

## SSC Junior Engineers (JE) Exam - 2016 "held on 02 March 2017" Afternoon Shift (General Engineering)

**QID : 201** - For construction of structures under water, the type of lime used is \_\_\_\_\_.

**Options:**

- 1) hydraulic lime
- 2) fat lime
- 3) quick lime
- 4) pure lime

**Correct Answer:** hydraulic lime

**QID : 202** - The compound of Portland cement which reacts immediately with water and also sets first is \_\_\_\_\_.

**Options:**

- 1) Tri-calcium silicate
- 2) Di-calcium silicate
- 3) Tri-calcium aluminate
- 4) Tetra calcium alumino ferrite

**Correct Answer:** Tri-calcium aluminate

**QID : 203** - Rapid hardening cement attains early strength due to \_\_\_\_\_.

**Options:**

- 1) larger proportion of lime grounded finer than normal cement
- 2) lesser proportion of lime grounded coarser than normal cement
- 3) lesser proportion of lime grounded finer than normal cement
- 4) larger proportion of lime grounded coarser than normal cement

**Correct Answer:** larger proportion of lime grounded finer than normal cement

**QID : 204** - The percentage of water for normal consistency is \_\_\_\_\_.

**Options:**

- 1) 5 % to 15%
- 2) 10% to 25%
- 3) 15% to 25%
- 4) 20% to 30%

**Correct Answer:** 15% to 25%

**QID : 205** - Soundness test of cement determines \_\_\_\_\_.

**Options:**

- 1) quality of free lime
- 2) ultimate strength
- 3) durability
- 4) initial setting

**Correct Answer:** quality of free lime

**QID : 206** - Bulking of sand is caused due to \_\_\_\_\_.

**Options:**

- 1) surface moisture
- 2) air voids
- 3) viscosity
- 4) clay contents

**Correct Answer:** surface moisture

**QID : 207** - For a 50 kg cement bag, water required is \_\_\_\_\_.

**Options:**

- 1) 16.5 liters
- 2) 18.5 liters
- 3) 20.5 liters
- 4) 22.5 liters

**Correct Answer:** 22.5 liters

**QID : 208** - Pick up the correct statement from the following Method of sawing timber \_\_\_\_\_.

**Options:**

- 1) tangentially to annual rings, is known as tangential method
- 2) in four quarters such that each board cuts annual rings at angles not less than  $45^\circ$ , is known as quarter sawing method
- 3) cut out of quarter logs, parallel to the medullary rays and perpendicular to annual rings is known as radial sawing
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 209** - For the manufacture of plywood, veneers are placed so that grains of adjacent veneers are \_\_\_\_\_.

**Options:**

- 1) at right angles
- 2) parallel
- 3) inclined at  $45^\circ$
- 4) inclined at  $60^\circ$

**Correct Answer:** at right angles

**QID : 210** - The portion of the brick without a triangular corner equal to half the width and half the length is called \_\_\_\_\_.

**Options:**

- 1) closer
- 2) queen closer
- 3) king closer
- 4) squint brick

**Correct Answer:** king closer

**QID : 211** - The height of the sink of wash basin above floor level is kept \_\_\_\_\_.

**Options:**

- 1) 60 cm
- 2) 70 cm
- 3) 75 cm to 80 cm
- 4) 80 cm

**Correct Answer:** 75 cm to 80 cm

**QID : 212** - Pick up the correct statement from the following.

**Options:**

- 1) In order to check up the average depth of excavation, 'Dead mans' are left at the mid-widths of borrow pits
- 2) The earthwork calculation in excavation is made from the difference in levels obtained with a level
- 3) The earthwork done in excavation is to form the road embankment includes the formation of correct profiles and depositing the soil in layers
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 213** - If the formation level of a highway has a uniform gradient for a particular length and the ground is also having a longitudinal slope, the earthwork may be calculated by \_\_\_\_\_.

**Options:**

- 1) Mid-section formula
- 2) Trapezoidal formula
- 3) Prismoidal formula
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 214** - The area of a sloping surface of a protective embankment of mean height  $d$ , side slopes  $S:1$  and length  $L$  is \_\_\_\_\_.

**Options:**

- 1)  $d \times d \times s$
- 2)  $\sqrt{[(d^2 \times (ds^2))]}$
- 3)  $L.D \sqrt{(1+s^2)}$
- 4)  $2Ld \sqrt{(1+s^2)}$

**Correct Answer:**  $L.D \sqrt{(1+s^2)}$

**QID : 215** - A cement concrete road is 1000 m long, 8 m wide and 15 cm thick over the sub-base of 10 cm thick gravel. The cubic content of concrete (1:2:4) for the road specified in is \_\_\_\_\_.

**Options:**

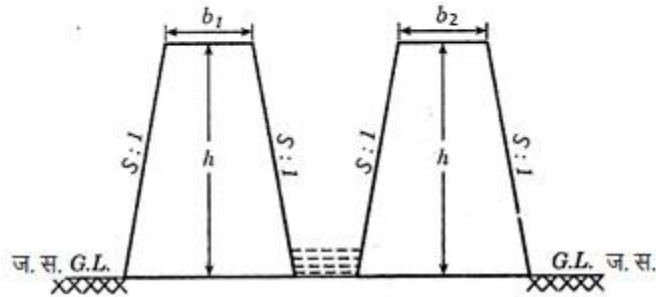
- 1) 300 m<sup>3</sup>
- 2) 600 m<sup>3</sup>
- 3) 900 m<sup>3</sup>
- 4) 1200 m<sup>3</sup>

**Correct Answer:** 1200 m<sup>3</sup>

**QID : 216 -**

The cross-sectional area of the embankment of a canal fully in embankment, (refer the figure given below) is:-

किसी पूर्ण रूप से तटबंधित नहर के बांध का अनुप्रस्थ परिच्छेद क्षेत्रफल \_\_\_\_\_ होगा।  
(नीचे दी गई आकृति का संदर्भ लें।)



**Options:**

- 1)  $\frac{1}{2}(b_1+b_2)h$
- 2)  $(b_1+b_2)h + Sb_2$
- 3)  $(b_1+b_2) + 2Sh^2$
- 4)  $2[(b_1+b_2)(b+Sh)]$

**Correct Answer:**  $(b_1+b_2) + 2Sh^2$

**QID : 217 -** The following item of earthwork is not measured separately \_\_\_\_\_.

**Options:**

- 1) Setting out of works
- 2) Site clearance
- 3) dead men
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 218 -** Pick up the incorrect statement from the following \_\_\_\_\_.

**Options:**

- 1) No deduction is made for the volume occupied by reinforcement
- 2) No deduction is made for the openings up to 0.1 sq.m
- 3) No deduction is made for volumes occupied by pipes, not exceeding 100 sq. cm in cross-section
- 4) None of the these

**Correct Answer:** None of the these

**QID : 219** - While estimating a reinforced cement structure the omitted cover of concrete is assumed \_\_\_\_\_.

**Options:**

- 1) at the end of reinforcing bar, not less than 25 mm or twice the diameter of the bar
- 2) in thin slabs, 12 mm minimum or diameter of the bar whichever is more
- 3) for reinforcing longitudinal bar in a beam 25 mm minimum or diameter of the largest bar which is more
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 220** - For 100 sq. m cement concrete (1:2:4) 4 cm thick floor, the quantity of cement required is \_\_\_\_\_.

**Options:**

- 1) 0.90 m<sup>3</sup>
- 2) 0.94 m<sup>3</sup>
- 3) 0.98 m<sup>3</sup>
- 4) 1.00 m<sup>3</sup>

**Correct Answer:** 0.94 m<sup>3</sup>

**QID : 221** - If  $h$  is the difference in height between end points of a chain of length  $l$  the required slope correction is \_\_\_\_\_.

**Options:**

- 1)  $h^2/(2l)$
- 2)  $h/(2l)$
- 3)  $h^2/l$
- 4)  $h^2/(4l)$

**Correct Answer:**  $h^2/(2l)$

**QID : 222** - Correction per chain length of 100 links along a slope of  $\alpha$  radians is \_\_\_\_\_.

**Options:**

- 1)  $100 \alpha^2$
- 2)  $100 \alpha$
- 3)  $100 \alpha^3$
- 4)  $100 \alpha(-1)$

**Correct Answer:**  $100 \alpha$

**QID : 223** - Check lines (or proof lines) in Chain Surveying are essentially required \_\_\_\_\_.

**Options:**

- 1) to plot the chain lines
- 2) to plot the offsets
- 3) to indicate the accuracy of the survey work
- 4) to increase the out-turn

**Correct Answer:** to indicate the accuracy of the survey work

**QID : 224** - For taking offsets with an optical square on the right hand side of the chain line it is held \_\_\_\_\_.

**Options:**

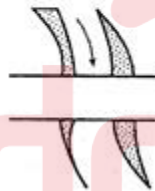
- 1) by right hand upside down
- 2) by left hand upright
- 3) by right hand upright
- 4) by left hand upside down

**Correct Answer:** by left hand upright

**QID : 225** -

The conventional sign shown in the figure below represents a.

आकृति में दर्शाया गया परंपरागत चिह्न \_\_\_\_\_ को प्रदर्शित करता है।



**Options:**

- 1) road bridge
- 2) railway bridge
- 3) canal bridge
- 4) aquaduct

**Correct Answer:** road bridge

**QID : 226** - In an adjusted level when the bubble is central, the axis of the bubble tube becomes parallel to \_\_\_\_\_.

**Options:**

- 1) line of sight
- 2) line of collimation

- 3) axis of the telescope
- 4) None of the these

**Correct Answer:** line of sight

**QID : 227** - An internal focusing type surveying telescope may be focused by the movement of \_\_\_\_\_.

**Options:**

- 1) objective glass of the telescope
- 2) convex-lens in the telescope
- 3) concave lens in the telescope
- 4) plano-convex lens in the telescope

**Correct Answer:** concave lens in the telescope

**QID : 228** - A dumpy level is set up with its eye-piece vertically over a peg A. The height from the top of peg A to the center of the eye-piece is 1.540 m and the reading on peg B is 0.705 m. The level is then setup over B. The height of the eye-piece above peg B is 1.490 m and a reading on A is 2.195 m. The difference in level between A and B is \_\_\_\_\_.

**Options:**

- 1) 2.900 m
- 2) 3.030 m
- 3) 0.770 m
- 4) 0.785 m

**Correct Answer:** 0.770 m

**QID : 229** - The constant vertical distance between two adjacent contours is called \_\_\_\_\_.

**Options:**

- 1) horizontal interval
- 2) horizontal equivalent
- 3) vertical equivalent
- 4) contour interval

**Correct Answer:** contour interval

**QID : 230** - The direction of steepest slope on a contour is \_\_\_\_\_.

**Options:**

- 1) along the contour
- 2) at an angle of  $45^\circ$  to the contour



- 3) at right angles to the contour
- 4) None of the these

**Correct Answer:** at right angles to the contour

**QID : 231** - Geologic cycle for the formation of soil, is \_\_\_\_\_.

**Options:**

- 1) Upheaval → transportation → deposition → weathering
- 2) Weathering → upheaval → transportation → deposition
- 3) Transportation → upheaval → weathering → deposition
- 4) weathering → transportation → deposition → upheaval

**Correct Answer:** weathering → transportation → deposition → upheaval

**QID : 232** - Water content of a soil sample is the difference of the weight of the given sample at the given temperature and the weight determined after drying it for 24 hours at temperatures ranging from \_\_\_\_\_.

**Options:**

- 1) 80° to 90° C
- 2) 90° to 95° C
- 3) 95° to 100° C
- 4) 105° to 110° C

**Correct Answer:** 105° to 110° C

**QID : 233** - Fundamental relationship between dry density ( $\gamma_d$ ), bulk density ( $\gamma$ ) and water content ( $\omega$ ) is \_\_\_\_\_.

**Options:**

- 1)  $\gamma = \gamma_d / (1 + \omega)$
- 2)  $\gamma_d = \gamma / (1 + \omega)$
- 3)  $\omega = \gamma / (1 + \gamma_d)$
- 4)  $\omega = \gamma / (1 - \gamma_d)$

**Correct Answer:**  $\gamma_d = \gamma / (1 + \omega)$

**QID : 234** - Pick up the correct statement from the following \_\_\_\_\_.

**Options:**

- 1) The void ratio in soils is defined as the ratio of the volume of voids to the volume of solids
- 2) The porosity of a soil is defined as the ratio of the volume of voids to the gross volume of the soil

- 3) The bulk density of a soil is defined as the unit weight of the soil
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 235** - Alcohol is used in manometer, because \_\_\_\_\_.

**Options:**

- 1) its vapor pressure is low
- 2) it provides suitable meniscus for the inclined tube
- 3) its density is less
- 4) it provides longer length for a given pressure difference

**Correct Answer:** its vapor pressure is low

**QID : 236** - The property of fluid by virtue of which it offers resistance to shear is called \_\_\_\_\_.

**Options:**

- 1) surface tension
- 2) adhesion
- 3) cohesion
- 4) viscosity

**Correct Answer:** viscosity

**QID : 237** - The unit of kinematic viscosity is \_\_\_\_\_.

**Options:**

- 1) m<sup>2</sup>/sec
- 2) kg-sec/m<sup>2</sup>
- 3) newton-sec/m<sup>2</sup>
- 4) newton-sec<sup>2</sup>/m

**Correct Answer:** m<sup>2</sup>/sec

**QID : 238** - The total pressure on the surface of a vertical sluice gate 2m x 1m with its top 2 m surface being 0.5 m below the water level will be \_\_\_\_\_.

**Options:**

- 1) 500 kg
- 2) 1000 kg
- 3) 1500 kg
- 4) 2000 kg

**Correct Answer:** 2000 kg

**QID : 239** - Metacentric height is given as the distance between \_\_\_\_\_.

**Options:**

- 1) the centre of gravity of the body and the metacentre
- 2) the centre of gravity of the body and the centre of buoyancy
- 3) the centre of gravity of the body and the centre of pressure
- 4) centre of buoyancy and metacentre

**Correct Answer:** the centre of gravity of the body and the metacentre

**QID : 240** - The difference of pressure between the inside and outside of a liquid drop is \_\_\_\_\_.

**Options:**

- 1)  $p = T \times r$
- 2)  $p = T/r$
- 3)  $p = T/2r$
- 4)  $p = 2T/r$

**Correct Answer:**  $p = 2T/r$

**QID : 241** - The property by which a liquid opposes relative motion between its different layers is called \_\_\_\_\_.

**Options:**

- 1) surface tension
- 2) co-efficient of viscosity
- 3) viscosity
- 4) osmosis

**Correct Answer:** surface tension

**QID : 242** - The atmospheric pressure with rise in altitude decreases \_\_\_\_\_.

**Options:**

- 1) linearly
- 2) first slowly then steeply
- 3) first steeply and then gradually
- 4) unpredictable

**Correct Answer:** first slowly then steeply

**QID : 243** - Barometer is used to measure \_\_\_\_\_.

**Options:**

- 1) pressure in pipes, channels etc..

- 2) atmospheric pressure
- 3) very low pressure
- 4) difference of pressure between two points

**Correct Answer:** atmospheric pressure

**QID : 244** - Flow meters based on obstruction principle like orifice plates can be used with Reynold's number upto approximately \_\_\_\_\_.

**Options:**

- 1) 500
- 2) 1000
- 3) 2000
- 4) 4000

**Correct Answer:** 2000

**QID : 245** - The state of the soil when plants fail to extract sufficient water for their requirements is \_\_\_\_\_.

**Options:**

- 1) maximum saturated point
- 2) permanent wilting point
- 3) ultimate utilization point
- 4) None of these

**Correct Answer:** None of these

**QID : 246** - The field capacity of a soil is 25%, its permanent wilting point is 15% and specific dry unit weight is 1.5. If the depth of root zone of a crop is 80 cm, the storage capacity of the soil is \_\_\_\_\_.

**Options:**

- 1) 8 cm
- 2) 10 cm
- 3) 12 cm
- 4) 14 cm

**Correct Answer:** 12 cm

**QID : 247** - According to the recommendations of Nagpur Conference the width formation of an ideal National Highway in hard rock cutting is \_\_\_\_\_.

**Options:**

- 1) 8.9 m
- 2) 7.9 m

- 3) 6.9 m
- 4) 6.5 m

**Correct Answer:** 7.9 m

**QID : 248** - If L is the length of a rail and R is the radius of a curve, the versine h for the curve is \_\_\_\_\_.

**Options:**

- 1)  $a = L/4R$
- 2)  $a = L^2/4R$
- 3)  $h = L^2/8R$
- 4)  $h = L^2/16R$

**Correct Answer:**  $h = L^2/8R$

**QID : 249** - Pick up the incorrect statement from the following.

**Options:**

- 1) Manholes are provided in sewer pipes at suitable intervals
- 2) Catch basins are generally provided in sewers for carrying drainage discharge
- 3) Inlets are generally provided in all sewers
- 4) None of the these

**Correct Answer:** Inlets are generally provided in all sewers

**QID : 250** - If q is the average sewage flow from a city of population P, the maximum sewage flow \_\_\_\_\_.

**Options:**

- 1)  $Q = [(4 + \sqrt{P}) / (18 + \sqrt{P})]q$
- 2)  $Q = [(18 + P) / (4 + \sqrt{P})]q$
- 3)  $Q = [(18 + \sqrt{P}) / (4 + \sqrt{P})]q$
- 4)  $Q = [(5 + \sqrt{P}) / (15 + \sqrt{P})]q$

**Correct Answer:**  $Q = [(18 + \sqrt{P}) / (4 + \sqrt{P})]q$

**QID : 251** - A body is said to be in equilibrium if \_\_\_\_\_.

**Options:**

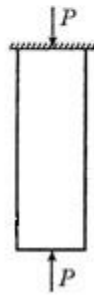
- 1) it moves horizontally
- 2) it moves vertically
- 3) it rotates about its C.G.
- 4) None of these

**Correct Answer:** None of these

**QID : 252 -**

The forces acting normally on the cross section of a bar shown in the figure given below introduces \_\_\_\_\_.

दर्शाई गई आकृति के अनुसार छड़ के अनुप्रस्थ खंड के लम्बवत कार्य कर रहे बल \_\_\_\_\_ का आरंभ करेंगे।



**Options:**

- 1) compressive stress
- 2) tensile stress
- 3) shear stress
- 4) None of these

**Correct Answer:** compressive stress

**QID : 253 -** At yield point of a test piece, the material \_\_\_\_\_.

**Options:**

- 1) obeys Hooke's law
- 2) behaves in an elastic manner
- 3) regains its original shape on removal of the load
- 4) undergoes plastic deformation

**Correct Answer:** undergoes plastic deformation

**QID : 254 -** If a concrete column 200 x 200 mm in cross-section is reinforced with four steel bars of 1200 mm<sup>2</sup> total cross-sectional area. What is the safe load for the column if permissible stress in concrete is 5 N/mm<sup>2</sup> and  $E_s = 15 E_c$ ?

**Options:**

- 1) 264 MN
- 2) 274 MN

- 3) 284 MN
- 4) 294 MN

**Correct Answer:** 284 MN

**QID : 255** - A steel rod of sectional area 25 sq. mm connects two parallel walls 5 m apart. The nuts at the ends were tightened when the rod was heated at 100° C. If  $\alpha_{\text{steel}} = 0.000012/\text{C}^\circ$ ,  $E_{\text{steel}} = 0.2 \text{ MN/mm}^2$ , the tensile force developed at a temperature of 50° C is \_\_\_\_\_.

**Options:**

- 1) 80 N/mm<sup>2</sup>
- 2) 100 N/mm<sup>2</sup>
- 3) 120 N/mm<sup>2</sup>
- 4) 150 N/mm<sup>2</sup>

**Correct Answer:** 120 N/mm<sup>2</sup>

**QID : 256** - The ratio of tangential and normal components of a stress on an inclined plane through  $\theta^\circ$  to the direction of the force is \_\_\_\_\_.

**Options:**

- 1)  $\sin^2\theta$
- 2)  $\cos^2\theta$
- 3)  $\tan^2\theta$
- 4)  $\cos\theta$

**Correct Answer:**  $\tan^2\theta$

**QID : 257** - Pick up the correct statement from the following.

**Options:**

- 1) For a uniformly distributed load, the shear force varies linearly
- 2) For a uniformly distributed load, bulk modular curve is a parabola
- 3) For a load varying linearly, the shear force curve is a parabola
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 258** - At any point of a beam, the section modulus may be obtained by dividing the moment of inertia of the section by \_\_\_\_\_.

**Options:**

- 1) depth of the section
- 2) depth of the neutral axis

- 3) maximum tensile stress at the section
- 4) maximum compressive stress at the section

**Correct Answer:** depth of the neutral axis

**QID : 259** - The moment of inertia of a circular section about any diameter D, is \_\_\_\_\_.

**Options:**

- 1)  $(\pi D^2)/64$
- 2)  $(\pi D^4)/32$
- 3)  $(\pi D^3)/64$
- 4)  $(\pi D^4)/64$

**Correct Answer:**  $(\pi D^4)/64$

**QID : 260** - In case of principal axes of a section \_\_\_\_\_.

**Options:**

- 1) sum of moment of inertia is zero
- 2) difference of moment of inertia is zero
- 3) product of moment of inertia is zero
- 4) None of these

**Correct Answer:** product of moment of inertia is zero

**QID : 261** - The locus of the moment of inertia about inclined axis to the principal axis is \_\_\_\_\_.

**Options:**

- 1) straight line
- 2) parabola
- 3) circle
- 4) ellipse

**Correct Answer:** ellipse

**QID : 262** - The ratio of moments of inertia of a triangular section about its base and about a centroidal axis parallel to its base is \_\_\_\_\_.

**Options:**

- 1) 1
- 2) 1.5
- 3) 2
- 4) 3

**Correct Answer:** 3



**QID : 263** - If aggregates completely pass through a sieve of size 75 mm and are retained on a sieve of size 60 mm, the particular aggregate will be flaky if its minimum dimension is less than \_\_\_\_\_.

**Options:**

- 1) 20.5 mm
- 2) 30.5 mm
- 3) 40.5 mm
- 4) 50.5 mm

**Correct Answer:** 40.5 mm

**QID : 264** - For the construction of thin R.C.C. structures the type of cement to be avoided is \_\_\_\_\_.

**Options:**

- 1) ordinary Portland cement
- 2) rapid hardening cement
- 3) low heat cement
- 4) blast furnace slag cement

**Correct Answer:** blast furnace slag cement

**QID : 265** - Percentage of pozzolanic material containing clay upto 80% used for the manufacture of pozzolana cement is \_\_\_\_\_.

**Options:**

- 1) 30%
- 2) 40%
- 3) 50%
- 4) 60%

**Correct Answer:** 30%

**QID : 266** - Pick up the incorrect statement applicable to the field test of good cement.

**Options:**

- 1) When one thrusts one's hand into a bag of cement, one should feel warm
- 2) The color of the cement is bluish
- 3) A handful of cement thrown into a bucket of water should sink immediately
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 267** - Pick up the correct statement from the following.

**Options:**

- 1) The maximum size of a coarse aggregate is 75 mm and minimum is 4.75 mm
- 2) The maximum size of the fine aggregate is 4.75 mm and minimum 0.75 mm
- 3) The material having particles of size varying from 0.06 mm to 0.002 mm is known as silt
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 268** - Sand generally contains salt if it is obtained from \_\_\_\_\_.

**Options:**

- 1) nala beds
- 2) river beds
- 3) sea beds
- 4) All options are correct

**Correct Answer:** sea beds

**QID : 269** - Pick up the correct statement from the following.

**Options:**

- 1) Bulking of sand is caused due to formation of a thin film of surface moisture
- 2) Fine sand bulks more than coarse sand
- 3) With 10% moisture content by weight the bulking of sand is increased by 50%
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 270** - If fineness modulus of sand is 2.5 it is graded as \_\_\_\_\_.

**Options:**

- 1) very fine sand
- 2) fine sand
- 3) medium sand
- 4) coarse sand

**Correct Answer:** fine sand

**QID : 271** - An ordinary Portland cement when tested for its fineness, should not leave any residue on I.S. Sieve No.9, more than \_\_\_\_\_.

**Options:**

- 1) 5%
- 2) 10%

- 3) 15%
- 4) 20%

**Correct Answer:** 10%

**QID : 272** - Pick up the correct statement from the following.

**Options:**

- 1) Insufficient quantity of water makes the concrete mix harsh
- 2) Insufficient quantity of water makes the concrete unworkable
- 3) Excess quantity of water makes the concrete segregated
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 273** - Pick up the incorrect statement from the following.

**Options:**

- 1) A rich mix of concrete possesses higher strength than that a lean mix of desired workability with excessive quantity of water
- 2) The strength of concrete decreases as the water cement ratio increases
- 3) If the water cement ratio is less than 0.45, the concrete is not workable and causes honey-combed structure
- 4) Good compaction by mechanical vibrations, increases the strength of concrete

**Correct Answer:** A rich mix of concrete possesses higher strength than that a lean mix of desired workability with excessive quantity of water

**QID : 274** - Pick up the correct statement from the following.

**Options:**

- 1) The concrete gains strength due to hydration of cement
- 2) The concrete cured at a temperature below 23° C, gains strength up to 28 days
- 3) The concrete does not set at freezing point
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 275** - Hardening of cement occurs at \_\_\_\_\_.

**Options:**

- 1) rapid rate during the first few days and afterwards it continues to increase at a decreased rate
- 2) slow rate during the first few days and afterwards it continues to increase at a rapid rate

- 3) uniform rate throughout its age
- 4) None of these

**Correct Answer:** None of these

**QID : 276** - Pick up the correct statement from the following.

**Options:**

- 1) Higher workability indicates unexpected increase in the moisture content
- 2) Higher workability indicates deficiency of sand
- 3) If the concrete mix is dry, the slump is zero
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 277** - The top diameter, bottom diameter and the height of a slump mould are \_\_\_\_\_.

**Options:**

- 1) 10 cm, 20 cm, 30 cm
- 2) 10 cm, 30 cm, 20 cm
- 3) 20 cm, 10 cm, 30 cm
- 4) 20 cm, 30 cm, 10 cm

**Correct Answer:** 10 cm, 20 cm, 30 cm

**QID : 278** - Pick up the correct statement from the following.

**Options:**

- 1) Segregation is necessary for a workable concrete
- 2) Consistency does not affect the workability of concrete
- 3) If the slump increases, workability decreases
- 4) None of these

**Correct Answer:** None of these

**QID : 279** - The grade of concrete M 150 means that compressive strength of a 15 cm cube after 28 days, is \_\_\_\_\_.

**Options:**

- 1) 100 kg/cm<sup>2</sup>
- 2) 150 kg/cm<sup>2</sup>
- 3) 200 kg/cm<sup>2</sup>
- 4) 250 kg/cm<sup>2</sup>

**Correct Answer:** 150 kg/cm<sup>2</sup>

**QID : 280** - The preliminary test is repeated if the difference compressive strength of three test specimens, exceeds \_\_\_\_\_.

**Options:**

- 1) 5 kg/cm<sup>2</sup>
- 2) 8 kg/cm<sup>2</sup>
- 3) 10 kg/cm<sup>2</sup>
- 4) 15 kg/cm<sup>2</sup>

**Correct Answer:** 15 kg/cm<sup>2</sup>

**QID : 281** - According to load factor method, the permissible load  $W$  on a short column reinforced with longitudinal bars and lateral stirrups is \_\_\_\_\_.

**Options:**

- 1) Stress in concrete x area of concrete
- 2) Stress in steel x area of steel
- 3) Stress in concrete x area of concrete + stress in steel x area of steel
- 4) None of these

**Correct Answer:** Stress in concrete x area of concrete + stress in steel x area of steel

**QID : 282** - The length of the lap in a compression member is kept greater than [bar diameter x (Permissible stress in bar)/(Five times the bond stress)] or is \_\_\_\_\_.

**Options:**

- 1) 12 bar diameters
- 2) 18 bar diameters
- 3) 24 bar diameters
- 4) 30 bar diameters

**Correct Answer:** 24 bar diameters

**QID : 283** - A short column 20 cm x 20 cm in section is reinforced with 4 bars whose area of cross section is 20 sq.cm. If permissible compressive stresses in concrete and steel are 40 kg/cm<sup>2</sup> and 300 kg/cm<sup>2</sup>, the safe load on the column should not exceed \_\_\_\_\_.

**Options:**

- 1) 412 kg
- 2) 4120 kg
- 3) 412000 kg
- 4) None of these

**Correct Answer:** None of these

**QID : 284** - A column is regarded as long column if the ratio of its effective length and lateral dimension exceeds \_\_\_\_\_.

**Options:**

- 1) 10
- 2) 15
- 3) 20
- 4) None of these

**Correct Answer:** None of these

**QID : 285** - If the size of a column is reduced above the floor, the main bars of the columns \_\_\_\_\_.

**Options:**

- 1) continues up
- 2) bend inwards at the floor level
- 3) stops just below the floor level and separates lap bars provided
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 286** - The pitch of the main bars in a simply supported slab should not exceed its effective depth by \_\_\_\_\_.

**Options:**

- 1) three times
- 2) four times
- 3) five times
- 4) six times

**Correct Answer:** six times

**QID : 287** - Distribution reinforcement in a simply supported slab is provided to distribute \_\_\_\_\_.

**Options:**

- 1) load
- 2) temperature stress
- 3) shrinkage stress
- 4) All options are correct

**Correct Answer:** All options are correct

**QID : 288** - In a simply supported slab the minimum spacing of distribution reinforcement should be four times the effective thickness of the slab or \_\_\_\_\_.

**Options:**

- 1) 20 cm
- 2) 30 cm
- 3) 40 cm
- 4) None of these

**Correct Answer:** None of these

**QID : 289** - The modular ratio 'm' of a concrete whose permissible compressive stress is 'C' may be obtained from the equation \_\_\_\_\_.

**Options:**

- 1)  $m = 700/3C$
- 2)  $m = 1400/3C$
- 3)  $m = 2800/3C$
- 4)  $m = 3500/3C$

**Correct Answer:**  $m = 2800/3C$

**QID : 290** - For M 150 grade concrete (1 : 2 : 4) the moment of resistance factor is \_\_\_\_\_.

**Options:**

- 1) 0.87
- 2) 8.5
- 3) 7.5
- 4) 5.8

**Correct Answer:** 8.5

**QID : 291** - If the thickness of a structural member is small as compared to its length and width, it is classified as \_\_\_\_\_.

**Options:**

- 1) one dimensional
- 2) two dimensional
- 3) three dimensional
- 4) None of these

**Correct Answer:** two dimensional

**QID : 292** - Design of a riveted joint assumes that \_\_\_\_\_.

**Options:**

- 1) the bending stress in rivets is accounted for

- 2) the riveted hole is to be filled by the rivet
- 3) the stress in the plate is not uniform
- 4) the friction between plates is considered

**Correct Answer:** the riveted hole is to be filled by the rivet

**QID : 293** - Rolled steel T-sections are used \_\_\_\_\_.

**Options:**

- 1) as columns
- 2) with flat strips to connect plates in steel rectangular tanks
- 3) as built up sections to resist axial tension
- 4) None of these

**Correct Answer:** with flat strips to connect plates in steel rectangular tanks

**QID : 294** - With a percentage increase of carbon in steel, decreases its \_\_\_\_\_.

**Options:**

- 1) strength
- 2) hardness
- 3) brittleness
- 4) ductility

**Correct Answer:** ductility

**QID : 295** - If  $P$  is the wind pressure in  $\text{kg/cm}^2$ ,  $v$  is the velocity in  $\text{km/hour}$  and  $K$  is constant of proportionality then \_\_\_\_\_.

**Options:**

- 1)  $P=K/v^2$
- 2)  $v=K/P^2$
- 3)  $P=Kv^2$
- 4)  $P=Kv$

**Correct Answer:**  $P=Kv^2$

**QID : 296** - Factor of safety is the ratio of \_\_\_\_\_.

**Options:**

- 1) yield stress to working stress
- 2) tensile stress to working stress
- 3) compressive stress to working stress
- 4) bearing stress to working stress

**Correct Answer:** yield stress to working stress



**QID : 297** - The ratio of shearing stress to shearing strain within elastic limit, is known as \_\_\_\_\_.

**Options:**

- 1) modulus of elasticity
- 2) shear modulus of elasticity
- 3) bulk modulus of elasticity
- 4) tangent modulus of elasticity

**Correct Answer:** shear modulus of elasticity

**QID : 298** - The rivets which are heated and then driven in the field are known \_\_\_\_.

**Options:**

- 1) power driven shop rivets
- 2) power driven field rivets
- 3) hand driven rivets
- 4) cold driven rivets\

**Correct Answer:** power driven field rivets

**QID : 299** - The gross diameter of a rivet is the diameter of \_\_\_\_.

**Options:**

- 1) cold rivet before driving
- 2) rivet after driving
- 3) rivet hole
- 4) None of these

**Correct Answer:** rivet after driving

**QID : 300** - Working shear stress on the gross area of a rivet as recommended by Indian Standards is \_\_\_\_.

**Options:**

- 1) 785 kg/cm<sup>2</sup>
- 2) 1025 kg/cm<sup>2</sup>
- 3) 2360 kg/cm<sup>2</sup>
- 4) None of the these

**Correct Answer:** 1025 kg/cm<sup>2</sup>

### (General Intelligence & Reasoning)

**QID : 301** - Select the related word/letters/number from the given alternatives.

Red : Colour :: French : ?

**Options:**

- 1) foreign
- 2) language
- 3) European
- 4) Country

**Correct Answer:** language

**QID : 302** - Select the related word/letters/number from the given alternatives.

Chips : Potatoes :: Soda : ?

**Options:**

- 1) Fizz
- 2) Bottle
- 3) Lemon
- 4) Water

**Correct Answer:** Water

**QID : 303** - Select the related word/letters/number from the given alternatives.

Quadrilateral : Four :: ?

**Options:**

- 1) Cylinder : Circle
- 2) Cube : Square
- 3) Triangle : 180
- 4) Hexagon : Six

**Correct Answer:** Hexagon : Six

**QID : 304** - Select the related word/letters/number from the given alternatives.

FGI : HIK :: STV : ?

**Options:**

- 1) UVW
- 2) VWY
- 3) XYZ
- 4) UVX

**Correct Answer:** UVX

**QID : 305** - Select the related word/letters/number from the given alternatives.

Dream : Area :: Frame : ?

**Options:**

- 1) Farmer
- 2) Ear
- 3) Fare
- 4) Freer

**Correct Answer:** Fare

**QID : 306** - Select the related word/letters/number from the given alternatives.

Brine : Inert :: Beware : ?

**Options:**

- 1) Arenas
- 2) Declare
- 3) Spare
- 4) Area

**Correct Answer:** Arenas

**QID : 307** - Select the related word/letters/number from the given alternatives.

169 : 13 :: 225 : ?

**Options:**

- 1) 22
- 2) 25
- 3) 20
- 4) 15

**Correct Answer:** 15

**QID : 308** - Select the related word/letters/number from the given alternatives.

159 : 840 :: 345 : ?

**Options:**

- 1) 654
- 2) 765
- 3) 876
- 4) 987

**Correct Answer:** 654

**QID : 309** - Select the related word/letters/number from the given alternatives.

761 : 928 :: 651 : ?

**Options:**

- 1) 765
- 2) 753
- 3) 807
- 4) 951

**Correct Answer:** 807

**QID : 310** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) kilometres
- 2) feet
- 3) grams
- 4) micrometers

**Correct Answer:** grams

**QID : 311** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) pros and cons
- 2) dead or alive
- 3) null and void
- 4) sooner or later

**Correct Answer:** null and void

**QID : 312** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) Crayon and Marker
- 2) Pen and Eraser
- 3) Book and Diary
- 4) Pen and Marker

**Correct Answer:** Book and Diary

**QID : 313** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) OU
- 2) YC
- 3) IA
- 4) EO

**Correct Answer:** YC

**QID : 314** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) Cuisine
- 2) Business
- 3) Disinterested
- 4) Noisiness

**Correct Answer:** Business

**QID : 315** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) DRGK
- 2) WMUI
- 3) OHAU
- 4) XHTV

**Correct Answer:** DRGK

**QID : 316** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) 7531
- 2) 2468
- 3) 9753
- 4) 8642

**Correct Answer:** 2468

**QID : 317** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) 15
- 2) 25
- 3) 53
- 4) 45

**Correct Answer:** 53

**QID : 318** - Select the odd word/letters/number/word pair/number pair from the given alternatives.

**Options:**

- 1) 108, 132
- 2) 114, 156
- 3) 136, 152
- 4) 120, 138

**Correct Answer:** 136, 152

**QID : 319** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

Cremation, Accolade, Maestro, Chrome, ?

**Options:**

- 1) Very
- 2) Zebra
- 3) Virtual
- 4) Time

**Correct Answer:** Zebra

**QID : 320** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

Toxic, Icon, Onto, Tomorrow, ?

**Options:**

- 1) Owl
- 2) Wet
- 3) Rat
- 4) Borrow

**Correct Answer:** Owl

**QID : 321** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

age, dire, genre, stumpy, ?

**Options:**

- 1) splayed
- 2) secretes
- 3) preacher
- 4) shooed

**Correct Answer:** splayed

**QID : 322** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

L, J, H, F, ?

**Options:**

- 1) E
- 2) G
- 3) D
- 4) I

**Correct Answer:** D

**QID : 323** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

eca, fdb, gec, hfd, ?

**Options:**

- 1) ige
- 2) ieg
- 3) gei
- 4) egi

**Correct Answer:** ige

**QID : 324** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

XXXXOXO, XXXXOOX, XXXXOOX, XXXOXOX, ?

**Options:**

- 1) XOXOXOX

- 2) XXXXOXO
- 3) XXXXOOX
- 4) XXOXXOX

**Correct Answer:** XXOXXOX

**QID : 325** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

-2, 1, 5, ?, 16

**Options:**

- 1) 9
- 2) 10
- 3) 11
- 4) 13

**Correct Answer:** 10

**QID : 326** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

-10/3, ?, -2/3, 2/3, 2

**Options:**

- 1) -2
- 2) 2
- 3) -1/3
- 4) 1/3

**Correct Answer:** -2

**QID : 327** - In the given series one word/one term/one number is missing. Select the correct alternative from the given ones that will complete the series.

23, 29, ?, 37, 41

**Options:**

- 1) 30
- 2) 33
- 3) 31
- 4) 35

**Correct Answer:** 31

**QID : 328** - If  $a < b$ ,  $d > c$  and  $a < d$ , which of the following is true?



- I.  $b < c$
- II.  $c > a$

**Options:**

- 1) Only I
- 2) Neither I nor II
- 3) Only II
- 4) Both I and II

**Correct Answer:** Neither I nor II

**QID : 329** - The weights of five boxes are 10, 30, 40, 70 & 70 kilograms. Which of the following cannot be the total weight (in kilograms) of any combination of these boxes?

**Options:**

- 1) 190
- 2) 180
- 3) 210
- 4) 200

**Correct Answer:** 200

**QID : 330** - If the letters Q, B, T, A, U, E & N are numbered 1, 2, 3, 4, 5, 6 & 7 respectively. Select that combination of numbers so that letters arranged accordingly, form a meaningful word.

**Options:**

- 1) 5617312
- 2) 5447134
- 3) 2471563
- 4) 3242637

**Correct Answer:** 2471563

**QID : 331** - If PROXIMAL is coded as KILCRNZO, then how will WHY be coded as?

**Options:**

- 1) DSB
- 2) EDC
- 3) CDE
- 4) BNM

**Correct Answer:** DSB

**QID : 332** - In a certain code language, 531 means 'boy is shy', 346 means 'girl is bold', 256 means 'shy or bold'. Find the code for 'or'.

**Options:**

- 1) 1
- 2) 2
- 3) 3
- 4) 5

**Correct Answer: 2**

**QID : 333** - In a certain code language, '+' represents 'x', '-' represents '+', 'x' represents '÷' and '÷' represents '-'. Find out the answer to the following question.

$$0.1 + 500 - 240 \times 6 = ?$$

**Options:**

- 1) 90
- 2) 10
- 3) 1.25
- 4) 108

**Correct Answer: 90**

**QID : 334** - If A @ B means A is father of B, A # B means A is sister of B and A ! B means A is son of B, then what does E @ F ! G # H mean, if H is a male?

**Options:**

- 1) H is brother of E
- 2) H is father of E
- 3) H is son of E
- 4) H is E's wife's brother

**Correct Answer: H is E's wife's brother**

**QID : 335** - If  $45@23 = 14$ ,  $76@22 = 17$ , then find the value of  $55@10 = ?$

**Options:**

- 1) 8
- 2) 11
- 3) 15
- 4) 5

**Correct Answer: 11**

**QID : 336** - Which of the following words follow the trend of the given list?

Zonal, Tzars, Wizen, Seize, Waltz, ?

**Options:**

- 1) Unitize
- 2) Ablaze
- 3) Azure
- 4) Sanza

**Correct Answer:** Unitize

**QID : 337** - Which of the following terms follows the trend of the given list?

ABC, BCAB, CABCA, \_\_\_\_\_.

**Options:**

- 1) BCABCA
- 2) CAB CAB
- 3) ABCCBA
- 4) ABCABC

**Correct Answer:** ABCABC

**QID : 338** - A girl walks 3 km East starting from her home. She then turns South and walks 2 km, then she turns West and walks 7 km, then she turns to her right and walks 2 km. Where is she now from her starting position?

**Options:**

- 1) 10 km to the West from her home.
- 2) 4 km to the East from her home.
- 3) 10 km to the East from her home.
- 4) 4 km to the West from her home.

**Correct Answer:** 4 km to the West from her home.

**QID : 339** - A is standing 6 m to the East of B. A walks 9 m South, then turns to his right and walks 7 m. At the same time, B has walked 3 m West, then he turned South and walked 9 m, then he turned to his left and walked 5 m. Where is B now with respect to the position of A?

**Options:**

- 1) B is 12 m to the East of A
- 2) B is 3 m to the West of A
- 3) B is 3 m to the East of A
- 4) B is 12 m to the West of A

**Correct Answer:** B is 3 m to the East of A

**QID : 340** - In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the mentioned statements.

**Statement 1:** All huts are made of mud.

**Statement 2:** Things made of mud are not b.

**Conclusion I:** All huts are b.

**Conclusion II:** Mud huts are not b.

**Options:**

- 1) Only conclusion I follows
- 2) Either I or II follows
- 3) Neither I nor II follows
- 4) Only conclusion II follows

**Correct Answer:** Only conclusion II follows

**QID : 341** - In the question a statement is given, followed by two arguments, I and II. You have to consider the statement to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given arguments, if any, is a b argument.

**Statement :** Should teachers be permitted to cane unruly children?

**Argument I :** No, this will teach them that physical violence is an acceptable means of social behaviour.

**Argument II :** Yes, children taught in a strict atmosphere are more successful.

**Options:**

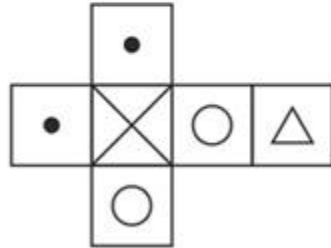
- 1) only argument II is b
- 2) neither argument I nor II is b
- 3) both argument I and II are b
- 4) only argument I is b

**Correct Answer:** only argument I is b

**QID : 342 -**

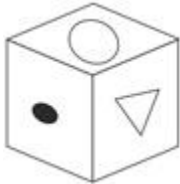
Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?

निम्नलिखित उत्तर आकृति में से कौन सा घन दिए गए प्रश्न आकृति में से खुले घन से बनाया नहीं जा सकता?



**Options:**

1)



2)



3)



4)



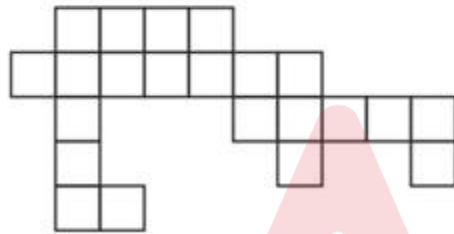
**Correct Answer:**



**QID : 343 -**

Which of the following answer figure patterns can be combined to make the question figure?

निम्नलिखित उत्तर आकृति में से कौन से प्रतिरूपों को जोड़कर दिए गए प्रश्न आकृति को बनाया जा सकता है?

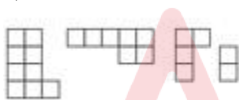


**Options:**

1)



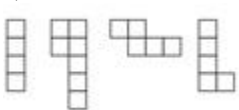
2)



3)



4)



**Correct Answer:**



**QID : 344 -** Which of the following diagrams represent the relationship between Engineers, Software Engineers and Chemical Engineers?

**Options:**

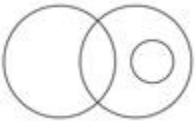
1)



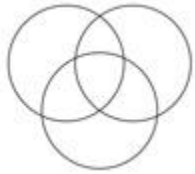
2)



3)



4)



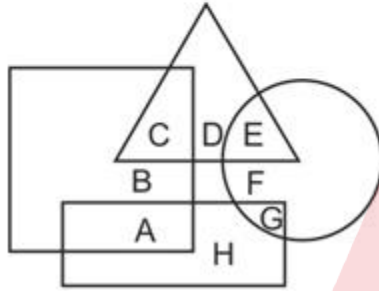
**Correct Answer:**



**QID : 345 -**

In the following figure, square represents engineers, triangle represents environmentalists, circle represents lawyers and rectangle represents government officers. Which set of letters represents lawyers who are not environmentalists and government officers who are engineers?

निम्नलिखित आकृत में वर्ग इंजीनियरों को दर्शाता है, त्रिभुज पर्यावरणविदों को दर्शाता है, वृत्त वकीलों को दर्शाता है और आयत सरकारी अधिकारियों को दर्शाता है। वर्णों का कौन सा समूह वकीलों को दर्शाता है जो पर्यावरणविद नहीं हैं और सरकारी अधिकारी जो इंजीनियर हैं?



**Options:**

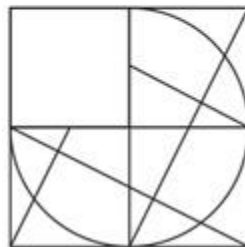
- 1) E, F and B
- 2) A, E and F
- 3) B, A and E
- 4) G, F and A

**Correct Answer:** G, F and A

**QID : 346 -**

Which answer figure will complete the pattern in the question figure?

निम्नलिखित में से कौन-सी उत्तर आकृति प्रश्न आकृतिके प्रतिरूप को पूरा करेगी?



**Options:**

- 1)





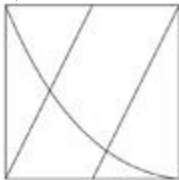
2)



3)



4)



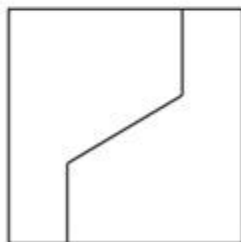
**Correct Answer:**



**QID : 347 -**

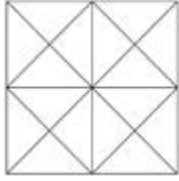
From the given answer figures, select the one in which the question figure is hidden/embedded.

दी गई उत्तर आकृतियों में से उस आकृति को चुनिए जिसमें प्रश्न आकृति निहित है।

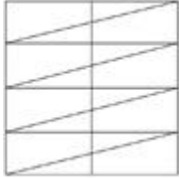


**Options:**

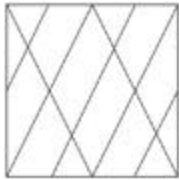
1)



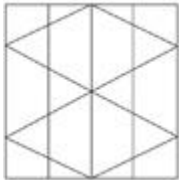
2)



3)



4)



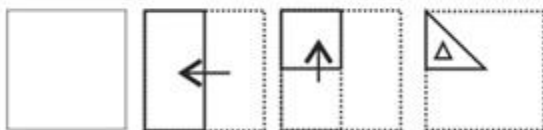
**Correct Answer:**



**QID : 348 -**

A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.

प्रश्न आकृतियों में दिखाए अनुसार कागज को मोड़कर उसमें छेद करने तथा खोलने के बाद वह किस उत्तर आकृति जैसा दिखाई देगा?

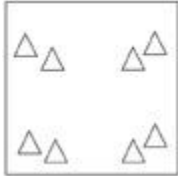


**Options:**

1)



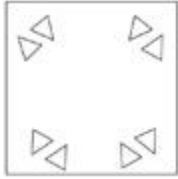
2)



3)



4)



**Correct Answer:**



**QID : 349 -**

If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?

यदि एक दर्पण को MN रेखा पर रखा जाए तो दी गई उत्तर आकृतियों में से कौन-सी आकृति प्रश्न आकृति का सही प्रतिबिम्ब होगी?



**Options:**

1)



2)



3)



4)



**Correct Answer:**



**QID : 350 -**

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example 'N' can be represented by 00, 12 etc and 'C' can be represented by 95, 76 etc. Similarly, you have to identify the set for the word 'TYRES'.

एक शब्द केवल एक संख्या-समूह द्वारा दर्शाया गया है, जैसा कि विकल्पों में से किसी एक में दिया गया है। विकल्पों में दिए गए संख्या-समूह अक्षरों के दो वर्गों द्वारा दर्शाए गए हैं, जैसा कि दिए गए दो आव्यूहों में है। आव्यूह-I के स्तम्भ और पंक्ति की संख्या 0 से 4 और आव्यूह-II की 5 से 9 है। इन आव्यूहों से एक अक्षर को पहले उसकी पंक्ति और बाद में स्तम्भ संख्या द्वारा दर्शाया जा सकता है। उदाहरण के लिए 'N' को 00, 12 आदि द्वारा दर्शाया जा सकता है तथा 'C' को 95, 76 आदि द्वारा दर्शाया जा सकता है। इसी तरह से आपको प्रश्न में दिए शब्द 'TYRES' के लिए समूह को पहचानना है।

MATRIX - I आव्यूह - I						MATRIX - II आव्यूह - II					
	0	1	2	3	4		5	6	7	8	9
0	N	V	P	R	W	5	J	I	C	E	J
1	X	T	N	Y	V	6	G	G	A	L	I
2	Z	P	S	X	Q	7	F	C	J	K	D
3	U	Z	X	W	U	8	E	M	K	J	H
4	Y	Y	R	N	R	9	C	L	E	A	E

**Options:**

- 1) 21,40,04,69,01
- 2) 12,13,41,55,69
- 3) 11,41,44,85,22
- 4) 31,01,65,58,41

**Correct Answer:** 11,41,44,85,22

**(General Awareness)**

**QID : 351 -** Which of the following is not a part of the human stomach?

**Options:**

- 1) cardiac
- 2) caecum

- 3) fundic
- 4) pyloric

**Correct Answer:** caecum

**QID : 352** - Which of the following white blood cells is a type of agranulocytes?

**Options:**

- 1) neutrophils
- 2) eosinophils
- 3) lymphocytes
- 4) basophils

**Correct Answer:** lymphocytes

**QID : 353** - Which of the following is an insectivorous plant?

**Options:**

- 1) Pitcher
- 2) Alstonia
- 3) Calotropis
- 4) Eichhornia

**Correct Answer:** Pitcher

**QID : 354** - Which of the following represents the correct pathway of water movement in the root?

**Options:**

- 1) Epidermis > Endodermis > Cortex > Pericycle > Xylem
- 2) Epidermis > Pericycle > Endodermis > Cortex > Xylem
- 3) Epidermis > Cortex > Endodermis > Pericycle > Xylem
- 4) Epidermis > Pericycle > Cortex > Endodermis > Xylem

**Correct Answer:** Epidermis > Cortex > Endodermis > Pericycle > Xylem

**QID : 355** - Consider the following pairs.

**Name : Formula**

- 1] 2-Bromopropane :  $(\text{CH}_3)_2\text{C}=\text{CHCOCH}_3$
- 2] Propan-1-amine :  $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{NH}_2$
- 3] Dichloromethane :  $\text{CH}_2\text{Cl}_2$
- 4] 4-Methylpent-3-en-2-one :  $\text{CH}_3-\text{CHBr}-\text{CH}_3$

Which of the above pairs are correctly matched?

**Options:**

- 1) 1 and 4 only
- 2) 3 and 4 only
- 3) 2 and 3 only
- 4) 2 , 3 and 4 only

**Correct Answer:** 2 and 3 only

**QID : 356** - What is the IUPAC name of Allyl bromide?

**Options:**

- 1) Dichloromethane
- 2) Tetrachloromethane
- 3) 2-Chlorobutane
- 4) 3-Bromopropene

**Correct Answer:** 3-Bromopropene

**QID : 357** - Formula for Hexamethylene diamine is \_\_\_\_\_.

**Options:**

- 1)  $\text{NH}_2(\text{CH}_2)_4\text{NH}_2$
- 2)  $\text{NH}_2(\text{CH}_2)_6\text{NH}_2$
- 3)  $\text{NH}_2(\text{CH}_2)_3\text{NH}_2$
- 4)  $\text{NH}_2(\text{CH}_2)_2\text{NH}_2$

**Correct Answer:**  $\text{NH}_2(\text{CH}_2)_6\text{NH}_2$

**QID : 358** - Which of the following elements is the most electronegative?

**Options:**

- 1) Aluminium
- 2) Boron
- 3) Gallium
- 4) Thallium

**Correct Answer:** Boron

**QID : 359** - Which HTML tag is used to make a text bold?

**Options:**

- 1) `<body>`
- 2) `<b>`
- 3) `<br>`
- 4) None of these

**Correct Answer:** <b>

**QID : 360** - To easily access commonly used commands and tools in a word processor use the \_\_\_\_\_ bar.

**Options:**

- 1) Home
- 2) Title
- 3) Menu
- 4) Tool

**Correct Answer:** Tool

**QID : 361** - Hareli is the harvest festival of which state?

**Options:**

- 1) Assam
- 2) Andhra Pradesh
- 3) Himachal Pradesh
- 4) Chhattisgarh

**Correct Answer:** Chhattisgarh

**QID : 362** - In October 2016, who was sacked as the Chairman of the Tata Sons?

**Options:**

- 1) Ratan Tata
- 2) Narayan Murthy
- 3) Cyrus Mistry
- 4) Vishal Sikka

**Correct Answer:** Cyrus Mistry

**QID : 363** - Which of the following scientists demonstrated that fermentation is caused by the growth of micro-organisms?

**Options:**

- 1) Edmund Becquerel
- 2) Dmitri Mendeleev
- 3) Louis Pasteur
- 4) Joseph Priestley

**Correct Answer:** Louis Pasteur

**QID : 364** - The line consisting of all the bundles which cost exactly equal to the consumer's income is called the \_\_\_\_\_ line.



**Options:**

- 1) demand
- 2) utility
- 3) budget
- 4) indifference

**Correct Answer:** budget

**QID : 365** - The area under the short run \_\_\_\_\_ cost curve up to any level of output gives us the total variable cost up to that level.

**Options:**

- 1) average
- 2) marginal
- 3) total
- 4) variable

**Correct Answer:** marginal

**QID : 366** - If price of an article decreases from Rs 60 to Rs 50, when quantity demanded increases from 1,000 units to 1,200 units. Find point elasticity of demand.

**Options:**

- 1) 1
- 2) -1.2
- 3) -1
- 4) 1.2

**Correct Answer:** -1

**QID : 367** - Which ratio is the proportion of the total deposits commercial banks keep as reserves?

**Options:**

- 1) Cash Reserve
- 2) currency deposit
- 3) Reserve deposit
- 4) Statutory Liquidity

**Correct Answer:** Reserve deposit

**QID : 368** - Gross Domestic Product + Net factor income from abroad =

**Options:**

- 1) Personal income
- 2) Personal Disposable Income

- 3) Gross National Product
- 4) Net National Product at factor cost

**Correct Answer:** Gross National Product

**QID : 369** - Which of the following metals is not used as a catalyst in catalytic converters fitted in automobiles?

**Options:**

- 1) Platinum
- 2) Polonium
- 3) Rhodium
- 4) Palladium

**Correct Answer:** Polonium

**QID : 370** - Bio-magnification is well established for which of the following pollutants?

**Options:**

- 1) zinc
- 2) mercury
- 3) copper
- 4) nickel

**Correct Answer:** mercury

**QID : 371** - All changes in climate and weather take place in which layer of the atmosphere?

**Options:**

- 1) Stratosphere
- 2) Mesosphere
- 3) Thermosphere
- 4) Troposphere

**Correct Answer:** Troposphere

**QID : 372** - Which type of electromagnetic radiation converts oxygen into ozone?

**Options:**

- 1) Gamma rays
- 2) Cosmic rays
- 3) Infra-red rays
- 4) Ultra-violet rays

**Correct Answer:** Ultra-violet rays

**QID : 373** - Jan Koum is the cofounder of which startup?

**Options:**

- 1) Microsoft
- 2) Google
- 3) Facebook
- 4) WhatsApp

**Correct Answer:** WhatsApp

**QID : 374** - With reference to the interior of the earth consider the following statements.

- 1] Body waves are generated due to the release of energy at the focus.
- 2] The denser the material, the lower is the velocity of the Earthquake waves.
- 3] There are two types of body waves. They are called P and S-waves.

Which of the statements given above is / are correct?

**Options:**

- 1) 1 and 2 only
- 2) 2 and 3 only
- 3) 3 only
- 4) 1 and 3 only

**Correct Answer:** 1 and 3 only

**QID : 375** - Which of the following is a major tectonic plate?

**Options:**

- 1) Cocos plate
- 2) Arabian plate
- 3) Pacific plate
- 4) Nazca plate

**Correct Answer:** Pacific plate

**QID : 376** - The mean distance between the Sun and the Earth is approximately \_\_\_\_\_.

**Options:**

- 1) 99.6 Million Km
- 2) 49.6 Million Km
- 3) 149.6 Million Km
- 4) 199.6 Million K

**Correct Answer:** 149.6 Million Km

**QID : 377** - The process by which soil deposits through compaction turn into rocks is called \_\_\_\_\_.

**Options:**

- 1) lithification
- 2) Metamorphication
- 3) Slatification
- 4) Petrification

**Correct Answer:** lithification

**QID : 378** - The Rabi cropping season is from \_\_\_\_\_.

**Options:**

- 1) April – June
- 2) June - September
- 3) May - August
- 4) October – March

**Correct Answer:** October – March

**QID : 379** - With reference to India's freedom struggle consider the following statements.

- 1] Gandhiji's first major public appearance was at the opening of the Banaras Hindu University (BHU) in February 1916.
- 2] During the Great War of 1914-18, the French had instituted censorship of the press and permitted detention without trial.
- 3] Jallianwala Bagh massacre took place in Amritsar in April 1919.

Which of the statements given above is / are correct?

**Options:**

- 1) 1 and 2 only
- 2) 2 and 3 only
- 3) 3 only
- 4) 1 and 3 only

**Correct Answer:** 1 and 3 only

**QID : 380** - By the sixth century BC, \_\_\_\_\_ had established control over major parts of the Assyrian empire.

**Options:**

- 1) Iranians
- 2) Greeks

- 3) Romans
- 4) Mongols

**Correct Answer:** Iranians

**QID : 381** - Asoka, arguably the most famous ruler of early India, conquered \_\_\_\_\_, present-day coastal Orissa.

**Options:**

- 1) Pataliputra
- 2) Prayaga
- 3) Taxila
- 4) Kalinga

**Correct Answer:** Kalinga

**QID : 382** - Ibn Battuta was a \_\_\_\_\_ who wrote about his travels to India in the fourteenth century.

**Options:**

- 1) Persian
- 2) Egyptian
- 3) Turk
- 4) Moroccan

**Correct Answer:** Moroccan

**QID : 383** - One of the earliest Bhakti movements were led by the Nayanars, who were devotees of \_\_\_\_\_.

**Options:**

- 1) Shiva
- 2) Vishnu
- 3) Surya
- 4) Brahma

**Correct Answer:** Shiva

**QID : 384** - Phonograph was invented by which scientist?

**Options:**

- 1) Alexander Graham Bell
- 2) Thomas Edison
- 3) Jagadish Chandra Bose
- 4) George Eastman

**Correct Answer:** Thomas Edison

**QID : 385** - Consider the following pairs.

**Event : Time interval ( in Seconds)**

- 1] Period of atomic vibrations : 10-15
- 2] Period of radio wave : 10-6
- 3] Travel time for light from Sun to Earth : 106
- 4] Revolution period of the moon : 1010

Which of the above pairs are correctly matched?

**Options:**

- 1) 1 and 4 only
- 2) 1 and 2 only
- 3) 2 and 3 only
- 4) 2 , 3 and 4 only

**Correct Answer:** 1 and 2 only

**QID : 386** - The correct expression for the time period (T) of a particle of mass (m) performing Simple Harmonic Motion, where k is a constant, is \_\_\_\_\_.

**Options:**

- 1)  $T = 2\pi\sqrt{(k/m)}$
- 2)  $T = 2\pi(m/k)^2$
- 3)  $T = 2\pi(k/m)^2$
- 4)  $T = 2\pi\sqrt{(m/k)}$

**Correct Answer:**  $T = 2\pi\sqrt{(m/k)}$

**QID : 387** - Who has a wavelength range of 700 nm to 400 nm?

**Options:**

- 1) X-Rays
- 2) Visible light
- 3) Microwaves
- 4) Radio waves

**Correct Answer:** Visible light

**QID : 388** - How far should the object be placed from a concave mirror of focal length 4.8 cm, when the image is to be obtained at a distance of 12 cm from the mirror?

**Options:**

- 1) 8 cm

- 2) 10 cm
- 3) 12 cm
- 4) 15 cm

**Correct Answer:** 8 cm

**QID : 389** - The Institution of the Speaker and his role of the Indian Constitution are borrowed from the \_\_\_\_\_ constitution.

**Options:**

- 1) British
- 2) French
- 3) Irish
- 4) Canadian

**Correct Answer:** British

**QID : 390** - Which of the following is a characteristic of a Proportional Representation system?

**Options:**

- 1) The country is divided into small geographical units called constituencies or districts
- 2) Candidate who wins the election may not get majority (50%+1) votes
- 3) A party may get more seats than votes in the legislature
- 4) Every party gets seats in the legislature in proportion to the percentage of votes that it gets

**Correct Answer:** Every party gets seats in the legislature in proportion to the percentage of votes that it gets

**QID : 391** - Which of the following is false with reference to Presidential type of executive?

**Options:**

- 1) President is the head of the Government
- 2) President is head of the state
- 3) The President is usually directly elected by the people
- 4) President is accountable to the Legislature

**Correct Answer:** President is accountable to the Legislature

**QID : 392** - Which of the following subjects is included in the Concurrent List?

**Options:**

- 1) Banking
- 2) Trade Unions

- 3) Agriculture
- 4) Police

**Correct Answer:** Trade Unions

**QID : 393** - Independence of Judiciary means all of the following, except \_\_\_\_\_.

**Options:**

- 1) Executive must not restrain the functioning of the judiciary
- 2) Legislature should not interfere with the decision of the judiciary.
- 3) Absence of accountability
- 4) Judges must be able to perform their functions without fear

**Correct Answer:** Absence of accountability

**QID : 394** - Jwala Gutta is associated with which sport?

**Options:**

- 1) Wrestling
- 2) Boxing
- 3) Badminton
- 4) Weight Lifting

**Correct Answer:** Badminton

**QID : 395** - Who wrote the novel "Angels & Demons"?

**Options:**

- 1) Dan Brown
- 2) Jonathan Swift
- 3) Daniel Defoe
- 4) William Shakespeare

**Correct Answer:** Dan Brown

**QID : 396** - Over two-thirds of all named species on earth are \_\_\_\_\_.

**Options:**

- 1) Porifera
- 2) Arthropods
- 3) Aschelminthes
- 4) Ctenophora

**Correct Answer:** Arthropods



**QID : 397** - Which type of epithelium is made of a single thin layer of flattened cells with irregular boundaries?

**Options:**

- 1) cuboidal
- 2) columnar
- 3) ciliated
- 4) squamous

**Correct Answer:** squamous

**QID : 398** - Which is the longest river bridge in India?

**Options:**

- 1) Bandra-Worli Sea Link
- 2) Mahatma Gandhi Setu
- 3) Vikramshila Setu
- 4) Vembanad Rail Bridge

**Correct Answer:** Mahatma Gandhi Setu

**QID : 399** - Which of the following is a famous Classical Indian dancer?

**Options:**

- 1) Amrita Sher Gil
- 2) Satish Gujral
- 3) Sonal Mansingh
- 4) Bhimsen Joshi

**Correct Answer:** Sonal Mansingh

**QID : 400** - Which of the following is a recipient of the "Ashoka Chakra" award?

**Options:**

- 1) Abhijeet Gupta
- 2) Hangan Dada
- 3) Akhil Kumar
- 4) Sunil Chhetri

**Correct Answer:** Hangan Dada