

2nd QUIZ EXAMINATION of MA 205 DISCRETE MATHEMATICS in Maths Dept. BITD for BTECH (CSI) 3rd SEM. MO2024; TIME: Scheduled Class Time & room (25/10/2024)

Marks

- Q1. Use the definition of big oh (O) to prove that $\left| (3n^4 - 2n) / (5n - 1) \right| = O(n^3)$ 3
- Q2. Let $G = \mathbb{R} - \{-1\}$, prove that $(G, *)$ is a group under the composition $*$ define as $a * b = a + b + ab$; $\forall a, b \in G$. Is this group commutative? 3+1
- Q3. Show that permutation group S_3 with respect to multiplication (composition) is associative by an example. Is S_3 group commutative? 2+1