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Q 3) Select the choice that represents the given number the best.
1725552:
a) NPNRRRS
b) NNPQQRS
c) ABCDEFF
d) ABCDDDC

## YоиТиПе BHANNEL

Q 4) The equator does not pass through which of the following countries:
a) Kenya
b) Indonesia
c) Mexico
d) Brazil


Q 5）How many countries are members of the SAARC organization？
a） 10
b） 9
c） 8
d）None of these
$\square$


Q 6) The resultant of two forces each equal to $P$ and acting at right angles is:
a) $P / \sqrt{2}$
b) $\mathrm{P} / 2$
c) $P / 2 \sqrt{2}$
d) $\sqrt{2} p$

Q 7) Which of the following is a scalar quantity?
a) Force
b) Velocity
c) Speed
d) Acceleration
$\square$


Q 8）A beam extending beyond the supports is called：
a）Simply supported beam
b）Fixed beam
c）Overhanging beam
d）Continuous beam

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Q 10) The ratio of specific weight of a liquid to the specific weight of pure water at a standard temperature is called:
a) Density of liquid
b) Specific gravity of liquid
c) Compressibility of liquid
d) Surface tension of liquid


Q 11) The point at which the resultant pressure on a immersed surface acts, is known as:
a) Centre of Gravity
b) Centre of depth
c) Centre of pressure
d) Centre of immersed surface

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Q 12) The hydraulic mean depth or the hydraulic radius is the ratio of:
a) Area of flow and wetted perimeter
b) Wetted perimeter and diameter of pipe
c) Velocity of flow and area of flow
d) None of these


Q 13) Reynolds number is the ratio of the inertia force to the:
a) Surface tension force
b) Viscous force
c) Gravity force
d) Elastic force
$\square$


Q 14) A pelton wheel is:
a) Tangential flow impulse turbine
b) Inward flow impulse turbine
c) Outward flow impulse turbine
d) Inward flow reaction turbine


Q 15) The bricks should be burnt at temperature from:
a) $\mathbf{3 0 0}{ }^{\circ} \mathrm{C}$ to $500^{\circ} \mathrm{C}$
b) $700^{\circ} \mathrm{C}$ to $1000^{\circ} \mathrm{C}$
c) $500^{\circ} \mathrm{C}$ to $700^{\circ} \mathrm{C}$
d) $900^{\circ} \mathrm{C}$ to $1200^{\circ} \mathrm{C}$

## Q 16) In plane surveying:

a) The curvature of the earth is taken consideration
b) The curvature of the earth is not taken consideration
c) The degree of accuracy of surveys is high
d) The surveys extend over large areas


Q 17) Which of the following formula is used for computing the quantity of water for fire demand?
a) Freemans formula
b) Bustons formula
c) Kuichling formula
d) All of these


Q 18) The most common cause of acidity in water is:
a) Hydrogen
b) Carbon dioxide
c) Oxygen
d) All of these
$\square$


Q 19) An arrangement for backwashing is provided in:
a) Slow sand filter
b) Sedimentation tank
c) Rapid sand filter
d) All of these
$\square$


Q 20) The water content ratio of a soil is defined as the ratio of the:
a) Weight of water to the weight of solids
b) Volume of water to the volume of voids in the soil mass
c) Total volume of voids to the volume of soil solids
d) Total volume of voids to the total volume of soil



Q 22) Reinforced cement concrete is equally strong in taking:
a) Tensile and compressive stresses
b) Compressive and shear stresses
c) Tensile, compressive and shear stress
d) Tensile and shear stresses


Q 23) If $\sigma_{c b}$ is the permissible stress in compression due to bending in concrete in $\mathrm{N} / \mathrm{mm}^{2}$, the modular ratio $(\mathrm{m})$ is of the order of:
a) $280 / 3 \sigma_{c b}$
b) $\mathbf{2 8 0} / 4 \sigma_{\mathrm{cb}}$
c) 19
d) 23


Q 24) The centre to centre spacing of vertical stirrups, in a rectangular beam, is:
a) Increased towards the centre of the span of the beam
b) Decreased towards the centre of the span of the beam
c) Increased at the ends
d) None of these


$\square$



Q 27) Angles of 450 with a chain line may be set out with:
a) Optical square
b) Open cross staff
c) French square
d) Prismatic square
$\square$


# Q 28) The reduced bearing of a line 

 is $\mathbf{N} 87 \mathbf{W}$, Its whole circle bearing is:a) $\mathbf{8 7}{ }^{\circ}$
b) $\mathbf{2 7 3}{ }^{\circ}$
c) $173^{\circ}$
d) $\mathbf{1 8 3}{ }^{\circ}$



Q 30) If a three hinged parabolic arch carries a uniformly distributed load on its entire span, every section of the arch resists:
a) Tensile force
b) Compressive force
c) Shear force
d) Bending moment

a) $B M$ is zero
b) BM is maximum
c) BM is minimum
d) SF is minimum

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# Q 33) Hydrostatic pressure on a dam depends upon its: 

a) Length
b) Breadth
c) Depth
d) All of these
$\square$


## Q 34) Cowl is provided at:

a) Lower end of the ventilating column
b) Upper end of ventilating column
c) Upper end of the manhole
d) Lower end of manhole
$\square$


Q 35）The rising of road towards outer radius is called：
a）Camber
b）Super elevation
c）Curve
d）Ridge
$\square$

Q 36) Disinfection of drinking water is done to remove:
a) Odour
b) Colour
c) Turbidity
d) Bacteria
$\square$


Q 37) The maximum pressure which a soil can carry without shear failure, is called:
a) Net safe bearing capacity
b) Safe bearing capacity
c) Net ultimate bearing capacity
d) Ultimate bearing capacity


Q 38) Separation of water or water sand cement from a freshly mixed concrete, is known:
a) Bleeding
b) Flooding
c) Creeping
d) Segregation


Q 39) Workability of concrete mix with low water cement ratio is determined by:
a) Slump test
b) Tensile test
c) Compaction factor test
d) All of these


Q 40) The grade of concrete not recommended by IS 456:2000, is:
a) $\mathbf{M} 20$
b) $\mathbf{M} 80$
c) $\mathbf{M 6 0}$
d) $\mathbf{M 9 0}$
$\square$


Q 41）Le－chatelier＇s apparatus is used for cement testing：
a）Hardness
b）Soundness
c）Initial setting time
d）Strength
$\square$



Q 43) A cantilever RCC beam $230 \mathrm{~mm} \times 450 \mathrm{~mm}$ effective depth has span 4 m and carries a UDL of 500 $\mathrm{KN} / \mathrm{m}$ inclusive of its self-weight, the bending moment is:
a) $\mathbf{1 0 0 0} \mathrm{KNM}$
b) $\mathbf{3 0 0 0} \mathbf{~ K N M}$
c) 2000 KNM
d) $\mathbf{4 0 0 0} \mathbf{K N M}$


Q 44) An ISA $50 \times 50 \times 6$ is welded on a gusset plate of 20 mm thick with fillet weld size 4 mm , The Over all total length of weld is 100 mm , the effective length of weld is:
a) $\mathbf{1 0 0} \mathrm{mm}$
b) $\mathbf{9 2} \mathbf{~ m m}$
c) 96 mm
d) 90 mm


a) Length/minimum side dimension
b) Effective length/radius of gyration
c) Effective length/corresponding radius of gyration
d) Effective length/least radius of gyration


Q 47) The minimum cover for bars in RCC slabs should be:
a) $\mathbf{1 5} \mathrm{mm}$
b) $\mathbf{1 5} \mathbf{~ m m}$ or dia of bars
c) $\mathbf{2 5} \mathbf{~ m m}$ or dia of bars
d) 15 mm or the size of the aggregate
$\square$


Q 48) Volumetric expansion of soil due to shear in a drained shear test is called:
a) Thixotropy
b) Swelling
c) Dilatancy
d) Creep


Q 49) Shear stress in the Newtonian fluid is proportional to:
a) Pressure
b) Strain
c) Strain rate
d) The inverse of the viscosity
$\square$


Q 50) A floating body is in stable equilibrium:
a) When its metacentric height is zero
b) When the centre of gravity of the body is below the centre of buoyancy
c) When its metacentre is above the centre of gravity of
d) In none of the above situations


Q 51) The minimum super elevation or curves should not be less than:
a) 0.05
b) 0.04
c) Camber
d) None of these
$\square$


Q 52) Which one of the following forms of chlorine has no disinfectant property:
a) Hypochlorous acid
b) Hypochlorite ion
c) Trichloramine
d) Monochloramine


Q 53) The most coagulant used for is:
a) Chlorine
b) Ferrous oxide
c) Alum
d) Ozone
$\square$


Q 54) During leveling if back sight is more than fore sight:
a) Forward staff is at lower point
b) Back staff is at lower point
c) The difference in level can not be ascertained
d) None of these


Q 55) If the depth of a simply supported beam carrying an isolated load at its centre is doubled, the deflection at centre will be changed by a factor of:
a) 2
b) 43497
c) 4
d) $\mathbf{4 3 6 7 8}$


## Q 56) Pick up the correct statement from the following:

a) If the ratio of depth and width is less than 2 it is shallow foundation
b) If the ratio of depth and width is more than 2 it is deep foundation
c) If the ratio of the length $\&$ width is between $1 \& 2$, it is spread foundation
d) All of these


Q 57) The following figure shows the shear force diagram for a beam simply supported. The maximum BM for the loaded beam is:

a) 13.0 tm at B
b) $\mathbf{9 ~ t m}$ at $B$
c) 48 tm at C
d) None of these

# Q 58) A truss which contains j joints and $m$ members will be a simple truss if: 

a) $m=2 j-3$
b) $\mathbf{m}=3 \mathrm{j}-3$
c) $j=2 m-3$
d) $\mathbf{j}=3 \mathrm{~m}-\mathbf{2}$

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## Q 59) The force in member $C D$ of

 truss shown in figure is:
a) 5 t compression
b) 2.5 t compression
c) 5 t tension
d) None of these
$\square$


Q 60) The length of a line measured with 20 m chain is found to be 400 m . If the actual length of the chain is 20.05 m , the true length of the line, is:
a) 400.5 m
b) $\mathbf{3 9 9 . 5 m}$
c) 401.0 m
d) $\mathbf{3 9 9 . 0} \mathrm{m}$




Q 63) The total pressure on the retaining wall acts at:
a) $h / 2$ from the base
b) $h / 3$ from the base
c) $\mathbf{2 h} / \mathbf{3}$ from the base
d) $3 \mathrm{~h} / 4$ from the base
$\square$


Q 64) A steel rod mm in diameter, 300 cm long is subjected to a sudden pull of 10 tonnes the maximum instantaneous stress induced in the rod will be:
a) Less than 0.5 tonne $/ \mathrm{cm}^{2}$
b) Less than 0.75 tonne / $\mathrm{cm}^{2}$
c) More than 1 tonne / $\mathrm{cm}^{2}$
d) More than 2 tonne / $\mathrm{cm}^{2}$


## Q 65) BOD represents:

a) Pollution strength of a waste
b) Pollution strength of an organic fraction of wastes
c) Pollution strength of inorganic fraction of wastes
d) Pollution strength of biodegradable organic waste


Q 66) A circular hole of 50 mm diameter is cut out from a circular disc of $\mathbf{1 0 0} \mathbf{~ m m}$ diameter as shown in Fig. The center of gravity of the section will lie:

a) In the bigger circle
b) In the hole

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d) At center of smaller circle

Q 67) The method of Three-moment equations is used to analyze:
a) Statically indeterminate trusses
b) Statically indeterminate frames
c) Statically determinate frames
d) Statically indeterminate multispan beam


Q 68) For the purpose of foundation design, silt can be classified as:
a) Cohesionless soil
b) Limited cohesive soil
c) Highly cohesive soil
d) None Of these
$\square$

Q 69) A reinforced concrete beam is cast during a summer month when the ambient temperature is around $42^{\circ} \mathrm{C}$. During the winter when the ambient temperature is around $5^{\circ} \mathrm{C}$, the stress in the concrete will be:
a) Compressive
b) Compressive as well as tensile as in flexure
c) Tensile
d) The same as at the time of casting


Q 70) Principal Plane is a plane in a stressed body of material on which
a) Shear stress is zero
b) Shear stress is maximum
c) Shear stress is minimum
d) None of the above statements is applicable


## Q 71) Purlins are used as structural

 members in trussed roofs. The purlins are primarily:a) Tension members
b) Compression members
c) Shear resisting members
d) Flexural members


Q 72) In a riveted connection, a minimum distance of the rivet from the edge is kept with a view to preventing failure due to
a) Shearing of rivet
b) Bearing on rivet
c) Shearing of plate
d) Tearing of plate


Q 73) The tie bars in a concrete pavement are provided in:
a) Contraction joints
b) Longitudinal joints
c) Expansion Joints
d) Construction joints
$\square$


a) Allowable settlement only
b) Ultimate bearing capacity of soil
c) Both allowable settlement and ultimate bearing capacity
d) Neither allowable settlement nor ultimate bearing capacity


