

Code No: **R4204A****R10****Set No. 1****IV B.Tech II Semester Supplementary Examinations, July/August - 2017****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) Sketch the details of Horizontal blanking & sync pulses as well as Vertical blanking & sync pulses as per CCIR system B. [10]  
b) Why is the total number of scanning lines kept odd in all TV systems? [5]
- 2 a) What are the advantages of IF modulation over direct modulation in a TV transmitter? Explain in detail. [8]  
b) Explain the need of VSB in picture transmission in TV system. [7]
- 3 a) Explain the working principle of Image orthicon camera tube and list its drawbacks. [8]  
b) Explain the functions of anti-coment gun. [7]
- 4 a) What are the different types of color picture tubes? Explain any one of them in detail. [8]  
b) Describe the features of American 525 line B&W TV system standard. [7]
- 5 a) Explain the role of video amplifier in a TV receiver in terms of the input signal, frequency response & output signal it is required to handle. [8]  
b) Explain the principle of electron tuner with a neat circuit diagram. [7]
- 6 a) Describe the functional operation of staggered tuning and synchronous tuning of IF amplifier stages. [8]  
b) Explain the operation of keying pulses for AGC from horizontal output stage. [7]
- 7 a) Explain the PAL-D decoder with the help of a neat block diagram. [7]  
b) Describe the principle of additive and subtractive color signal mixing. [8]
- 8 a) Why AFC is employed in horizontal sync section of TV receiver? [7]  
b) Explain the operation of deflection oscillator with a neat sketch. [8]