

1.	What is the shape of elementary profile of a gravity dam?			
	(A) Rectangular	(B) Triangular	(C) Parabolic	(D) Trapezoidal
2.	In storage routing of a reservoir, the storage is maximum in the reservoir under which of the following condition with ungated spillway?			
	(A) Inflow is equal outflow.			
	(B) Inflow is higher than outflow.			
	(C) Inflow is lesser than outflow.			
	(D) Inflow is zero and outflow is maximum.			
3.	The rockfill dam is preferred under which of the following condition?			
	(A) Suitable rock quarry is available in the vicinity of dam site.			
	(B) Suitable fine clay borrow pits are available in the vicinity of dam site.			
	(C) Suitable rock quarry and clay borrow pits are available near dam site			
	(D) Suitable rock foundation is available near the dam site.			
4.	The magnitude of camber in road pavement is governed by which of the following factor(s)?			
	(A) Nature of pavement surface			
	(B) Magnitude of rainfall			
	(C) Both magnitude of rainfall and nature of pavement surface			
	(D) Speed of vehicle			
5.	Compute the lag distance, as per the PIEVE theory, by assuming design speed of 100 kmph and reaction time of 2.5 seconds.			
	(A) 69.50 m	(B) 250 m	(C) 100 m	(D) 139 m
6.	What will be the value of equilibrium super elevation for a design speed of 100 kmph on a circular curve of radius 100 m?			
	(A) 0.79	(B) 0.40	(C) 0.15	(D) 0.88
7.	Which of the following speed is estimated as <b>safe speed limit</b> from cumulative speed distribution data?			
	(A) 98 <sup>th</sup> percentile speed			
	(B) 85 <sup>th</sup> percentile speed			
	(C) Modal speed			
	(D) 15 <sup>th</sup> percentile speed			
8.	Which of the following test measures toughness of aggregates?			
	(A) Abrasion test	(B) Elongation test		
	(C) Crushing test	(D) Impact value test		

9.	<p>Arrange the correct sequence from the bottom to top a flexible pavement.</p> <p>(A) Subgrade, granular subbase course, built up spray grout, Water bound macadam, Bituminous macadam, Semi-dense carpet</p> <p>(B) Subgrade, granular subbase course, water bound macadam, Built up spray grout, Bituminous macadam, Semi-dense carpet</p> <p>(C) Subgrade, granular subbase course, water bound macadam, Built up spray grout, Semi-dense carpet, Bituminous macadam</p> <p>(D) Subgrade, water bound macadam, granular subbase course, Built up spray grout, Semi-dense carpet, Bituminous macadam</p>
10.	<p>Which of the following failure is related with rigid pavement?</p> <p>(A) Frost heaving</p> <p>(B) Reflection cracking</p> <p>(C) Shear failure</p> <p>(D) Mud pumping</p>
11.	<p>The mean sea level (msl) of a permanent bench mark was 150 m. The 'Foresight reading taken on a vertical staff, kept on the bench mark was 1.50 m while the 'Back sight' reading taken on an inverted vertical staff kept at the bottom of the roof was 1.8 m. What would be the level of bottom of roof?</p> <p>(A) 151.50 m      (B) 151.80 m      (C) 149.70 m      (D) 153.30 m</p>
12.	<p>The satellite images give the information related to land use and land cover of the earth surface. Such data is processed for getting useful information using the which of the following tools?</p> <p>(A) Geographical information system (GIS)</p> <p>(B) Remote sensing</p> <p>(C) AutoCAD</p> <p>(D) Primavera</p>
13.	<p>If the cross-sectional areas of an embankment at 30 m intervals are 20, 40, 60, 50 and 30 m<sup>2</sup> respectively. What would be approximate volume of the embankment?</p> <p>(A) 5300 m<sup>3</sup>      (B) 7300 m<sup>3</sup>      (C) 8300 m<sup>3</sup>      (D) 9300 m<sup>3</sup></p>
14.	<p>Which of the topographic survey maps procured under different scale would be more accurate?</p> <p>(A) 1:500000</p> <p>(B) 1:250000</p> <p>(C) 1:50000</p> <p>(D) 1:25000</p>

150 - 1.50  
148.50



1.8

15.	For a tachometer, the additive and multiplying constants are respectively.			
	(A) 0 and 100			
	(B) 100 and 0			
	(C) 0 and 0			
	(D) 100 and 100			
16.	The maximum permissible limit for fluoride in drinking water is			
	(A) 5.0 mg/litre			
	(B) 2.50 mg/litre			
	(C) 1.50 mg/litre			
	(D) 1.0 mg/litre			
17.	The chemical most commonly used for increasing the speed of sedimentation of sewage is			
	(A) Sulphuric acid			
	(B) Copper sulphate			
	(C) Lime			
	(D) Sodium permanganate			
18.	If the optimistic time, most likely time and pessimistic time for activity A are 4.6 and 8 respectively, what would be expected time for completion of activity A?			
	(A) 4 days	(B) 6 days	(C) 8 days	(D) 9 days
19.	Which of the following excavator is most suitable for digging under water?			
	(A) Drag line	(B) Hoe	(C) Clam shell	(D) Dipper shovel
20.	The process in which chlorination is done beyond the breakpoint is known as			
	(A) Pre-chlorination			
	(B) Post Chlorination			
	(C) Super chlorination			
	(D) Breakpoint chlorination			
21.	The sewer which receives the discharge of a number of house sewer is called			
	(A) House sewer			
	(B) Lateral sewer			
	(C) Main sewer			
	(D) Submain sewer			

$\frac{4.6 + 4 + 8}{3} = 6$

22.	Which one of the following criteria is met in gap graded soil?	(A) There is representation of coarser and finer particles wherein intermediate particles are missing.	(B) There is representation of coarser and intermediate particles wherein finer particles are missing.	(C) There is representation of coarser, intermediate and finer particles	(D) There is representation of finer and intermediate particles wherein the coarser particles are missing.
23.	Which of the following soil has maximum plasticity index?	(A) Clay with Montmorillonite mineral	(B) Clay with Illite mineral	(C) Clay with Kaolinite mineral	(D) Delhi silt
24.	As per Indian Standard classification MI means _____	(A) Organics silt with low compressibility	(B) Inorganics silt with medium compressibility	(C) Inorganics silt with high compressibility	(D) Organic silt with medium compressibility
25.	A saturated soil has specific gravity of 2.6 and moisture content of 0.30, what would be void ratio of the soil under saturated condition?	(A) 0.30	(B) 0.88	(C) 0.58	(D) 0.78
26.	What would be the dry unit weight of a soil having unit weight of $1.60 \text{ gm/cm}^3$ and moisture content of 0.20?	(A) 1.60	(B) 1.20	(C) 1.92	(D) 1.33
27.	Which type of rollers are suitable for compaction of clayey soil?	(A) Vibratory rollers	(B) Sheep foot rollers	(C) Pneumatic tyred rollers	(D) None of the above
28.	The characteristics of 'isotropic soil and non-homogeneous soils' refers to _____	(A) Permeability of soil at different point is same in identical direction only.	(B) Permeability of soil is same at different points in all directions.	(C) Permeability of soil is same at a point in all the directions; however, the property is different at different points.	(D) Permeability of soil is different at different points and the property is different in different directions.

29. In homogeneous earth dam, the upstream face of the dam in contact with water represents \_\_\_\_\_
- (A) Stream lines  
(B) The plane under atmospheric pressure  
(C) The plane under negative pressure  
(D) Equipotential surface
30. The upstream face of the dam is critical under which of the following conditions?
- (A) Under full reservoir condition  
(B) Under sudden drawdown condition  
(C) Under empty reservoir condition  
(D) Under above all condition
31. The core provided in Rock fill dam consists of \_\_\_\_\_
- (A) Rocky material  
(B) Sandy soil  
(C) Coarse gravel  
(D) Clayey material
32. Which of the following methods can be used for estimation of bearing capacity of soil using laboratory tests?
- (A) Proctor test  
(B) Modified proctor test  
(C) Plate load test  
(D) Triaxial test
33. Which of the following soil has the maximum porosity?
- |            |          |          |          |
|------------|----------|----------|----------|
| (A) gravel | (B) Sand | (C) silt | (D) Clay |
|------------|----------|----------|----------|
34. What would be critical exit gradient in a soil of specific gravity 2.5, having void ratio of 0.50?
- |          |          |          |         |
|----------|----------|----------|---------|
| (A) 0.25 | (B) 0.50 | (C) 0.75 | (D) 1.0 |
|----------|----------|----------|---------|
35. Due to expulsion of pore water from a saturated soil leads to which of the following?
- (A) Increase in shear strength of soil  
(B) Decrease in shear strength of soil  
(C) Shear strength of soil remains constant  
(D) Increases the porosity of soil
36. Number of bricks required for one cubic meter of brick masonry is \_\_\_\_\_
- |         |         |         |         |
|---------|---------|---------|---------|
| (A) 400 | (B) 450 | (C) 500 | (D) 550 |
|---------|---------|---------|---------|

37.	The most commonly used retarder in cement is _____			
	(A) Gypsum			
	(B) Calcium chloride			
	(C) Calcium carbonate			
38.	The compaction factor test for cement concrete determines its _____			
	(A) strength			
	(B) porosity			
	(C) Degree of compaction under loads			
39.	According to IS specification, the compressive strength of ordinary Portland cement after three days should not be less than _____			
	(A) 7 MPa	(B) 11.50 MPa	(C) 16 MPa	(D) 21 MPa
	23			
	27			
40.	Effective thickness of a fillet weld is _____			
	(A) 0.707x size of weld			
	(B) 1.414 x size of weld			
	(C) A function of the angle between fusion faces			
41.	Maximum bending moment in a beam occurs where _____			
	(A) Deflection is zero			
	(B) Shear force is maximum			
	(C) Shear force is minimum			
42.	The stiffness of a helical spring is expressed as _____			
	(A) Load per unit length			
	(B) Load per unit deflection			
	(C) Load per unit diameter			
43.	The moment of inertia of a circular disc of radius R and Mass M about its diameter is _____			
	(A) $\frac{MR^2}{2}$	(B) $\frac{MR^2}{3}$	(C) $\frac{MR^2}{4}$	(D) $MR^2$
	D			
	D			
44.	A collision is said to be perfectly inelastic, if the coefficient of restitution 'e' is _____			
	(A) 1	(B) $\infty$	(C) Zero	(D) -1

45.	The carryover factor in a prismatic member whose far end is fixed is _____			
	(A) Zero	(B) 1/2	(C) 3/4	(D) 1
46.	Bending moment at any section in a conjugate beam gives in the actual beam _____			
	(A) slope		(B) curvature	
	(C) deflection		(D) bending moment ✗	
47.	The shape for a solid circular section subjected to bending about its diameter is			
	(A) 1.12	(B) 1.50	(C) 1.70	(D) 2.0
48.	Minimum grade of reinforced concrete for mild exposure condition as per Indian standard code of practices is _____			
	(A) M <sub>15</sub>	(B) M <sub>20</sub>	(C) M <sub>25</sub>	(D) M <sub>30</sub>
49.	In general, the proportion of fine aggregates to coarse aggregates in nominal concrete mix, are _____			
	(A) 1 : 1.5	(B) 1 : 2	(C) 1 : 3	(D) 1 : 4
50.	The minimum number of longitudinal bars in a circular column as per Indian standard are _____			
	(A) 4	(B) 6	(C) 8	(D) 12
51.	Which of the following three towns of 'New Himachal' are made the Tehsils of the district of Solan?			
	(i) Kasauli, Baddi and Kandaghat. (ii) Parwanoo, Kasauli and Nalagarh. (iii) Kandaghat, Nalagarh and Kasauli. (iv) Baddi, Dharampur and Kasauli.			
	(A) (iv) only.	(B) (ii) only.	(C) (i) only.	(D) (iii) only.
52.	Which of the following statement about the geography of Himachal Pradesh is correct?			
	(i) The State of Punjab lies in its West. (ii) The State of Jammu & Kashmir lies in its East. (iii) To its North lies India's border with Tibet.			
	(A) (i) only.	(B) (ii) only.	(C) (iii) only.	(D) (ii) & (iii).

53.	Which of the following statement is correct about the participation of women in Voting in the Himachal Pradesh Legislative Assembly elections held in year 2007 and 2012 :			
	(i) The trend in the above elections indicates that women exercised their franchise less than that of men. (ii) The trend indicates that women exercised their franchise more than that of men in the above elections. (iii) The percentage of both the sexes was found to be equal, surprisingly.			
	(A) (i) only.	(B) (ii) only.	(C) (iii) only.	(D) (i) & (ii).
54.	Which of the following pair of two districts show decline in child sex ratio of Himachal Pradesh in the Census - 2011.			
	(A) Shimla and Una.		(B) Sirmaur and Kangra.	
	(C) Mandi and Solan.		(D) Shimla and Mandi.	
55.	Which of the following is correct about the Himachal Pradesh State Information Commission?			
	(i) The State government constituted it on February 04, 2006 in exercise of powers conferred by the Right to Information Act, 2005. (ii) It started functioning two months later on April 04, 2006. (iii) It is headed by the Chief Information Commissioner.			
	(A) (i) & (ii).	(B) (ii) & (iii).	(C) (iii) & (i).	(D) (iii) only.
56.	Of the State revenue, how much was being spent on the payment of interest in the year 2020-21, according to the Economic Survey, 2020-21 of Himachal Pradesh?			
	(A) About 10%.		(B) About 5%.	
	(C) About 15%.		(D) About 17%.	
57.	Find out from the following, who is not matched correctly with the place shown in front of his / her name :			
	(A) Sobha Singh - Andretta.		(B) Nicholas Roerich - Naggar.	
	(C) Amrita Shergil - Kangra.		(D) Norah Richards - Andretta.	
58.	Which of the following pair of the districts of Himachal Pradesh have the lowest Scheduled Caste population between 1991 and 2001?			
	(A) Bilaspur and Una.		(B) Kinnaur and Bilaspur.	
	(C) Hamirpur and Chamba.		(D) Chamba and Solan.	

BM SF D C

1:2:4  
1:1:5

25  
25  
30  
25  
40  
J.S.P.S.

1:2:4  
1:1:5

59.	Identify the place / places in Himachal Pradesh where the building of Panchayati Raj Training Institute are constructed :			
	(A) Mashobra.	(B) Kangra.		
	(C) Chamba.	(D) Manali.		
60.	Which of the following is correct about the H.P. State's desire to construct the housing units to the people living below the poverty line, during the Ninth Five Year Plan (1997-2002)?			
	(i) The State envisaged to construct 31000 housing units.			
	(ii) They were to be constructed under the 'Gandhi Kuteer Yojna'.			
	(iii) The State Government achieved the above target during the Plan period itself.			
	(A) (i) & (iii).	(B) (ii) & (iii).	(C) (iii) only.	(D) (i) & (ii).
61.	Which of the following Indian State of North-East have borders with Myanmar and Bangladesh?			
	(A) Arunachal	(B) Mizoram.	(C) Nagaland.	(D) Sikkim.
62.	Which of the following is correct about the Constituent Assembly, constituted to frame a Constitution of India?			
	(i) Formulated by the Cabinet Mission Plan 1946, it was constituted in November, 1946.			
	(ii) Its members were drawn equally from the British India Provinces and the Princely States.			
	(iii) Its Constitutional Advisor was Sir B.N. Rau.			
	(A) (iii) & (ii)	(B) (i) & (ii).	(C) (iii) & (i).	(D) (ii) only.
63.	Which of the following is correct about India's National Education Policy- 2020?			
	(i) It aims to make transformal reforms in school and higher education.			
	(ii) It is the second major revamp of the framework of education since independence.			
	(iii) It aims to make India a global knowledge superpower.			
	(A) (i) & (iii).	(B) (ii) & (i).	(C) (ii) only.	(D) (iii) & (ii).
64.	Which of the following language was added to the list of major recognized Indian languages by the Constitutional Amendment, 1967?			
	(A) Dogri.	(B) Konkani.	(C) Sindhi.	(D) Bodo.

65. Which of the following is not correct about the growth of Indian Economy from 1947 onwards?

(A) In order to give the economy a stimulus, the Planning Commission was established on 15 March, 1950.

(B) The First Five Year Plan (1951-56) was, in fact, to tackle the post-independence economic and social issues.

(C) P.C. Mahalanobis played a leading role in drafting the Second Five Year Plan.

(D) Five giant steel plants were set up in the public sector within the Second Five Year Plan.

66. The river Danube forms boundary between the countries :

(A) Romania and Bulgaria.	(B) Germany and Norway.
(C) Norway and Sweden.	(D) Italy and Switzerland.

67. Which of the following is correct about the Second Summit held between Donald Trump, the President of USA and Kim Jong Un, the North Korean Leader?

(i) It was held in February, 2019.

(ii) It was held in May, 2019.

(iii) It was held in Hanoi (Vietnam).

(iv) It was held in Singapore.

(A) (i) & (iv).	(B) (iii) & (i).	(C) (ii) & (iii).	(D) (iv) & (ii).
-----------------	------------------	-------------------	------------------

68. The headquarters of the Comprehensive Test Ban Treaty (CTBT) are established in :

(A) New York	(B) Geneva.	(C) Paris.	(D) Vienna
--------------	-------------	------------	------------

69. Which of the following country is not in the continent of North America?

(A) Canada.	(B) Cuba.	(C) Brazil.	(D) Costa Rica.
-------------	-----------	-------------	-----------------

70. Which of the following is not the Novel of Salman Rushdie?

(A) The Inheritance of Loss.	(B) Midnight's Children.
(C) The Satanic Verses.	(D) Quichotte.

71. In case of Newtonian Fluid, which of the following statements is correct?

(A) Absolute viscosity of fluid varies linearly with rate of Angular deformation.

(B) Absolute viscosity of fluid remains constant with variation in rate of angular deformation.

(C) Absolute viscosity of fluid decreases linearly with variation in rate of angular deformation.

(D) Absolute viscosity is zero for Newtonian fluid.

72.	In static fluid, the pressure on a stationary plain vertical surface, causes the center of pressure always below the centroid of the plain surface. The correct reasoning of the said statement is			
	(A) The pressure decreases linearly with depth below the free surface in a static fluid.			
	(B) The pressure is maximum on free surface while minimum at deeper level.			
	(C) The pressure increases linearly with depth below the free surface.			
	(D) The pressure remains constant along the depth from free surface.			
73.	The ratio of inertia force to viscous force is known as			
	(A) Reynolds number	(B) Froude number		
	(C) Euler's number	(D) Weber's number		
74.	The observed mean flow velocity of water in a pipe of 5 cm diameter was found to be 10 cm/s, what would be the value of Reynolds number for above flow condition?			
	(A) 5000	(B) 2000	(C) 3000	(D) 4000
75.	The mean flow depth and mean velocity in a rectangular channel were found to be 1.0 m and 0.60 m/s respectively. The flow condition in the rectangular channel can be classified as _____			
	(A) Subcritical		(B) Critical	
	(C) Supercritical		(D) Mixed flow	
76.	The head of a flowing fluid is termed as _____			
	(A) Energy per unit mass of flowing fluid			
	(B) Energy per unit volume of flowing fluid			
	(C) Energy per unit weight of flowing fluid			
	(D) Momentum per unit weight mass of flowing fluid.			
77.	What would be the momentum correction factor for an ideal fluid flowing in a pipe?			
	(A) 1.5	(B) Zero	(C) 2.0	(D) 1.0
78.	The coefficient of velocity ( $C_v$ ) and coefficient of discharge ( $C_d$ ) of an orifice are 0.96 and 0.60 respectively. What would be the corresponding value of coefficient of contraction of the same orifice?			
	(A) 0.60	(B) 0.80	(C) 0.625	(D) 0.99

$$= \frac{0.60}{0.96}$$

6

$$C_d = C_c C_v$$

$$= \frac{C_d}{C_v}$$

$$\frac{0.6}{0.96} = 10$$



$$C_d = C_c C_v$$

79.	In smooth turbulent flow, the friction factor is dependent on which of the following factor(s)?			
	(A) Reynold number			
	(B) Relative roughness			
	(C) Both Reynolds number and relative roughness			
	(D) Reynold number, relative smoothness and relative roughness			
80.	Compute total pressure force acting on a vertical cross section of a right angled triangular channel section, having uniform water flow depth of 3.0m?			
	(A) 28 kN	(B) 9.0 kN	(C) 8.829 kN	(D) 88.29 kN
81.	Specific Energy concept is applicable for which of the following situation?			
	(A) Unsteady rapid varied flows			
	(B) Steady Rapid varied flows			
	(C) Steady uniform flows			
	(D) Unsteady Gradually varied flows			
82.	Surges in open channel is classified as _____			
	(A) Uniform flow			
	(B) Steady gradually varied flow			
	(C) Steady rapid varied flow			
	(D) Unsteady rapid varied flow.			
83.	$M_2$ gradually varied flow profiles are having which of the flowing characteristics?			
	(A) Drawdown with super critical flow.			
	(B) Drawdown with subcritical flows.			
	(C) Backwater with subcritical flows.			
	(D) Back water with supercritical flows.			
84.	A dam was created on a mild sloped river. What kind of profile is expected in downstream of dam on the river bed.			
	(A) $M_1$	(B) $M_2$	(C) $M_3$	(D) $S_3$
85.	The base flow component includes which of the following?			
	(A) Surface run off and quick interflow			
	(B) Ground water flow and quick interflow			
	(C) Surface run off and delayed interflow			
	(D) Ground water flow and delayed interflow			
86.	What would the intensity of excess rainfall that would be represented by a Unit hydrograph of 4-hr duration?			
	(A) 4 cm/hr	(B) 2 cm/hr	(C) 0.50 cm/hr	(D) 0.25 cm/hr

87. Rational formula is applicable under what condition in prediction of flood for storm of duration 1hr?

- (A) The time of concentration at catchment outlet should be higher than 1hr.
- (B) The time of concentration at catchment outlet should be lesser than 1hr.
- (C) The time of concentration at catchment outlet should be higher than 0.50 hr.
- (D) The time of concentration at catchment outlet should be lesser than 0.50 hr.

88. The recurrence intervals for a flood of magnitude  $20000\text{m}^3/\text{s}$  in a river, were observed to be 4 yrs, 6yrs, 5 yrs, 5yrs and 10 yrs in a time span of 30 yrs. What would be the Return period for the flood of magnitude  $20000\text{m}^3/\text{s}$  in the same river?

- |          |          |          |            |
|----------|----------|----------|------------|
| (A) 4yrs | (B) 5yrs | (C) 6yrs | (D) 10 yrs |
|----------|----------|----------|------------|

89. In hydrologic routing, Storage time constant (K) represents \_\_\_\_\_

- (A) Time required for passage of flood wave from upstream section to downstream section.
- (B) The relative weightage of inflows at upstream section and outflows from downstream section.
- (C) Base time for inflow flood hydrograph.
- (D) Base time for outflow flood hydrograph.

90. The duty of a canal network would be maximum at which of the following location?

- (A) Head of agricultural field.
- (B) Head of major distributary.
- (C) Head of Branch canal.
- (D) Head of main canal.

D =

91. The field capacity (FC) and Permanent wilting point (PWP) of an irrigation field were observed to be 0.30 and 0.10 respectively. Compute the moisture content for optimal growth for the same field, by assuming readily available moisture is 75 % of available moisture.

- |          |          |          |          |
|----------|----------|----------|----------|
| (A) 0.10 | (B) 0.15 | (C) 0.25 | (D) 0.30 |
|----------|----------|----------|----------|

92. Which of the following porous media has high specific yield?

- |           |           |            |               |
|-----------|-----------|------------|---------------|
| (A) Sandy | (B) silty | (C) clayey | (D) Fine clay |
|-----------|-----------|------------|---------------|

93. Specific capacity of well refers to \_\_\_\_\_

- (A) Discharge per unit draw down of the well.
- (B) Draw down at the well.
- (C) Discharge from the well.
- (D) Draw down per unit discharge from well.

94. In a gravity dam, under full reservoir condition, tensile stress is expected at which of the following location?

- (A) Toe of the dam
- (B) Middle of the dam
- (C) Heel of the dam
- (D)  $\frac{2}{3}$  rd of dam width from the toe



95. Hydraulic jump type energy dissipator is used in Spillways, under which of the following conditions?

- (A) Deficient tail water condition with sound rock strata in river bed.
- (B) Excessive tail water depth with sound rock strata in river bed.
- (C) Steep sloped channel with sound rock in the river bed.
- (D) Tail water curve follows the jump height curve.

96. Which of the following purposes of flood control reservoir are met?

- (A) It reduces the flood peak in downstream channel.
- (B) It reduces the flood peak and causes time lag in the flood in downstream channel.
- (C) It reduces the flood peak and volume of flood in the downstream channel.
- (D) It reduces the flood volume and causes lag in the flood in downstream channel.

97. The canal falls are needed in the canal network for which of the following condition?

- (A) Designed slope is smaller than available ground slope.
- (B) Designed slope is larger than available ground slope.
- (C) Designed slope is equal to available ground slope.
- (D) Designed slope is much higher than available ground slope.

98. What is the shape of Lacey's regime channel?

- |               |                 |                     |                |
|---------------|-----------------|---------------------|----------------|
| (A) Parabolic | (B) Trapezoidal | (C) Semi-elliptical | (D) Triangular |
|---------------|-----------------|---------------------|----------------|

99. What would be exit gradient for a permeable foundation in absence of downstream pile?

- |          |         |          |              |
|----------|---------|----------|--------------|
| (A) Zero | (B) 1.0 | (C) 0.50 | (D) Infinite |
|----------|---------|----------|--------------|

100. Under which of the following conditions, maximum cross-drainage work is expected?

- |                 |                   |
|-----------------|-------------------|
| (A) Ridge canal | (B) Contour canal |
| (C) Main canal  | (D) Branch canal  |

65.	Which of the following is not correct about the growth of Indian Economy from 1947 onwards?			
	(A) In order to give the economy a stimulus, the Planning Commission was established on 15 March, 1950.			
	(B) The First Five Year Plan (1951-56) was, in fact, to tackle the post-independence economic and social issues.			
	(C) P.C. Mahalanobis played a leading role in drafting the Second Five Year Plan.			
	(D) Five giant steel plants were set up in the public sector within the Second Five Year Plan.			
66.	The river Danube forms boundary between the countries :			
	(A) Romania and Bulgaria.	(B) Germany and Norway.		
	(C) Norway and Sweden.	(D) Italy and Switzerland.		
67.	Which of the following is correct about the Second Summit held between Donald Trump, the President of USA and Kim Jong Un, the North Korean Leader?			
	(i) It was held in February, 2019.			
	(ii) It was held in May, 2019.			
	(iii) It was held in Hanoi (Vietnam).			
	(iv) It was held in Singapore.			
	(A) (i) & (iv).	(B) (iii) & (i).	(C) (ii) & (iii).	(D) (iv) & (ii).
68.	The headquarters of the Comprehensive Test Ban Treaty (CTBT) are established in :			
	(A) New York	(B) Geneva.	(C) Paris.	(D) Vienna
69.	Which of the following country is not in the continent of North America?			
	(A) Canada.	(B) Cuba.	(C) Brazil.	(D) Costa Rica.
70.	Which of the following is not the Novel of Salman Rushdie?			
	(A) The Inheritance of Loss.		(B) Midnight's Children.	
	(C) The Satanic Verses.		(D) Quichotte.	
71.	In case of Newtonian Fluid, which of the following statements is correct?			
	(A) Absolute viscosity of fluid varies linearly with rate of Angular deformation.			
	(B) Absolute viscosity of fluid remains constant with variation in rate of angular deformation.			
	(C) Absolute viscosity of fluid decreases linearly with variation in rate of angular deformation.			
	(D) Absolute viscosity is zero for Newtonian fluid.			