

Roll No. 

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Total No. of Pages: 02  
Total No. of Questions: 09

**BCA (Sem.-2<sup>nd</sup>)**  
**DIGITAL CKT. & LOGIC DESIGN**  
**Subject Code: BC-205**  
**Paper ID: [B0209]**

Time: 3 Hrs.

Max. Marks: 60

**INSTRUCTIONS TO CANDIDATE:**

1. *Section-A is compulsory consisting of ten questions carrying two marks each.*
2. *Section-B contains six questions carrying ten marks each and a student has to attempt any four questions.*

**SECTION-A**

- Q1. a) Define BCD codes?  
 b) Give the logic circuit of 1:4 DEMUX?  
 c)  $(3A.2F)_{16} = (?)_{10}$   
 d) What are Binary Counters?  
 e) Give any example of SOP form?  
 f) Define don't care condition?  
 g) Define encoders?  
 h) Give the involution Law?  
 i) Define shift registers?  
 j) Define Hamming code?

**SECTION-B**

- Q2. Difference between encoders and decoders?  
 Q3. Explain the working of 8:3 line encoder?  
 Q4. Use De morgan's Theorem to simplify the expressions
- a)  $((A+B)' + C)'$
  - b)  $((A+B)' + (CD)')'$

- Q5. Explain 3 bit up down Asynchronous counter?
- Q6. Explain various error detecting and correcting codes?
- Q7. Discuss the working of Master slave JK Flip Flop?

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