

Code No: **R4204A**

**R10**

**Set No. 1**

**IV B.Tech II Semester Supplementary Examinations, July - 2014**

**TELEVISION ENGINEERING**

**(Electronics and Communication Engineering)**

**Time : 3 hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions carry equal marks**

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- 1 a) Explain about aspect ratio and picture resolution [8]  
b) Explain about image continuity and synchronization [7]
- 2 a) Explain about VSB transmission in TV transmission systems [10]  
b) Explain about standard channel BW. [5]
- 3 Discuss in detail about Camera tube types. [15]
- 4 a) Discuss about 625-line monochrome system in detail. [8]  
b) Explain about Beam deflection [7]
- 5 a) Explain about sync separation and processing [8]  
b) Draw and explain about scanning circuit [7]
- 6 a) Explain about vision IF subsystem of Black and White receivers [10]  
b) Explain about AGC [5]
- 7 a) Explain about Burst phase discriminator [8]  
b) Explain about ACC amplifier [7]
- 8 a) Explain about Receiver Antennas in detail [10]  
b) Explain about k noise in sync pulses [5]

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**Set No. 2**

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**Time : 3 hours**

**Max. Marks: 75**

**Answer any Five Questions  
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- 1 a) Discuss about PAL encoder. [8]  
b) Explain about encoding of colour difference signals in detail. [7]
- 2 a) Explain about TV broadcast channels. [8]  
b) Explain about sound signal transmission. [7]
- 3 Draw and explain about Silicon Diode Array Vidicon. [15]
- 4 a) Explain about Monochromatic Picture tube in television systems. [10]  
b) Write about picture tube characteristics. [5]
- 5 a) Draw and explain about Electron tuners. [8]  
b) Draw and explain about raster circuits. [7]
- 6 a) Draw and explain about video and inter carrier sound signal detection. [10]  
b) Explain about noise cancellation. [5]
- 7 a) Draw and explain about Indent and colour killer circuits [8]  
b) Explain about Color burst separation. [7]
- 8 a) Draw and explain about Deflection Oscillator in detail [10]  
b) Explain about AFC. [5]

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**Set No. 3**

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**Time : 3 hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions carry equal marks**

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- 1 a) Explain about Perception of brightness and colours [8]  
b) Explain about additive colour mixing. [7]
- 2 a) Explain about Picture signal transmission. [10]  
b) Write the difference between positive and negative modulation [5]
- 3 Discuss in detail about Monochrome TV camera and color cameras [15]
- 4 a) Explain about American 525 line B&W TV system [10]  
b) Write about picture tube specifications. [5]
- 5 Draw and explain in detail about video amplifier. [15]
- 6 a) Explain about remote control of receiver functions. [8]  
b) Draw and explain about Colour receiver IF subsystem. [7]
- 7 a) Explain about separation of U and V signals. [8]  
b) Explain about U & V demodulators. [7]
- 8 a) Explain about Direct to Home Satellite TV. [8]  
b) Explain about Digital TV Receiver. [7]

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**Set No. 4**

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**(Electronics and Communication Engineering)**

**Time : 3 hours**

**Max. Marks: 75**

**Answer any Five Questions  
All Questions carry equal marks**

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- 1 Explain about TV transmitter and receivers in detail. [15]
- 2 a) Explain about TV transmission Antennas in detail. [8]  
b) Explain about signal propagation in television systems. [7]
- 3 a) Explain about CCD Image Sensors. [8]  
b) What are the different Camera tube types and explain one in detail [7]
- 4 a) Draw and explain about Electrostatic focusing system in televisions. [10]  
b) Briefly explain about NTSC colour system. [5]
- 5 a) Draw and explain about IF subsystem. [8]  
b) Draw and explain about synchronous demodulators. [7]
- 6 Explain about digital tuning techniques in detail. [15]
- 7 a) Draw and explain about Reference oscillator. [8]  
b) Explain about Colour signal mixing. [7]
- 8 a) Draw and explain about single ended AFC circuit. [8]  
b) Explain about Digital Terrestrial TV. [7]