

**April 2018**

Time – Three hours  
(Maximum Marks: 75)

*[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory.  
Answer any FOUR questions from the remaining in each PART – A  
and PART – B*

*(2) Answer division (a) or division (b) of each question in PART – C.*

*(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and  
10 marks in PART – C. ]*

**PART – A**

1. What are the various forms of precipitation?
2. List out the uses of unit hydrograph.
3. Write Darcy's law.
4. Define the term salt balance.
5. Define pitching of banks.
6. What is canal irrigation system?
7. State the causes of soil erosion.
8. List out the functions of spillway.

**PART – B**

9. Explain about the various losses of run off.
10. Describe artesian aquifer with a sketch.
11. Write a note on basin management by conjunctive use.
12. Write a note on interlinking of rivers.
13. Describe about the weir with a sketch.
14. Briefly explain about Syphon aqueduct.
15. Define soil erosion. List out the various remedial measures available to control it.
16. Define water logging. List out the various effects of water logging.

[Turn over.....

PART – C

17. (a) Explain the various components of a hydrological cycle with a neat sketch.

(Or)

- (b) Explain Symon's rain gauge and floating type rain gauge with neat sketch.

18. (a) Explain in detail about the various measurement of yield of well.

(Or)

- (b) Explain in detail about the various methods of artificial recharge of ground water.

19. (a) (i) Explain solid gravity dam with neat sketch.

- (ii) Explain shaft spillway with neat sketch.

(Or)

- (b) Explain about the various causes of failure of earth dams with neat sketch and with suitable remedial measures.

20. (a) Explain the components of diversion head works with sketch.

(Or)

- (b) (i) What are the objects and advantages of canal lining.  
(ii) Write a note on cropping pattern and irrigation scheduling.

21. (a) Explain in detail about the seepage control with neat sketch.

(Or)

- (b) (i) Explain about the land drainage.  
(ii) Explain about the land reclamation.

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