INDIAN INSTITUTE OF INFORMATION TECHNOLOGY DHARWAD
MID-TERM EXAMINATION-2021
DS105 --PROBABILITY and STATISTICS

Date: 07-06-2021   Duration: 60 minutes   Max. Marks:30   Reg. No.:

Note:
- *Clearly mention the assumptions made (if any) in derivations or solving problems.*
- *Answer all questions, briefly to the point. All questions carry equal marks.*

1. Define Non-central and central moments. Find the relationship between central and non-central moments. **(2+8=10M)**

2. Find first four central moments of the following data and also find the Sheppard's corrections. **(6+4=10M)**

C.I	10-20	20-30	30-40	40-50	50-60	60-70	70-80
F	1	18	63	108	72	27	3

3. Fit a best suitable line for the following data. **(5=5M)**

Year	1796	1977	1978	1979	1980	1981
Sales	15	17	19	21	24	29

4. Find the mean and variance of Binomial distribution (i.e. B(n,p) using moment generating function. **(5=5M)**