



	(b)	What measures can be taken to prevent high water table?	07
<b>Q-3</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(a)	Write short note on “Reclamation of saline soils by leaching method”.	06
	(b)	Calculate the farm conveyance efficiency and field water application efficiency when a stream of 150 l/s received at the farm gate after being diverted from a canal delivered 72 l/s to the field. During irrigation to wheat crop for 8 hour, 350 and 158 m <sup>3</sup> of water respectively were lost by run-off and deep percolation.	06
	(c)	Give classification of Drainage in brief.	02
<b>Q-4</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(a)	What is ‘Water User Organization’? Explain merit and demerit of water user’s organizations.	07
	(b)	Define water logging? Discuss causes and remedial measures of water logging.	07
<b>Q-5</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(a)	Compute the time required to irrigate a square area of 4 ha to a depth of 5 cm with two movable laterals 200 m long each fitted with 16 sprinklers at an interval of 13 m on each lateral. A sprinkler applies 1.25 cm of water per hour and the laterals are spaced at 20 m interval. Five hours are required to move the laterals each time.	08
	(b)	Define land grading. Enumerate various benefits and factors influencing land grading process.	06
<b>Q-6</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(a)	How would be the Remote Sensing and Geographical Information System helpful in canal irrigation system?	08
	(b)	Discuss in detail operation and maintenance of canal irrigation system.	06
<b>Q-7</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(a)	What step-by-step procedures for the hydraulic design of sprinkler Irrigation systems?	05
	(b)	Write a brief note on ‘Emitters’.	02
	(c)	The following data were obtained for determination of emission uniformity coefficient of a drip irrigation lateral: $q_{\min} = 35 \text{ l/s}$ , $q_{\max} = 60 \text{ l/s}$ , $C_v = 0.075$ and slope = 1.5 % determine emission uniformity coefficient.	07
<b>Q-8</b>		<b>Attempt all questions</b>	<b>(14)</b>
	(a)	Discuss the problems encountered in drip irrigation systems. Explain in brief how fertilizers and chemicals are applied in drip irrigation system?	08
	(b)	Distinguish between surface irrigation and subsurface irrigation.	06

