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Time : 2 Hours

**APPLIED AND CONSUMER
ELECTRONICS**

Subject Code

V	3	3	3
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Total No. of Questions : 5

(Printed Pages : 2)

Maximum Marks : 50

Instructions:-1) Answer each question on a fresh page.

2) Write the number of the questions and sub-questions clearly.

3) All questions are compulsory.

4) Figures to the right indicate full marks.

5) Draw neat labelled diagram wherever necessary.

Q.1) A) Fill in the blanks:- (2)

- i) The technical standard for accessing information over a mobile wireless network is _____
- ii) The IF value of AM receiver is _____

B) Answer the following :- (6)

- i) Draw the symbols of zener diode and LED. Give an application of each.
- ii) Give an application of the following w.r.t cell phone technology
- a) SIM b) TDMA c) EDGE

C) Answer the following:- (2)

- i) State the application of Data Port and Microprocessor in a MP3 player.

Q.2) A) Answer the following:- (2)

- i) Define Offset voltage of an op- amp.
- ii) State the function of Tone control circuit of a radio receiver.

B) Answer the following:- (6)

- i) Give two points of differentiation between Monolithic and Hybrid circuits. State any two advantages of IC over discrete circuit.
- ii) Draw the logo of Bluetooth. State two disadvantages of Bluetooth Technology.

C) Answer the following:- (2)

- i) State two advantages of DTH transmission.

Q.3)A) Fill in the blanks:- (2)

- i) The tones of higher frequency are interpreted by the listener as _____
- ii) The circuit that makes the op-amp with single ended output is _____

B) Answer the following:- (3)

- i) Draw a neat labelled diagram of a Crystal microphone and give an application of it.

C) Answer any one of the following:- (5)

- i) With neat diagrams explain the formation of AM wave. State the use of AGC circuit in AM receiver.
- ii) Draw a neat block diagram of FM superhetrodyne radio receiver. State the use of limiter in a FM receiver. Give two points of differentiation between AM and FM waves.

Q.4)A) Answer the following:- (2)

- i) State the distance of the ionospheric layer from the earth's surface.
- ii) Name the rotational system used in a CD player.

B) Answer the following:- (3)

- i) What is Erasing of an audio tape? State the application of any two speakers of a Digital home theatre system.

C) Answer any one of the following:- (5)

- i) With a neat block diagram explain the tuner and sound section of a TV receiver. State the function of blanking pulse used in TV transmission.
- ii) Explain the tuner and video section of a TV receiver with a neat block diagram. State the function of LNB in a DTH system.

Q.5)A) Answer the following:- (10)

- i) Name the two types of loudspeakers. Why is impedance matching of microphones and loudspeakers necessary?
- ii) Draw the wave produced by an oscillator in a radio transmitter. State the use of this wave.
- iii) State two advantages of storing information in digital format.
- iv) Draw the diagram of PN junction formation using alloying technique. State the advantage of diffusion method.
- v) List any four applications of TFT- LCD's.