

**King Saud University
College of Engineering
Civil Engineering Department**

Final Exam

**CE 423 - Hydraulic Structures
2nd Semester 1426-1427H
Time:3 hours**

Student Name:-

Student No.:-

Mark:-.....

Instructor:- Prof. Abdulaziz A. Alhamid

Question 1

Mark the following statements as **T**True or **F**False:

No.	Statement	True	False
(i)	If the tail water depth is greater than the conjugate depth, a ski-jump bucket is a good choice for energy dissipation.		
(ii)	In gravity dam, a drain is usually provided near the heel to reduce uplift and seepage.		
(iii)	The crest level of the weir is usually higher than that of the undersluice		
(iv)	For eccentricity more than one-sixth the base width, tension stress will not exist.		
(v)	The diversion headworks are usually located in the mountainous stage of the river.		
(vi)	A barrage is generally cheaper than a weir.		
(vii)	Earthquakes acting upwards increase the safety factor against overturning.		
(viii)	The axis of the head regulator usually makes an angle of 60° to 90° with the axis of the weir.		
(ix)	For a constant arch dam, the volume of concrete is minimum when the angle is 150° .		
(x)	Wave suppressors are recommended for flow having Froude number more than 9.		

