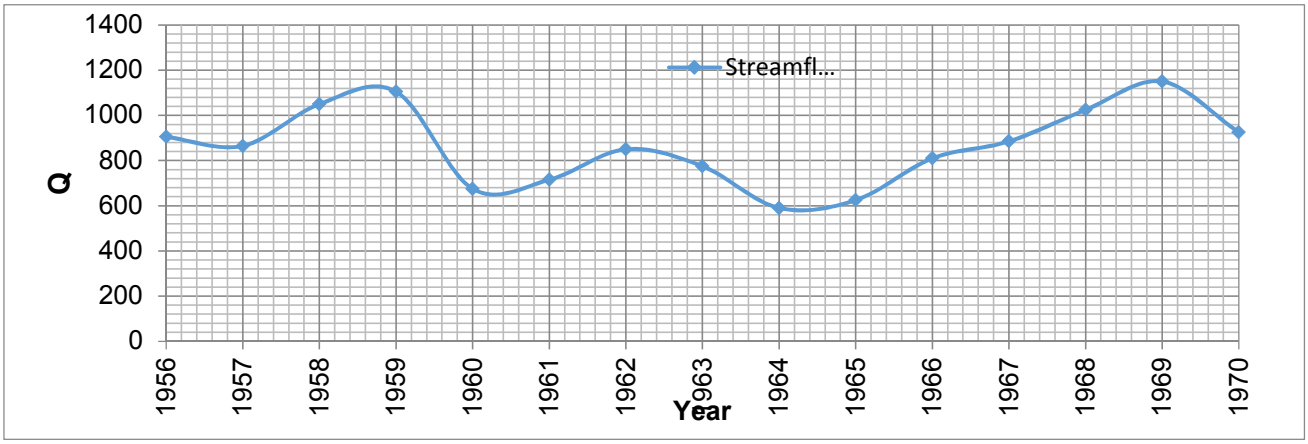
BULE HORA UNIVERSITY
COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF HYDRAULIC AND WATER RESOURCES EN'G

Course: Hydropower Engineering-1 ***Deadline-within two Weeks***
Course Number: HWRE3171 ***Target group: 3rd Year HWRE.***
Course Instructor: Wakgari E. **Assignment-2 (Group content-5-Stud)**

1. The record of average yearly flow in a river '**X**' for 15 years as the following:-



Year	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Flow (m^3/s)	905	865	1050	1105	675	715	850	775	590	625	810	885	1025	1150	925

a) Construct the flow duration curve for the river by the rank order method.

b) Construct the power duration curve if the available head is 15 m.

c) Calculate i) Q50 ii) Q30……(MW)

d) Calculate the average potential power and the technically available power with conveyance efficiency of 70% and overall efficiency of 80%. (……MW)