

SEAT No. _____ Sardar Patel University

S. Y. B. Sc - 4th semester Electronics and Communication Examination

No. of Printed Pages : 2

19-04-2018, Time: 10:00 am to 1:00 pm

US04CELC02- Radio and Television System

Maximum Marks: 70

[45/A-13]

Note: Figures to right indicates the full marks.

Q-1 Multiple Choice Questions.

(10)

1. In AM Radio transmitter the carrier signal is produced by _____.
(a) Master oscillator (b) Buffer amplifier
(c) Audio amplifier (d) one of these
2. Long wave broadcast transmitter is used in _____.
(a) Tropical countries (b) Temperate countries
(c) Everywhere (d) some countries
3. Medium wave broadcast is used for _____.
(a) National service (b) Domestic service
(c) Regional service (d) International service
4. The RF amplifier provides _____.
(a) image signal rejection (b) better selectivity
(c) better sensitivity (d) All of these
5. In CCIR system B standard the line frequency is _____.
(a) 15625 lines/sec (b) 625 lines/sec
(c) 17625 lines/sec (d) 55625 lines/sec
6. In a T.V. system aspect ratio is _____.
(a) 2:3 (b) 4:3
(c) 3:2 (d) 5:4
7. In CCIR system B the sound carrier is above the picture carrier by _____.
(a) 5.25 MHz (b) 6.5 MHz
(c) 5.5 MHz (d) 6.25 MHz
8. _____ is used for impedance matching.
(a) IF Trap (b) RF amplifier
(c) IF amplifier (d) Balun
9. The local oscillator frequency is kept _____ than RF signal frequency.
(a) higher (b) same
(c) lower (d) zero
10. Vidicon camera tube utilizes the principle of _____.
(a) photo conductivity (b) photo volatic
(c) photo emission (d) none of these

P.T.O

Q-2 Answer in short. (Any Ten)

(20)

1. Give the classification of radio receiver.
2. Give the classification of radio transmitter according to the type of service involved.
3. What is meant by intermediate frequency?
4. What are the main advantages of RF amplifier stage?
5. What is the function of frequency mixer?
6. What is the two limitation of simple AFC in radio receiver?
7. Mention the characteristics of camera tube.
8. What is meant by Aspect ratio?
9. Explain why vestigial sideband signal television video modulation?
10. Define sound modulation.
11. What is IF traps? Why they are required?
12. Draw the block diagram of VHF tuner.

- Q-3 (a)** Draw the neat label diagram of super heterodyne receiver. **(03)**
(b) Explain the function of each stage of Super heterodyne receiver.. **(07)**

OR

- Q-3 (a)** Explain the constituent stages of A.M. radio transmitters. **(05)**
(b) What are the salient features of broadcast receiver? **(05)**
- Q-4 (a)** Explain RF amplifier circuit in detail. **(07)**
(b) What are the applications of RF amplifier? **(03)**

OR

- Q-4 (a)** Explain IF amplifier circuit in detail. **(07)**
(b) List different Intermediate Frequencies for various applications. **(03)**
- Q-5 (a)** Explain Composite Video Signal in detail **(05)**
(b) Write a short note on: Horizontal scanning. **(05)**

OR

- Q-5 (a)** Explain principle working of image orthicon camera tube. **(05)**
(b) Write a short note on: Vertical scanning. **(05)**
- Q-6** Draw the block diagram of B/W television receiver and explain it. **(10)**

OR

- Q-6 (a)** What is the function of RF tuner? **(05)**
(b) Write a short note on: Balun. **(05)**

————— X —————