- 68. Name the structure carrying discharge of a natural stream across a canal intercepting the stream :
 - (A) Gallerv (B) Cut off pile (C) Cross drainage work
 - (D) Sluice

69. Which among the following is torsional rigidity?

- product of rigidity modulus and moment of inertia (A)
- (B) product of rigidity modulus and polar moment of inertia
- (C) product of rigidity modulus and angle of twist
- (D) product of torque and radius of shaft
- During setting and hardening of cement concrete, hydration of which among the following 70. contributes to the progressive strength of concrete?

(A)	C_3S			(B)	C_3A
(C)	$C_4 AF$	•		(D)	C_2S

71. What is the polar moment of inertial of a circle of diameter D?

(A)	πD^4			(B)	πD^4
	64			(-)	32
(0)	πD^4				πD^4
(0).	128		· · · ·	(D)	16

72. What is called, the time in hours taken by rainwater that falls at the farthest point to reach the outlet of a catchment?

- (A) effective duration basin lag (B)
- (C) time of concentration (D) recession time
- 73. Name the short sections of wood or steel, which are fixed on principal rafter of trusses to support purlins :
 - (A) ridge piece (B) wall plate
 - eaves board (C) (D) cleat

74. Name the area to be irrigated by a dam :

(A) ayacut catchment area (B) (D) upstream side

(C) reservoir

Among the following methods for computing average precipitation (or rainfall) in which 75. method the area of the basin is not taken into account?

(A) Isohyetal method

A

- (B) Thiesson polygon method
- (C) Arithmetic average method
- (D) None of these
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76.	What is radius 10	the super elevation (expressed in 000 m if the design speed is 100 km/	percentas hour?	ge terms) required for a road curve o
	(A)	$\frac{127}{1000}$ %	(B)	$\frac{1000}{127}\%$
	(C)	10%	(D)	$\frac{10}{9.81}\%$
77.	Which of	the following is not included in tem	porary ad	ljustments of a dumpy level?
	(A) (C)	setting up elimination of parallax	(B) (D)	levelling up centering
78.	Among th	ne following which represents the irr	rigating c	apacity of a unit of water :
	(A) (C)	water application efficiency duty	(B) (D)	consumptive use efficiency delta
79.	What is t	he maximum size of the particle of s	silt?	
- ALLIN -	(A)	0.02 mm	(B)	0.002 mm
	(C)	0.2 mm	(D)	0.06 mm
80.	Name the	e well from which water flows autom	natically	under pressure :
	(A)	infiltration well	(B)	artesian well
	(C)	flowing well	(D)	tube well
81.	Which an	nong the following is the back bearing	ng of N30	°É?
	(A)	E 30° N	(B)	N 150° E
	(C)	S 150° W	(D)	S 30° W
82.	Among t	he following, by which method th for a given discharge?	ne efficie	ncy of a sedimentation tank can be
	(A)	by increasing the depth of the tan	k (B)	by decreasing the depth of the tank
ai de	(C)	by increasing the area of the tank	(D)	by decreasing the area of the tank
83.	For a can deflection	ntilever beam of length L , what he equal to that produced by a concent	bending r trated loa	noment at free end would produce a W at free end?
	(A)	WL	(B)	$\frac{2}{3}WL$
	(C)	$\frac{2}{3}W$	(D)	$\frac{WL}{EI}$
84.	If bucklin will be the	g of sand is not taken into account e result?	for volu	metric proportioning of concrete, what
	(A) (B)	no effect buckling of concrete product will b	e the resu	ılt
	(C) (D)	more quantity of concrete per bag less quantity of concrete per bag of	of cement	will be produced will be produced
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85.	In which board in e	direction, resultant elementary profile of	force will shift by a gravity dam, fo	y provi r full r	ding a top width for roadway and free eservoir condition?			
	(A)	shift towards top		(B)	shift towards toe			
	(C)	shift towards heel		(D)	no shift at all			
86.	Two simp <i>strength</i> of	ly supported beams A	A and B of same w	vidth h	ave identical loading. What is the ratio			
	strength a	of beam B	nas depth double	that 0	i beam D:			
	(A)	2		(B)	4			
	(C)	1/2		(D)	1/4			
87.	What is th	ne least count of a tra	ansit theodolite?		and the second s			
	(A)	20 minutes		(B)	30 minutes			
	(C)	60 seconds		(D)	20 seconds			
88.	A steel ro	od of length 20 m a	t 30°C is heated	upto 4	40°C. What is the temperature stress			
	developed	if the expansion is p	revented? Given,	$\alpha = 12$	$2 \times 10^{-6} \text{ per }^{\circ}\text{C}, E = 2 \times 10^{5} \text{ N/mm}^{2}$			
	(A)	2.4 N/mm ²		(B)	24 N/mm ²			
	(C)	240 N/mm ²		(D)	0.24 N/mm ²			
89.	9. What will be the deflection at the centre of a simply supported beam of rectangular cross section if the depth is doubled, for the same load W?							
	(A)	$\frac{1}{2}$ of first case		(B)	$\frac{1}{6}$ of first case			
	(C)	$\frac{1}{8}$ of first case		(D)	$\frac{1}{4}$ of first case			
90.	If K is the	bulk modulus, E is t	he Young's modul	us and	N is the shear modulus then, which is			
	the relatio	n to find out Poisson	's ratio $\left(\frac{1}{m}\right)$?		23 For a contraction of the form			
	(A)	$\frac{9KN}{N+3K}$		(B)	$\frac{3K-2N}{6K+2N}$			
	(C)	$2N\left(1+\frac{1}{K}\right)$		(D)	$3K\left(1-\frac{2}{N}\right)$			

91. If three coplanar, concurrent forces are acting at a point are in equilibrium, of which two of them are collinear, then what is the magnitude of third force which is acting at an angle θ with other two forces?

(A) zero

A

- (B) algebraic sum of other two forces(D) none of the above
- (C) vector sum of other two forces
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		· · · · · · · · · · · · · · · · · · ·		
92.	Where is	the keystone of an arch being placed?	alies.	
	(A)	extrados	(B)	crown
	(C)	intrados	(D)	springing line
00	NTT	1		
93.	What is n	leasured using a venturimeter?	(D)	
	(A) (C)	vigeocity	(D)	discharge
	(0)	VISCOSILY	(D)	uischarge
94.	What will	be the elongation of a prismatic bar	of len	gth L. cross sectional area A. hanging
	vertically	under its own weight W?		
	(1)	WL	(D)	WL
	(A)	AE	(D)	3AE
	(0)	WL		WL
	(0)	$\overline{2AE}$	(D)	$\overline{4AE}$ ·
95.	In a hyd	ro electric scheme which of the follo	owing	is used to carry water from storage
	reservoir	to the power house?		
•	(A)	forebay	(B)	intake structure
	(C)	draft tube	(D)	penstocks
96	What is th	ne nominal size of standard brick?		
	(A)	$19 \text{ cm} \times 9 \text{ cm} \times 9 \text{ cm}$	(B)	$20 \text{ cm} \times 10 \text{ cm} \times 10 \text{ cm}$
	(C)	$22 \text{ cm} \times 11.5 \text{ cm} \times 7.5 \text{ cm}$	(D)	$20 \text{ cm} \times 10 \text{ cm} \times 5 \text{ cm}$
97.	What will	be the elementary profile of a gravity	dam?	
	(A)	rectangular in section	(B)	trapezoidal in section
	(C)	polygon with six sides	(D)	triangular in section
		and the second		
98.	Where the	e tension steel is provided in a two way	slab?	and the second second second
1.	(A)	only at top	(B)	only at bottom
	(0)	at top and bottom	(D)	at corners
99.	What is a	graph showing variations of discharge	with	time at a particular point of a stream?
	(A)	Unit hydrograph	(B)	Hyetograph
	(C)	Strange's run off curve	(D)	Hydrograph
100.	For a redu	indant frame if number of members is	m and	I number of joints is j then which of the
	following	relations will be satisfied?		
	(A)	m > (2j - 3)	(B)	m < (2j - 3)
	(C)	m < 2(j-3)	(D)	m > 2(j-3)

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A