

April 2019

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. Define hydrology and hydrological cycle.
2. What are the losses of run off?
3. Define specific retention.
4. State the classifications of spillway.
5. Define canal head regulator and list out its functions.
6. Define cropping pattern and crop rotation.
7. State the various causes of soil erosion.
8. Give a typical sketch of a plain cement concrete dam in section.

PART – B

9. Describe about the hydrograph with its uses.
10. Describe about the various zones of ground water.
11. Write a note on injection methods of artificial recharge.
12. Describe about the various classifications of river training works.
13. Write a note on water rights and water allocation.
14. State the types of cross drainage works and also make a note on super passage.
15. Write a note on bench terracing.
16. State the causes of water logging.

PART – C

17. (a) (i) Describe about the necessity for conserving water resources.
(ii) Briefly explain about the factors that affects runoff.
(Or)
(b) Explain with sketch the various types of recording type rain gauges.
18. (a) (i) Explain about the measurement of yield of well by pumping test.
(ii) Briefly explain about the basin management by conjunctive use.
(Or)
(b) Explain about the various geophysical methods of ground water exploration.
19. (a) Explain with neat sketch the following river training works.
(i) Levees (ii) Guide banks.
(Or)
(b) With neat sketch explain the various classifications of earth dams.
20. (a) (i) Explain in detail about the various classifications of canal.
(ii) State the advantages of canal lining.
(Or)
(b) Explain the methods of improving canal irrigation management.
21. (a) (i) What are the characteristics of good drainage system?
State the various methods of land drainage.
(ii) What are the benefits of water harvesting?
(Or)
(b) Explain with neat sketches about the seepage control.
