

પ્રશ્નપુસ્તિકા નંબર
300061

CEGBU-2024

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ઉમેદવારનો બેઠક નંબર

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કુલ પ્રશ્નો : 100

કુલ ગુણ : 100

સમય : 120 મિનિટ

Total Que. : 100

Total Marks : 100

Time : 120 Minutes



તમને સૂચના આપવામાં ન આવે ત્યાં સુધી પ્રશ્નપુસ્તિકા ખોલવી નહીં.

- (01) આ પ્રશ્નપત્રમાં કુલ 100 પ્રશ્નો છે. પ્રત્યેક પ્રશ્નનો ઉત્તર A, B, C અને D પૈકી કોઈ એક છે. ઉમેદવાર જો જવાબ ન આપવા માંગતા હોય તો તેના માટે OMR ઉત્તરપત્રમાં વિકલ્પ E આપેલ છે. બધા જ પ્રશ્નોના ઉત્તર આપવા ફરજિયાત છે. આ સાથે અલગ આપેલ OMR ઉત્તરપત્રમાં જ ઉત્તર આપવાના છે.

ઉદાહરણ તરીકે :

ભારતના રાષ્ટ્રપિતા તરીકે કોણ ઓળખાય છે?

- A) સરદાર પટેલ B) સુભાષચંદ્ર બોઝ
C) મહાત્મા ગાંધી D) વિનોબા ભાવે

ઉત્તરપત્ર (OMR SHEET) માં.

(A) (B) (C) (D) (E)

ઉપર્યુક્ત ઉદાહરણનો જવાબ “C” છે. આથી “C” નું વર્તુળ ઘાટું (encode) કરેલ છે. સાચી અને ખોટી પદ્ધતિથી વર્તુળ ઘાટું કરવા બાબતની સૂચના OMR માં આપેલ છે જેની નોંધ લેવી.

- (02) 1 થી 100 પ્રશ્નો પુરેપૂરા છપાયેલા છે કે કેમ તેની પ્રથમ ખાતરી કરી લો. જો પ્રશ્નો પૂરા છપાયા ન હોય અથવા કોઈ પૃષ્ઠ ફાટેલું હોય કે કોઈ પૃષ્ઠ સામેલ ન હોય અથવા તો અન્ય કોઈ ક્ષતિ જણાય તો તરત જ નિરીક્ષક પાસેથી પ્રશ્નપુસ્તિકા અચૂક બદલાવી લેવી.

ઉમેદવારને OMR ઉત્તરપત્ર મળ્યા બાદ જો તેઓ દ્વારા તેનો નાશ કરવામાં આવશે કે ગુમ કરવામાં આવશે તો તે ઉમેદવારને ગેરલાયક ઠરાવવામાં આવશે.

- (03) પરીક્ષા શરૂ થયેથી ઉમેદવાર અધવચ્ચેથી પરીક્ષા ખંડ છોડી શકશે નહીં.
- (04) ઉમેદવારે પોતાના બેઠક ક્રમાંકની પ્રશ્નપુસ્તિકા અને OMR ઉત્તરપત્ર મળેલ છે તેની ખાતરી કરી લેવી અન્યથા ખંડ નિરીક્ષકનું તરત જ ધ્યાન દોરવું. ઉમેદવારને OMR ઉત્તરપત્ર મળે કે તરત જ તેમાં નિયત કરેલ જગ્યાએ પોતાનો બેઠક ક્રમાંક સ્વચ્છ અક્ષરે લખવાનો રહેશે તેમજ બેઠક ક્રમાંક નીચે આપેલ વર્તુળ પણ ઘાટું (encode) કરવાનું રહેશે. મળેલ પ્રશ્નપુસ્તિકાનો કોડ નિયત જગ્યાએ લખીને તેની સાથે આપેલ વર્તુળ પણ ઘાટું (encode) કરવાનું રહેશે. લખેલી વિગતો અને ઘાટું (encode) કરેલ વર્તુળની વિગતો યોગ્ય રીતે ભરાયેલ છે તેની ખાતરી કરી લેવી.

- (05) પ્રત્યેક સાચા જવાબદીઠ 1 (એક) ગુણ મળવાપાત્ર થશે. ગુણાંકન પદ્ધતિમાં માર્કનસ પદ્ધતિ રાખવામાં આવી છે. જે મુજબ - પ્રત્યેક ખોટા જવાબદીઠ, ખાલી છોડેલ જવાબદીઠ, છેકછાક કરેલ હોય તેવા જવાબદીઠ તથા OMR માં જણાવ્યા પ્રમાણેની ખોટી પદ્ધતિથી કે એક કરતાં વધુ વિકલ્પ દર્શાવેલ જવાબદીઠ 0.25 ગુણ કાપવામાં આવશે. જો ઉમેદવાર જવાબ આપવા માંગતા ન હોય અને વિકલ્પ (E) ઘાટું (encode) કરશે તો 0.25 ગુણ કાપવામાં આવશે નહિં.

- (06) OMR ઉત્તરપત્રમાં નિશ્ચિત જગ્યા સિવાય ઉમેદવારે પોતાનો બેઠક ક્રમાંક લખવો નહીં તથા પોતાની ઓળખ છતી થાય તેવી નામ કે અન્ય કોઈ પણ પ્રકારની નિશાની દર્શાવવાની સખત મનાઈ છે. તેમ છતાં પણ કોઈ પણ નિશાની કે ઓળખ કર્યાનું માલૂમ પડશે તો તેને સંપૂર્ણ ગેરશિસ્ત ગણવામાં આવશે અને પરીક્ષા માટે ગેરલાયક ગણવામાં આવશે.

- (07) ઉત્તરપત્ર (OMR SHEET) માં ઉમેદવાર તથા નિરીક્ષક બંનેની સહી ફરજિયાત છે. બંનેની સહી વિનાની OMR SHEET (ઉત્તરપત્ર) વાળા ઉમેદવાર ગેરલાયક ઠરશે.

- (08) પરીક્ષા દરમ્યાન ઉમેદવાર પાસેથી કોઈ પણ સાહિત્ય, માર્ગદર્શિકા, કાપલી, અન્ય હસ્તલિખિત કે પ્રિન્ટેડ સાહિત્ય, મોબાઈલ ફોન, પેજર, કેલક્યુલેટર, બ્લુટુથ, સ્માર્ટ વોચ કે અન્ય વીજાણુ ઉપકરણો લોવાનું જણાશે તો ઉમેદવારને ગેરલાયક ગણવામાં આવશે.

- (09) આ જવાબવહી કોમ્પ્યુટર દ્વારા તપાસવાની હોવાથી તે વળે, ફાટે કે બગડે નહિ તેની ખાસ કાળજી રાખવી તથા જવાબવહીની ગડી વાળવી નહીં.

- (10) પ્રશ્નપુસ્તિકામાં કોરી જગ્યામાં રફ કામ કરવું. તે માટે અલગ કાગળ આપવામાં આવશે નહીં. જવાબવહીમાં કઈ પણ રફ વર્ક કરવું નહીં. પ્રશ્નપુસ્તિકામાં જવાબો લખવાની મનાઈ છે.

- (11) પ્રશ્નપુસ્તિકામાં કોઈ પૃષ્ઠ ફાડવા કે જુદાં કરવાની મનાઈ છે.

- (12) ચાલુ પરીક્ષા દરમ્યાન અંદરોઅંદર ગુસપુસ કરવી, અવાજ કરવો કે નિરીક્ષકની સૂચનાઓનું ઉલ્લંઘન કરવું કે અન્ય કોઈ ગેરરીતી કરવી તે ગેરશિસ્ત ગણાશે.

- (13) ઉમેદવારે ભૂરી/કાળી બોલપોઈન્ટ પેનથી ઉત્તરો લખવાના છે. અન્ય શાહી કે પેન કે પેન્સિલ તથા સફેદ શાહીનો ઉપયોગ કરી શકાશે નહીં તથા સફેદ શાહી (White Ink), બ્લેડ કે રબરથી કે અન્ય કોઈ પણ રીતે પ્રશ્નના જવાબમાં કરેલા સુધારા માન્ય ગણાશે નહીં.

પરીક્ષા આપનાર ઉમેદવારે ઉત્તરપત્ર (OMR SHEET) વર્ગનિરીક્ષકને પરત કર્યા બાદ જ વર્ગખંડ છોડવાનો રહેશે. તેમ કરવામાં કસુર થયેથી શિસ્તભંગના પગલાં ગણી પરીક્ષા માટે ઉમેદવારને ગેરલાયક ઠેરવવામાં આવશે.

001. In which year, name of Kandla Port Trust is renamed as Pandit Deendayal Port Trust?
- (A) 2016 (B) 2017
(C) 2018 (D) 2019
002. "Adalaj ni Vav" was built by Mahmud Begada in _____.
- (A) 1411 (B) 1512
(C) 1610 (D) 1380
003. Which of the following is / are objective(s) of NITI Aayog?
- (A) To evolve a shared vision of national development priorities, sectors and strategies with the active involvement of States.
(B) To create a knowledge, innovation and entrepreneurial support system through a collaborative community of national and international experts, practitioners and other partners.
(C) To focus on technology upgradation and capacity building for implementation of programmes and initiatives
(D) All of the above
004. Economic Survey is published by _____.
- (A) Ministry of Finance (B) NITI Aayog
(C) Indian Statistical Institute (D) Indian Economic Service
005. નીચે આપેલ પૈકી કયું સાચું છે?
- (A) સત્ + નારી = સત્રારી (B) શાળા + ઉપયોગી = શાળોપયોગી
(C) પરમ + ઈશ્વર = પરમેશ્વર (D) આપેલ તમામ
006. નીચેનામાંથી કયો દ્વન્દ્વ સમાસ નથી?
- (A) ભરતીઓટ (B) હાડમાંસ
(C) છળકપટ (D) રાવણવધ
007. Article 29 belongs to which part of Indian Constitution?
- (A) Part II (B) Part III
(C) Part IV (D) Part V

008. Fundamental Duties were included in the Constitution on the recommendation of which of the following committee?
(A) Swaran Singh Committee
(B) Santhanam Committee Shah Committee
(C) J. B. Kripalani Committee
(D) None of the given
009. Scissors : Cloth :: Axe : ?
(A) Wood (B) Grinder
(C) Stone (D) Brick
010. Aakash and Aman have to travel from Ahmedabad to Rajkot in their respective vehicles. Aakash is driving at 80 kmph while Aman is operating at 120 kmph. Obtain the time taken by Aman to reach Rajkot if Aakash takes 3 hrs.
(A) 4 hrs (B) 2 hrs
(C) 2 hours and 45 minutes (D) None of the given
011. What are the two categories of cells which nervous system is made up of?
(A) Gastric chief cell, Parietal cell
(B) Satellite cell and Boettcher cell
(C) Neurons and Glial cells
(D) Tendon cell and Macula densa cell
012. The concept of ICT is related to
(A) storing digital information (B) recording digital information
(C) sending digital information (D) All of the given
013. Give synonym of the following word: "Audacity"
(A) Courage (B) Accurate
(C) Rude (D) Cowardice
014. Give antonym of the following word: "Barrier"
(A) Fertile (B) Obstacle
(C) Assistance (D) Barricade
015. With reference to higher education, E stands for what in NMEICT?
(A) E-content (B) Education
(C) Equal (D) None of the given

016. Which of the following is an online store house of all academic awards like certificates, diplomas, degrees marksheets etc.?
- (A) SWAYAM
(B) National Digital Library
(C) National Academic Library
(D) National Academic Depository
017. The fourth vertical of HECI will be the _____, which will frame expected learning outcomes for higher education programmes, also referred to as 'graduate attributes'.
- (A) National Accreditation Council
(B) Higher Education Grants Council
(C) National Higher Education Regulatory Council
(D) General Education Council
018. NEP 2020 stated to establish a National Repository of high-quality resources on foundational literacy and numeracy on Government Digital Platforms. What is the name of the Government's Digital Platform?
- (A) DIKSHA (B) DISHA
(C) NISHTHA (D) SHIKSHA
019. If the administrative authority within a department is vested in a single individual, then that system is known as _____.
- (A) Board (B) Bureau
(C) Commission (D) None of the given
020. Which of the following act prohibits the improper use of State Emblem of India for professional and commercial purposes?
- (A) The State Emblem of India Act, 2005
(B) The National Emblem of India Act, 2005
(C) The Improper Use and Proper Use of State Emblem of India Act, 2005
(D) None of the given

021. Which of the following is correct as per rule 141A of General Financial Rules (GFR), 2005?
- (A) GeM may be utilized by Government buyers for direct online purchases upto Rs. 1,00,000/- through any of the available supplier on the GeM, meeting the requisite quality, specifications and delivery period;
- (B) GeM may be utilized by Government buyers for direct online purchases upto Rs. 5,00,000/- through any of the available supplier on the GeM, meeting the requisite quality, specifications and delivery period;
- (C) GeM may be utilized by Government buyers for direct online purchases upto Rs. 50,000/- through any of the available supplier on the GeM, meeting the requisite quality, specifications and delivery period;
- (D) None of the given
022. An appointment to any service or post included in the State service shall be made by the State Government or by an authority duly empowered in that behalf by the State Government _____.
- (A) on the result of a competitive examination held for the purpose
- (B) by promotion or transfer
- (C) by direct selection
- (D) All of the given
023. Qualifying service for the purpose of pension of a government employee does not include as per Gujarat Civil Service (Pension) Rules, 2002.
- (A) Service on fixed pay basis (B) Service as an apprentice
- (C) Service on contract basis (D) All of the given
024. As per Gujarat State Biotechnology Policy, indicative list of Ecosystem strengthening projects includes _____
- (A) Genome Sequencing
- (B) Plug and Play facilities
- (C) Clinical Testing including Animal Testing Facilities
- (D) All of the given
025. Who is the Director General of Gujarat Biotechnology University?
- (A) Shri Dilip Shanghvi (B) Shri Sudhir Vaid
- (C) Dr. Subeer S. Majumdar (D) Dr. J. C. Lilani

026. Which of the following test is conducted on stone to determine its toughness?
(A) Hardness test (B) Impact test
(C) Crushing test (D) Attrition test
027. Which component of cement is responsible for 28 days strength of cement?
(A) C_2S (B) C_3S
(C) C_3A (D) C_4AF
028. Read the following sentences
1. Seasoning of timber increases its weight
2. Seasoning of timber increases its strength
3. Seasoning of timber causes reduction in shrinkage and warping
Which option is correct?
(A) 1 and 2 are true (B) 1 and 3 are true
(C) 2 and 3 are true (D) 1, 2 and 3 are true
029. Which is a property of green concrete?
(A) Strength (B) Durability
(C) Dimensional stability (D) Workability
030. Which one of the following limes is used in masonry work?
(A) Hydraulic lime (B) Fat lime
(C) Quick lime (D) White lime
031. Which is incorrect for the characteristics of good brick?
(A) Two bricks should make a metallic sound when struck each other
(B) Brick should have uniform deep red colour
(C) Brick should have uniform size, shape with short straight edge
(D) Brick should not absorb water more than 30% of its dry weight when submerged in water for 24 hours
032. Which apparatus/method is used to determine setting time of cement?
(A) Compaction factor test (B) Autoclave method
(C) Le-chatelier method (D) Vicat's apparatus
033. The ratio of maximum shear stress to average shear stress in a circular cross section of beam is
(A) 2 (B) $3/2$
(C) $2/3$ (D) $4/3$

034. The slope of bending moment diagram represents
(A) Maximum bending moment (B) Maximum shear force
(C) Shear force (D) Bending moment
035. An overhang beam AB is having span L between supports and overhang length L/2 beyond support B. If a UDL 'w' is applied on length L/2 on either side of support B, the reaction at support A will be
(A) $wL/2$ (B) wL
(C) $1.5wL/2$ (D) Zero
036. The number of members (m) and number of joints (j) in a plane perfect truss is given by
(A) $m = (3j - 3)$ (B) $j = (2m - 3)$
(C) $m = (2j - 3)$ (D) $j = (3m - 2)$
037. What would be the moment of inertia of a rectangular section about its base, if b is base width and h is height of section?
(A) $bh^3/12$ (B) $bh^3/3$
(C) $bh^3/36$ (D) $bh^3/48$
038. The shape of bending moment diagram for a cantilever beam, whose free end is subjected to a moment will be
(A) Rectangle (B) Triangle
(C) Trapezium (D) Parabolic
039. As per IS 456:2000 designation, concrete having characteristic strength varying from M 25 to M 55 is known as
(A) Nominal Concrete (B) Standard Concrete
(C) Normal Concrete (D) High strength Concrete
040. Minimum grade of concrete in prestressing is
(A) M15 (B) M25
(C) M35 (D) M50
041. Which is not a property of cement?
(A) Workability (B) Soundness
(C) Setting time (D) Consistency
042. A minimum cover thickness provided in footing is
(A) 40 mm (B) 50 mm
(C) 60 mm (D) 70 mm

043. What will be bending moment and slope respectively at the end of fixed support of a fixed beam loaded by UDL
(A) Minimum, zero (B) Maximum, zero
(C) Zero, Minimum (D) Zero, Maximum
044. The degree of static indeterminacy of the rigid portal frame having one internal hinge is
(A) 2 (B) 3
(C) 4 (D) 5
045. How much percent value of probability of not being exceeded during the entire life of structure can be defined as characteristics load
(A) 80 percent (B) 85 percent
(C) 90 percent (D) 95 percent
046. The covering stone, concrete placed on the exposed top of a wall to prevent seepage of water is
(A) Coping (B) Throating
(C) Corbel (D) Cornice
047. Which of the following masonry bond have same appearance both in front face and in the back face?
(A) English bond (B) Single Flemish bond
(C) Double Flemish bond (D) Dutch bond
048. The portion of brick obtained by cutting the brick lengthwise into two portion is
(A) King closer (B) Queen closer
(C) Mitred closer (D) Bevelled closer
049. The sloping member which supports the step in a stair is
(A) Pitch (B) Newel post
(C) Baluster (D) Stringer
050. Which of the following roof is combination of King post truss and Queen post truss?
(A) Mansard roof truss (B) Bel-fast roof truss
(C) Composite roof truss (D) North light truss
051. The location of various natural features like, river, ponds, woods etc, are shown in
(A) Hydrographic survey (B) Cadastral survey
(C) Topographical survey (D) Geological survey

052. The following readings were taken on the change point or turning point
(A) Back sight and Intermediate sight
(B) Back sight and Fore sight
(C) Fore sight and Intermediate sight
(D) Intermediate sight only
053. Ideal transition curve is also known as
(A) Clothoid curve (B) Cubical curve
(C) Parabolic curve (D) Hyperbolic curve
054. Read the following statements in relation of curve
1. A curve consists of two circular arcs of equal or different radii turning in opposite direction with a common tangent at the junction of the arc is known as reverse curve
2. A curve of varying radius is known as transition curve
3. A compound curve is a combination of two circular curves of different radii
Which option is correct?
(A) 1 and 2 are true (B) 1 and 3 are true
(C) 2 and 3 are true (D) 1, 2 and 3 are true
055. In a closed traverse, the algebraic sum of departure and latitude must be equal to
(A) 0° (B) 90°
(C) 180° (D) 360°
056. The water surface joining the static levels in several non-pumping wells penetrating a continuous confined aquifers represents
(A) Water-table surface
(B) Capillary fringe
(C) Piezometric surface of the aquifer
(D) Physical top surface of the aquifer
057. The volume of water that can be extracted by force of gravity from a unit volume of aquifer material is called
(A) Specific retention (B) Specific yield
(C) Specific storage (D) Specific capacity
058. Which of the following is NOT a direct stream flow determination technique?
(A) Dilution method (B) Ultrasonic method
(C) Area-velocity method (D) Slope-area method

059. A catchment area consists of 30% area with runoff coefficient 0.4 with remaining 70% area with runoff coefficient of 0.6. The equivalent runoff coefficient of the catchment will be
 (A) 0.48 (B) 0.54
 (C) 0.63 (D) 0.76
060. A reservoir has an original capacity of 720 ha-m. The drainage area of the reservoir is 100 sq-km and has a sediment delivery rate of 0.10ha-m/sq-km. If the reservoir has a trap efficiency of 80% the annual percentage loss of original capacity is
 (A) 1.39 % (B) 1.11%
 (C) 1.74% (D) 0.28%
061. Match list-1 and list-2 and which option is correct?
List-1 **List-2**
 A. Aquiclude 1. Contains water and also transmit water
 B. Aquifer 2. Contains water but can transmit water at very low rate
 C. Aquifuge 3. Contains water but can not transmit water
 D. Aquitard 4. Neither porous nor permeable to water
 (A) A-1, B-2, C-4, D-3 (B) A-2, B-1, C-4, D-3
 (C) A-2, B-3, C-4, D-1 (D) A-3, B-1, C-4, D-2
062. A lysimeter is used to measure
 (A) Infiltration (B) Evaporation
 (C) Evapotranspiration (D) Surface runoff
063. The base period of a particular crop is 120 days. If the duty is 1500 ha per cumec, the delta is about
 (A) 69.0 cm (B) 138 cm
 (C) 35 cm (D) 54 cm
064. Which of the following statement is incorrect?
 (A) Ridge canal has minimum number of cross-drainage work in its alignment
 (B) Base period of crop is slightly more than the crop period
 (C) Available water to the crop = Field capacity – Wilting point
 (D) The water conveyance efficiency is the ratio of the quantity of water diverted to the field to the quantity of water diverted into canal from the offtake point

065. What will be the compressive stress at the heel of the dam when eccentricity = one sixth of bed width
 (A) Positive value (B) Negative value
 (C) Zero (D) Can be positive or Negative
066. When drainage is passing below the canal such that highest flood level of drainage is above the bed level of canal, the cross-drainage work is termed as
 (A) Aqueduct (B) Syphon aqueduct
 (C) Super passage (D) Canal Syphon
067. The ratio of mass density of a fluid to mass density of water is termed as
 (A) Specific gravity (B) Specific weight
 (C) Specific volume (D) Specific surface
068. Which of the following instrument will not be used to obtain the discharge in a pipe directly?
 (A) Venturi meter (B) Orifice meter
 (C) Rota meter (D) Pitot tube
069. If y = Depth of flow, y_n = Normal depth of flow, y_c = Critical depth of flow Which condition is true for the development of M_1 profile in case of open channel flow?
 (A) $y > y_n > y_c$ (B) $y_n > y > y_c$
 (C) $y < y_n < y_c$ (D) $y_n > y_c > y$
070. The depth of flow after formation of hydraulic jump in an open channel is termed as
 (A) Initial depth (B) Final depth
 (C) Sequent depth (D) Alternate depth
071. Which of the following is NOT a reaction turbine?
 (A) Francis turbine (B) Pelton wheel
 (C) Kaplan Turbine (D) Propeller turbine
072. Air vessel is used in reciprocating pump to obtain
 (A) Reduction in suction head
 (B) Rise in delivery head
 (C) Continuous supply of water at uniform rate
 (D) Increase in supply of water

073. Which of the statement is incorrect in relation of index properties of soil
(A) The ratio of volume of void to volume of solid is termed as porosity
(B) The value of void ratio can be greater than one
(C) The porosity can not exceed 100%
(D) The ratio of volume of water to volume of voids is termed as degree of saturation
074. The ratio of plasticity index of soil to flow index of soil is termed as
(A) Liquidity index (B) Consistency index
(C) Toughness index (D) Shrinkage index
075. Which of the following instrument is used to determine the bulk unit weight of the soil
(A) Pycnometer (B) Core cutter
(C) Triaxial apparatus (D) Sand bath apparatus
076. Which of the following factor does not affect the permeability of soil?
(A) Void ratio (B) Viscosity of water
(C) Particle size (D) Surface tension of water
077. Read the following sentences for the characteristics of flow net
1. Flow lines and equipotential lines are orthogonal to each other
2. The discharge passing through each flow channel is not constant
3. The fields are almost square in shape
Which option is correct?
(A) 1 and 2 are true (B) 1 and 3 are true
(C) 2 and 3 are true (D) 1, 2 and 3 are true
078. The decrease in void ratio per unit increase in effective stress of soil is termed as
(A) Coefficient of volume change (B) Degree of consolidation
(C) Coefficient of compressibility (D) Time factor
079. Which is NOT a merit of triaxial shear test over direct shear test?
(A) The stress distribution on failure plane is uniform
(B) The changes in pore pressure can be measured directly
(C) The specimen is free to fail on the weakest plane
(D) The apparatus is cheap and simple
080. What would be critical height of unsupported vertical cut in a cohesive soil having cohesion = 40 kN/m^2 and bulk unit weight equal to = 20 kN/m^3
(A) 4.0 m (B) 8.0 m
(C) 1.0 m (D) 2.0 m

081. The reduction of volume of partially saturated soil because of expulsion of air with unaltered water content is termed as
(A) Compaction (B) Consolidation
(C) Soil stabilization (D) Degree of consolidation
082. The maximum gross pressure which the soil can carry safely without causing shear failure is called
(A) Ultimate bearing capacity (B) Net Ultimate bearing capacity
(C) Safe bearing capacity (D) Net safe bearing capacity
083. When the ground water table is located at a depth equal to greater than width of footing, the ultimate bearing capacity is
(A) Reduced (B) Not affected
(C) Increased (D) Reduced by 50 %
084. When hard stratum does not exist at a reasonable depth the pile suitable under this condition is
(A) End bearing pile (B) Friction pile
(C) Combined pile (D) Tension pile
085. The reduction in price of existing machinery or asset due to new and better invention, design or process is termed as
(A) Obsolescence (B) Salvage value
(C) Depreciation (D) Scrap value
086. Which is NOT a type of contract?
(A) Item rate contract (B) Percentage rate contract
(C) Lump-sum contract (D) Detailed contract
087. Read the following statement in relation of Critical path method of network analysis
1. When the float of an activity is negative, it is called super-critical activity
 2. When the float of an activity is zero, it is called critical activity
 3. When the float of an activity is positive, it is called sub-critical activity
- Which option is correct?
(A) 1 and 2 are true (B) 1 and 3 are true
(C) 2 and 3 are true (D) 1, 2 and 3 are true

088. The cost slope in scheduling is defined as
(A) $(\text{Crash cost} - \text{Normal cost}) / (\text{Crash time} - \text{Normal time})$
(B) $(\text{Crash cost} - \text{Normal cost}) / (\text{Normal time} - \text{Crash time})$
(C) $(\text{Normal cost} - \text{Crash cost}) / (\text{Normal time} - \text{Crash time})$
(D) $(\text{Normal cost} - \text{Crash cost}) / (\text{Crash time} - \text{Normal time})$
089. Which of the following statement is incorrect?
(A) An activity is actual performance of task
(B) Float is applicable to activity in network analysis
(C) Slack is applicable to event in network analysis
(D) Float of an activity can not be negative
090. For an average Indian town, which has the maximum requirement of water in litres per capita per day?
(A) Domestic use
(B) Industrial use
(C) Public use
(D) Fire demand
091. Read the following points for site selection of intake works
1. Site should be selected near heavy current of river water
2. Site should be selected such that intake can draw sufficient amount of water even in worst condition
3. Site should be located near the water treatment plant
Which option is correct?
(A) 1 and 2 are true
(B) 1 and 3 are true
(C) 2 and 3 are true
(D) 1, 2 and 3 are true
092. The permissible limit of iron and manganese in water used for domestic purposes is
(A) Up to 0.2 ppm
(B) Up to 0.3 ppm
(C) Up to 0.4 ppm
(D) Up to 0.5 ppm
093. During epidemic or water borne disease, the administration of high dose of chlorine beyond the break point is termed as
(A) Break point chlorination
(B) De-chlorination
(C) Super-chlorination
(D) Post-chlorination
094. Which method is not used for the removal of colour, odour and taste in water
(A) Aeration
(B) Treatment with activated carbon
(C) Treatment with copper sulphate
(D) Treatment with chlorine

095. Which layout of water distribution system is most suitable for irregular developed town or cities?
(A) Tree System (B) Grid-iron system
(C) Ring system (D) Radial system
096. Read the following sentences
1. The presence of hydrogen sulphide gas in sewage indicates anaerobic decomposition
2. The minimum amount of dissolve oxygen for survival of fish in river system is 4 ppm
3. The COD test is carried out on sewage to determine the extent of readily oxidisable organic matter present in sewage
Which option is correct?
(A) 1 and 2 are true (B) 1 and 3 are true
(C) 2 and 3 are true (D) 1, 2 and 3 are true
097. During the self-purification of stream, which zone has minimum concentration of dissolve oxygen?
(A) Zone of degradation (B) Zone of active decomposition
(C) Zone of Recovery (D) Zone of cleaner water
098. Which of the following works on the principal of anaerobic digestion?
(A) Trickling filter (B) Oxidation pond
(C) Septic tank (D) Activated sludge process
099. The bridge having its floor supported or suspended at the bottom of the superstructure is termed as
(A) Deck bridge (B) Through bridge
(C) Suspension bridge (D) Semi-through bridge
100. Which of the following is NOT a river training work?
(A) Dyke or levee (B) Spur
(C) Groyne (D) Pier

પરીક્ષા પૂરી થયા બાદ (OMR SHEET) ઉત્તરપત્ર વર્ગ નિરીક્ષકને
પરત કર્યા બાદ જ વર્ગખંડ છોડવાનો રહેશે.
તેમ કરવામાં કસૂર થયેથી તેને શિસ્તભંગનાં પગલાં ગણી
પરીક્ષા માટે ઉમેદવારને ગેરલાયક ઠેરવવામાં આવશે.