

**Department of Electrical Engineering**  
**Sessional Assignment**  
**Course Details**

Course Title: Digital Logic Design (BTech) \_\_\_\_\_ Module: \_\_\_\_\_

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**Student Details**

Name: \_\_\_\_\_ Student ID: \_\_\_\_\_

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**Q1: Solve the below given Boolean Expressions:**

A.  $\overline{A}\overline{B}\overline{C}D + \overline{A}BCD + ABD$

B.  $AB + \overline{A}\overline{C} + \overline{A}\overline{B}C (AB + C)$

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**Q2 (A): Reduce the following function using K-map technique:**

$$f(A, B, C, D) = \sum m(0, 1, 4, 8, 9, 10)$$

**(B): Minimize the following expression in POS form:**

$$Y = (\overline{A} + \overline{B} + C + D)(\overline{A} + \overline{B} + \overline{C} + D)(\overline{A} + \overline{B} + \overline{C} + \overline{D})(\overline{A} + B + C + D)$$

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