

# CBCS SCHEME



BESCK204C

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OR

|     |    |   |    |    |     |
|-----|----|---|----|----|-----|
| Q.6 | a. | Express the Boolean $F = A + B'C$ in a sum of minterms and $G = xy + x'z$ in a product of maxterms. | 10 | L2 | CO2 |
|     | b. | Design a half adder by constructing the truth table and simplify the output equations.              | 10 | L1 | CO2 |

Module – 4

|     |    |  |    |    |     |
|-----|----|--|----|----|-----|
| Q.7 | a. | i) Write any 5 differences between RISC and CISC processor.<br>ii) Write any 5 differences between Microprocessor and Microcontroller. | 10 | L2 | CO3 |
|     | b. | Write the differences between embedded system vs general computing system.   | 10 | L2 | CO2 |

OR

|     |    |   |    |    |     |
|-----|----|---|----|----|-----|
| Q.8 | a. | With neat diagram, explain the major elements of embedded system.         | 10 | L1 | CO2 |
|     | b. | Define embedded system and explain the classification of embedded system. | 10 | L1 | CO2 |

Module – 5

|     |    |   |    |    |     |
|-----|----|---|----|----|-----|
| Q.9 | a. | With neat diagram, explain the basic blocks used in communication system.                     | 10 | L1 | CO2 |
|     | b. | What are the advantages and disadvantages of digital communication over analog communication? | 10 | L1 | CO2 |

OR

|      |    |  |    |    |     |
|------|----|--|----|----|-----|
| Q.10 | a. | Explain the types of communication system available with neat diagram.   | 10 | L1 | CO2 |
|      | b. | Explain the need for modulation and explain briefly the types of modulation techniques used for communication. | 10 | L1 | CO1 |

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| Module – 1 |    |  | M  | L  | C   |
|------------|----|--|----|----|-----|
| Q.1        | a. | With neat block diagram, explain the working of a DC power supply also mention the principal components used in each block.  | 10 | L1 | CO2 |
|            | b. | With neat circuit diagram and waveform, explain the working operation of a Bi-phase rectifier circuit.   | 10 | L1 | CO2 |
| OR         |    |  |    |    |     |
| Q.2        | a. | Define feedback. What are the different types of feedback available, what are the advantages of negative feedback used in amplifier? Derive the overall gain for negative feed back. | 10 | L2 | CO3 |
|            | b. | Define amplifier, what are the different types of amplifier used in real time.   | 10 | L1 | CO2 |
| Module – 2 |    |  |    |    |     |
| Q.3        | a. | What is an oscillator and what are the conditions to be satisfied for a device to work as an oscillator.   | 10 | L1 | CO2 |
|            | b. | With neat diagram and waveform explain the working of RC phase shift oscillator.   | 10 | L1 | CO3 |
| OR         |    |  |    |    |     |
| Q.4        | a. | Explain the concept of openloop voltage gain input and output resistance, input offset voltage and slew rate of op-amp with relevant diagram.  | 10 | L1 | CO2 |
|            | b. | What is a operation amplifier? What are the op-amp characteristics in real time?   | 10 | L1 | CO2 |
| Module – 3 |    |  |    |    |     |
| Q.5        | a. | Design the AND, OR, NOT gate with the help of truth table.   | 8  | L1 | CO2 |
|            | b. | Using 10 complement subtract 72532-3250.   | 4  | L1 | CO1 |
|            | c. | Given two binary number $X = 1010100$ and $Y = 1000011$ perform the subtraction i) $X-Y$ ii) $Y-Y$ using 2's complement.   | 8  | L2 | CO2 |
| 1 of 2     |    |  |    |    |     |