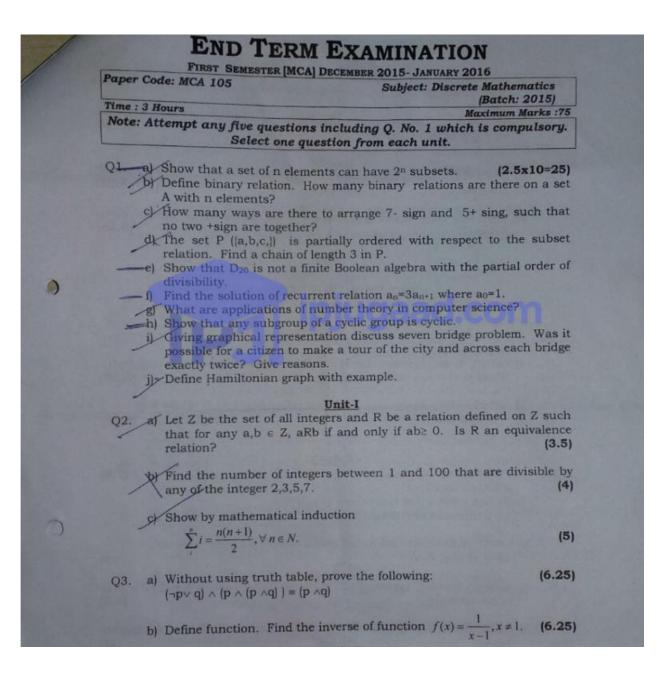
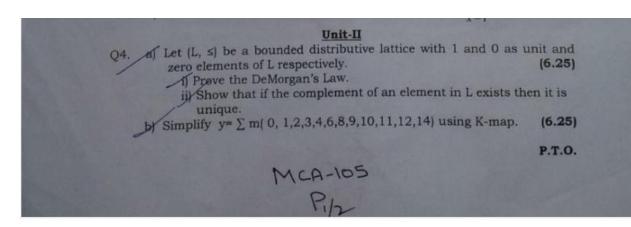
2016 Question Paper





- Q7. a) Let (G, *) be a group. Let $H = \{a: a \in G \text{ and } a*b=b*a \text{ for all } b \in G\}$. Show that H is a normal subgroup. (6.25)
 - b) Let (G, .) be a group. Let (H, .) be a subgroup of (G, .). Show that $G=H\cup Ha\cup Hb$, where $a,b\in G$. (6.25)

Unit-IV

Q8. a Differentiate between

(7.5)

if Graph and Tree
ii) Sub graphs and isomorphic graph
iii) Connected and complete graph

by Let G=(V,E) be an undirected graph with edges then show that $2e=\sum deg(v)$, $v\in V$.

(5)

- Q9. a) Explain inorder, preorder and postorder tree traversals with the help of an example.
 - b) Show that a graph is two colorable if and only if it is a bipartite graph.

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