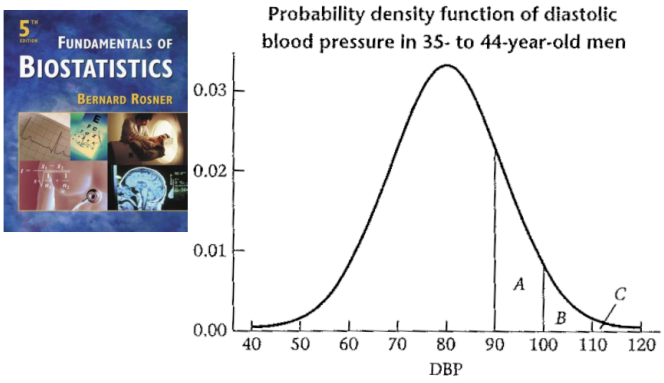
THE *Abdus Salam* INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS
MASTER OF ADVANCED STUDIES IN MEDICAL PHYSICS

Homework #2

Student name:

Course: *2024 Statistics for Medicine* – Professor: *Massimo Borelli*
Due date: *January 24th, 2024*

Question



1. Refer to the above graph as proposed by Bernard Rosner, concerning the normally distributed diastolic blood pressure.

2. (Integration) Evaluate by means of JASP the probabilities of region A, B and C.

3. (Not compulsory - optional for experienced students) **the Monte Carlo methods**. Simulate 10000 normally distributed random point to replicate the above graph, and numerically compute the estimates for A, B and C. Verify the equivalence of findings.

4. Report the 2. (and optionally the 3.) outputs, eventually arranged in a more readable form, into the **Answer** section of the present Homework # 2.

5. Go to `https://forms.gle/12u14E7d2j7vuhts7` in order to upload your final .pdf document.

Answer.