Part (one)

Attempt the following Qs & assume any required data:-

Q#1

a) By the line diagram show the construction of the cotton card feeding section.

b) Write a formula for calculating (a+b) of a dish plate that concerns a cotton card.

c) Determine the dimensions of the dish plate front edge (a+b+c) of a cotton card when it is required to process Giza 91 (G91) with UHM = 30.2 mm, licker in radius = 115 mm & fed cotton fleece thickness = 16 mm.

Q#2

What are the basic engineering requirements in the manufacturing technology of a cotton card main-cylinder?

Q#3

a) Derive a formula for calculating the load intensity q during metallic wire winding on the main cylinder of a carding engine.

b) Calculate the load intensity q for a cotton card swift shell during metallic wire winding by using:

- Cylinder radius = 636 mm
- Metallic wire thickness = 2 mm
- Tesion during winding = 100 N.

With Best Wishes

Prof. Dr. Eng. Ibrahim A. El-Hawary