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No. Of Printed Pages: 2 ^{SC-1}

SARDAR PATEL UNIVERSITY

B.Sc. Electronics

SEM – IV, April 2016

RADIO AND TELEVISION SYSTEM

SUB CODE: US04CELC02

DATE: 22nd April 2016

DAY: Friday

TIME: 10:30 AM TO 1:30 PM

TOTAL MARKS: 70

Q. 1 Choose the correct answer.

[10]

- (1) The standard value of the intermediate frequency is _____ .
(A) 456 K hz (C) 100 K Hz
(B) 1 M hz (D) 565 K Hz
- (2) What should be the sensitivity of radio receiver?
(A) Low (C) High
(B) Average (D) Zero
- (3) In AM Radio transmitter the carrier signal is produced by _____ .
(A) Master oscillator (C) Audio amplifier
(B) Buffer amplifier (D) None of above
- (4) Which circuit refinement helps in proper tuning of the receiver?
(A) AGC (C) AFC
(B) Limiter (D) None of above
- (5) Which stage of radio receiver is responsible for selecting desire signal?
(A) IF amplifier (C) RF amplifier
(B) Frequency mixer (D) None of above
- (6) Aperture of the camera tube is same as diameter _____ .
(A) Of lens system (C) Of electron beam
(B) Of camera tube (D) None of above
- (7) The aspect ratio of T.V. communication system used in India is _____ .
(A) 2:3 (C) 3:2
(B) 4:3 (D) None of above
- (8) The local oscillator frequency is kept _____ then RF signal frequency.
(A) Same (C) Lower
(B) Higher (D) None of above
- (9) Fidelity of the radio receiver determines the _____ of reproduce signal.
(A) Distortion (C) Quality
(B) Loudness (D) Frequency
- (10) _____ is used for impedance matching.
(A) IF amplifier (C) RF amplifier
(B) Balun (D) None of above

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(P.T.O.)

- Q.2 Answer the following.(attempt any ten, each two marks) [20]**
- (1) Briefly classify the radio receivers.
 - (2) State principle of super heterodyne receiver.
 - (3) Write advantage of RF amplifier.
 - (4) Briefly explain interlace scanning.
 - (5) What is composite video signal?
 - (6) What is meant by intermediate frequency?
 - (7) Define aspect ratio.
 - (8) Draw the frequency response curve of RF amplifier.
 - (9) What do you mean by AFC?
 - (10) What is dark current?
 - (11) Why frequency mixture is required?
 - (12) What is important of IF trap?

- Q.3 (A) Draw the block diagram of the radio transmitter using low level modulation and explain it. [07]**
(B) Write short note on straight receiver. [03]

OR

- Q.3 (A) Draw the block diagram of super heterodyne receiver and explain its function. [07]**
(B) Discuss the classification of radio transmitter according to type of modulation method used. [03]

- Q.4 With necessary circuit diagram explain the function of RF amplifier. [10]**

OR

- Q.4 Draw the circuit of IF amplifier and explain its working in detail. [10]**

- Q.5 Discuss rectangular switching and interlace scanning with diagrams. [10]**

OR

- Q.5 Explain in detail construction of vidicon camera tube and state principle of image orthicon camera tube. [10]**

- Q.6 Explain block diagram of B/W television receiver. [10]**

OR

- Q.6 (A) Write a short note on balun. [05]**
(B) What are the functional requirements of RF tuner? [05]

— X —
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