Code No: **R4204A** **R10** **Set No. 1**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

TELEVISION ENGINEERING

(Electronics & Communication Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1	a)	Explain in details the chromaticity diagram for obtaining different chrominance signal.	[8]
	b)	Explain Luminance and chrominance signals.	[7]
2	a)	What are the differences between positive and negative modulation techniques? Which of these modulation techniques is used in TV systems and Why?	[8]
	b)	Draw and explain the block diagram of TV transmitter.	[7]
3	a)	Explain the construction and operation of Silicon Diode Array Vidicon camera tube.	[8]
	b)	Distinguish between Monochrome TV camera and color camera.	[7]
4	a)	Explain the standards of American 525 line B&W TV system.	[8]
	b)	Explain color purity of picture tube.	[7]
5	a)	With neat sketch explain the RF tuner and IF subsystem of Monochrome TV receiver.	[8]
	b)	What is the significance of sync separation and explain its processing.	[7]
6	a)	What is the significance of AGC circuit? Distinguish the various types of AGC circuits used in TV system.	[8]
	b)	With neat sketch explain the IF subsystem of Black and White receivers.	[7]
7	a)	What is the significance of ACC amplifier? Explain in detail.	[8]
	b)	Write a short note on U, V demodulators.	[7]
8		Write short notes on	[8]
		a) Direct to Home Satellite TV b) deflection drive Ics	[7]

Code No: **R4204A** **R10** **Set No.2**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

TELEVISION ENGINEERING

(Electronics & Communication Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1 a) With neat sketch explain the procedure for generation of color signals. [8]

b) Explain in detail the PAL system. [7]

2 a) Compare positive and negative transmission. [8]

b) Explain the functional block for the sound system in a T.V. Receiver. [7]

3 a) Explain the construction and operation of Image orthicon camera tube and list its draw backs. [8]

b) What is the significance of CCD Image Sensors? Explain. [7]

4 a) With neat sketch explain the NTSC color system. [8]

b) Explain the precaution to be taken with the television picture tubes. [7]

5 a) Define flicker effect. What are the methods to avoid flicker effects? [8]

b) Explain how the Y signal is produced for transmission to the receiver. [7]

6 a) With neat sketch explain the IF subsystem of color receivers. [8]

b) Explain the schematic diagram of a remote control IR transmitter and IR receiver. [7]

7 a) Explain the principle and operation of 180^{o} PAL–SWITCH circuitry. [8]

b) Write a short notes on color Killer circuit. [7]

8 Write short notes on [8]

a) AFC b) k noise in sync pulses [7]

Code No: **R4204A** **R10** **Set No.3**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

TELEVISION ENGINEERING

(Electronics & Communication Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Draw and explain the block diagram of TV broadcasting system.	[8]
	b)	Explain the differences between Interlaced scanning and Sequential scanning.	[7]
2	a)	Explain the various Antennas for reliable transmission of TV signals.	[8]
	b)	Draw the block diagram to obtain U and V signals.	[7]
3	a)	Explain the construction and operation of Vidicon camera tube.	[8]
	b)	Explain the block diagram of a monochrome TV receiver.	[7]
4	a)	Give in detail the characteristics and specifications of picture tube.	[8]
	b)	Explain the 625-line monochrome system.	[7]
5	a)	Explain block diagram of RF tuner section.	[8]
	b)	With block diagram explain the PAL chroma Decoder IC 7A7699.	[7]
6	a)	What is the principle of Tuner operation and distinguish between VHF and UHF tuners.	[8]
	b)	Explain the detection process involved in video and intercarrier sound signal.	[7]
7	a)	Explain colourplexed composite video signal.	[8]
	b)	Write a short note on color Killer circuit.	[7]
8		Write short notes on	[8]
		a) Single ended AFC circuit. b) Digital TV Receiver	[7]

Code No: **R4204A** **R10** **Set No.4**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

TELEVISION ENGINEERING

(Electronics & Communication Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions

All Questions carry equal marks

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1	a)	Explain with neat sketches, the differences between Horizontal and vertical scanning processes.	[8]
	b)	Justify "All TV systems have odd number of Scanning lines".	[7]
2	a)	Explain VSB signal Transmission and Reception and merits and demerits.	[8]
	b)	Explain about TV broadcast channels.	[7]
3	a)	What are the various TV Camera tubes, compare their merits and demerits.	[8]
	b)	Explain the block diagram of a monochrome TV receiver.	[7]
4	a)	Explain the magnetic deflection used in television picture tubes.	[8]
	b)	Explain the construction and working principle of a Trinitron color picture tube.	[7]
5	a)	Explain various types of raster distortions.	[8]
	b)	Draw the block diagram of digital PAL-D color TV receiver.	[7]
6	a)	What is the procedure involved in noise cancellation in IF subsystem.	[8]
	b)	Explain various digital tuning techniques.	[7]
7	a)	Explain I signal, Q signal, B-Y signal, R-Y signal and G-Y signal used in colour TV System.	[8]
	b)	Write a short note on Burst phase discriminator.	[7]
8	a)	Write short notes on Digital Satellite TV.	[8]
	b)	Write short notes on separation of frame and line sync pulses.	[7]