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MANIPAL INSTITUTE OF TECHNOLOGY
 Manipal University
FOURTH SEMESTER B.Tech. (E & C) DEGREE END SEMESTER
EXAMINATION - April/May 2017
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 neat diagram explain the working of balanced armature headphone. Compare its merits and demerits with other headphones.
1B.	Explain working of optical discs .Discuss how DVDs can store more data than regular CDs.
1C.	An audio amplifier produces 20 Watt output across an 8 ohm resistance when a 5mV signal is applied to its input across a 1MΩ resistor. Calculate the gain in decibels.
(5+3+2)	
2A.	Draw the block diagram of television transmitter and briefly explain its working.
2B.	Discuss interlaced scanning and explain how it reduces flicker to conserve bandwidth.
2C.	Sketch the details of horizontal blanking and sync pulses.
(5+3+2)	
3A.	Explain the working of cordless telephone. List the types of advanced cordless telephones with their frequency range.
3B.	Discuss the service provided by GSM system with its frequency allocation. What is the purpose of a mobile switching centre?
3C.	What are hand off strategies? Plot its graphical curve.
(5+3+2)	
4A.	Explain with block diagram the principle of working of automated teller machines.
4B.	Discuss bar code digital scanners to read digital data.
4C.	Differentiate digital diaries with digital cameras.
(5+3+2)	
5A.	Discuss the arrangement of basic components of an all air heating and cooling system for an Air conditioner.
5B.	Explain data flow chart for washing machines control system.
5C.	Write a program to control the cooking timings in a microwave oven with beep sound.
(5+3+2)	

