

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY

Winter Examination-2019

Subject Name : Irrigation Engineering

Subject Code : 4TE05IRE1

Branch: B.Tech (Civil)

Semester: 5

Date: 27/11/2019

Time: 10:30 To 01:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1	Attempt the following questions:	(14)
	a) Define the terms Permanent Wilting Point.	1
	b) What is meant by canal irrigation?	1
	c) Define leaching.	1
	d) Define Inundation canal.	1
	e) What is balancing depth in a canal?	1
	f) Write the relation between duty and delta.	1
	g) Define Groynes.	1
	h) Define Irrigation.	1
	i) Enlist the types of tube well.	1
	j) What is contour canal?	1
	k) Define aquifer.	1
	l) What is base period?	1
	m) What is canal alignment?	1
	n) Define basin irrigation.	1

Attempt any four questions from Q-2 to Q-8

Q-2	Attempt all questions	(14)
	a) Design an irrigation canal to carry discharge 5 cumecs. Take $m = 1.0$, $N=0.0225$ and B/D ratio 4.40.	7
	b) What do you understand by total planning concept (scope) of irrigation project?	7
Q-3	Attempt all questions	(14)
	a) What are the different methods of irrigation? Explain surface methods of irrigation.	7
	b) What are the various drainage system? Give advantages of open drain.	7
Q-4	Attempt all questions	(14)
	a) Explain the salient features of the drip irrigation system. What are the advantages and disadvantages of the drip irrigation?	7



- b) Explain the procedure for designing an irrigation channel using Kennedy's theory, when Q , N , m and S are given. 7
- Q-5 Attempt all questions (14)**
- a) Write short note on: Land reclamation 7
- b) Explain the classification of irrigation project. 7
- Q-6 Attempt all questions (14)**
- a) Explain in brief design of guide banks. 7
- b) Write short note on type of tube well. 7
- Q-7 Attempt all questions (14)**
- a) Explain in brief afflux embankment. 7
- b) Write short note on confined aquifer. 7
- Q-8 Attempt all questions (14)**
- a) Explain the procedure for designing an irrigation channel using Lacey's theory. 7
- b) What do you understand by waterlogging? What are the main causes of water logging? 7

