



Damietta University
Faculty of Science
Physics Department
Oral Exam



4th year Mathematics

Quantum Mechanics

Mark: 10 Marks

Answer the Following Question

a) What do we mean by the following statements:

1- A quantum mechanical operator is hermitian.

2- The Hamiltonian is a constant of motion.

3- The quantum mechanical operators commute with each other.

4- The matrix of the operator is diagonal and has equal diagonal elements.

Answer two of the Following:

b) What the mean difference between the quantum problems solved by the perturbation method, the variational method and the WKB approximation .

c) What is the difference between degenerate and non-degenerate quantum states?

Best wishes

مع تمنياتي بدوام التوفيق

Prof. Dr. Mustafa Selim
