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**Question Paper Code: U3504**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Electrical and Electronics Engineering

**21EEV504- CONSUMER ELECTRONICS**

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5 x 1 = 5 Marks)

1. Diaphragm is made up of CO2- U  
(a) Aluminium      (b) Duralumin      (c) Carbon      (d) Copper
2. In FM the amount of variation from the carrier frequency is called CO1-U  
(a) depth of modulation      (b) frequency deviation  
(c) guard band      (d) modulation index
3. In NTSC standards, the total number of equalizing pulses per field is CO1-U  
(a) 10      (b) 12      (c) 5      (d) 6
4. A method of multiplexing in which the total frequency spectrum available CO2-U  
is used by channel, but only for part of the time.  
(a) FDM      (b) TDM      (c) SDM      (d) NOTA
5. When the door of a refrigerator is kept open, the temperature of room will CO2-U  
(a) increase      (b) decrease      (c) remain same      (d) none of the above

PART – B (5 x 3= 15 Marks)

6. Express the power dissipated in a  $15 \Omega$  resistor in decibel relative to 1 mW CO2-App  
when the voltage across the resistor is 1.5 V rms.
7. Define : (i) Fidelity (ii) Selectivity CO1-U
8. What is additive mixing? CO1-U
9. What role is played by DTMF tones in answering machines? CO2-U
10. What is the use of labda sensor? CO2-U

PART – C (5 x 16= 80 Marks)

11. (a) Compare the different types of microphones with their specification. CO2-U (16)
- Or
- (b) Compare the parameters of moving-coil, ribbon, crystal, condenser and carbon microphones. Discuss applications of each type. CO2-U (16)
12. (a) Analyze the specifications of various devices used to store audio information and discuss on each in detail. CO5-Ana (16)
- Or
- (b) How the audio signal can be retrieved from the storage device? Explain it in detail. CO5-Ana (16)
13. (a) Describe the components used in Remote Control and discuss on use of every control option. CO1-U (16)
- Or
- (b) Explain in detail about Video recording system with neat block diagram. CO1-U (16)
14. (a) What is the advantage of transmitting telephone voice in digital form? Explain in detail about digital exchanges. CO2-U (16)
- Or
- (b) Mention the different types of cellular systems. Also, explain the steps involved in making a call between two mobile users. CO2-U (16)
15. (a) Describe the function of refrigeration systems with neat schematic. CO2-U (16)
- Or
- (b) Explain in detail about Air conditioning system. CO2-U (16)