

IQRA NATIONAL UNIVERSITY, PESHAWAR

DEPARTMENT OF CIVIL ENGINEERING

MID TERM EXAMINATION (Summer Semester 2020)

SUBJECT; CE 324 Irrigation Engineering

Duration; 4hrs minutes

Instructor; Dr Jahangir Durrani

Total Marks ; 30

Note; Attempt all questions, draw neat sketches wherever necessary. All questions carry equal marks.

Q.1.a) Define “Delta” and Duty and derive their relationship in MKS and FPS systems.

b) If wheat requires about 9 cm of water after every 35 days and the base period or crop period of wheat is 140 days. Find out the delta for wheat?

C) Explain Indus Water Treaty.

D) Write significance of Duty of a crop.

Q.2.a) Explain the factors affecting consumptive use.

b) Wheat is to be grown at a certain place, the useful rainfall for the whole season is 10 cm and its cumulative consumptive use is 40cm. Determine consumptive irrigation requirement (CIR) and Field Irrigation Requirement (FIR) if the water application efficiency is 80%.

c) Explain Class A Pan Evaporation (E_p) measurement with the help of a diagram.

d) Explain Crop Seasons (Rabi and Kharif) and Kharif Rabi Ratio.

Q.3. Define and explain the following terms

a) Field Capacity

b) Permanent wilting point

c) Available and readily available moisture contents

d) Optimum utilization of water.