Group 1

Group Number :	1
Group Id :	8273477
Group Maximum Duration :	0
Group Minimum Duration :	120
Revisit allowed for view? :	No
Revisit allowed for edit? :	No
Break time:	0
Mandatory Break time:	No
Group Marks:	100

Civil Engineering

Section Id :	8273477
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	100
Number of Questions to be attempted:	100
Section Marks:	100

Sub-Section Number:	1
Sub-Section Id:	8273477
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 827347601 Question Type : MCQ

The maximum value of Poisson's ratio for an elastic material is

Options :

0.25

0.5

0.75

0.1

Question Number : 2 Question Id : 827347602 Question Type : MCQ

A metal bar of length 100 mm is inserted between two rigid supports and its temperature is increased by 10º C. If the coefficient of thermal expansion is 8×10^{-6} per ºC and the young's modulus is 1.5×10^5 Mpa, the stress in the bar is

Options :

Zero

12 Mpa

24 Mpa

2400 Mpa

Question Number : 3 Question Id : 827347603 Question Type : MCQ

Mohr's circle for the state of stress defined by $\begin{bmatrix} 30 & 0 \\ 0 & 30 \end{bmatrix}$ Mpa is a circle with

Options :

center at (0, 0) and radius 30 Mpa

center at (0, 0) and radius 60 Mpa

center at (30, 0) and radius 30 Mpa

center at (30, 0) and zero radius

Question Number : 4 Question Id : 827347604 Question Type : MCQ

The maximum bending stress induced in a steel wire of modules of elasticity 100 kN/m² and diameter 2 mm when wound on a drum of diameter 2 m is approximately equal to

Options :

50 N/mm²

100 N/mm²

200 N/mm²

400 N/mm²

Question Number : 5 Question Id : 827347605 Question Type : MCQ

A solid circular shaft of diameter D and length L is fixed at one end and free at the other end. A torque T is applied at the free end. The shear modulus of the material is G. the angle of twist at the free end is
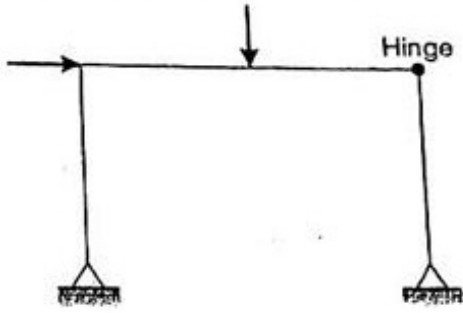
Options :

16 TL/πd⁴ G

32 TL/πd⁴ G

64 TL/πd⁴ G

128 TL/πd⁴ G

Question Number : 6 Question Id : 827347606 Question Type : MCQ

The kinematic indeterminacy of the plane frame shown in figure is(disregarding the axial deformation of the members)
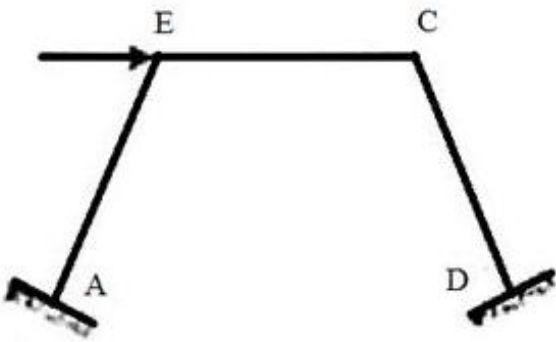

Options :
7
5
6
4

Question Number : 7 Question Id : 827347607 Question Type : MCQ

The degree of kinematic indeterminacy of the rigid frame with clamped ends at A and D as shown in the figure is

Options :
4
3
2
0

Question Number : 8 Question Id : 827347608 Question Type : MCQ

The fixed end moment of uniform beam of span L and fixed at the ends subjected to a central point load P is

Options :
PL/2
PL/8
PL/12
PL/16

Question Number : 9 Question Id : 827347609 Question Type : MCQ

The number of simultaneous equations to be solved in the slope deflection method is equal to

Options :

The degree of static indeterminacy

The degree of kinematic indeterminacy

The number of joints in the structure

The number of member in the structure

Question Number : 10 Question Id : 827347610 Question Type : MCQ

Match list -I with list -II and select the correct answer using the codes given in the lists:

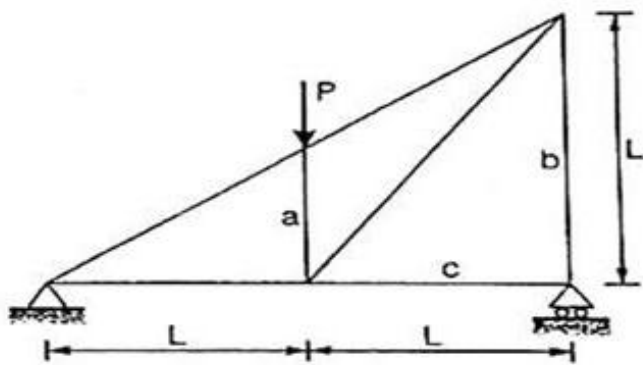List-I   List-II

A. Slope deflection method   a. Force method

B. Moment distribution method   b. Displacement method

C. Method of three moments

D. Castiglione's second theorem

Options :

A – a,   B – b,   C – a,   D – b

A – a,   B – a,   C – b,   D – b

A – b,   B – b,   C – a,   D – a

A – b,   B – a,   C – b,   D – a

Question Number : 11 Question Id : 827347611 Question Type : MCQ

The forces in members a, b, c in the truss as shown in the figure are, respectively

Options :

P, P/2, 0

P/2, P, 0

P, P, P

P/2, P/2, 0

Question Number : 12 Question Id : 827347612 Question Type : MCQ

In a linear elastic structural element

Options :

stiffness is directly proportional to flexibility

stiffness is inversely proportional to flexibility

stiffness is equal to flexibility

stiffness and flexibility are not related

Question Number : 13 Question Id : 827347613 Question Type : MCQ

The ratio of the stiffness of a beam at the near end when the far end is hinged to the stiffness of the beam at the near end when the far end is fixed is

Options :

$\dfrac{1}{2}$

$\dfrac{3}{4}$

$\dfrac{1}{4}$

$\dfrac{4}{3}$

Question Number : 14 Question Id : 827347614 Question Type : MCQ

While designing for a steel column of Fe 250 grade, a base plate resting on a concrete pedestal of M20 grade, the bearing strength of concrete (in N/mm²) in limit state method of design as per IS 456 : 2000 is

Options :

8 N/mm²

9 N/mm²

10 N/mm²

12 N/mm²

Question Number : 15 Question Id : 827347615 Question Type : MCQ

The flexural tensile strength of M25 grade of concrete, in (N/mm²) as per IS 456: 2000 is

Options :

3 N/mm²

3.5 N/mm²

4 N/mm²

4.5 N/mm²

Question Number : 16 Question Id : 827347616 Question Type : MCQ

IS 456 : 1978 recommends to provide certain minimum steel in a RCC beam

Options :

to ensure compression failure

to avoid rupture of steel in case a flexural failure occurs

to hold the stirrups steel in position

to provide enough ductility to the beam

Question Number : 17   Question Id : 827347617   Question Type : MCQ

The permissible bending tensile stress in concrete for the vertical wall of an RC water tank made of M25 concrete is

Options :

8.5 N/mm²

6.0 N/mm²

2.5 N/mm²

1.8 N/mm²

Question Number : 18   Question Id : 827347618   Question Type : MCQ

Which one of the following set of values give the minimum clear cover (in mm) for the main reinforcements in the slab, beam, column and footing respectively according to IS 456 : 1978?

Options :

20, 25, 30, 75

5, 15, 25, 50

15, 25, 40, 75

25, 15, 20, 75

Question Number : 19   Question Id : 827347619   Question Type : MCQ

A prestressed concrete beam has a cross section with the following properties:

Area A = 46,400 mm²

$I = 75.8 \times 10^7 \text{ mm}^4$

$Y_{bottom} = 244 \text{ mm}$, $Y_{top} = 156 \text{ mm}$

It is the subjected to a prestressing force an eccentricity 'e' so as to have a zero stress at the top fibre. The value of 'e' is given by

Options :

66.66 mm

66.95 mm

104.72 mm

133.33 mm

Question Number : 20   Question Id : 827347620   Question Type : MCQ

The loss of prestress due to elastic shortening of concrete is least in

Options :

One wire pre-tensioned beam

One wire post-tensioned beam

Multiple wire pre-tensioned beam with sequential cutting of wires

Multiple wire post-tensioned beam subjected to sequential prestressing

Question Number : 21   Question Id : 827347621   Question Type : MCQ

The percentage loss of prestress due to anchorage slip of 3 mm in a concrete beam of length 30 m which is post-tensioned by a tendor with an initial stress of 1200 N/mm² and modulus of elasticity equal to 2.1×10^5 N/mm² is

Options :
0.0175
0.175
1.75
17.5

Question Number : 22 Question Id : 827347622 Question Type : MCQ

Which one of the following is categorized as a long term loss of prestress in a prestressed concrete member?

Options :
Loss due to elastic shortening

Loss due to friction
Loss due to relaxation of strands
Loss due to anchorage slip

Question Number : 23 Question Id : 827347623 Question Type : MCQ

If soil is dried beyond its shrinkage limit, it will show

Options :
large volume change
moderate volume change
low volume change
no volume change

Question Number : 24 Question Id : 827347624 Question Type : MCQ

The void ratio and specific gravity of a soil are 0.65 and 2.72 respectively. the degree of saturation (in percent) corresponding to water content of 20 % is

Options :
65.3
20.9
83.7
54.4

Question Number : 25 Question Id : 827347625 Question Type : MCQ

The shape of clay particle is usually

Options :
Angular
Flaky
Tubular
Rounded

Question Number : 26 Question Id : 827347626 Question Type : MCQ

Group symbols assigned to silty sand and clayey sand are respectively

Options :

SS and CS

SM and CS

SM and SC

MS and CS

Question Number : 27 Question Id : 827347627 Question Type : MCQ

A soil mass has coefficients of horizontal and vertical permeability as 9×10^{-7} cm/s and 4×10^{-7} cm/s, respectively. The transformed coefficient of permeability of an equivalent isotropic soil mass is

Options :

9×10^{-7} cm/s

4×10^{-7} cm/s

13×10^{-7} cm/s

6×10^{-7} cm/s

Question Number : 28 Question Id : 827347628 Question Type : MCQ

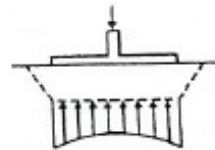Match List I with List II and select the correct answer using the given lists;

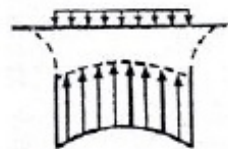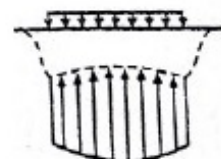| List I		List II
A. Flexible footing on cohesive soil	a.	
B. Rigid footing on cohesive soil	b.	
C. Rigid footing on cohesion less soil	c.	
D. Flexible footing on cohesion less soil	d.	
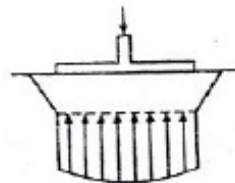
Options :

A – a,   B – b,   C – c,   D – d

A – c,   B – b,   C – a,   D – d

A – b,   B – a,   C – d,   D – c

A – d,   B – c,   C – b,   D – a

Question Number : 29 Question Id : 827347629 Question Type : MCQ

Sand drains are used to

Options :

reduce the settlement

accelerate the consolidation

increase the permeability

transfer the load

Question Number : 30 Question Id : 827347630 Question Type : MCQ

Piping in soil occurs when

Options :

the soil is highly porous

sudden change in permeability occurs

effective pressure becomes zero

the soil is highly stratified

Question Number : 31 Question Id : 827347631 Question Type : MCQ

In a compaction test as the compaction effort is increased the optimum moisture content

Options :

decreases

remains same

increases

increase first and then decreases

Question Number : 32 Question Id : 827347632 Question Type : MCQ

The appropriate field test to determine the undrained shear strength of soft clay is

Options :

Plate load test

Static cone penetration test

Standard penetration test

Vane shear test

Question Number : 33 Question Id : 827347633 Question Type : MCQ

Coulomb's theory of earth pressure is based on

Options :

the theory of elasticity

the theory of plasticity

empirical rules

Wedge theory

Question Number : 34 Question Id : 827347634 Question Type : MCQ

A foundation is considered as shallow if its depth is

Options :

less than 1 meter

greater than its width

equal to or less than its width

greater than 1 meter

Question Number : 35 Question Id : 827347635 Question Type : MCQ

The ultimate bearing capacity of a soil is 300 kN/m². The depth of foundation is 1 m and unit weight of soil is 20 kN/m³. Choosing a factor of safety of 2.5, the net safe bearing capacity is
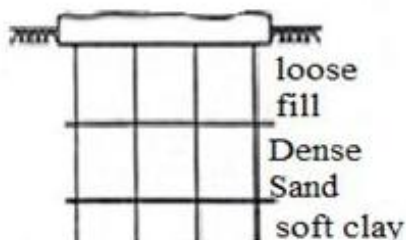
Options :
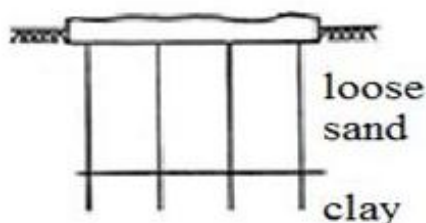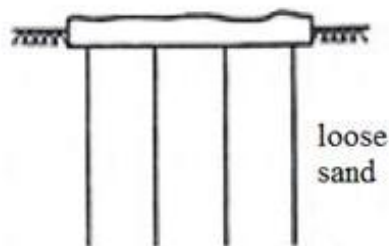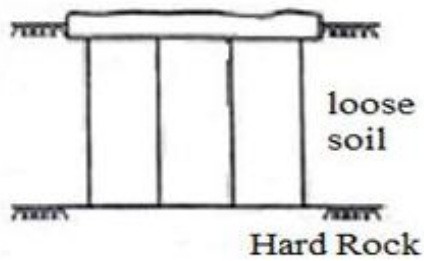
100 kN/m³

112 kN/m³

80 kN/m³

100.5 kN/m³

Question Number : 36 Question Id : 827347636 Question Type : MCQ

In which one of the following conditions, is the pile system as shown in figure highly inappropriate?

Options :

loose
sand

loose
sand

clay

loose
fill

Dense
Sand

soft clay

loose soil

Hard Rock

Question Number : 37 Question Id : 827347637 Question Type : MCQ

Well foundation are commonly used as foundation for the following structures

Options :

Water tanks

Bridge

Buildings

Reciprocating machines

Question Number : 38 Question Id : 827347638 Question Type : MCQ

Negative skin friction in a soil is considered when the pile is constructed through a

Options :

fill material

dense coarse sand

over consolidated stiff clay

dense fine sand

Question Number : 39 Question Id : 827347639 Question Type : MCQ

If, for a fluid in motion, pressure at a point is same in all directions, then the fluid is

Options :

a real fluid

a Newtonian fluid

an ideal fluid

a Non-Newtonian fluid

Question Number : 40 Question Id : 827347640 Question Type : MCQ

A 15 cm length of steel rod with relative density of 7.4 is submerged in a two layer fluid. The bottom layer is mercury and the top layer is water the height of top surface of the rod above the liquid interface (in cm) is

Options :

8.24

7.82

7.64

7.38

Question Number : 41 Question Id : 827347641 Question Type : MCQ

For a 2D flow field, the stream function ψ is given as $\psi = \frac{3}{2}(y^2 - x^2)$. The magnitude of discharge occurring between the stream line passing through points (0, 3) and (3, 4) is

Options :

6 units

3 units

1.5 units

2 units

Question Number : 42 Question Id : 827347642 Question Type : MCQ

The reading of differential manometer of a venturi meter, placed at 45° to the horizontal is 11 cm. if the venture meter is turned to horizontal position, the manometer reading will be

Options :

Zero

$\frac{11}{\sqrt{2}}$ cm

11 cm

$11\sqrt{2}$ cm

Question Number : 43 Question Id : 827347643 Question Type : MCQ

Match List I (Devices) with List II (Uses) and select the correct answer using the given lists:

List-I (Devices)	List-II (Uses)
A. Pitot tube	a. Measuring pressure in a pipe
B. Manometer	b. Measuring velocity of flow in a pipe
C. Venturi meter	c. Measuring air and gas velocity
D. Anemometer	d. Measuring discharge in a pipe

Options :

A – a,	B – b,	C – d,	D – c
A – b,	B – a,	C – c,	D – d
A – b,	B – a,	C – d,	D – c
A – d,	B – a,	C – c,	D – b

Question Number : 44 Question Id : 827347644 Question Type : MCQ

The number of π parameters needed to express the function $f(A, V, t, \mu, L) = 0$ are

Options :

5

4

3

2

Question Number : 45 Question Id : 827347645 Question Type : MCQ

Water flow through a 100 mm diameter pipe with a velocity of 0.015 m/sec. if the kinematic viscosity of water is 1.13×10^{-6} m²/sec, the friction factor of the pipe material is

Options :

0.0015

0.032

0.037

0.048

Question Number : 46 Question Id : 827347646 Question Type : MCQ

On an immersed body in a flowing fluid, the lift force is

Options :

due to buoyant force

always in the opposite direction to gravity

due to wake phenomenon

the dynamic fluid force component normal to approach velocity

Question Number : 47 Question Id : 827347647 Question Type : MCQ

The thickness of the laminar boundary layer on a flat plate at a point A is 2 cm and at a point B, 1 m downstream of A, is 3 cm. What is the distance of A from the leading edge of the plate?

Options :

0.50 m

0.80 m

1.00 m

1.25 m

Question Number : 48 Question Id : 827347648 Question Type : MCQ

The repeating variables in dimensional analysis should

Options :

include the dependent variable

have amongst themselves all the basic dimensions

be derivable from one another

exclude one of the basic dimensions

Question Number : 49 Question Id : 827347649 Question Type : MCQ

Which of the following statement is correct regarding impulse turbine?

Options :

Always operates submerged

Makes use draft tube

Operates by initial complete conversion to kinetic energy

Converts pressure head into velocity head throughout the vanes

Question Number : 50 Question Id : 827347650 Question Type : MCQ

A hydraulic turbine has a discharge of 5 m³/sec, when operating under a head of 20 m with a speed of 500 rpm. It is to operate under a head of 15 m, for the same discharge, the rotational speed in rpm will approximately be

Options :
433

403

627

388

Question Number : 51 Question Id : 827347651 Question Type : MCQ

Identify the false statement from the following.
The specific speed of the pump increases with-

Options :
increase in shaft speed

increase in discharge

decrease in gravitational acceleration

increase in head

Question Number : 52 Question Id : 827347652 Question Type : MCQ

The specific retention is least in case of

Options :
Clay

Sand

Silt

Coarse gravel

Question Number : 53 Question Id : 827347653 Question Type : MCQ

Bacteriological examination of drinking water for Escherischia Coli (E.coli) is performed because

Options :
They are pathogenic causing intestinal diseases

Their presence indicates viral contamination of water

They are used as indicator organisms for probable presence of pathogens

They represent unique indicator organism for sewage pollution

Question Number : 54 Question Id : 827347654 Question Type : MCQ

MPN index is a measure of

Options :
coliform bacteria

BOD$_5$

dissolved oxygen content

hardness

Question Number : 55 Question Id : 827347655 Question Type : MCQ

Most of the turbidity meters work on the scattering principle. The turbidity value so obtained is expressed in

Options :

CPU

FTU

JTU

NTU

Question Number : 56 Question Id : 827347656 Question Type : MCQ

The presence of hardness in excess of permissible limit causes

Options :

cardio-vascular problems

skin discolouration

calcium deficiency

increased laundry expenses

Question Number : 57 Question Id : 827347657 Question Type : MCQ

The absorbent most commonly used in water and waste treatment is

Options :

Sand of grain size from 0.1 to 2 mm

Activated carbon granules of size 0.1 to 2 mm

Ordinary wood shavings of fine size

Coal-tar

Question Number : 58 Question Id : 827347658 Question Type : MCQ

Zero hardness of water is achieved by

Options :

lime soda process

excess lime treatment

ion exchange treatment

excess alum and lime treatment

Question Number : 59 Question Id : 827347659 Question Type : MCQ

A surface water treatment plant operates round the clock with a flow rate of 35 m³/ min. the water temperature is 15°C and jar testing indicated an alum dosage of 25 mg/l with flocculation at GT value of 4×10^4 producing optimal results. The alum quantity required for 30 days (in kg) of operation of the plant is

Options :

23700 kg

15200 kg

45320 kg

37800 kg

Question Number : 60 Question Id : 827347660 Question Type : MCQ

The drop manholes are provided in sewerage system when there is

Options :

change in alignment of sewer line

change in size of sewers

change in the elevation of ground level

change from gravity system to pressure system

Question Number : 61 Question Id : 827347661 Question Type : MCQ

High COD to BOD ratio of an organic pollutant represents

Options :

High biodegradability of the pollutant

Low biodegradability of the pollutant

Presence of free oxygen for aerobic decomposition

Pressure of toxic material in the pollutant

Question Number : 62 Question Id : 827347662 Question Type : MCQ

A single rapid test to determine the pollution status of river water is

Options :

Biochemical oxygen demand

Chemical oxygen demand

Total organic solids

Dissolved oxygen

Question Number : 63 Question Id : 827347663 Question Type : MCQ

Chlorine is sometimes used in sewage treatment

Options :

To avoid flocculation

To increase biological activity of bacteria

To avoid bulking of activated sludge

To help in grease separation

Question Number : 64 Question Id : 827347664 Question Type : MCQ

From amongst the following sewage treatment options, largest land requirements for a given discharge will be needed for

Options :

Trickling filter

Anaerobic pond

Oxidation ditch

Oxidation pond

Question Number : 65 Question Id : 827347665 Question Type : MCQ

The dominating microorganisms in an activated sludge process reactor are

Options :

Aerobic heterotrophs

Anaerobic heterotrophs

Autotrophs

Phototrophs

Question Number : 66 Question Id : 827347666 Question Type : MCQ

The dispersion of pollutants in atmosphere is maximum when

Options :

environmental lapse rate is greater than adiabatic lapse rate

environmental lapse rate is less than adiabatic lapse rate

environmental lapse rate is equal to adiabatic lapse rate

maximum mixing depth is equal to zero

Question Number : 67 Question Id : 827347667 Question Type : MCQ

Two primary air pollutants are

Options :

Sulphur oxide and ozone

Nitrogen oxide and peroxyacetyl nitrate

Sulphur oxide and hydrocarbon

Ozone and peroxyacetyl nitrate

Question Number : 68 Question Id : 827347668 Question Type : MCQ

The reference pressure used in the determination of sound pressure level is

Options :

20 μpa

20 dB

10 μpa

10 dB

Question Number : 69 Question Id : 827347669 Question Type : MCQ

A canal was designed to supply the irrigation needs for 1200 hectares of land growing rice of 140 days base period having a delta of 134 cm. if this canal water is used to irrigate wheat of base period 120 days having a delta of 52 cm, the area (in hectares) that can be irrigated is

Options :

2650

3608

543

1730

Question Number : 70 Question Id : 827347670 Question Type : MCQ

On which of the canal system, R.G. Kennedy, executive engineer in the Punjab irrigation department made his observations for proposing his theory on stable channels?

Options :

Krishna Western Delta Canals

Lower Bari Doab Canals

Lower Chenab Canals

Upper Bari Doab Canals

Question Number : 71 Question Id : 827347671 Question Type : MCQ

The live storage requirement for a reservoir is to be determined by

Options :

Topographical survey

Annual demand

Double mass curve analysis

Mass curve analysis

Question Number : 72 Question Id : 827347672 Question Type : MCQ

Isopleths are lines on a map through points having equal depth of
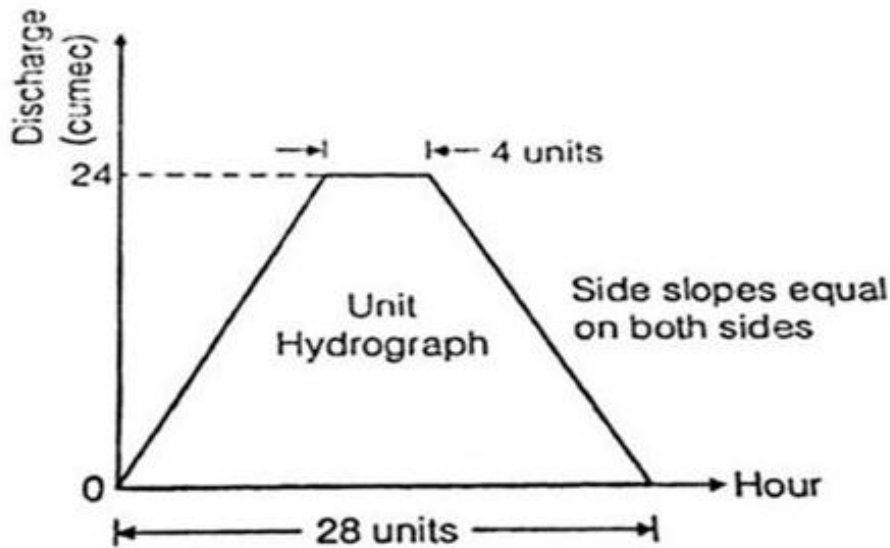
Options :

rainfall

infiltration

evapotranspiration

total run off

Question Number : 73 Question Id : 827347673 Question Type : MCQ

A 2-hour unit hydrograph can be approximated as trapezoidal as shown in figure. The unit hydrograph refers to catchment of area is

Options :
138.24 km²
0.0384 km²
384 m²
3840 m²

Question Number : 74 Question Id : 827347674 Question Type : MCQ

In reservoirs with an uncontrolled spillway, the peak of the plotted outflow hydrograph

Options :
Lies outside the plotted inflow hydrograph
Lies on the recession limb of the plotted inflow hydrograph
Lies on the peak of the inflow hydrograph
Is higher than the peak of the plotted inflow hydrograph

Question Number : 75 Question Id : 827347675 Question Type : MCQ

The standard project flood is

Options :
same as the probable maximum flood
same as the design flood
smaller than the probable maximum flood
larger than the probable maximum flood by a factor implying safety factor

Question Number : 76 Question Id : 827347676 Question Type : MCQ

The design flood for a culvert should be preferably

Options :
The probable maximum flood
Obtained from statistical considerations say a flood of 50 years return period

The highest observed flood

Obtained from a flood formula

Question Number : 77 Question Id : 827347677 Question Type : MCQ

Muskingum method for routing of flood is

Options :

used for routing floods through reservoirs

a method of routing that uses continuity and momentum equations

a hydrologic method of routing floods through streams

one in which only energy equation is used

Question Number : 78 Question Id : 827347678 Question Type : MCQ

A linear reservoir is one in which

Options :

storage varies linearly with time

storage varies linearly with outflow rate

storage varies linearly with inflow rate

storage varies linearly with elevation

Question Number : 79 Question Id : 827347679 Question Type : MCQ

The plan of a map was photo copied to a reduced size such that a line originally 100 mm, measures 90 mm. the original scale of the plan was 1: 1000. The revised scale is

Options :

1 : 900

1 : 1111

1 : 1121

1 : 1221

Question Number : 80 Question Id : 827347680 Question Type : MCQ

The type of surveying in which the curvature of the earth is taken into account is called

Options :

Geodetic surveying

Plane surveying

Preliminary surveying

Topographical surveying

Question Number : 81 Question Id : 827347681 Question Type : MCQ

Match the list I (tool/instrument) with list II (method of surveying) and select the correct answer using the codes given in lists:

List -I (Tool/instrument)   List-II (Method of surveying)

    A. Alidade   a. Chain surveying

    B. Arrow   b. Levelling

    C. Bubble tube   c. Plain table surveying

    D. Stadia hair   d. Theodolite surveying

Options :

A – c,	B – b,	C – a,	D – d
A – b,	B – d,	C – c,	D – a
A – a,	B – b,	C – d,	D – c
A – c,	B – a,	C – b,	D – d

Question Number : 82 Question Id : 827347682 Question Type : MCQ

In a closed loop traverse of 1 km total length the closing errors in departure and latitude are 0.3 m and 0.4 m, respectively. The relative precision of this traverse will be

Options :

1 : 5000

1 : 4000

1 : 3000

1 : 2000

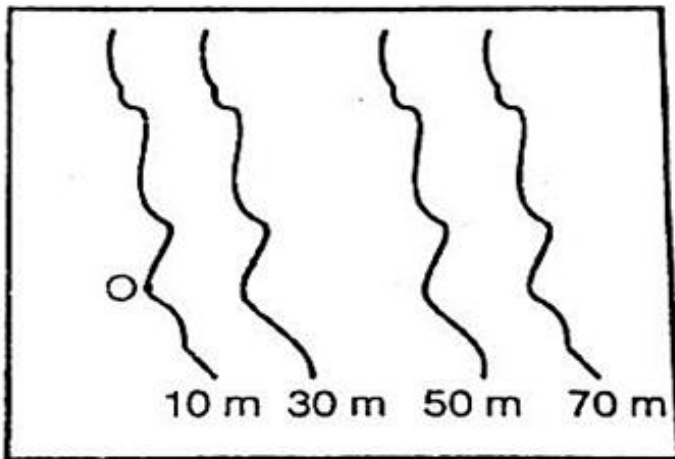**Question Number : 83 Question Id : 827347683 Question Type : MCQ**

The rise and fall method provides an arithmetic check on

Options :

back sights and fore sights

intermediate sights

back sights and intermediate sights

back sights, intermediate sights and fore sights

Question Number : 84 Question Id : 827347684 Question Type : MCQ

Consider the following figure, which is an extract from a contour map (scale = 1: 20,000) of an area. An alignment of a road at a ruling gradient of 4 % is to be fixed from the point O and beyond. What should be the radius of the arc with O as the center to get the point of alignment of the next contour on the map?

Options :
0.025 cm
0.25 cm
2.5 cm
5.0 cm

Question Number : 85 Question Id : 827347685 Question Type : MCQ

Anallactic lens provided in a tacheometer is

Options :
concave lens
convex lens
planoconvex lens
plane lens

Question Number : 86 Question Id : 827347686 Question Type : MCQ

The tangential method of tacheometry is

Options :
slower than stadia hair method
faster than stadia hair method
preferred as involves less computations to get reduced distances
preferred as chances of operational error are less compared to stadia hair method

Question Number : 87 Question Id : 827347687 Question Type : MCQ

A first class brick should not absorb water more than _____ of its own dry weight after 24 hours immersion in cold water

Options :
10 %
15 %
20 %

Question Number : 88 Question Id : 827347688 Question Type : MCQ

Excess of alumina in the clay

Options :

makes the brick brittle and weak

makes the brick crack and warp on drying

changes the colour of the brick from red to yellow

improves impermeability and durability of the brick

Question Number : 89 Question Id : 827347689 Question Type : MCQ

The good clay for making bricks is

Options :

Unweathered clay

Weathered clay

Silted clay

Black cotton soil

Question Number : 90 Question Id : 827347690 Question Type : MCQ

Jhama bricks are

Options :

well burnt having smooth and even surface

slightly over burnt having rough surface

under burnt and can be easily broken

over burnt with irregular shape

Question Number : 91 Question Id : 827347691 Question Type : MCQ

Which one of the following slows down or retards the setting action of cement?

Options :

Sulphur trioxide

Alkaline

Calcium sulphate

Magnesia

Question Number : 92 Question Id : 827347692 Question Type : MCQ

The durability of concrete is proportional to

Options :

Sand content

Water - cement ratio

Cement - aggregate ratio

Aggregate - water ratio

Question Number : 93 Question Id : 827347693 Question Type : MCQ

The slump test of concrete is used to measure its

Options :

consistency

tensile and compressive strength

impact value

homogeneity

Question Number : 94 Question Id : 827347694 Question Type : MCQ

The purpose of seasoning of timber is to

Options :

change the direction of grains

remove voids

reduce moisture content

increase moisture content

Question Number : 95 Question Id : 827347695 Question Type : MCQ

The wood generally used for railway sleepers is

Options :

Mango

Kail

Babul

Bamboo

Question Number : 96 Question Id : 827347696 Question Type : MCQ

Simple stress means

Options :

direct tensile stress

direct compressive stress

shear stress

only one type of stress

Question Number : 97 Question Id : 827347697 Question Type : MCQ

Endurance limit is

Options :

The maximum stress a material can sustain for very long time

The maximum stress a material can take under direct loading

The maximum bending stress the material can take

The maximum stress at which even a billion reversal of stress cannot cause failure of the material

Question Number : 98 Question Id : 827347698 Question Type : MCQ

According to Robert Hooke, stress is directly proportional to strain within

Options :
Proportional limit

Elastic limit

Yield point

Ultimate stress

Question Number : 99 Question Id : 827347699 Question Type : MCQ

Point of contraflexure in a beam is the point when

Options :
bending moment is zero

bending moment is maximum

shear force is minimum

shear force is zero

Question Number : 100 Question Id : 827347700 Question Type : MCQ

Rolled steel tubes are referred by their

Options :
outer diameters

inner diameter

average diameter

outer radius