

[99]

**SARDARPATEL UNIVERSITY V.V.NAGAR**

T.Y.B.Sc. Sem-V EXAMINATION

SUB. CODE:-US05CELE24

Analog Communications

DATE:-29/12/2020

TIME:-02:00 pm to 04:00 pm

MARKS-70

**Q-1 Choose correct answer****[10]**

1. In TV receiver frequency mixer out-put consists of Video IF & \_\_\_\_\_.  
(A) Sound IF (C) Audio low frequency  
(B) picture signal (D) None of these
2. IF frequency in case of super-heterodyne radio receiver is \_\_\_\_\_.  
(A) 455 khz (C) 55 khz  
(B) 45 khz (D) None of these
3. Aspect ratio used in T.V receiver is \_\_\_\_\_.  
(A) 4:3 (C) 3:3  
(B) 4:4 (D) None of these
4. AVC is taken from \_\_\_\_\_ section of radio receiver.  
(A) detector (C) mixer  
(B) local oscillator. (D) None of these
5. RF tuner in TV consists of RF amplifier, frequency mixer and \_\_\_\_\_.  
(A) Local oscillator (C) Video if amplifier  
(B) sound amplifier. (D) None of these
6. As different stations are tuned in Radio Receiver o/p frequency of mixer is \_\_\_\_\_.  
(A) Constant (C) Changes  
(B) Zero (D) None of these
7. \_\_\_\_\_ process is done in radio receiver.  
(A) modulation (C) demodulation  
(B) Fm modulation. (D) None of these
8. \_\_\_\_\_ is used to match impedance of TV Receiver to input.  
(A) BALUN (C) RF TUNER  
(B) IF TRAP (D) None of these
9. In TV sound signal IF Frequency is \_\_\_\_\_.  
(A) 33.4 MHz (C) 1 KHz  
(B) 33 KHz (D) None of these
10. Image orthicon works on principle of \_\_\_\_\_.  
(A) photo-emission (C) photo-conduction  
(B) photo-voltaic (D) None of these

**Q.2****A Filling the Blanks****(04)**

- 1) AM receiver is used for receiving \_\_\_\_\_ modulated carrier signal.
- 2) Gang Capacitors circuits & tuned are used in \_\_\_\_\_
- 3) In TV the Video IF signal is \_\_\_\_\_ modulated
- 4) Vidicon camera tube works on principle of \_\_\_\_\_.

**B State true or false****(04)**

- 1) Radio receives gives audio signals as output.
- 2) If trap is used in TV receiver.
- 3) Superhetrodyne principle is used in AM radio receiver.
- 4) In radio receiver, one transistor working as Oscillator and mixer is called converter transistor.

[15]

(P.T.O.)

- Q-3 Short answer type question. (any ten) [20]**
1. Explain aspect ratio.
  2. Explain interlaced scanning.
  3. Explain principle of superheterodyne.
  4. Explain good fidelity in radio receiver.
  5. Explain Converter transistor in radio receiver.
  6. List salient features of Broad Cast Receiver.
  7. Give classifications of a Radio Receiver.
  8. Explain importance of blanking pulse.
  9. Explain how many field's make one frame.
  10. Draw the circuit of BALUN.
  11. Draw the video IF amplifier response in TV receiver.
  12. Draw the diagram of IF trap in TV receiver..

- Q.4 Answer any four out of eight**
- Q.1 Draw the circuit of RF Amplifier and explain its working . [08]
- Q.2 Explain Automatic gain control in detail. [08]
- Q.3 Draw the block diagram of super hetero-dyne Radio Receiver and explain function of each block. [08]
- Q.4 List basic functions of AM Receiver and explain each in detail. [08]
- Q.5 Draw a neat diagram of Vidicon and explain its working in brief. [08]
- Q.6 List different components of composite video signal explain any one drawing necessary figure. [08]
- Q.7 Draw a neat block diagram of Black & White Broadcast TV Receiver and label it. [08]
- Q.8 List different inter stage coupling methods. Explain any two in detail. [08]

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