

Roll No. \_\_\_\_\_

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**SVIS 303 A -16**  
**B.Sc. VIth Semester Degree Examination**  
**Electronics**  
**(Communication Electronics-II)**  
**Paper - 6.1**

Time : 3 Hours

Maximum Marks : 80

**Texts:**

- 1) Answer **All** questions from section - A
- 2) Answer any **Five** questions from section B
- 3) Answer any **Four** questions from section - C

**Section -A**

1. Choose the correct answer

**(1×5=5)**

- i) One of the following camera tubes is based on photo emissive principle
  - a) Vidicon
  - b) Saticon
  - c) Image orthicon
  - d) None of these
- ii) The combination of red and green yields
  - a) Blue
  - b) Cyan
  - c) Magenta
  - d) Yellow
- iii) The networks which interconnect multiple stations ever a very small are called
  - a) LAN
  - b) WAN
  - c) MAN
  - d) None of these

- iv) Pulse communication system that is inherently highly immune to noise is
- PWM
  - PAM
  - PPM
  - PCM
- v) Optical fibre cable works on the principle of
- Reflection
  - Refraction
  - Total internal reflection
  - None of these

2. Fill in the blanks

(1×5=5)

- The video band width in Indian TV system is \_\_\_\_\_
- In PAL system colour sub carrier frequency is \_\_\_ MHz
- The minimum number of geostationary satellites required for global coverage are \_\_\_\_\_
- The PAM signal can be demodulated using \_\_\_\_\_ filter
- In PSK, the binary signal is used to switch the phase of the signal between \_\_\_ and \_\_\_\_\_

3. State the following statements are True or False

(1×5=5)

- Picture information is transmitted in TV signals by FM
- Companding is used to protect small signals in PCM from quantizing distortion.
- Uplink and downlink frequencies of earth stations are same.
- The colour of any object is distinguished by its hue or tint.
- The core of an optical fibre and its cladding have the same optical characteristics.

**Section -B**

Answer any five of the following.

(5×5=25)

- Explain in brief camera tube characteristics.
- What is pulse modulation. Draw the wave forms showing four prominent methods of pulse modulation

6. What is internet? Explain
7. With the help of wave form describe frequency shift keying (FSK)
8. Briefly explain satellite links
9. Explain colour sub-carrier
10. List the advantages and disadvantages of optical fibre communication system.

**Section -C**

Answer any four questions of the following

**(10×4=40)**

11. Draw the block diagram of monochrome TV transmitter and explain the function of each block **(10)**
12. a) Write the standard TV channel allocation for GCIR-B system  
b) Explain luminance and chrominance signal. **(5+5)**
13. a) Explain code division multiple access (CDMA) in detail with suitable diagram.  
b) List the advantages of CDMA **(7+3)**
14. a) Explain the generation of pulse width modulation with suitable diagram  
b) List the advantages of DPSK **(7+3)**
15. a) With neat diagram, explain the different types of optical fibre.  
b) Calculate the numerical aperture of an optical fibre. Given, the refractive index of the core is 1.623 and cladding is 1.522 and also find out the angle of acceptance. **(7+3)**
16. Write a note on **(5+5)**
  - a) WAP protocol
  - b) Probability of bit error in base band transmission

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