

PGDWR-04

June - Examination 2016

PGDWR Examination**Practical Approach of Water Resource Development****Paper - PGDWR-04****Time : 3 Hours]****[Max. Marks :- 100**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A**10 × 2 = 20**

(Very Short Answer Questions)

Note: Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) What is coarse fragments in the soil? Explain
- (ii) How will you measure infiltration?
- (iii) What are the data needed for preparing the schedule for the canal operation?
- (iv) If free board in a canal is not sufficient what will happen?
- (v) What is major irrigation system?
- (vi) Mention the natural conditions affecting the suitable irrigation method.
- (vii) What do you understand by rate of advance, recession and opportunity time?

- (viii) Prepare L-section of water course.
- (ix) What is contour line?
- (x) What is current meter?

Section - B**4 × 10 = 40**

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

- 2) Do you know that Chambal Command Kota Raj is the most successful Command in India. Explain how?
- 3) What do you know about flumes, their types and functions. Explain in short.
- 4) Explain about the determination of soil texture by feel method.
- 5) Explain granular and crumb structures of soil.
- 6) What is rectangular notch submerged orifices and their limitations?
- 7) How many types of irrigation methods are generally in practice? Explain about their suitability and use.
- 8) Do you know that depth of water needed for the crop is different than the depth of water applied by Indian farmers. Which adversely affect the crop production. Explain in detail.
- 9) Make a note on micro sprinkler.

Section - C**2 × 20 = 40**

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

- 10) Write few steps for better irrigation planning. Also draw map.
- 11) How will you identify water logged area? Also mention how will you do water table monitoring.
- 12) What are the steps you will adopt for development of new irrigation command area in Southern Rajasthan.
- 13) Explain following:
 - (i) Border irrigation
 - (ii) Drip irrigation
 - (iii) Roughness co-efficient
 - (iv) Cost benefit ratio in a new project
 - (v) Service road embankment
 - (vi) Erosion and sedimentation
 - (vii) Sub surface drainage
 - (viii) Saturated hydrolic conductivity
