National Water Development Agency
Ministry of Water Resources, River Development and Ganga Rejuvenation
Government of India

Participant ID	www.exammix.com
Participant Name	
Test Center Name	iON Digital Zone iDZ 1 Sector 62
Test Date	
Test Time	12:30 PM - 2:30 PM
Subject	JUNIOR ENGINEER CIVIL

Section : **General English**

Q.1 Select the most appropriate synonym of the given word:

HIGH

Ans
✗ 1. Low
✗ 2. Short
✗ 3. Flat
✓ 4. Elevated

Question ID : **402817204**
Status : **Answered**
Chosen Option : **4**

Q.2 Select the most appropriate synonym of the given word:

Robber

Ans
✓ 1. Thief
✗ 2. Fraud
✗ 3. Miser
✗ 4. Friend

Question ID : **402817202**
Status : **Answered**
Chosen Option : **1**

Q.3 Fill in the blanks with the most appropriate option.

She is _____ girl who believes that her mother is _____ angel from heaven.

Ans
✓ 1. a; an
✗ 2. a; a
✗ 3. an; the
✗ 4. an; a

Question ID : **402817205**

Status : **Answered**
Chosen Option : **1**

Q.4 Fill in the blank with the most appropriate option.

"Are you taking me with _____?" _____ asked me.

Ans
✔ 1. you; she
✘ 2. him; her
✘ 3. this; that
✘ 4. we; they

Question ID : **402817201**
Status : **Answered**
Chosen Option : **1**

Q.5 From the options, select the noun that is in the plural form.

Ans
✘ 1. Tongs
✔ 2. Levers
✘ 3. Scissors
✘ 4. Physics

Question ID : **402817203**
Status : **Answered**
Chosen Option : **2**

Section : **General Awareness**

Q.1 एक संग्रहालय में जुलाई के महीने के दौरान पहले 11 दिन, अगले 13 दिन और महीने के शेष दिनों में आगंतुकों की औसत संख्या क्रमशः 750, 818 और 1040 थी। पूरे महीने के लिए आगंतुकों की औसत संख्या क्या है?

Ans
✘ 1. 711
✘ 2. 926
✘ 3. 845
✔ 4. 844

Question ID : **402817223**
Status : **Answered**
Chosen Option : **4**

Q.2 जनवरी 2019 में किस राज्य के मुख्यमंत्री ने गंजाम जिले में 1100 करोड़ रुपये की विभिन्न विकास योजनाओं का उद्घाटन एवं शिलान्यास किया?

Ans
✔ 1. ओडिशा
✘ 2. आंध्र प्रदेश
✘ 3. पश्चिम बंगाल
✘ 4. महाराष्ट्र

Question ID : **402817208**
Status : **Answered**
Chosen Option : **1**

Q.3 एक रेफ्रिजरेटर और एक एयर कंडीशनर के अंकित (विक्रय) मूल्य पर क्रमशः 8% और 12% की छूट देने के बाद उनका मूल्य ₹14,720 और ₹21,120 हो जाता है। यदि ग्राहक दोनों वस्तुओं के कुल अंकित मूल्य पर 10% की छूट मांगता है, तो ग्राहक को उसके मोलभाव के बाद होने वाला शुद्ध लाभ कितना है?

Ans
✗ 1. ₹200
✗ 2. ₹150
✓ 3. ₹160
✗ 4. ₹180

Question ID : **402817225**
Status : **Answered**
Chosen Option : **3**

Q.4 $5\sqrt{2}, 2\sqrt{8}, 4\sqrt{3}, 3\sqrt{5}$ में से सबसे छोटी संख्या _____ है।

Ans
✓ 1. $2\sqrt{8}$
✗ 2. $4\sqrt{3}$
✗ 3. $3\sqrt{5}$
✗ 4. $5\sqrt{2}$

Question ID : **402817221**
Status : **Answered**
Chosen Option : **4**

Q.5 एक आदमी को एक मेज़ और कुर्सी बेचने पर ₹200 का लाभ प्राप्त होता है, जो क्रमशः 5% और 10% लाभ है। यदि वह 10% लाभ पर मेज़ बेचता है और 5% की हानि पर कुर्सी बेचता है, तो उसका लाभ ₹50 कम हो जाता है। (i) कुर्सी और (ii) मेज़ की लागत ज्ञात कीजिए।

Ans
✗ 1. (i) ₹750; (ii) ₹1500
✗ 2. (i) ₹1500; (ii) ₹750
✓ 3. (i) ₹1000; (ii) ₹2000
✗ 4. (i) ₹2000; (ii) ₹1000

Question ID : **402817230**
Status : **Answered**
Chosen Option : **1**

Q.6 Choose the term from the given options which is different from the other three.

Ans
✗ 1. JN
✗ 2. NT
✗ 3. FZ
✓ 4. SG

Question ID : **402817217**
Status : **Answered**

Chosen Option : **4**

Q.7 'चिकित्सा का जनक' (फादर ऑफ़ मेडिसिन) किसे कहा जाता है?

Ans
✔ 1. हिपोक्रेटिस
✘ 2. चार्ल्स डार्विन
✘ 3. अरस्तू
✘ 4. न्यूटन

Question ID : **402817209**
Status : **Answered**
Chosen Option : **3**

Q.8 अंतरराष्ट्रीय मौसम (जलवायु) परिवर्तन के लिए क्योटो प्रोटोकॉल पर दिसंबर 1997 में हस्ताक्षर किए गए थे। उस देश का नाम बताइए, जहाँ इस प्रोटोकॉल पर हस्ताक्षर किए गए थे।

Ans
✘ 1. दक्षिण कोरिया
✘ 2. चीन
✘ 3. इंडोनेशिया
✔ 4. जापान

Question ID : **402817213**
Status : **Answered**
Chosen Option : **4**

Q.9 यदि 'EARTH' को एक कोड़ के रूप में '# % ^ + ×', लिखा जाता है, 'DELHI' को एक कोड़ के रूप में '$ # & × =' लिखा जाता है, तो 'AHEAD' के लिए कोड क्या होगा?

Ans
✘ 1. × % # + $
✘ 2. % × # % &
✔ 3. % × # % $
✘ 4. % # % $ %

Question ID : **402817220**
Status : **Answered**
Chosen Option : **3**

Q.10 सुबह 7.35 बजे शुरू करके, तीन व्यक्ति A, B और C एक वृत्ताकार पथ के चारों ओर दौड़ते हैं और एक चक्कर क्रमशः 6, 8 और 12 मिनट में पूरा करते हैं। (i) शुरुआती बिंदु पर वे किस समय फिर से मिलेंगे? (ii) B तब तक कितने चक्कर लगाता है?

Ans
✘ 1. (i) प्रात: 7.50 (ii) 4 चक्कर
✘ 2. (i) प्रात: 8.03 (ii) 2 चक्कर
✔ 3. (i) प्रात: 7.59 (ii) 3 चक्कर
✘ 4. (i) प्रात: 7.57 (ii) 4 चक्कर

Question ID : **402817228**
Status : **Answered**
Chosen Option : **3**

Q.11 एक बल्लेबाज ने 12 चौकों और 7 छक्कों की मदद से 150 रन बनाए। चौकों का सिंगल रनों से प्रतिशत कितना है?

Ans
1. 85%
2. 70%
3. 90%
4. 80%

Question ID : **402817224**
Status : **Answered**
Chosen Option : **4**

Q.12 30 मीटर लंबे और 20 मीटर चौड़े एक पार्क के परिमाप के साथ-साथ अंदर की तरफ एक मीटर चौड़े पथ का निर्माण किया जाना है। यदि सीमेंट का 1 बैग, जिसकी लागत ₹260 प्रति बैग है, पथ के 4 मी^{2} क्षेत्र के लिए आवश्यक है, तो सीमेंटेड पथ के निर्माण के लिए आवश्यक सीमेंट की लागत ज्ञात कीजिए।

Ans
1. ₹6,860
2. ₹5,730
3. ₹6,240
4. ₹6,420

Question ID : **402817229**
Status : **Answered**
Chosen Option : **3**

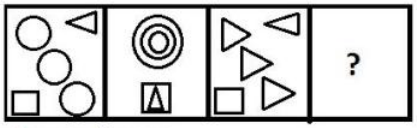
Q.13 शेख हसीना ने लगातार _____ कार्यकाल (टर्म्स) के लिए जनवरी 2019 में बांग्लादेश की प्रधानमंत्री के रूप में शपथ ली है।

Ans
1. चौथा
2. तीसरा
3. दूसरा
4. पांचवां

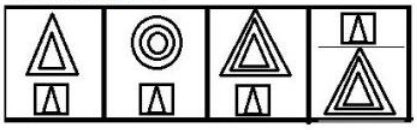
Question ID : **402817212**
Status : **Answered**
Chosen Option : **1**

Q.14 Select the option that is related to the third Problem figure in the same way as the second Problem figure is related to the first Problem figure.

Problem figures



Answer figures



1 2 3 4

Ans
1. 4

✗ 2. 2
✗ 3. 1
✓ 4. 3

Question ID : **402817216**
Status : **Answered**
Chosen Option : **4**

Q.15 "समाजवाद" शब्द को भारतीय संविधान की प्रस्तावना में किस संशोधन के तहत जोड़ा गया था?

Ans
✗ 1. 30वें
✗ 2. 40वें
✓ 3. 42वें
✗ 4. 50वें

Question ID : **402817211**
Status : **Answered**
Chosen Option : **3**

Q.16 In which Indian state are the Bugyals found?

Ans
✗ 1. Sikkim
✓ 2. Uttarakhand
✗ 3. Tamil Nadu
✗ 4. Himachal Pradesh

Question ID : **402817207**
Status : **Answered**
Chosen Option : **4**

Q.17 P और Q ने एक कार्य को 12 दिनों में पूरा किया जिसे P अकेले 20 दिनों में पूरा कर सकता है। कार्य को पूरा करने में अकेले Q को कितने दिन लगेंगे?

Ans
✗ 1. 18 दिन
✗ 2. 15 दिन
✗ 3. 25 दिन
✓ 4. 30 दिन

Question ID : **402817222**
Status : **Answered**
Chosen Option : **4**

Q.18 If 'PUNE' is coded as '1161322', 'DELHI' is coded as '2322151918', then what will be the code for 'MUMBAI'?

Ans
✓ 1. 14614252618
✗ 2. 14611425018
✗ 3. 15615252618
✗ 4. 14614252617

Question ID : **402817219**
Status : **Answered**
Chosen Option : **1**

Q.19 ऑस्ट्रेलियन ओपन में 2019 महिलाओं का एकल खिताब किसने जीता है?

Ans
✗ 1. पेट्रा क्वितोवा
✗ 2. सेरेना विलियम्स
✗ 3. जेनिफर कैप्रियाती
✓ 4. नाओमी ओसाका

Question ID : **402817210**
Status : **Answered**
Chosen Option : **4**

Q.20 जमा की गयी धनराशि ज्ञात कीजिए, यदि इसका परिपक्वता मूल्य दो वर्ष के बाद 10% के वार्षिक चक्रवृद्धि ब्याज पर ₹30,250 हो जाता है।

Ans
✗ 1. ₹26,400
✓ 2. ₹25,000
✗ 3. ₹28,500
✗ 4. ₹22,000

Question ID : **402817227**
Status : **Answered**
Chosen Option : **2**

Q.21 उस विकल्प का चयन करें जो तीसरे पद से ठीक उसी तरह संबंधित है जिस प्रकार दूसरा पद पहले पद से संबंधित है।

7 : 42 :: 6 : ?

Ans
✓ 1. 30
✗ 2. 31
✗ 3. 32
✗ 4. 33

Question ID : **402817215**
Status : **Answered**
Chosen Option : **1**

Q.22 हैदराबाद शहर का संस्थापक कौन था?

Ans
✗ 1. इब्राहीम कुली कुतुब शाह वली
✗ 2. जमशेद कुली कुतुब शाह
✗ 3. अब्दुल्ला कुतुबशाह
✓ 4. मुहम्मद कुली कुतुब शाह

Question ID : **402817206**
Status : **Answered**
Chosen Option : **2**

Q.23 A, D के पिता के पिता है। C, E की बहन है जो A का एकलौता पुत्र है। D और B बहने हैं। F, B की माँ है। B का A से क्या संबंध है?

Ans
✗ 1. चचेरा/ ममेरा/ मौसेरा/ फुफेरा भाई/ चचेरी/ ममेरी/ मौसेरी/ फुफेरी बहन
✗ 2. पुत्री
✓ 3. पोती/ नवासी
✗ 4. माँ

Question ID : **402817218**
Status : **Answered**
Chosen Option : **3**

Q.24 Select the option that is related to the third term in the same way as the second term is related to the first term.

RESPECT : SERPTCE :: COURAGE : ?

Ans
✗ 1. UCORAGE
✗ 2. DPVRBHF
✗ 3. DQTRGEA
✓ 4. UOCREGA

Question ID : **402817214**
Status : **Answered**
Chosen Option : **4**

Q.25 एक कारखाने में काम करने वाले कर्मचारियों की कुल संख्या 1800 थी। पुरुष और महिला कर्मचारियों की संख्या सुरक्षा कर्मचारियों की संख्या से क्रमशः तीन गुना और दोगुनी है। $\frac{1}{5}$ महिला कर्मचारी, $\frac{1}{4}$ पुरुष कर्मचारी और $\frac{1}{6}$ सुरक्षा कर्मचारी एक दिन नौकरी से सेवानिवृत्त हो गए। शेष बचे कर्मचारियों की कुल संख्या ज्ञात कीजिए।

Ans
✗ 1. 1360
✓ 2. 1420
✗ 3. 1240
✗ 4. 1170

Question ID : **402817226**
Status : **Answered**
Chosen Option : **2**

Section : **Computer Literacy**

Q.1 The operating system is a set of system programs that provides a number of facilities to a user to allow the use of a computer. Which of the below listed facilities are provided by the operating system?

i) Program to control input/output devices
ii) Program to manage user files
iii) Allocation of a resource of a computer
iv) Program to select appropriate translators requested

Ans
✓ 1. i, ii, iii only

2. i, iii, iv only
3. i, ii, iv only
4. ii, iii, iv only

Question ID : **402817235**
Status : **Answered**
Chosen Option : **2**

Q.2 निम्नलिखित MS-Excel (एमएस एक्सेल) सूत्र का मान क्या है?

=COUNT(1>2>3, 2, 0)

Ans
1. 3
2. 1
3. 5
4. 0

Question ID : **402817231**
Status : **Answered**
Chosen Option : **1**

Q.3 Which of the following is not a valid function in MS Excel?

Ans
1. COUNT()
2. COUNTA()
3. SUBTRACT()
4. SUM()

Question ID : **402817233**
Status : **Answered**
Chosen Option : **2**

Q.4 Which device is also called as WORM?

Ans
1. Compact Disk (CD)
2. Floppy
3. Hard Disk
4. Magnetic Tape

Question ID : **402817232**
Status : **Answered**
Chosen Option : **4**

Q.5 निम्नलिखित में से किसका उपयोग इमेज (चित्र) से टेक्स्ट (चिन्ह, अक्षर, या नंबर जैसे कोई भी कैरेक्टर) निकालने के लिए किया जा सकता है?

Ans
1. OCR (ओसीआर)

✗ 2. OMR (ओएमआर)

✗ 3. MICR (एमआईसीआर)

✗ 4. बार कोड

Question ID : **402817234**
Status : **Answered**
Chosen Option : **4**

Section : **Estimating,Costing & valuation & Surveying**

Q.1 A building owner receives an annual rent of ₹1,00,000. Total annual cost of repairs is ₹15,000. The capitalised value of the building if the rate of interest is 5% per annum is:

Ans

✗ 1. ₹4,250

✓ 2. ₹8,50,000

✗ 3. ₹17,00,000

✗ 4. ₹23,00,000

Question ID : **402817240**
Status : **Answered**
Chosen Option : **3**

Q.2 The cross staff is used for:

Ans

✗ 1. Levelling

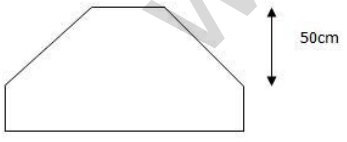
✗ 2. Measuring distance

✓ 3. Setting out right angles

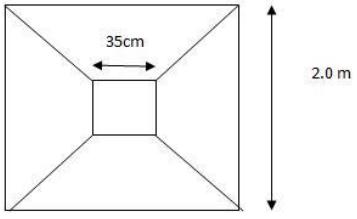
✗ 4. Measuring acute angle

Question ID : **402817246**
Status : **Answered**
Chosen Option : **3**

Q.3 The shuttering quantity required for the trapezium portion of a square footing shown in the figure is:



Square footing with trapezium portion



Ans
1. $4.532\ cm^2$ ✗
2. $4.532\ m^2$ ✓
3. $25.064\ cm^2$ ✗
4. $1.132\ m^2$ ✗

Question ID : **402817238**
Status : **Answered**
Chosen Option : **2**

Q.4 The angle between true meridian and magnetic meridian is termed as:

Ans
1. Dip ✗
2. True bearing ✗
3. Local attraction ✗
4. Declination ✓

Question ID : **402817247**
Status : **Answered**
Chosen Option : **4**

Q.5 The purpose of Alidade in plane table surveying is:

Ans
1. eliminating parallax ✗
2. levelling the plane table ✗
3. centering ✗
4. sighting to target points ✓

Question ID : **402817249**
Status : **Answered**
Chosen Option : **4**

Q.6 The minimum number of satellites required for precise position determination is:

Ans
1. 10 ✗
2. 4 ✓
3. 1 ✗
4. 3 ✗

Question ID : **402817260**
Status : **Answered**
Chosen Option : **2**

Q.7 The curve provided to accomplish gradual transition from tangent to circular curve is termed as:

Ans
1. Complex curve ✗
2. Transition curve ✓
3. Summit curve ✗

✗ 4. Reverse curve

Question ID : **402817255**
Status : **Answered**
Chosen Option : **2**

Q.8 The unit of measurement for 2 cm thick damp proof course (DPC) is:

Ans
✗ 1. Square centimetre
✓ 2. Square metre
✗ 3. Running metre
✗ 4. Cubic metre

Question ID : **402817236**
Status : **Answered**
Chosen Option : **2**

Q.9 In permanent adjustment of levels, two peg test is done to correct or adjust:

Ans
✗ 1. Level tube
✗ 2. Cross-hair ring and Line of collimation both
✗ 3. Cross-hair ring
✓ 4. Line of collimation

Question ID : **402817258**
Status : **Answered**
Chosen Option : **4**

Q.10 An old building has been purchased by a person at a cost of ₹30000 excluding the cost of the land. Calculate the amount of annual sinking fund at 4% interest assuming the future life of the building as 20 years and the scrap value of the building as 10% of the cost of purchase.

Ans
✓ 1. ₹907.20
✗ 2. ₹555.25
✗ 3. ₹1028.37
✗ 4. ₹1500

Question ID : **402817241**
Status : **Answered**
Chosen Option : **3**

Q.11 The maximum permissible tolerance in a 20 m chain is:

Ans
✗ 1. ±10 mm
✓ 2. ±5 mm
✗ 3. ±20 mm
✗ 4. ±15 mm

Question ID : **402817245**
Status : **Answered**
Chosen Option : **2**

Q.12 The horizontal distance between two points on two consecutive contours is known as:

Ans
1. Contour interval ✗
2. Horizontal equivalent ✓
3. Horizontal equivalent and Contour interval both ✗
4. Contour elevation ✗

Question ID : **402817257**
Status : **Answered**
Chosen Option : **2**

Q.13 If 1 acre equals 100 m^2 and 100 hectare equals 1 km^2, then 1km^2 equals _____ m^2.

Ans
1. 10,00,000 ✓
2. 1,00,000 ✗
3. 1,000 ✗
4. 10,000 ✗

Question ID : **402817244**
Status : **Answered**
Chosen Option : **1**

Q.14 The multiplying constant of tacheometric instrument is 100 and the staff is held vertically. If the staff readings at point 'A' are 1.36, 1.915, 2.47 respectively and the measured vertical angle is 10°30′, what is the distance between instrument station and point A?

Ans
1. 107 m ✓
2. 90 m ✗
3. 150 m ✗
4. 168 m ✗

Question ID : **402817252**
Status : **Answered**
Chosen Option : **1**

Q.15 In determining the area of the curved boundary _____ rule is used to get accurate results.

Ans
1. Simpson's ✓
2. mid-ordinate ✗
3. average ordinate ✗
4. trapezoidal ✗

Question ID : **402817239**
Status : **Answered**
Chosen Option : **1**

Q.16 Calculate (to the nearest integer) the length of the curve of 15 chains radius with a deflection angle of 50°30′, when the length of chain is 20 m.

Ans
1. 250 m ✗

✔ 2. 264 m
✘ 3. 270 m
✘ 4. 300 m

Question ID : **402817253**
Status : **Answered**
Chosen Option : **2**

Q.17 An observer standing on a signal post between two forts situated in a straight line sees the top of both the forts. If the signal post acts as point of horizon, what is the distance between two forts, if fort A and B are 3 km and 5 km above the sea level respectively?

Ans
✘ 1. 580 km
✘ 2. 380 km
✘ 3. 280 km
✔ 4. 480 km

Question ID : **402817250**
Status : **Answered**
Chosen Option : **2**

Q.18 The wavelengths at which electromagnetic radiations are partially or wholly transmitted through atmosphere are known as:

Ans
✘ 1. Energy packers
✘ 2. Atmospheric doors
✘ 3. Absorption wavers
✔ 4. Atmospheric windows

Question ID : **402817259**
Status : **Answered**
Chosen Option : **1**

Q.19 The process of turning the telescope in vertical plane through 180 degrees about trunnion axis is termed as:

Ans
✘ 1. Centering
✘ 2. Change face
✘ 3. Swinging
✔ 4. Transiting

Question ID : **402817248**
Status : **Answered**
Chosen Option : **3**

Q.20 What are the units of measurement of distance according to Standards of Weights and Measures Act, 1956?

Ans
✘ 1. Yards and feet
✘ 2. Inches and feet
✘ 3. Poles and chains
✔ 4. Metre and centimetre

Question ID : **402817243**
Status : **Answered**
Chosen Option : **2**

Q.21 The anallactic lens provided in a tacheometer is a:

Ans
✗ 1. Convex and concave lens
✗ 2. Concave lens
✓ 3. Convex lens
✗ 4. Plane lens

Question ID : **402817251**
Status : **Answered**
Chosen Option : **1**

Q.22 A circular curve of radius R connects two points of tangent. What is the length of the tangent if the angle of deflection is 30°?

Ans
✗ 1. 0.78R
✗ 2. 0.115R
✗ 3. 0.58R
✓ 4. 0.27R

Question ID : **402817254**
Status : **Answered**
Chosen Option : **3**

Q.23 Select the correct statement, from the options, with respect to contouring.

Ans
✓ 1. The contour interval does not depend on the nature of ground
✗ 2. The contour interval on a map is not constant
✗ 3. A closed contour line with one or more higher ones inside represents a valley
✗ 4. The ground slope can be determined using contours

Question ID : **402817256**
Status : **Answered**
Chosen Option : **4**

Q.24 The method of measuring approximate distance between two points by counting the number of paces between them is termed as:

Ans
✗ 1. Chaining
✗ 2. Trigonometric levelling
✗ 3. Tachometric survey
✓ 4. Pacing

Question ID : **402817242**
Status : **Answered**

Chosen Option : **4**

Q.25 In the steel reinforcement calculation for RCC, the additional length for two 45° bent-ups in reinforcing bars is:

Ans

✗ 1. $(1 - \sin 45^{\circ})$ times the total depth of beam or slab minus bottom and top cover

✗ 2. Sin 45° times the length of distance between the centre of the upper and lower arms of the bent up bars

✗ 3. 0.84 times the total depth of beam or slab minus bottom and top cover

✓ 4. 0.42 times the length of distance between the centre of the upper and lower arms of the bent up bars

Question ID : **402817237**
Status : **Answered**
Chosen Option : **3**

Section : **Discipline**

Q.1 Identify the INCORRECT statement among the below mentioned statements.

Ans

✗ 1. The number of unit hydrographs for a given basin is theoretically infinite.

✗ 2. The rain during specified duration is called unit storm.

✓ 3. The time required by rain water to reach the outlet of drainage basin is generally called as time of overland flow.

✗ 4. The specified duration of unit hydrograph is called unit duration.

Question ID : **402817297**
Status : **Answered**
Chosen Option : **2**

Q.2 Workability of concrete is measured in a concrete lab by compaction factor test. If the partial compacted concrete weight after deducting empty weight of cylinder = 11.4 kg and fully compacted concrete weight after deducting empty weight of cylinder = 11.98 kg, determine compaction factor value.

Ans

✗ 1. 11.69

✗ 2. 0.58

✓ 3. 0.95

✗ 4. 0.86

Question ID : **402817298**
Status : **Answered**
Chosen Option : **3**

Q.3 The clay mineral responsible for swelling property in black cotton soil is:

Ans

✗ 1. Kaolinite

✗ 2. Halloysite

✗ 3. Illite

✔ 4. Montmorillonite

Question ID : **402817269**
Status : **Answered**
Chosen Option : **4**

Q.4 Which of the following is a shallow foundation?

Ans
✘ 1. Pile foundations
✘ 2. Well foundation
✔ 3. Raft foundation
✘ 4. Pier foundation

Question ID : **402817267**
Status : **Answered**
Chosen Option : **3**

Q.5 Which of the below is the desired policy of the manometric fluid?

Ans
✘ 1. Low surface tension
✘ 2. Low density
✔ 3. High density
✘ 4. High surface tension

Question ID : **402817274**
Status : **Answered**
Chosen Option : **3**

Q.6 The sedimentation analysis for particle size distribution is adopted for the soil particles that are finer than:

Ans
✘ 1. 625 micron
✘ 2. 425 micron
✔ 3. 75 micron
✘ 4. 47.5 micron

Question ID : **402817262**
Status : **Answered**
Chosen Option : **3**

Q.7 At shrinkage limit, the degree of saturation, in percentage, of soil is:

Ans
✘ 1. always less than hundred
✘ 2. always zero
✔ 3. equal to hundred
✘ 4. less than hundred

Question ID : **402817261**
Status : **Answered**
Chosen Option : **1**

Q.8 In an ogee-shaped spillway, the discharge is proportional to :

Ans
✔ 1. $H^{1.5}$
✘ 2. $H^{0.5}$
✘ 3. $H^{2.5}$
✘ 4. H

Question ID : **402817287**
Status : **Answered**
Chosen Option : **2**

Q.9 A reservoir with a surface area of 300 ha has a water temperature of 30°C, humidity of 50%, wind velocity of 12 kmph one metre above the ground, and mean barometer reading of 750 mm mercury. Calculate the daily evaporation using Meyer's formula.

Ans
✔ 1. 11.66 mm
✘ 2. 12.66 mm
✘ 3. 13.66 mm
✘ 4. 10.66 mm

Question ID : **402817296**
Status : **Answered**
Chosen Option : **1**

Q.10 A hydrograph of direct runoff due to 1 cm effective rainfall over a catchment for unit duration is called:

Ans
✘ 1. Runoff hydrograph
✔ 2. Unit hydrograph
✘ 3. Direct Runoff hydrograph
✘ 4. Storm hydrograph

Question ID : **402817295**
Status : **Answered**
Chosen Option : **2**

Q.11 Irrigation water conveyed to the land by means of gravity flow indicates which of the following type of irrigation?

Ans
✘ 1. Sprinkler irrigation
✘ 2. Lift irrigation
✘ 3. Drip irrigation
✔ 4. Flow irrigation

Question ID : **402817276**
Status : **Answered**
Chosen Option : **4**

Q.12 In a gravity dam, the total force due to wave pressure acts at the height of _____ above still water level.

Ans
✘ 1. $0.665\ h_w$

✔ 2. 0.375 h_w

✘ 3. 0.935 h_w

✘ 4. 0.500 h_w

Question ID : **402817285**
Status : **Answered**
Chosen Option : **2**

Q.13 The canal aligned on the natural watershed line is called:

Ans

✘ 1. Side slope canal

✔ 2. Watershed canal

✘ 3. Contour canal

✘ 4. Free canal

Question ID : **402817280**
Status : **Answered**
Chosen Option : **2**

Q.14 A storm with 150 mm precipitation produces a direct runoff of 8.7 cm, with incremental hourly rainfall values being 0.6, 1.35, 2.25, 3.45, 2.7, 2.4 1.5 and 0.75 cm/hr. Estimate the Ø index of the storm.

Ans

✘ 1. 0.725 cm/hr

✔ 2. 0.925 cm/hr

✘ 3. 0.625 cm/hr

✘ 4. 0.825 cm/hr

Question ID : **402817288**
Status : **Answered**
Chosen Option : **2**

Q.15 The reason for adding gypsum in cement is:

Ans

✘ 1. To increase the heat of hydration

✔ 2. To avoid flash set

✘ 3. To increase the rate of hydration

✘ 4. To decrease the soundness of cement

Question ID : **402817289**
Status : **Answered**
Chosen Option : **2**

Q.16 For pure cohesive soil, the value of bearing capacity factor (Nc) is:

Ans

✔ 1. 5.7

✘ 2. 0

✘ 3. 9.6

✘ 4. 6.8

Question ID : **402817265**
Status : **Answered**
Chosen Option : **3**

Q.17 खरीफ की फसलों को किस अन्य नाम से भी जाना जाता है?

Ans
✔ 1. मानसून (वर्षाकालिक) फसलें
✘ 2. ग्रीष्मकालीन फसलें
✘ 3. वसंत फसलें
✘ 4. शीतकालीन फसलें

Question ID : **402817278**
Status : **Answered**
Chosen Option : **1**

Q.18 Water is released at the rate of 12 cumec at the head of a canal. If duty at the field is 1250 hectare/cumec and loss of water in transit is 25%, find the area of land that can be irrigated.

Ans
✘ 1. 12250 ha
✘ 2. 9250 ha
✔ 3. 11250 ha
✘ 4. 10250 ha

Question ID : **402817279**
Status : **Answered**
Chosen Option : **3**

Q.19 An irrigation canal carries a discharge of 5 cumec. Assuming N = 0.0225, m = 1, S = 0.2 m/km, calculate the mean velocity of flow by using Kutter's formula.

Ans
✔ 1. 0.56 m/sec
✘ 2. 0.66 m/sec
✘ 3. 0.26 m/sec
✘ 4. 0.76 m/sec

Question ID : **402817286**
Status : **Answered**
Chosen Option : **1**

Q.20 A conical tube of length 2 m is fixed vertically with its smaller end upwards. The velocity of the flow at the smaller end is 5 m/s while at the lower end it is 2 m/s. The pressure head at the smaller end is 2.5 m of liquid. The loss of head in the tube is $\frac{0.35(V_1 - V_2)^2}{2g}$. What will be the pressure head at the lower end if the flow occurs in the downward direction?

Ans
✔ 1. 5.407 m of fluid
✘ 2. 18.337 m of fluid
✘ 3. 13.427 m of fluid
✘ 4. 8.325 m of fluid

Question ID : **402817275**
Status : **Answered**
Chosen Option : **1**

Q.21 During design of Raft foundation according to IS code, the maximum settlement in sand and hard clay for reinforced concrete structures is:

Ans
✗ 1. 40 mm
✗ 2. 90 mm
✓ 3. 75 mm
✗ 4. 65 mm

Question ID : **402817299**
Status : **Answered**
Chosen Option : **1**

Q.22 The variation in the volume of a liquid with the change of pressure is called its:

Ans
✗ 1. Viscosity
✓ 2. Compressibility
✗ 3. Surface tension
✗ 4. Capillarity

Question ID : **402817270**
Status : **Answered**
Chosen Option : **2**

Q.23 As per IS 10262-2009, the maximum water content to be taken for concrete mix design, per cubic metre of concrete, for nominal maximum size of 10 mm is:

Ans
✗ 1. 225 litre
✗ 2. 165 litre
✗ 3. 186 litre
✓ 4. 208 litre

Question ID : **402817290**
Status : **Answered**
Chosen Option : **1**

Q.24 The force exerted by a static fluid on a vertical, horizontal or an inclined plane surface that is immersed depends on the:

Ans
✗ 1. density of the liquid and area of the immersed surface
✗ 2. area of the immersed surface
✗ 3. density of the liquid only
✓ 4. density of the liquid, area of the immersed surface and depth of the centre of gravity of the immersed surface

Question ID : **402817272**
Status : **Answered**
Chosen Option : **1**

Q.25 An isohyet is a line joining places of:

Ans
✗ 1. unequal rainfall

✔ 2. equal rainfall

✘ 3. unequal snowfall

✘ 4. equal snowfall

Question ID : **402817292**
Status : **Answered**
Chosen Option : **2**

Q.26 The minimum length to diameter ratio of the rock sample necessary to conduct Uniaxial Compressive Strength test, without applying any correction factor, is:

Ans

✘ 1. 1.9

✘ 2. 1

✔ 3. 2

✘ 4. 1.5

Question ID : **402817266**
Status : **Answered**
Chosen Option : **4**

Q.27 For a three-phase soil system, the value of percentage air voids:

Ans

✘ 1. is always zero

✘ 2. is always hundred

✘ 3. could be anything above hundred

✔ 4. lies between zero and hundred

Question ID : **402817263**
Status : **Answered**
Chosen Option : **4**

Q.28 Considering the compaction curve, the soil in the wet of optimum zone has:

Ans

✔ 1. dispersed structure

✘ 2. flocculated structure

✘ 3. more permeability than in dry of optimum zone

✘ 4. more shear strength than in dry of optimum zone

Question ID : **402817264**
Status : **Answered**
Chosen Option : **4**

Q.29 A flow net (per metre length) gives $N_f = 3$ and $N_d = 30$ for a net head of 10 m. Calculate the discharge if $K = 1 \times 10^{-6}$ m/sec.

Ans

✘ 1. 0.004 lps

✘ 2. 0.002 lps

✘ 3. 0.001 lps

✔ 4. 0.003 lps

Question ID : **402817284**
Status : **Answered**
Chosen Option : **3**

Q.30 The SI unit of kinematic viscosity is:

Ans
✘ 1. m/s^2
✘ 2. m^3/s^2
✘ 3. kg/m-s
✔ 4. m^2/s

Question ID : **402817271**
Status : **Answered**
Chosen Option : **4**

Q.31 नीचे दिए गए कथनों पर विचार करें और गर्म व ठंडे मौसम में कंक्रीट निर्माण को ध्यान में रखते हुए सही कथन(नों) की पहचान करें।

A. ठंडे मौसम में कंक्रीट को सेट होने के लिए अधिक समय देने से कंक्रीट ठंड के प्रति अधिक प्रतिरोधी बनती है।
B. गर्म मौसम की परिस्थिति सामान्य रूप से अपेक्षाकृत कम सापेक्ष आर्द्रता से जुड़ी होती है।

Ans
✘ 1. कथन A सही है लेकिन B गलत है।
✔ 2. कथन B सही है लेकिन A गलत है।
✘ 3. दोनों कथन गलत हैं।
✘ 4. दोनों कथन सही हैं।

Question ID : **402817291**
Status : **Answered**
Chosen Option : **3**

Q.32 The Bligh's creep coefficient for light sand and mud is:

Ans
✘ 1. 25
✘ 2. 10
✔ 3. 18
✘ 4. 20

Question ID : **402817283**
Status : **Answered**
Chosen Option : **3**

Q.33 As per IS 10430-2000, the range of rugosity coefficient of a brick-tile-lined canal is:

Ans
✘ 1. 0.001-0.0013
✔ 2. 0.018-0.020
✘ 3. 0.00001-0.0002
✘ 4. 0.18-0.20

Question ID : **402817282**
Status : **Answered**
Chosen Option : **2**

Q.34 Calculate the hydraulic mean radius using Manning's equation for a trapezoidal channel to carry 200 cumec discharge laid at a slope of 30 cm/km with side slope 1.5 : 1 at flow velocity of 2 m/sec. Take rugosity factor of 0.017.

Ans
1. 2.07 m ✗
2. 2.75 m ✓
3. 1.57 m ✗
4. 3.75 m ✗

Question ID : **402817300**
Status : **Answered**
Chosen Option : **1**

Q.35 Which of following pile types is typically used in water front structures?

Ans
1. Anchor pile ✗
2. Tension pile ✗
3. Compaction pile ✗
4. Fender pile ✓

Question ID : **402817268**
Status : **Answered**
Chosen Option : **1**

Q.36 As per the 'bandhara irrigation scheme', the discharge formula used for a bandhara weir is:

Ans
1. $1.7\ L\ H^{2.5}$ Cumec ✗
2. $1.7\ L\ H^{1.5}$ Cumec ✓
3. $1.7\ H\ l^{1.5}$ Cumec ✗
4. $2.7\ L\ H^{1.5}$ Cumec ✗

Question ID : **402817281**
Status : **Answered**
Chosen Option : **1**

Q.37 For a furrow slope of 0.3%, the net depth of water application for clay soil should not be less than:

Ans
1. 500 mm ✗
2. 390 mm ✓
3. 300 mm ✗
4. 200 mm ✗

Question ID : **402817277**
Status : **Answered**
Chosen Option : **2**

Q.38 The rainfall figures for successive 30-minute intervals are 35, 40, 120, 85, 45, 45 and 30 mm/hr. If the Ø index is 35mm/hour, determine W-index.

Ans
1. 54.3 mm/hour ✗
2. 34.3 mm/hour ✓
3. 24.3 mm/hour ✗
4. 44.3 mm/hour ✗

Question ID : **402817293**
Status : **Answered**
Chosen Option : **2**

Q.39 The reading on the pressure gauge fitted on a vessel is 34 bar. The atmospheric pressure is 1.03 bar and the value of g is 9.81 m/s^2. The absolute pressure in the vessel is:

Ans
1. 23.89 bar ✗
2. 35.03 bar ✓
3. 44.03 bar ✗
4. 32.97 bar ✗

Question ID : **402817273**
Status : **Answered**
Chosen Option : **4**

Q.40 The rate at which a soil is capable of absorbing water is called:

Ans
1. Infiltration ✗
2. Filtration capacity ✗
3. Filtration ✗
4. Infiltration capacity ✓

Question ID : **402817294**
Status : **Answered**
Chosen Option : **4**