



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

FOURTH SEMESTER (E&C) B.Tech. DEGREE END SEMESTER EXAMINATION - APRIL/MAY 2018 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 Moving coil headphone. Compare its merits and demerits with other headphones.
- 1B. Differentiate compact disc with digital video display. Give its features.
- 1C. An audio amplifier produces 20 Watt output across an 8 ohm resistance when a 10mV signal is applied to its input across a 10 MΩ resistor. Calculate the gain in decibels.
(5+3+2)
- 2A. Explain with the help of suitable sketches how video signal is developed in a vidicon camera tube. Compare its merits and demerits with plumbicon camera tube.
- 2B. What is vestigial side band transmission and why it is used for transmission of TV picture signals.
- 2C. Discuss the merits of electromagnetic deflection over electrostatic deflection in television picture tubes. Why is cosine winding used for deflection coils?
(5+3+2)
- 3A. Differentiate Telephone set with 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. List the features of Mobile switching centre with Base station controller.
- 3C. Discuss hand off strategies ? Plot its graphical curve.
(5+3+2)
- 4A. Draw the block diagram of the typical facsimile machine. Give its operations at the transmitting and receiving end.
- 4B. Discuss basic steps of xerographic process with neat diagram.
- 4C. Differentiate digital diaries with digital cameras.
(5+3+2)
- 5A. Draw the functional block diagram of a microwave oven and explain its working.
- 5B. Discuss the vapour compression in refrigeration system with necessary sketch.
- 5C. Explain Electronic fund transfer system in automated teller machines.
(5+3+2)