

SRM Institute of Science and Technology Thiruchirappalli



Department of Mathematics

Discrete Mathematics (21MAB302T)

Assignment-II

Submission Date: October 18, 2024

Answer All Questions

1. A total of 1232 students have taken a course in Tamil, 879 have taken a course in English and 114 have taken a course in Hindi. Further, 103 have taken courses in both Tamil and English, 23 have taken courses in both Tamil and Hindi and 14 have taken courses in both English and Hindi. If 2092 students have taken at least one of Tamil, English and Hindi, how many students have taken a course in all the three languages?
2. Find the number of integers between 1 and 100 both inclusive that are not divisible by (i) any of the integers 2, 3, 5 or 7. (ii) any of the integers 2, 3, 5 but not by 7.
3. Find the number of integers between 1 and 500 both inclusive that are not divisible by 7, 3 and 5.
4. Use Euclidean algorithm to find the integers ' m ' and ' n ' such that $423m + 198n = 9$.
5. Use Euclidean algorithm to find the integers ' m ' and ' n ' such that $100996m + 20048n = 28$.
6. Use Euclidean algorithm to find $\gcd(6773760, 12902400)$ and also express the linear combination of the given number.
7. Use Euclidean algorithm to find $\gcd(2464, 7469)$ and also express the linear combination of the given number.
8. Use Euclidean algorithm to find $\gcd(6060, 9888)$ and also express the linear combination of the given number.

Best wishes

