Question Paper with Final (Revised) Answer Key for the Post of $\quad$ Assistant Engineer (Civil) held on 11-09-2018

## Itemcode: AC1001

Q1: Punching of hole is permitted only in a material, whose yield strength ( $f_{y}$ ) does not exceed ...... and where thickness does not exceed (5600/fy) mm.
A 240 MPa
B $\quad 250 \mathrm{MPa}$
c $\quad 280 \mathrm{MPa}$
D $\quad 360 \mathrm{MPa}$
Correct Ans: D

## Itemcode : AC1002

Q2: With reference to fire resistance of steel structures, the following relationship is correct:
A $\quad$ Period of Structural Adequacy $\geq$ Fire Resistance Level

B Period of Structural Adequacy < Fire Resistance Level
C Both of the above.
D None of the above.
Correct Ans: A

Itemcode : AC1003
Q3: In fatigue loading, the maximum stress range should not exceed ..... for shear stress. Where, $\mathrm{f}_{\mathrm{y}}$ is the yield strength of the material.

| A | $\mathrm{f}_{\mathrm{y}}$ |
| :--- | :--- |
| B | $1.5 \mathrm{f}_{\mathrm{y}}$ |
| C | $\mathrm{f}_{\mathrm{y}} /(3)^{0.5}$ |
| D | $1.5 \mathrm{f}_{\mathrm{y}} /(3)^{0.5}$ |

Correct Ans: D

## Itemcode : AC1004

Q4: In fatigue analysis, the values obtained from standard S-N curve are modified by a capacity reduction factor, when plates are greater than ..... in thickness and are joined together by transverse fillet or butt welding.

| A | 25 mm |
| :--- | :--- |
| $\mathbf{B}$ | 20 mm |
| $\mathbf{C}$ | 15 mm |
| $\mathbf{D}$ | 10 mm |
| Correct Ans: $\mathbf{A}$ |  |


| Itemcode : AC1005 |  |
| :--- | :--- |
| Q5: $\quad$ Lug angles are used to $\ldots \ldots \ldots .$. |  |
| A | transmit load on wider area. |
| $\mathbf{B}$ | reduce the length of the connection |
| $\mathbf{C}$ | promote use of angles. |
| $\mathbf{D}$ | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |

## Itemcode : AC1006

Q6: The minimum edge distance and end distances from the centre of any hole to the nearest edge of a plate should not be less than ......................... in case of hand flame cut edges.
A 1.7 times the hole diameter
B 1.5 times the hole diameter

| $\mathbf{C}$ | 1.3 times the hole diameter |
| :--- | :--- |
| $\mathbf{D}$ | 1.2 times the hole diameter |
| Correct Ans: $\mathbf{A}$ |  |


| $\mid \mathrm{Itemcode}:$ AC1007 <br> Q7: <br> Compression members are designed for ...... buckling classes. <br> A 4 |  |
| :--- | :--- |
| B | 5 |
| C | 6 |
| D | 7 |
| Correct Ans: A |  |


| Qtemcode : AC1008 <br> Q8: <br> As per IS: 456, use of Silica fume in concrete is recommended as .....\% of cement content. <br> A <br> 5 to $10 \%$ <br> B 10 to $15 \%$ |  |
| :--- | :--- |
| C | 15 to $20 \%$ |
| D | 20 to $25 \%$ |
| Correct Ans: $\mathbf{A}$ |  |


| Itemcode: AC1009Q9: Slump of concrete to be used in in-situ piling should be |  |
| :---: | :---: |
|  |  |
| A | 0 to 25 mm . |
| B | 25 to 50 mm . |
| c | 50 to 100 mm . |
| D | 100 to 150 mm . |
| Correct Ans: D |  |

Itemcode : AC1010
Q10: Minimum cement content in concrete including flyash and ground granulated blast furnace slag, to be used in reinforced
concrete under mild exposure should not be less than ......

| A | $220 \mathrm{~kg} / \mathrm{m}^{3}$ |
| :--- | :--- |
| B | $240 \mathrm{~kg} / \mathrm{m}^{3}$ |
| C | $280 \mathrm{~kg} / \mathrm{m}^{3}$ |
| D | $300 \mathrm{~kg} / \mathrm{m}^{3}$ |
| Correct Ans: $\mathbf{D}$ |  |



| $\mathbf{D} \quad 60 \%$ |
| :--- | :--- |
| Correct Ans: D |

## Itemcode : AC1013

Q13: Maximum distance between distribution reinforcement bars in a slab should not be more than ....
A five times effective depth of solid slab.
B 450 mm .
C smaller of (A) and (B).
D none of the above.
Correct Ans: C

| Itemcode : AC1014 |  |
| :--- | :--- |
| Q14: Minimum thickness of footing, when it is resting on piles ........ |  |
| A | 75 mm. |
| B | 150 mm. |
| C | 225 mm. |
| D | 300 mm. |
| Correct Ans: $\mathbf{D}$ |  |

## Itemcode: AC1015

Q15: At sections, where moment capacity after redistribution is less than that from elastic maximum moment diagram, the following relationship should be satisfied. Where $x_{u}, d$ and $\delta M$ are depth of neutral axis, effective depth and $\%$ reduction in moment respectively.

| A | $\mathrm{x}_{\mathrm{u}} / \mathrm{d}+\delta \mathrm{M} / 100 \leq 0.9$ |
| :--- | :--- |
| B | $\mathrm{x}_{\mathrm{u}} / \mathrm{d}+\delta \mathrm{M} / 100 \leq 0.8$ |
| C | $\mathrm{x}_{\mathrm{u}} / \mathrm{d}+\delta \mathrm{M} / 100 \leq 0.7$ |
| D | $\mathrm{x}_{\mathrm{u}} / \mathrm{d}+\delta \mathrm{M} / 100 \leq 0.6$ |
|  |  |

Correct Ans: D

| Itemcode : $\mathbf{A C 1 0 1 6}$ <br> Q16: $\quad$ At the time of failure, the maximum strain in tension reinforcement at the failure section should not be less than .... <br> A $\mathrm{f}_{\mathrm{y}} /\left(1.15 \mathrm{E}_{\mathrm{s}}\right)$ |  |
| :--- | :--- |
| B | $\mathrm{f}_{\mathrm{y}} /\left(1.15 \mathrm{E}_{\mathrm{s}}\right)+0.002$ |
| C | $\mathrm{f}_{\mathrm{u}} /\left(1.15 \mathrm{E}_{\mathrm{s}}\right)$ |
| D | $\mathrm{f}_{\mathrm{u}} /\left(1.15 \mathrm{E}_{\mathrm{S}}\right)+0.002$ |
| Correct Ans: $\mathbf{B}$ |  |

## Itemcode : AC1017

Q17: The shear resistance of concrete without shear reinforcement in solid slabs is enhanced with reference to beam by a factor greater than unity when slab thickness is less than .....
A 150 mm .
B $\quad 200 \mathrm{~mm}$.
C 250 mm .
D 300 mm .
Correct Ans: D

| Itemcode : AC1018 |  |
| :--- | :--- |
| Q18: In the case of gases, the viscosity $\ldots$. with increase in temperature. |  |
| A | decreases |
| B | increases |


| $\mathbf{C}$ | has no change |
| :--- | :--- |
| $\mathbf{D}$ | none of the above |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1019 |  |
| :--- | :--- |
| Q19: In case of ideal fluid, shear stress is zero when fluid is ... |  |
| A | at rest. |
| B | in motion. |
| C | at rest or in motion. |
| D | none of the above. |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1020  <br> Q20: $\quad$ When meta centre of a body is below its centre of gravity, the body will be in ....  <br> A stable equilibrium. <br> B unstable equilibrium. <br> C neutral equilibrium. <br> D any one of the above. <br> Correct Ans: $\mathbf{B}$  |
| :--- | :--- |


| Itemcode : AC1021 <br> Q21: An open rectangular tank 3 m wide, 4 m long and 2 m deep contains water for a depth of 1.75 m . Find the horizontal <br> acceleration with which the tank has to move parallel to its length so that water is just on the verge of spilling out of the <br> tank? |  |
| :--- | :--- |
| A | $1.00 \mathrm{~m} / \mathrm{sec}^{2}$ |
| B | $1.116 \mathrm{~m} / \mathrm{sec}^{2}$ |
| C | $1.166 \mathrm{~m} / \mathrm{sec}^{2}$ |
| D | $1.226 \mathrm{~m} / \mathrm{sec}^{2}$ |
| Correct Ans: D |  |

Itemcode : AC1022
Q22: Coefficient of velocity is the ratio of ....
A $\quad$ theoretical velocity to actual velocity.
B actual velocity to theoretical velocity.
C any of the above.
D none of the above.
Correct Ans: B

Itemcode : AC1023
Q23: If there is an error of $2 \%$ in water head measurement of a rectangular notch, the error in discharge will be of ....
A $\quad 1 \%$

B $2 \%$
C $3 \%$
D $5 \%$
Correct Ans: C

Itemcode : AC1024
Q24: In Cippoletti weir, the side slope is of .....

| A | $8^{0} 2^{\prime}$ |
| :--- | :--- |
| $\mathbf{B}$ | $10^{0} 2^{\prime}$ |

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|\mp@code{C }}12\mp@subsup{2}{}{0}\mp@subsup{2}{}{\prime
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| Itemcode : AC1025 <br> Q25: $\quad$ In a syphon, a part of pipe line is....... <br> A | above the total energy line. |
| :--- | :--- |
| B | above the hydraulic gradient line. |
| C | any of the above. |
| D | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1026 |  |
| :--- | :--- |
| Q26: $\quad$ In a stream, generally mean velocity is at .............. |  |
| A | 0.2 of the depth. |
| B | 0.4 of the depth. |
| C | 0.6 of the depth. |
| D | 0.8 of the depth. |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1027 |  |
| :--- | :--- |
| Q27: | When available water head is less than 15 m , suitable type of turbine is .... |
| A | Pelton wheel. |
| B | Francis. |
| C | Kaplan. |
| D | any of the above. |
| Correct Ans: C |  |


| Itemcode : AC1028 <br> Q28: <br> The ....... of a turbine is the speed of a turbine under a head of 1 m so as to develop 1 horse power. <br> A Specific power |  |
| :--- | :--- |
| B | Specific speed |
| C | Specific head |
| D | none of the above |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1029 <br> Q29: <br> A disturbed sample preserves...... of the in-situ soil. <br> A moisture content |  |
| :--- | :--- |
| B | soil structure |
| C | particle size distribution |
| D | all of the above |
| Correct Ans: $\mathbf{C}$ |  |


| Qemcode : AC1030 <br> Q30: <br> For determining shear strength, consolidation and permeability tests, ..... are required. <br> A <br> disturbed samples <br> B <br> undisturbed samples <br> C |  |
| :--- | :--- |
| any of the above | none of the above |


| Itemcode : AC1031 |  |
| :--- | :--- |
| Q31: For flexible pavement design, Curve $D$ is for $\ldots . . .$. |  |
| A | $0-15$ vehicles per day. |
| B | $15-45$ vehicles per day. |
| C | $45-150$ vehicles per day. |
| D | $150-450$ vehicles per day. |
| Correct Ans: D |  |


| Itemcode : AC1032 |  |
| :--- | :--- |
| Q32: The downward drag, which tends to reduce the useable pile capacity is called....... |  |
| A | skin problem. |
| B | positive skin friction. |
| C | negative skin friction. |
| D | none of the above. |
| Correct Ans: $\mathbf{C}$ |  |

Itemcode : AC1033
Q33: Grade beam in expansive soils is placed in such a way that its ...
A top face should be at ground level.
B bottom face should be at ground level.
C bottom face should be at least 80 mm above ground level.
D No such specification is required.
Correct Ans: C

| Itemcode : AC1034 |  |
| :---: | :---: |
| Q34: Bearing capacity: $\mathrm{q}_{\mathrm{f}}=1.2 \mathrm{c}_{\mathrm{T}} \mathrm{N}_{\mathrm{c}}+\mathrm{Y} D \mathrm{~N}_{\mathrm{q}}+0.3 \mathrm{YBN}_{\mathrm{Y}}$ is applicable for $\ldots \ldots . .$. |  |
| A | square footing. |
| B | circular footing. |
| C | rectangular footing. |
| D | hexagonal footing. |
|  | rect Ans: B |


| Itemcode : AC1035 <br> Q35: $\quad$ Contact pressure distribution below a rigid foundation is parabolic having ......... if foundation is on cohesionless soil. <br> A maximum values at edges and minimum value at centre. |  |
| :--- | :--- |
| B | zero values at edges and maximum values at centre. |
| C | maximum values at edges and zero value at centre. |
| D | none of the above. |
| Correct Ans: B |  |


| Itemcode : AC1036 |  |  |
| :---: | :---: | :---: |
|  | Q36: Critical hydraulic gradient, $\mathrm{i}_{\mathrm{c}}$ is .... |  |
|  | A | $(\mathrm{G}-1) /(1-\mathrm{e})$ |
|  | B | $(\mathrm{G}+1) /(1+e)$ |
|  | C | $(\mathrm{G}-1) /(1+e)$ |
|  | D | $(\mathrm{G}+1) /(1-\mathrm{e})$ |
|  | Correct Ans: C |  |

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Itemcode : AC1037
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Q37: A sand deposit is made up of three horizontal layers of equal thicknesses and permeability of $k_{1}, k_{2}$ and $k_{3}$. The resultant horizontal permeability will be .....

| A | $1 / \mathrm{k}=1 / \mathrm{k}_{1}+1 / \mathrm{k}_{2}+1 / \mathrm{k}_{3}$ |
| :--- | :--- |
| $\mathbf{B}$ | $\mathrm{k}=\mathrm{k}_{1}+\mathrm{k}_{2}+\mathrm{k}_{3}$ |
| $\mathbf{C}$ | any one of the above. |
| $\mathbf{D}$ | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1038 |
| :--- |
| Q38: Transition curve is a ........... |
| A |
| vertical curve. |
| B | horizontal curve used in isolation. $\quad$| C | vertical curve used in isolation. |
| :--- | :--- |
| D | horizontal curve used in between a tangent and a circular curve. |
| Correct Ans: D |  |


| Itemcode : AC1039 <br> Q39: $\quad$ In theodolite surveying, $\ldots$. is the process of turning the telescope about its horizontal axis through $180^{0}$ in the vertical plane <br> thus bringing it upside down and making it to point exactly in the opposite direction.. |  |
| :--- | :--- |
| A | Transiting |
| B | Centering |
| C | Swinging of Telescope |
| D | changing face |
| Correct Ans: A |  |


| Itemcode : AC1040 |  |
| :--- | :--- |
| Q40: $\quad$ When divisions of a vernier are increasing in the opposite direction of the main scale, such vernier is called a ... |  |
| A | Simple vernier. |
| B | direct vernier. |
| C | retrograde vernier. |
| D | double vernier. |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1041 |  |
| :--- | :--- |
| Q41: $\quad$ Distance between any two consecutive contours is called .... |  |
| A | contour interval. |
| B | horizontal equivalent. |
| C | contour gap. |
| $\mathbf{D}$ | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1042 <br> Q42: <br> From a point, if you move in any of the two opposite directions, reduced level of contours is decreasing, while moving in any <br> of two opposite directions normal to previous directions, reduced level of contours is increasing, such location is called .... |  |
| :--- | :--- |
| A | ridge. |
| B | valley. |
| C | lake or hill. |
| D | Saddle. |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode : AC1043 |  |
| :--- | :--- |
| Q43: If subsequent intermediate sight readings are increasing, it shows ......... |  |
| $\mathbf{A}$ | a plane land. |
| $\mathbf{B}$ | an upward slope. |
| $\mathbf{C}$ | a downward slope. |
| $\mathbf{D}$ | un-even land. |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1044 |  |
| :--- | :--- |
| Q44: $\quad$ A station is a point where ....... |  |
| A | Dumpy level is set up. |
| $\mathbf{B}$ | staff is held and reading is taken during process of leveling. |
| $\mathbf{C}$ | either (A) or (B). |
| $\mathbf{D}$ | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1045 <br> Q45: $\quad$ The limiting value of poisson' ratio is ......... <br> A 0.2 |  |
| :--- | :--- |
| B | 0.3 |
| C | 0.4 |
| D | 0.5 |
| Correct Ans: D |  |


| Itemcode : AC1046 |  |
| :--- | :--- |
| Q46: $\quad$ Maximum shear stress induces on a $\ldots . .$. |  |
| A | major principal plane. |
| B | minor principal plane. |
| C | plane making $45^{\circ}$ angle with major principal plane. |
| D | plane making $60^{\circ}$ angle with major principal plane. |
| Correct Ans: $\mathbf{C}$ |  |


|  |  |
| :---: | :---: |
| Itemcode : AC1047 <br> Q47: A cantilever beam span ' $I$ ' is subjected to a couple ' $M$ ' at its free end, shear force in the beam is ..... |  |
| A | constant (i.e. M/I). |
| B | linearly varying. |
| C | having parabolic variation. |
| D | zero everywhere. |
| Correct Ans: D |  |


| Itemcode: AC1048 |  |
| :--- | :--- |
| Q48: The rate of loading (w) per unit length on a beam is ...... |  |
| A | EI $(\mathrm{dy} / \mathrm{dx})$ |
| B | EI $\left(\mathrm{d}^{2} \mathrm{y} / \mathrm{dx}^{2}\right)$ |
| C | EI $\left(\mathrm{d}^{3} \mathrm{y} / \mathrm{dx}^{3}\right)$ |
| D | EI $\left(\mathrm{d}^{4} \mathrm{y} / \mathrm{dx} \mathrm{x}^{4}\right)$ |
| Correct Ans: $\mathbf{D}$ |  |

[^0]| A | top face of the section. |
| :--- | :--- |
| $\mathbf{B}$ | bottom face of the section |
| $\mathbf{C}$ | neutral axis of the section. |
| $\mathbf{D}$ | junction of web and flange of the section. |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1050 <br> Q50: <br> To control deflection of a built up beam, which of the following option is preferable? <br> A place the I-sections side by side. |  |
| :--- | :--- |
| B | place the I-sections one above the other. |
| C | use cover plates along with option (A). |
| D | any one of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1051 <br> Q51: $\quad$ In case of plane stress problem, normal strain in the direction perpendicular to the considered plane is ..... <br> A <br> zero. <br> B non zero but depend on normal stresses. |  |
| :--- | :--- |
| C | non-zero but depend in shearing stress. |
| D | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1052 <br> Q52: <br> Mechanical advantage is .... <br> A <br> ratio of load to effort. <br> B <br> ratio of distance moved by effort to distance moved by load. <br> C ratio of efficiency to velocity ratio. |  |
| :--- | :--- |
| D | none of the above. |
| Correct Ans: $\mathbf{A}$ |  |

Itemcode : AC1053
Q53: A screw jack is having efficiency ........

A $\quad$ less than $65 \%$.
B less than $60 \%$.
C less than $55 \%$.
D less than $50 \%$
Correct Ans: D

| Itemcode : AC1054 |  |
| :--- | :--- |
| Q54: $\quad$ Velocity ratio is the $\ldots .$. |  |
| A | ratio of load to effort. |
| B | ratio of distance moved by effort to the distance moved by load |
| C | ratio of efficiency to mechanical advantage |
| D | none of the above. |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode : AC1055 <br> Q55: The geometrics of highway should be designed to provide ..... at reasonable cost. |  |
| :---: | :---: |
| A | maximum safety |
| B | maximum efficiency |


| $\mathbf{C}$ | maximum efficiency and maximum safety |
| :--- | :--- |
| $\mathbf{D}$ | optimal efficiency and maximum safety |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode : AC1056 <br> Q56: |  |
| :--- | :--- |
| A | 0.15 |
| B | 0.20 |
| C | 0.30 |
| D | 0.35 to 0.40 |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode : AC1057 <br> Q57: In transition curves, the radius ..... as the length of the curve increases. |  |
| :---: | :---: |
| A | increases |
| B | decreases |
| c | remains constant |
| D | no set pattern |
|  | rect Ans: B |


| Itemcode : AC1058 <br> Q58: <br> Coning of wheels is there as the wheels are coned at a slope of ........ to prevent rubbing the inside face of the rail head and to <br> prevent lateral movement of the axle with its wheels. |  |
| :--- | :--- |
| A | 1 in 20 |
| B | 1 in 24 |
| C | 1 in 25 |
| D | 1 in 30 |
| Correct Ans: A |  |


| Itemcode : AC1059 |  |
| :--- | :--- |
| Q59: $\quad$ In India,...... are most commonly used. |  |
| A | Double headed rails |
| $\mathbf{B}$ | Bull headed rails |
| $\mathbf{C}$ | Flat footed rails |
| $\mathbf{D}$ | any one of the above. |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1060Q60: In railways, when gradient is steeper than ......, rack and pinion arrangement is adopted. |  |
| :---: | :---: |
|  |  |
| A | 1 in 50 |
| B | 1 in 45 |
| c | 1 in 40 |
| D | 1 in 30 |
| Correct Ans: D |  |


| Itemcode : AC1061 <br> Q61: |  |
| :--- | :--- |
| A | 15 |
| B | 20 |
| C | 25 |
| D | 30 |


| Itemcode: AC1062 |  |
| :--- | :--- |
| Q62: Maximum daily demand of water may be ...... times of average daily demand |  |
| A | 1.2 |
| B | 1.4 |
| C | 1.6 |
| D | 1.8 |
| Correct Ans: D |  |


| Itemcode: AC1063 |  |
| :--- | :--- |
| Q63: $\quad$ The discharge from an open well may be upto .... |  |
| A | $18 \mathrm{~m}^{3} /$ hour |
| B | $22 \mathrm{~m}^{3} /$ hour |
| C | $25 \mathrm{~m}^{3} /$ hour |
| D | $27 \mathrm{~m}^{3} / \mathrm{hour}$ |
| Correct Ans: A |  |


| Itemcode : AC1064 |  |
| :--- | :--- |
| Q64: In a cross drainage work, when canal is above the drain, such cross drainage work is called ..... |  |
| A | Aqueduct |
| B | Level crossing |
| C | Super passage |
| D | Syphon Aqueduct |
| Correct Ans: A,D |  |


| Itemcode : AC1065 |  |
| :--- | :--- |
| Q65: $\quad$ The useful life of RCC pipes is considered as ..... |  |
| A | 15 years. |
| B | 25 years. |
| C | 40 years. |
| D | 75 years. |
| Correct Ans: $\mathbf{D}$ |  |


| Qtemcode : AC1066  <br> Q66:  <br> A  |  |
| :--- | :--- |
| The permissible pH value for public supplies should not be less than $\ldots \ldots .$. |  |
| B | 6.75 |
| C | 6.70 |
| D | 6.60 |
| Correct Ans: $\mathbf{S} \quad$ (S Denotes question scrapped and weight-age to all ) |  |


| Itemcode : AC1067 |  |
| :--- | :--- |
| Q67: $\quad$ Tentative cost of distribution system in water supply scheme $\ldots \ldots$. |  |
| A | $35 \%$ |
| B | $40 \%$ |
| C | $45 \%$ |
| D | $50 \%$ |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode : AC1068 <br> Q68: Main and trunk sewers are designed for service life of ..... years. |  |
| :---: | :---: |
| A | 10-20 |
| B | 20-30 |
| c | 30-40 |
| D | 40-50 |
|  | rect Ans: D |


| Itemcode : AC1069 <br> Q69: $\quad$ Non-scouring limiting velocity for earthen channels is ... $\mathrm{m} / \mathrm{sec}$. <br> A <br> $0.6-1.2$ <br> B <br> $1.5-2.5$ <br> C <br> $2.5-3.0$ <br> D <br> Correct Ans: A $\mathbf{l}$ |  |
| :--- | :--- |


| Itemcode : AC107 |  |
| :---: | :---: |
| Q70: Sewers of 375 mm diameter are designed to run at ... at ultimate peak designed flow. |  |
| A | 1/2 depth |
| B | 2/3 depth |
| C | 3/4 depth |
| D | 4/5 depth |
| Correct Ans: A |  |


| Itemcode : AC1071 <br> Q71: <br> Sewer pipe sections are tested between manhole to manhole under a test pressure of about ..... head of water. <br> A <br> 1.2 m <br> B <br> 1.5 m <br> C <br> 1.0 m <br> D <br> Correct Ans: $\mathbf{B}$ |  |
| :--- | :--- |


| Itemcode $:$ AC1072 <br> Q72: <br> In grit chambers, the velocity of flow reduces to $\ldots . \mathrm{m} / \mathrm{sec}$. <br> A 0.3 |  |
| :--- | :--- |
| B | 0.4 |
| C | 0.5 |
| D | 0.6 |
| Correct Ans: $\mathbf{A}$ |  |


| Q73: For the design of Septic Tanks, the rate of sludge accumulation has been recommended as ...... litres/person/year. |  |
| :---: | :---: |
| A | 30 |
| B | 35 |
| c | 40 |
| D | 45 |
| Correct Ans: A |  |

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Itemcode : AC1074
Q74: The rate of hydraulic loading for conventional trickling filter may be .... million litres per hectare per day.
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A 12

| B | 16 |
| :--- | :--- |
| $\mathbf{C}$ | 20 |
| $\mathbf{D}$ | 28 |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode : AC1075 <br> Q75: <br> A good brick earth may contain Sand upto ...... <br> A <br> $50 \%$ <br> B <br> $60 \%$ <br> C <br> $\mathbf{D}$ <br> $70 \%$ <br> Correct Ans: A |  |
| :--- | :--- |


| Itemcode : AC1076 |  |  |
| :---: | :---: | :---: |
|  | Q76: ........ are made from refractory clay mixed with crushed pottery and stone. |  |
|  | A | Porcelain |
|  | B | Stoneware |
|  | c | Terracota |
|  | D | Earthenware |
|  |  |  |


| Itemcode : $\mathbf{A C 1 0 7 7}$ <br> Q77: $:$ Kankar lime is used for ......... <br> A <br> structural purposes. <br> B <br> plastering. <br> C <br> white washing. <br> D <br> masonry mortars. <br> Correct Ans: $\mathbf{D}$ |  |
| :--- | :--- |


| Itemcode : AC1078 |  |
| :--- | :--- |
| Q78: Latest specifications of 53 grade cement may be referred from.......... |  |
| A | IS: 8112. |
| B | IS: 15269. |
| C | IS: 269. |
| D | IS: 1489. |
| Correct Ans: C |  |


|  | code : AC1079 <br> : The duration of the project at which total cost of the project is minimum is called ... |
| :---: | :---: |
| A | Minimum duration. |
| B | Most economic duration. |
| c | most effective duration. |
| D | Optimum duration. |
|  | rect Ans: D |
|  |  |
|  | code : AC1080 |
| A | Critical Activity. |
| B | Super Critical Activity. |
| C | Sub Critical Activity. |

```
D none of the above.
Correct Ans: B
```

| Itemcode: AC1081 <br> Q81: Who made the film Yak: Ship of the Mountain? |  |
| :---: | :---: |
| A | Aparna Negi |
| B | Neeru Negi |
| C | Renu Negi |
| D | Veena Negi |
| Correct Ans: C |  |
| Itemcode : AC1082 <br> Q82: In which district of H.P. is Una-so lake ? |  |
| A | Una |
| B | Chamba |
| C | Lahaul - Spiti |
| D | Kinnaur |
| Correct Ans: C |  |


| Itemcode: AC1083 |  |
| :--- | :--- |
| Q83: Which river's tributary is Jalal stream ? |  |
| A | Yamuna |
| B | Beas |
| C | Satluj |
| D | Ravi |
| Correct Ans: $\mathbf{A}$ |  |


| Itemcode : AC1084 |  |
| :--- | :--- |
| Q84: According to 2011 Census which District of H.P. has the lowest percentage of Scheduled Castes population ? |  |
| A | Una |
| B | Bilaspur |
| C | Lahaul - Spiti |
| D | Hamirpur |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1085 |  |
| :--- | :--- |
| Q85: According to H.P. Government notification of 24-10-1994 which of the following is included in the category of OBCs ? |  |
| A | Banjara |
| B | Kumhar |
| C | Teli |
| D | Thathera |
| Correct Ans: $\mathbf{B}$ |  |


| Itemcode: AC1086 |  |
| :--- | :--- |
| Q86: Which dialect is spoken in Rampur and Kotgarh regions of H.P. ? |  |
| A | Kochi |
| B | Brari |
| C | Kiran |
| D | Kirni |
| Correct Ans: A |  |


| Itemcode : AC1087 |  |
| :--- | :--- |
| Q87: In which Vidhan Sabha elections in H.P. did the B.S.P. win a seat ? |  |
| A | 2003 |
| B | 2007 |
| C | 2012 |
| D | 2017 |
| Correct Ans: B |  |


| Itemcode: AC1088 |  |
| :--- | :--- |
| Q88: In which district of H.P. is Gamgul - Siahlehi sanctuary ? |  |
| A | Kullu |
| B | Shimla |
| C | Solan |
| D | Chamba |
| Correct Ans: D |  |


| Itemcode : AC1089 |  |
| :--- | :--- |
| Q89: $\quad$ Which of the following is the seat of Buddhist monasteries ? |  |
| A | Taleru |
| B | Sumdo |
| C | Tabo |
| D | Sangla |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1090 |  |
| :--- | :--- |
| Q90: $\quad$ Who invited the Dalai Lama to Mcleodganj around 1960 AD ? |  |
| A | B.C. Sanyal |
| B | S.S. Boparai |
| C | Norah Richards |
| D | N.N. Nowrojee |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode: AC1091 |  |
| :--- | :--- |
| Q91: According to 2011 census which state in India has the lowest literacy ? |  |
| A | Chhatisgarh |
| B | Bihar |
| C | Jharkhand |
| D | Rajasthan |
| Correct Ans: B |  |


| Itemcode: AC1092 |  |
| :--- | :--- |
| Q92: $\quad$ Who is the Governor of Karnataka ? |  |
| A | Vajubhai Vala |
| B | K. Siddaramaiah |
| C | K. Rosaiah |
| D | Shanker Singh Waghela |
| Correct Ans: A |  |

Itemcode : AC1093
Q93: Which warship of Indian Navy is participating India - Vietnam bilateral Navel exercise in May, 2018 ?
A INS Ganga

| B | INS Ranjit |
| :--- | :--- |
| $\mathbf{C}$ | INS Kamorta |
| $\mathbf{D}$ | INS Talwar |
| Correct Ans: $\mathbf{C}$ |  |


| Itemcode : AC1094 |  |
| :---: | :---: |
| Q94: Which agency carried out the conservation and restoration work of Humayun's Tomb in Delhi ? |  |
| A | the Aga Khan Foundation |
| B | Getty Foundation |
| C | Lakshmi Mitta Foundation |
| D | Dalmia - Bharat Gruop |
| Correct Ans: A |  |


| Itemcode : AC1095 <br> Q95: $\quad$ What will be the approximate length of the proposed Zojila tunnel in $J$ and $K$ ? <br> A 9 kms |  |
| :--- | :--- |
| B | 11 kms |
| C | 14 kms |
| D | 17 kms |
| Correct Ans: $\mathbf{C}$ |  |


| Qemcode: $:$ AC1096 <br> Q96: <br> W |  |
| :--- | :--- |
| Venezuela |  |
| B | Colombia |
| C | Guatemala |
| D | Honduras |
| Correct Ans: $\mathbf{A}$ |  |


| Itemcode : AC1097 |  |
| :--- | :--- |
| Q97: Which is the country of Meghan Markle's origin (who married Prince Harry recently) |  |
| A | United Kingdom |
| B | France |
| C | Germany |
| D | USA |
| Correct Ans: $\mathbf{D}$ |  |


| Itemcode: AC1098 |
| :--- |
| Q98: Which country is called the land of mid - night sun ? |
| A |
| Finland |
| B |
| Norway |
| C |
| Sweden |
| D |
| Denmark |
| Correct Ans: B |


| Itemcode : AC1099 <br> Q99: <br> Which planet is known as god of war ? <br> A Saturn |  |
| :--- | :--- |
| B | Jupiter |
| C | Mars |


| $\mathbf{D} \quad$ Venus |
| :--- | :--- |
| Correct Ans: $\mathbf{C}$ |


| Itemcode : AC1100 <br> Q100: What is the currency of Italy ? <br> A Lira |  |
| :--- | :--- |
| B | Euro |
| C | Forint |
| D | Lari |
| Correct Ans: B |  |


[^0]:    Itemcode : AC1049
    Q49: In a T-section, shear stress will be maximum at

