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Degree: (M.A)

Specialization: Conservation of monuments

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Title of thesis: A study of the treatment and conservation of the monumental structures erected on rock mass: "applied on the mosque and the dome of Shaheen alKhalwati at cliff of Gebel Al- Moqqattam"

Summary: Thesis is divided into four chapters.

Chapter one: the first part included a historical study about Islamic invasion and the development of the mosque till the Ottoman period. The second part included a theorem study of the geological formation of the area, the third part included the descriptive study of the complex of Shaheen El-Khalwati and the plan of the mosque and the dome, and illustrative photos.

Chapter two: the first part included a detailed study of the techniques of building by using stones in ancient times, in addition to the description of the techniques of the buildings by using fired bricks and ancient mortar, and the improving additions. The second part included the deterioration factors in the complex, which divided into interior causes related to the building materials and exterior causes which affect the monument and the study of the problem of the research as a special case rare in the field of archaeology.

Chapter three: the first part shows the methods of the examinations of the chemical properties of the samples, we examined the samples by the atomic absorption and the polarizing microscope, scanning electron microscope. This chapter also included a study of the clay materials, complete study of the physical properties and the mechanical properties, this chapter ended with conclusion.

Chapter four: the first part included theorem study of the methods of supporting mountains slopes, rather than restoration methods and chemical treatment with strong mixtures. The second part included experimental study of lime stone samples after applying treatment materials. Conclusion of the changes happened.