

Q.34 Define hydrological cycle in detail with the help of diagram.

Q.35 What is a divide wall and write the function of it.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the various methods for improving the canal water duty.

Q.37 Explain the classifications of dam in detail.

Q.38 Name the different type of spill ways. Explain any one in detail.

SECTION-E

Note: Attempt any two questions out of three questions. (2x25=50)

Q.39 Draw the layout of canal head works.

Q.40 Draw plan and cross section at D/S curved head of a guide bank showing its different components.

Q.41 Draw the X-Section of Sher Nehar Lower at RD 25000 with the following data:

| | | |
|-----|------------|--------|
| i | Bank level | 868.52 |
| ii | F.S. level | 867.02 |
| iii | BED level | 863.07 |
| iv | FSD/R | 3.95' |
| v | FB | 1.50' |
| vi | TW | 14.18 |

Side slope is 1 : 1 (All value are in feet) assume any

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Roll No.

5th Sem / Branch : Civil, Brick Tech., Constr. Mgmt.

Subject:- Irrigation Engineering and Drawing

Time : 4Hrs.

M.M. : 150

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 A _____ is a graph showing the variation of discharge with time.

- a) Symons b) Hydrograph
- c) Hydrology d) Rain gauge

Q.2 In a middle water scarce area, the drip irrigation could be preferred for growing

- a) Wheat b) Rice
- c) Fodder d) Fruits and vegetables

Q.3 The duty of irrigation water for a given crop is maximum:

- a) On the Field
- b) At the head of the water-course
- c) At the head of the main canal
- d) None of them

Q.4 The canal, which, can irrigate only on one side, is a:

- a) Watershed canal b) Side slope canal
- c) Contour canal d) None of them

Q.5 The garret's diagrams are based on:

- a) Lackey's theory b) Blight's theory
- c) Khosla's theory d) Kennedy's theory

Q.6 A canal head works has nothing to do with a:

- a) Weir b) Head regulator

- c) Guide bank d) Safety ladder
- Q.7 The canal regulator, which is constructed at a diversion head works, is called:
- a) Cross regulator
b) Canal siphon
c) Distributaries head regulator
d) None of the above
- Q.8 An irrigation canal, freely flowing under a drainage channel, is specifically called as:
- a) Super passage b) Canal siphon
c) Canal crossing d) Canal junction
- Q.9 The famous Bhakra dam of our country has been provided with:
- a) Trough spillway b) Shaft spillway
c) Ogee spillway d) Syphon spillway
- Q.10 A fully modular canal outlet has its:
- a) Sensitivity = 1 and flexibility = 1
b) Sensitivity = 1 and flexibility = 0
c) Sensitivity = 0 and flexibility = 1
d) Sensitivity = 0 and flexibility = 0

SECTION-B

Note: Objective type questions. All questions are compulsory.
(10x1=10)

- Q.11 What are the types of irrigation?
Q.12 What is Chezy's formula for design of irrigation canal?
Q.13 What is optimum water depth?
Q.14 What is canal head regulator?

- Q.15 Define river training works?
Q.16 What is the function of hydrograph?
Q.17 Why under sluices are provided?
Q.18 Write any two disadvantages of irrigation?
Q.19 Define land reclamation?
Q.20 Define water shed canal?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What are the advantages of canal lining?
Q.22 Give the difference between gravity dam and earthen dam?
Q.23 What is Symon's rain gauge? How it works?
Q.24 Give difference between tube well and canal irrigations.
Q.25 Discuss the various types of escapes.
Q.26 Explain the construction of a recharge well.
Q.27 Give the layout of subsurface drains.
Q.28 If wheat requires about 7.5cm f water after every 35 days, and the base period for wheat if 140 days. Find out value of delta for wheat.
Q.29 Discuss the method of designing irrigation canal based on Lackey's theory.
Q.30 Enumerate and explain briefly the different methods for control of entry of silt into canal.
Q.31 Explain the sarda type fall.
Q.32 Differentiate between Evaporation and Transpiration.
Q.33 Explain various causes of water logging.