

**Program: BE in Civil Engineering**

Curriculum Scheme: **Revised 2016**

Examination: **Final Year Semester VII**

Course Code: **CE C 703** and Course Name: **Water Resources Engineering II**

Time: 1-hour

Max. Marks: 50

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**Note to the students:** - All the Questions are compulsory and carry equal marks.

Q1.	Tension cracks in the gravity dam leads to the failure of the dam by
Option A:	Overtuning about the toe
Option B:	Sliding of the dam
Option C:	Crushing of concrete starting from the toe
Option D:	Both overturning and crushing
Q2.	Major overturning force in the gravity dam is
Option A:	Tail water pressure
Option B:	Upstream water pressure
Option C:	Wind pressure
Option D:	Uplift pressure
Q3.	RL of top of gravity dam is 310 m, RL of maximum water level is 307 m, RL of bed level 227 m, base width is 60. what will be the uplift force/m if unit weight of water is 10 KN/m <sup>3</sup>
Option A:	24900 KN
Option B:	24000 KN
Option C:	34000KN
Option D:	80000KN
Q4.	The joints which are provided parallel to the axis of the dam to prevent longitudinal cracks is called as
Option A:	Shear keys
Option B:	Shear joint
Option C:	Transverse joint
Option D:	Longitudinal joint
Q5.	To avoid cracks in concrete mass, height of lift should be restricted up to
Option A:	2.5 m
Option B:	2.0 m
Option C:	1.0 m
Option D:	1.5 m

Q6.	..... is a seepage line which separates saturated and unsaturated zones in an earth dam.
Option A:	Horizontal line
Option B:	Vertical line
Option C:	Contour line
Option D:	Phreatic line
Q7.	Piping is a .....failure of earth dam
Option A:	seepage failure
Option B:	hydraulic failure
Option C:	structural failure
Option D:	earthquake failure
Q8.	Seepage control through embankment can be done by .....
Option A:	Rock toe
Option B:	Swedish Slip Circle Method
Option C:	OMC method
Option D:	Vertical line
Q9.	During seepage through an earthen mass, the direction of seepage is _____ to the equipotential lines.
Option A:	Perpendicular
Option B:	Parallel
Option C:	Inclined
Option D:	Diagonal
Q10.	At the entry point, the phreatic line must be ..... to the upstream face since the upstream face is a 100% equipotential line
Option A:	Inclined
Option B:	parallel
Option C:	normal
Option D:	vertical
Q11.	Discharge of an ogee spillway with coefficient of discharge equal to 2.2 at a head of 3m and having a length of 100m
Option A:	457cumec
Option B:	1143cumec
Option C:	1258cumec
Option D:	478cumec
Q12.	What is the satisfactory radius for the reverse bottom curve which is provided at the downstream end of the spillway?
Option A:	one fourth of the spillway height
Option B:	equal to spillway height
Option C:	half the value of spillway height
Option D:	one third of the spillway height

Q13.	Discharge through a syphon spillway Q is
Option A:	$Q=C*A*(2gH)^{1/2}$
Option B:	$Q=C*A*(2gH)^{1/6}$
Option C:	$Q=C*A*(2gH)^{3/2}$
Option D:	$Q=C*A*(2gH)^{1/3}$
Q14.	Mr. R. G. Kennedy introduced which term after realizing the importance of silt grade on critical velocity?
Option A:	Critical Velocity Ratio
Option B:	Critical Displacement Ratio
Option C:	Hydraulic Jump
Option D:	Critical Flow Path
Q15.	Kennedy used whose equation to find out the value of mean velocity?
Option A:	Kutter's Equation
Option B:	Einstein's Equation
Option C:	Darcy's Equation
Option D:	Albert's Equation
Q16.	Kennedy's theory involves which procedure for design of channels?
Option A:	Approximate
Option B:	Trial and Error
Option C:	Fixed
Option D:	Flexible
Q17.	When the channel is protected with some kind of protecting material, there is no possibility for change in its section or longitudinal slope, in such case the channel is said to be in which regime condition?
Option A:	Initial
Option B:	Final
Option C:	True
Option D:	Permanent
Q18.	Lacey recognized importance of which factor, and introduced the same to obtain regime relationship?
Option A:	Silt factor
Option B:	sliding factor
Option C:	friction factor
Option D:	safety factor
Q19.	The difference in level between the top of a bank and supply level in a canal, is called
Option A:	Berm
Option B:	Free board
Option C:	Height of bank

Option D:	Head work
Q20.	When a canal and a drainage approach each other at the same level, the structure so provided, is
Option A:	An aqueduct
Option B:	A syphon
Option C:	A level crossing
Option D:	Inlet and outlet
Q21.	In a concrete canal the approximate permissible velocity of water should not exceed
Option A:	0.5 m/sec
Option B:	1 m/sec
Option C:	1.5 m/sec
Option D:	2 m/sec
Q22.	The most economical type of lining is the one which shows _____
Option A:	minimum benefit-cost ratio
Option B:	maximum benefit-cost ratio
Option C:	zero benefit-cost ratio
Option D:	benefit-cost ratio = 1
Q23.	Which of the following is a reason for surplus water present in a canal?
Option A:	No canal fall
Option B:	No Proper Hydraulic Jump
Option C:	No Proper Uniform Velocity of Flow
Option D:	Cultivators closing their outlets thinking their demand is over
Q24.	Which of the following is a type of canal escape?
Option A:	Canal Outlet
Option B:	Canal fall
Option C:	Surplus
Option D:	Canal Inlet
Q25.	The maximum length of a water course in general shall not be more than .....Km
Option A:	6
Option B:	5
Option C:	3
Option D:	2

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	B
Q3.	B
Q4	D
Q5	D
Q6	D
Q7	A
Q8.	A
Q9.	A
Q10.	C
Q11.	B
Q12.	A
Q13.	A
Q14.	A
Q15.	A
Q16.	B
Q17.	D

Q18.	A
Q19.	B
Q20.	C
Q21.	D
Q22.	B
Q23.	D
Q24.	C
Q25.	C