Code No: **R41012** **R10** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018

DESIGN & DRAWING OF IRRIGATION STRUCTURES

(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1 Design a canal regulator for the following data:

Data (parent canal)	**U/S**	**D/S**
Full supply discharge	32cumecs	24cumecs
Bed width	18m	18m
Bed level	+280m	+280m
F.S.L	+284m	+281.5m
T.B.L	+285m	+282.5m

Bed width of distributor =140m; depth of water in distributor =1.5m; good foundation is available at +279.0m; permissible exit gradient is 1:2.5. Draw longitudinal sectional elevation.

(Or)

2 Design and draw a type-III siphon aqueduct for the following data:

Discharge of the channel	=	$30m^3$/sec.
Bed width of the canal	=	20m.
Depth of water in canal	=	1.6m
Bed level of the canal	=	260.0m.
High flood discharge of the drain	=	261.00m.
High flood level of the drain	=	260.0m
Bed level of the drain	=	258.00m
General ground level	=	260.00m
Silt factor	=	0.9

Draw longitudinal section?