

Paper Id: **100752**Roll No:

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BTECH
(SEM VII) THEORY EXAMINATION 2019-20
RURAL DEVELOPMENT ENGINEERING

Time: 3 Hours**Total Marks: 70****Note: 1. Attempt all Sections. If require any missing data; then choose suitably.****SECTION A****1. Attempt all questions in brief. 2 x 7 = 14**

(a)	Describe the importance of Rural Development.
(b)	Enlist any four awareness programme under Rural Development.
(c)	Discuss the advantages and disadvantages of Ferrocement.
(d)	Enlist the various sources of water.
(e)	What is the difference between lean cement concrete and cement concrete.
(f)	What do you mean by trickle irrigation system.
(g)	Discuss the use of lime and cement in base course of rural road.

SECTION B**2. Attempt any three of the following: 7 x 3 = 21**

(a)	What are the design factors considered in design of flexible pavement?
(b)	Differentiate between the various types of Flyash and their suitability for common use.
(c)	How will you estimate the water requirement of a village while planning a water supply scheme for rural areas. Explain briefly.
(d)	Explain the principles of soil-bitumen and its applications in road construction.
(e)	Explain sprinkler irrigation and draw a clean layout of sprinkler irrigation system.

SECTION C**3. Attempt any one part of the following: 7 x 1 = 7**

(a)	Describe the role of Panchayat in the overall development of any rural area.
(b)	Explain briefly about any 3 ongoing projects for the development of rural areas in India.

4. Attempt any one part of the following: 7 x 1 = 7

(a)	Describe the design consideration of non-erodable mud plaster in construction and its common use and applications.
(b)	Describe the properties of composite materials and its advantages and disadvantages.

5. Attempt any one part of the following: 7 x 1 = 7

(a)	What is Sulabh Shauchalaya? Why are there uses is increasing in developing countries like India? Draw a neat sketch to illustrate the working of a Sulabh Shauchalaya.
(b)	Differentiate between a Septic Tank Privy and a Sulabh Shauchalaya and discuss their merits and demerits.

6. Attempt any one part of the following: 7 x 1 = 7

(a)	Explain the design considerations of (i) Expansion Joints (ii) Contraction Joints
(b)	Sketch typical cross-section of a flexible pavement and explain the functions of various components

7. Attempt any one part of the following: 7 x 1 = 7

(a)	Explain watersheds and what are the factors affecting the water flow in a stream.
(b)	Illustrate roof top rain water harvesting technique along with its merits and demerits.