

SHRI SANT GADGE BABA COLLEGE OF ENGINEERING & TECHNOLOGY,
BHUSAWAL

Department of Electronics & Communication Engineering

Subject: Television & Consumer Electronics (TV& CE)

BE (E&C)-SEM-II

UNIVERSITY PAPER QUESTIONS BANK

UNIT-I

*** April/May-2009 ***

1. Describe in detail construction & working principle of vidicon camera tube. **10**
2. Explain the visual characteristic of human eye. Also explain how these affect the television system standards for scanning. **10**
3. Write notes on:
 - i) VSB transmission.
 - ii) Composite video signal. **10**

*** Nov/Dec-2009 ***

4. Draw and explain construction and working principle of image orthicon camera tube. **10**
5. i) Define scanning? Why it is necessary in TV transmission. **05**
ii) Draw and explain composite Video signal. **05**
6. Draw block diagram of Monochrome TV receiver and explain the same. **10**

*** April/May-2010 ***

7. Why scanning is necessary for transmission of picture? What is interlaced scanning? How it avoided flicker? What is required bandwidth? **10**
8. Draw the complete diagram composite video signal. Explain each signal in detail. **10**
9. Why FM is not used for transmission of TV signal? What is VSB? Give it advantages. **10**

*** Nov/Dec-2010 ***

10. Draw and explain the block schematic to show how the video signal & audio signal is modulated & processed at the transmitting end. **10**
11. Write notes on:
- i) TV broadcast channels.
 - ii) CCIR-B standards for B&W TV. **10**
12. Draw and explain the PIN structure used in plumbicon camera tube in detail. Explain the complete working of plumbicon camera tube alongwith the camera characteristics. **10**

*** April/May-2011 ***

13. Sketch composite video signal waveform for at least three successive lines and indicate:
- i) Extreme white level
 - ii) Blanking level
 - iii) Pedestal height
 - iv) Sync. Pulse level and explain it. **10**
14. Explain complete block diagram of monochrome TV receiver. **10**
15. Explain 'Dark Current' in vidicon camera tube; and explain how the inherent smear effect is overcome in P-I-N structure of Plumbicon camera tube. **10**

*** Nov/Dec-2011 ***

16. Draw and explain construction and working principle of saticon camera tube. **10**
17. Draw and explain block diagram of the monochrome TV receiver. **10**
18. Write notes on:
- i) Composite Video signal.
 - ii) Interlace Scanning. **10**

*** April/May-2012 ***

19. Explain the following terms.
- i) Synchronization.
 - ii) Video bandwidth.
 - iii) Kell factor.
 - iv) Aspect ratio &
 - v) Resolution. **10**

20. Explain why a TV station uses am picture transmitter & fm sound transmitter. **10**
21. Draw and explain the working of plumbicon camera tube. Mention typical characteristics. **10**

*** Nov/Dec-2012 ***

22. Sketch composite video signal & show the details horizontal blanking pulse, sync pulse & camera video signal with extreme black & white levels & explain it. **10**
23. What is active interlace scanning? Explain how it reduce flicker & conserves the bandwidth. **10**
24. Explain the opening principle of Image Orthicon camera tube with the help of neat diagram. **10**

*** April/May-2013 ***

25. Draw and explain construction & working principle of plumbicon camera tube. **10**
26. Draw and explain complete block diagram of monochrome television receiver. **10**
27. Write notes on:
- i) Interlace Scanning.
 - ii) Vestigial sideband transmission signal. **10**

UNIT-II

*** April/May-2009 ***

1. Draw the block diagram of NTSC encoder & decoder & explain their operation. **10**
2. Draw & explain block diagram of colour TV receiver. **10**
3. What are the features of colour television system that make them compatible with monochrome system? What are the constraints imposed on performance due to compatibility. **10**

*** Nov/Dec-2009 ***

4. Draw and explain block diagram of SECAM encoder and decoder. **10**
5. Write note on:
 - i) Process of colour mixing.
 - ii) Colour TV Transmitter. **10**
6. Compare the salient features of PAL, SECAM and NTSC system. **10**

*** April/May-2010 ***

7. Draw and explain block diagram of colour TV receiver for PAL system. **10**
8. Explain working principle of vidicon camera tube? Draw its necessary diagram & give its specification in details. **10**
9. Draw the block diagram of NTSC encoder and decoder & explain their operations. **10**

*** Nov/Dec-2010 ***

10. Describe the construction & working of a colour TV camera & its optical system. Also discuss the main characteristics of human eye with regard to perception of colour. **10**
11. Describe how static convergence & dynamic convergence are adjusted in a colour TV. **10**
12. Write note on:
 - i) Interleaving colour signal.
 - ii) EHT generation. **10**

*** April/May-2011 ***

13. i) Compare NTSC, SECAM, PAL system.
ii) Enlist CCIR-B standards. 10
14. How by frequency interleaving the colour information is accommodated within same channel bandwidth of 7MHz. 10
15. Draw the Delta gun colour picture tube and explain its working. How the colour rasters generated? 10

*** Nov/Dec-2011 ***

16. Draw the block diagram of colour TV transmitter & explain the function of each block. 10
17. Draw & explain the block diagram of NTSC encoder & decoder. 10
18. Write note on:
i) Additive & Subtractive mixing.
ii) Compatibility & reverse compatibility for colour TV transmission. 10

*** April/May-2012 ***

19. Sketch the sectional view of a picture tube employing electrostatic focusing & electromagnetic deflection. 10
20. Compare NTSC, SECAM & PAL system. Which one being used in our India? Give the details of the standard used in India. 10
21. Draw & explain complete block diagram of colour TV receiver for PAL system. 10

*** Nov/Dec-2012 ***

22. What do you mean by
i) Hue ii) Chrominance
ii) Luminance iv) Compatibility 10
23. With the help of neat diagram explain complete working of P-I-L colour picture tube. 10
24. Draw the block diagram of typical colour TV receiver & label all the sections & explain it. 10

*** April/May-2013 ***

25. Write notes on:

- i) Frequency interleaving technique.
- ii) NTSC system.

10

26. Draw and explain in detail the block diagram of SECAM encoder & decoder .

10

27. Write notes on:

- i) Compatibility issues in colour TV transmission.
- ii) Colour mixing.

10

UNIT-III

*** April/May-2009 ***

1. What is MPEG? Hence explain in detail how MPEG compresses video data. **10**
2. Draw the block diagram of digital TV transmitter giving the function of each block. **10**
3. Write Note on:
 - i) DTH system.
 - ii) CCTV. **10**

*** Nov/Dec-2009 ***

4. Write Note on:
 - i) MPEG
 - ii) HDTV. **10**
5. Write Note on:
 - i) LCD TV
 - ii) DTH system. **10**
6. i) Draw the block diagram of digital TV transmitter & explain it in brief. **06**
ii) Explain JPEG technique in brief. **04**

*** April/May-2010 ***

7. Draw the block diagram of digital TV transmitter. Explain digital compression technique. **10**
8. Discuss HDTV transmitter & receiver in detail. **10**
9. Write Note on:
 - i) Plasma TV.
 - ii) LCD TV. **10**

*** Nov/Dec-2010 ***

10. What do you understand by high definition TV system? What are the various HDTV parameters?
Explain the block diagram of HDTV receiver. **10**
11. Write Note on:
 - i) Video on demand.
 - ii) CC TV. **10**

12. Draw & explain the block schematic of Digital Television Receiver in detail. **10**

*** April/May-2011 ***

13. With the help of diagram explain how the TV signals being transmitted by using DTH system. **10**

14. Draw the block diagram of digital TV receiver and explain its complete working. **10**

15. Write short note on:

i) CCTV

ii) Video on demand facility. **10**

*** Nov/Dec-2011 ***

16. Draw HDTV transmitter & receiver. Explain it in detail. **10**

17. Write short note on:

i) 3D Digital TV

ii) JPEG. **10**

18. Explain in brief:

i) DTH system.

ii) Digital TV receiver. **10**

*** April/May-2012 ***

19. Mention various advantages of Digital TV & explain the Digital TV receiver with the help of block diagram. **10**

20. Explain HDTV system. What are the various HDTV parameters? What is the principle of producing 3D effect. **10**

21. with the help of neat diagram how does the TV signal being transmitted by using DTH system. **10**

*** Nov/Dec-2012 ***

22. Draw & explain the block diagram of CCTV systems. Also give the applications of CCTV. **10**

23. Write short note on:

i) DTH system.

ii) GPEG technique. **10**

24. Draw the block schematic of Digital TV receiver & explain their working. **10**

*** April/May-2013 ***

25. What is HDTV system? Explain any two HDTV parameters? Also, explain the block diagram of HDTV receiver **10**
26. Write notes on:
- i) DTH system.
 - ii) CCTV. **10**
27. Write notes on:
- i) Digital compression techniques.
 - ii) Digital television transmitter. **10**

UNIT-IV

*** April/May-2009 ***

1. Draw the block diagram of disc recording & reproduction system & explain the function of each block. 10
2. What is P.A. system? Hence describe P.A. system installation plan for public meeting in public Park. 10
3. i) What is stereophony? How does it differ from monophonic system? Explain it with neat sketch. 10
ii) Explain in brief optical recording on compact disc. 10

*** Nov/Dec-2009 ***

4. Draw the block diagram optical recording & reproduction system. Explain it in detail. 10
5. Write note on:
 - i) Hi-Fi System.
 - ii) DVD & its specifications. 10
6. Write note on:
 - i) Requirement of P. A. system.
 - ii) Magnetic recording system. 10

*** April/May-2010 ***

7. Discuss in detail satellite radio reception. 10
8. Describe the P.A. system by giving the block diagram. Explain installation plan for an public meeting. 10
9. Describe laser vision system for recording & optical memory disc. 10

*** Nov/Dec-2010 ***

10. Give the relationship between gapwidth, tape speed & frequency & draw the block diagram of magnetic recording & reproduction system. 10
11. Compare Monophang & Stereophony system. Also give the procedure which is adopted for practical stereo system. 10

12. Write note on:

i) PA System.

ii) Satellite Radio Reception.

10

*** April/May-2011 ***

13. Explain recording of sound on CD.

10

14. Draw and explain the block diagram of magnetic recording and reproduction.

10

15. Write short note on:

i) PA system

ii) Satellite Radio Reception

10

*** Nov/Dec-2011 ***

16. Draw the block diagram of magnetic recording and reproducing system.

10

17. What do you mean by stereophony? How does it differ from monophonic system? Explain it in detail with neat sketch.

10

18. Write short note on:

i) PA system

ii) Satellite Radio Reception

10

*** April/May-2012 ***

19. What are the different types of reproducing cartridge? Describe any one in brief? Explain how sound signal is reproduced? Explain the function of each block with the help of neat block schematic.

10

20. Describe Public address system & also explain installation plan for public meeting.

10

21. What do you mean by stereophony? How does it differ from monophonic system? Explain it detail with neat sketch.

10

*** Nov/Dec-2012 ***

22. Explain the cause of Wow, flutter & rumble noises in the tape system. How they can be reduced? Mention the relationship between tape speed, Head gap & the maximum frequency of recording.

10

23. What is the need of PA system? Describe PA system & also explain the installation plan for public meeting. **10**
24. List advantages of CD. Mention specifications of CD & with the help of neat diagram explain working of optical recording in CD. **10**

*** April/May-2013 ***

25. Draw the block diagram of disc recording and reproduction system. Explain the function of each block. **10**
26. Explain in brief the working of Public Address System. Hence, draw & explain its installation plan for an Auditorium. **10**
27. Write notes on:
- i) Satellite radio reception.
 - ii) Monophony & stereophony system. **10**

UNIT-V

*** April/May-2009 ***

1. Draw the block diagram of FAX machine & explain its working. Also give its specifications. **10**
2. Explain operation of solar cell with neat diagram & hence state advantages & disadvantages of solar panels. **10**
3. Write note on:
 - i) DVD player.
 - ii) Microwave oven. **10**

*** Nov/Dec-2009 ***

4. Explain operation of Microwave Oven. Enlist its specification. **10**
5. Write Short note on:
 - i) Solar Cells.
 - ii) Palm Top. **10**
6. Write note on:
 - i) FAX machine.
 - ii) CD Player. **10**

*** April/May-2010 ***

7. Draw the block diagram of washing machine & explain operation in detail. **10**
8. What are the different types of FAX system? Explain the working of FAX with neat diagram. **10**
9. Discuss different application of internet in detail. Explain E-mail, FTP, WWW. **10**

*** Nov/Dec-2010 ***

10. Explain operation of washing machine with the help of diagram. **10**
11. Draw the block diagram of CD player & explain it in detail. Also mention specification of CD. **10**
12. Write note on:
 - i) Pen drive.
 - ii) Video games. **10**

*** April/May-2011 ***

13. Explain how fuzzy logic is used in washing machine and explain the working of washing machine. 10
14. Explain the working of microwave oven with neat sketch mention its advantages. 10
15. Write short note on:
- i) Video games
 - ii) Digital library 10

*** Nov/Dec-2011 ***

16. Explain operation of solar cell with neat diagram. Also state its advantages & disadvantages. 10
17. Write short note on:
- i) DVD Player
 - ii) FAX Machine 10
18. Draw the block diagram of washing machine & explain its operation in detail. Also give its specifications. 10

*** April/May-2012 ***

19. Explain how fuzzy logic is used in washing machine? What are the different types of washing machine? Explain the working of washing machine with the help of diagram. 10
20. What are the different types of FAX system? Explain the working of FAX machine with block schematic. 10
21. Write note on:
- i) Pen drive.
 - ii) Video games. 10

*** Nov/Dec-2012 ***

22. Explain the operation of washing machine with neat diagram. 10
23. With neat diagram explain the working of facsimile machine. 10
24. Write note on:
- i) DVD Player
 - ii) Pen Drive. 10

*** April/May-2013 ***

25. Explain operation of solar cells with neat diagram. Also, give its applications, advantages & disadvantages. **10**
26. Draw the block diagram of CD player & explain it in detail. Also, give the various specifications of CD. **10**
27. Write notes on:
- i) Microwave oven.
 - ii) FAX machine. **10**