Research submission: From 31 May to 7 June 2020

a) <u>**Write a research project in ONE of the following topics:**</u>

Topic No. 1

Discrete random variable: pdf; joint pdf ;conditional pdf; margenal pdf ; cases of independent; expectation;variance; covariance. Some discrete pdf: binomial disribution; poisson disribution; the relation between them. Using applied example to show that.

Topic No. 2

Continous random variable: pdf; joint pdf ;conditional pdf; margenal pdf ; cases of independent; expectation;variance; covariance. Some continous pdf: normal disribution; standared normal disribution; the relation between them. Using applied example to show that.

Topic No. 3

Events: sample space; mutually exclusive, conditional; cases of independent. Theorems used in Bayes rule; important of Bayes rule in machine defective. Using applied examples to show that.

b) <u>**Notes: please, your research must contain the following elements:**</u>

- μ, λt, $\sum$, σ^2

GOOD LUCK,

Examiner(s)	**Program Coordinator**
Dr.Amal Abo El-khair	**Dr. Ahmed Taha**