

December-23-03-5026
UG Computer Application Certificate Course Semester-I (NEP) Examination
Course Implemented From June-2023
Dec. -2023
Skill Enhancement Course
Mathematics – I – MS23SECBCA106

Total Marks : 25

Time : 2 Hours

- Que. 1 Solve the following. (Any Two) 10
1. State and prove De Morgan's Law.
 2. $1 + 3 + 5 + 7 + \dots + (2n-1) = n^2$ —
 3. If A = set of letters of word COLLEGE,
B = set of letters of word SCHOOL
Then find $A \Delta B$
- Que. 2 Solve the following. (Any Two) 10
1. Let a and b be integers and suppose Q(a,b) is Defined recursively by
 $Q(a,b) = \{(Q(a-b, a+b) + b, a \geq b$
Find Q(2,7), Q (5,3) and Q(15,2)
 2. Let $f: \mathbb{R} - \{-1\} \rightarrow \mathbb{R}$, $f(x) = \frac{1-x}{1+x}$ find fof.
 3. Let $f: \mathbb{R} \rightarrow \mathbb{R}$ and $g: \mathbb{R} \rightarrow \mathbb{R}$, $f(x) = 5x^2 - 2x + 4$, $g(x) = x^3 - 2$ find the formula of fog(x) and also find Fog (-2).
- Que. 3 Answer the Following. 05
1. Universal Set.
 2. Power Set.
 3. One-to- One Function.
 4. Floor Function.
 5. $\log_{10} 0.001$

4319117