Total No. of Questions : 8]

SEAT No. :

P4583

[Total No. of Pages : 2

[4860]-1054
M.E. (CIVIL) (WREE)
DAM ENGINEERING
(2013 Credit Pattern)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***Answer any FIVE questions.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Use of Calculator is allowed.***
5) ***Assume Suitable data if necessary.***

Q1) a) Enumerate various forces acting on a gravity dam. Explain your answer with typical sketch of a gravity dam. **[4]**

b) Explain various foundation treatments in gravity dams. **[6]**

Q2) a) What are basic principles of dam design? Explain step by step procedure for design of earthen dam. **[7]**

b) Discuss causes of seepage in earthen dam **[3]**

Q3) a) Explain the concepts of trail load theory for design of arch dam [7]

b) State various forces acting on arch dam with neat sketch **[3]**

Q4) a) Explain various types of rock fill dams and draw the sketch of one of them. **[6]**

b) What is buttress dam? Explain the classification of buttress dam **[4]**

Q5) a) State various types of spillways and explain any two **[6]**

b) Calculate the discharge over an Ogee weir with coefficient of discharge equal to 2.4 at a head of 2 m. The length of spillway is 100 m. The weir crest is 8 m above the bottom of approach channel having same width as that of the spillway. **[4]**

P.T.O.

Q6) a) Write a note on Dam Safety Organization (DSO) **[6]**

b) State various instruments used to assess safety of dam **[4]**

Q7) a) State various organizations in the world related to Dam engineering with their common objectives. **[4]**

b) Explain functioning of Global Water Partnership (GWP). **[6]**

Q8) a) What are the provisions to take care of project affected people? **[6]**

b) What is the impact on environment due to construction of dam? **[4]**

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