television pictures.
	(5+3+2)
4A.	Discuss the basic components of air heating and cooling in an air conditioning system.
4B.	Explain the working of a Telephone set with its features and limitations.
4C.	Discuss paging system with its limitations.
	(5+3+2)
5A.	Draw the block of television receiver and explain its working
5B.	Explain the basic Fax machine operation with necessary diagram.
5C.	List any two comparison between LED and LCD TV
	(5+3+2)