

23/4/19

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B.E / B.Tech / B. Arch (FULL TIME) - END SEMESTER EXAMINATIONS  
APRIL/MAY 2019  
ELECTRONICS AND COMMUNICATION ENGINEERING  
SIXTH SEMESTER  
EC7692 ELECTRONICS ENGINEERING (OPEN ELECTIVE)  
(REGULATION 2015)

Time: 3 Hours

Answer ALL Questions

Max.Marks 100

PART-A (10 x 2 = 20 Marks)

1. What is meant by impedance. Differentiate high and low impedance
2. What is Optical Fiber and differentiate its Types
3. Define Common Emitter Configuration with suitable circuit diagram
4. Draw the I-V Characteristics for Zener diode
5. Simplify  $XY+XYZ+XYZ'+X'YZ$
6. Draw the Excitation table for SR flip flop to D flip flop and verify with K-Map
7. What is PCB. Define Top and Bottom Metal layer
8. Define Scale/Level of IC's and what are the Applications
9. Write the Application for Automotive Electronics
10. Define Sensor and write its Various types



PART - B ( 5 x 13 = 65 Marks)

11. (a) (i) Explain LASER in detail with Applications (10)  
(ii) What is Connectors and define its types (3)
- (OR)
- (b) Briefly discuss about Various types of Capacitors and Inductors (13)

12. (a) Explain the Working Principle of SCR in detail with Advantages and Disadvantages. (13)

(OR)

(b) Explain in detail JFET and UJT Operations with its Characteristics and mark the three Operating Regions. (13)

13.(a) (i) Simplify the following Boolean function, verify the result and draw the logic diagram.  $F(w, x, y, z) = \sum (0, 1, 2, 4, 5, 6, 8, 9, 12, 13, 14)$  (8)

(ii) Draw the Circuit for 3:8 Decoder and verify its truth table (5)

(OR)

(b) Briefly Discuss about various types of ADC and DAC with Applications (13)

14.(a) Briefly explain about MOSFET operation with its characteristics and Applications. (13)

(OR)

(b) Explain in detail each steps for VLSI fabrications. (13)

15. (a) (i) Explain in briefly about E-Nose. (8)

(ii) What is data Processing and Classify its Types. (5)

(OR)

(b) Explain in detail about Navigation, Safety and Communication Systems. (13)

#### PART - C (1X 15= 15)

16. Design 32 to 1 Multiplexer using for Four 8 to 1 Multiplexer and 2 to 4 decoder. (15)

