

हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड

रजिस्टर्ड ऑफिस : 17, जमशेदजी टाटा रोड, मुंबई - 400 020.

HINDUSTAN PETROLEUM CORPORATION LIMITED

REGISTERED OFFICE : 17, JAMSHEDJI TATA ROAD, MUMBAI - 400 020.

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ne	
	11/08/2021
	9:00 AM - 11:30 AM
	CIVIL ENGINEER

Language

Which word can be used for this sentence?

While raining in Delhi, Gurugram has clear skies.

Choose

1

2

Question ID : 50389011127

Status : Answered

Chosen Option : 2

Choose appropriate words to complete the phrase.

He made _____ the lost time by using a cab instead of bus to reach the office.

1

2

3

Question ID : 50389011137

Status : Answered

Chosen Option : 4

Ask using the most appropriate phrase.
He was used to let him __without confirming his alibi.

Question ID : 50389011138
Status : Answered
Chosen Option : 2

Choose the most appropriate option to complete the sentence.

He decided to spend your income _____.

- only
- usually
- in
- in

Question ID : 50389011130
Status : Answered
Chosen Option : 2

Choose the most appropriate synonym of-

- hard
- infer
- re
- direct

Question ID : 50389011131
Status : Answered
Chosen Option : 2

Choose the most appropriate option to complete the sentence.
A piece of land covered _____ lots of forests, bushes and plants is called a forest.

grass

Question ID : 50389011126
Status : Answered
Chosen Option : 1

the sentence contains an error?

ried with a lady from Australia.

ied with

y

Australia

ncle

Question ID : 50389011140
Status : Answered
Chosen Option : 1

the sentence contains an error?

the exam as I was unwell.

unwell.

not

the exam

Question ID : 50389011139
Status : Answered
Chosen Option : 1

sspelt word.

le

xable

le

ible

Question ID : 50389011136
Status : Answered
Chosen Option : 3

st appropriate option to complete the sentence.

ife, I _____ anyone ever running away from money.

: not see

not seen

: not seen

: seen

entence which is grammatically correct.

bits of scrap material is Rock Garden made of

o material of bits is the Rock Garden made of

its of scrap material Rock of Garden is made

ock Garden is made of bits of scrap material

Question ID : 50389011141
Status : Answered
Chosen Option : 4

: appropriate synonym of-

hy

athy

osity

ity

Question ID : 50389011132
Status : Answered
Chosen Option : 1

ord which can be used in place of the words underlined.

ughter cannot read or write, so I am trying to encourage her to take some
me.

ate

iate

ate

ite

Question ID : 50389011134
Status : Answered
Chosen Option : 1

ist appropriate option to complete the sentence.

s argued with _____ over a piece of land.

selves

iselves

iself

other

Question ID : 50389011129
Status : Answered
Chosen Option : 4

misspelt word.

real

normal

ideal

actual

Question ID : 50389011135
Status : Answered
Chosen Option : 1

Choose the most appropriate antonym of-

assure

enlarge

validate

Question ID : 50389011133
Status : Answered
Chosen Option : 2

Choose the correct preposition.

His landing ___ the moon was absurd 100 years ago.

Question ID : 50389011125
Status : Answered
Chosen Option : 3

Word Aptitude

एक व्यक्ति अपनी मासिक आय का 80% है। उसकी मासिक आय में 25% की वृद्धि हुई और उसके 10% की वृद्धि हुई। उसकी मासिक बचत में होने वाली प्रतिशत वृद्धि ज्ञात कीजिए।

$+ \left(2x - \frac{2}{3}\right)^3 + \left(x - \frac{1}{4}\right)^3 = \frac{1}{8}(2x-3)(6x+2)(4x-1)$ है, तो x का मान ज्ञात करें।

$\frac{3}{8}$

Question ID : 50389011174
Status : Answered
Chosen Option : 3

ग्रीना शंकु के ऊपर अर्धगोले के आकार का है। यदि खिलौने की ऊंचाई 14 cm है और शंकवाकार भाग के आधार की तो खिलौने में प्रयुक्त लकड़ी का आयतन (cm^3 में, दशमलव के दो स्थानों तक सही) ज्ञात कीजिए।

5
65
58
58

Question ID : 50389011170
Status : Answered
Chosen Option : 3

$= b^{\frac{1}{4}}, b^y = \sqrt{c}, c^z = \sqrt[3]{a}$ है, तो xyz का मान ज्ञात करें।

Question ID : 50389011144
Status : Answered
Chosen Option : 1

य की उन सभी संख्याओं का योग ज्ञात कीजिए जिनकी इकाई का अंक 3 से विभाज्य है।

Question ID : 50389011142
Status : Answered
Chosen Option : 2

5 काम को 54 दिनों में पूरा कर सकते हैं। यदि एक आदमी 2 लड़कों के बराबर काम करता है, तो 2 लड़के उसी काम को कितने दिनों में पूरा करेंगे?

Question ID : 50389011159
Status : Answered
Chosen Option : 3

कलमों का मूल्य रुपये 3600 है, तो कितने कलमों की कीमत रुपये 450 होगी?

Question ID : 50389011152
Status : Answered
Chosen Option : 4

Temperature from 16th Feb to 23rd Feb was x and from 17th Feb to 24th Feb it was y . If the average temperature on 16th Feb was x , then what was the temperature (in $^{\circ}\text{C}$) on 24th Feb?

Question ID : 50389011164
Status : Answered
Chosen Option : 1

क वस्तु को 12% की छूट पर बेचकर 12% का लाभ कमाता है। यदि वह केवल 10% की छूट
1 लाभ प्रतिशत क्या होगा?

- $\frac{2}{3}$
 $\frac{44}{63}$
 $\frac{6}{11}$
 $\frac{9}{11}$

Question ID : 50389011162
Status : Answered
Chosen Option : 3

एक 280 रुपये प्रति शर्ट की दर से खरीदता है और 20% लाभ पर बेचता है। Rs 672 का लाभ
से कितनी कमीजें बेचनी चाहिए?

Question ID : 50389011161
Status : Answered
Chosen Option : 4

एक काम को 16 दिनों में कर सकता है और एक महिला उसी काम को 24 दिनों में कर सकती है। एक
महिलाओं ने काम शुरू किया। 4 दिनों के बाद आदमी ने काम छोड़ दिया और तीनों महिलाओं ने
काम पूरा किया। महिलाओं ने शेष कार्य को कितने दिनों में पूरा किया?

Question ID : 50389011160
Status : Answered
Chosen Option : 1

एक छात्रों का औसत अंक 52 है। यदि उत्तीर्ण छात्रों का औसत अंक 68 है और अनुत्तीर्ण छात्रों का
औसत अंक 40 है, तो कितने छात्रों ने परीक्षा उत्तीर्ण की?

5 km/h और 85 km/h की चाल से चलती हैं। जब वे विपरीत दिशाओं में चलती हैं, तो एक दूसरे पार करती हैं। जब वे एक ही दिशा में चलती हैं, तो तेज ट्रेन में एक व्यक्ति देखता है कि वह 36 न को पार करता है। तेज चाल वाली रेलगाड़ी की लंबाई (m में) ज्ञात कीजिए।

Question ID : 50389011157

Status : Answered

Chosen Option : 1

% लड़के हैं। लड़कों का औसत वजन 55 kg और लड़कियों का औसत वजन 50 kg है। पूरी वजन (kg में) कितना है?

Question ID : 50389011165

Status : Answered

Chosen Option : 4

1टे और बेटी के बीच 88400 रुपये इस तरह से विभाजित किया कि 7 साल के अंत में उसके बेटे ली राशि, 9 साल के अंत में उसकी बेटी को प्राप्त होने वाली राशि के बराबर है, चक्रवृद्धि ब्याज र्षक है। उसने अपनी बेटी के नाम पर बैंक में कितनी धनराशि (रुपये में) जमा किया है?

10

10

10

10

Question ID : 50389011166

Status : Answered

Chosen Option : 1

1पनी वस्तुओं पर उनके क्रय मूल्य से 30% अधिक मूल्य अंकित करता है और ग्राहकों को 20% उसका लाभ प्रतिशत क्या है?

Question ID : 50389011153

Status : Answered

Polynomials $(3x + 2)(4x^2 - ax + 3)$ and $(x - 3)(3x^2 - 4x + b)$ is $(3x - 2)(x - 3)$, then find the

3

Question ID : 50389011173
Status : Answered
Chosen Option : 2

1 पर, 2 वर्षों के लिए साधारण ब्याज 9900 रुपये है, जबकि उसी ब्याज दर पर चक्रवृद्धि ब्याज 10000 रुपये है। वार्षिक ब्याज दर क्या है?

%

Question ID : 50389011167
Status : Answered
Chosen Option : 4

खेत व्यंजक का मान ज्ञात कीजिए।

$$\frac{-22 \times 2 - [-2 - 6\{5 - (7 - 8)\} - 4(-5)]}{(-12) \times (-2) - 19}$$

A $\frac{4}{5}$

B $\frac{1}{5}$

C 0

Question ID : 50389011146
Status : Answered
Chosen Option : 4

क ऐसी संख्या है जो 88 से विभाज्य है, तो p के सबसे बड़े मान के लिए $(2k + 7p)$ का मान क्या

Question ID : 50389011143
Status : Answered
Chosen Option : 4

खेत व्यंजक का मान ज्ञात कीजिए।

$$\frac{\sqrt[3]{432} \times \sqrt[3]{648}}{\sqrt[3]{729}}$$

Question ID : 50389011145
Status : Answered
Chosen Option : 2

(in sq. cm) of a rhombus whose each side is 45 cm long and one of the diagonals is 48 cm.

Adda247

Question ID : 50389011168
Status : Answered
Chosen Option : 4

Two consecutive positive multiples of 7 is 588. What is the sum of the two

एक ट्रेन एक सिग्नल पोल को 21 सेकंड में पार करती है। ट्रेन की चाल (km/h में) क्या है?

Question ID : 50389011155

Status : Answered

Chosen Option : 2

$b = \frac{a}{a-b} - \frac{b}{a+b}$ है, तो $\frac{2}{3} * \frac{3}{4}$ का मान ज्ञात करें।

$\frac{1}{6}$

$\frac{8}{7}$

$\frac{9}{7}$

Question ID : 50389011149

Status : Answered

Chosen Option : 4

$\frac{172}{\times 2.5} + \frac{2.8}{.07}$ का मान क्या होगा?

6

Question ID : 50389011148

Status : Answered

Chosen Option : 1

3, 0.031 में सबसे बड़ी संख्या और सबसे छोटी संख्याओं के योग तथा 0.183, 0.092, 0.64, से बड़ी संख्या के बीच का अंतर क्या है?

7

1

Question ID : 50389011147
Status : Answered
Chosen Option : 3

परिवार के 3 सदस्यों की औसत आयु 25 वर्ष थी। तब से, दो बच्चे पैदा हुए हैं और परिवार की 1 वर्ष की कमी आई है। यदि दोनों बच्चों की आयु में 3 वर्ष का अंतर है, तो बड़े बच्चे की वर्तमान आयु क्या है?

Question ID : 50389011172
Status : Answered
Chosen Option : 2

क शंकु, जिसके आधार की त्रिज्या और ऊँचाई दोनों 7 cm हैं, को पिघलाया जाता है और 0.7 क निश्चित संख्या में गोलाकार कंचों में ढाला जाता है। ढाले गए कंचों की संख्या ज्ञात कीजिए।

Question ID : 50389011169
Status : Answered
Chosen Option : 2

काम का आधा भाग 5 दिन में कर सकता है और एक महिला उस कार्य को 15 दिन में पूरा कर। एक साथ मिलकर कार्य करते हैं, तो कार्य का आधा भाग कितने दिनों में पूरा हो जाएगा?

Question ID : 50389011158

5 व्यक्तियों A, B, C, D और E की उल्लेखित महीनों के दौरान कमाई (1000 रुपये में) दिखाती है। इन महीनों में नियमित रूप से बढ़ती रही?

	अप्रैल	मई	जून	जुलाई
!	25.5	25.8	26	26.5
;	24.2	25.5	27	26.8
;	24.8	26.5	24	28.2
;	24.7	25.2	27	28.8
	26.9	27.6	27.5	26.2

D, E

D

E

Question ID : 50389011175

Status : Answered

Chosen Option : 1

100 रुपये के कुल निवेश के साथ एक व्यवसाय शुरू किया। यदि 12000 रुपये के कुल लाभ को अनुपात में विभाजित करने के बजाय बराबर-बराबर विभाजित किया जाता है, तो A को अपने जना में 200 रुपये की हानि होती है, जब कुल लाभ को किए गए निवेश के अनुपात में बाँटा गया। श के बीच क्या अंतर (रुपये में) है?

Question ID : 50389011151

Status : Answered

Chosen Option : 1

A, B और C में इस प्रकार बाँटा जाना है कि A को B के तीन गुने सिक्के मिलें और B को C के मेलें। A को प्राप्त होने वाले सिक्कों की संख्या ज्ञात कीजिए।

Question ID : 50389011150

Status : Answered

Chosen Option : 3

गास से चलना शुरू करता है और यदि वह 30 km/h की चाल से अपनी बाइक चलाता है तो 10
र्यालय पहुंचता है, और यदि वह 40 km/h की चाल से बाइक चलाता है, तो अपने कार्यालय को
पहले पहुंच जाता है। तो उसके आवास से उसके कार्यालय की दूरी (km में) क्या है?

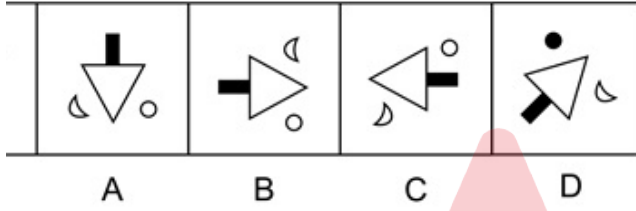
Question ID : 50389011156

Status : Answered

Chosen Option : 1

I Potential Test

तियों A,B,C और D में से केवल एक प्रश्न-आकृति 'Q' के समान है। उस आकृति का चयन करें।



Question ID : 50389011200

Status : Answered

Chosen Option : 4

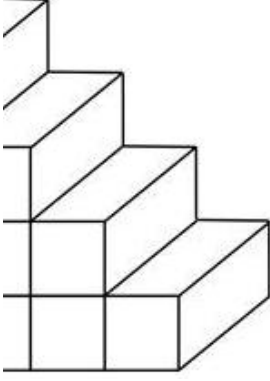
भाषा में, यदि CAT को BBS के रूप में; DOG को CPF के रूप में कूटबद्ध किया गया था, तो
ग कूट होगा?

Question ID : 50389011188

Status : Answered

Chosen Option : 2

शकृतल ढें कलतने घनलडलकर खंड हैं?



Question ID : 50389011205

Status : Answered

Chosen Option : 4

खललओं कल डुग 108 है। डधु ढें आने वलली संखुडल कुन सी हुगी (उनढें से न तु सडसे डडी और 1)?

Question ID : 50389011194

Status : Answered

Chosen Option : 1

डलषल ढें, डदल डेंटर कु डरुुी कहुल डलतल थल; डरुुी कु डुलंडर (Plumber) कहुल डलतल थल; डुलंडर कसलई कहुल डलतल थल; कसलई कु नलई कहुल डलतल थल; और नलई कु रसुडुडल कहुल डलतल थल, तु से कुन कडडुुी की सलललई करेगल?

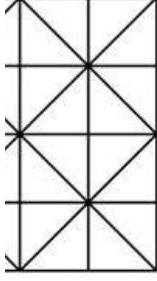
ड
:

Question ID : 50389011190

Status : Answered

Chosen Option : 4

total (maximum) number of squares formed in the image below?



Question ID : 50389011181
Status : Answered
Chosen Option : 3

द-युग्म) का चयन करें जो दिए गए शब्द-युग्म के समान है।

: किनारा

अभाव

: सक्रिय

र्ण : शत्रुतापूर्ण

Question ID : 50389011199
Status : Answered
Chosen Option : 4

चयन करें जो तीसरे पद से उसी प्रकार संबंधित है जिस प्रकार दूसरा पद पहले पद से संबंधित है।

: ?

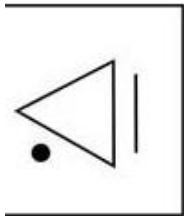
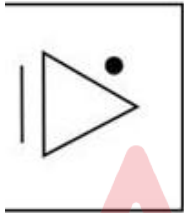
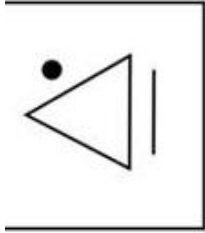
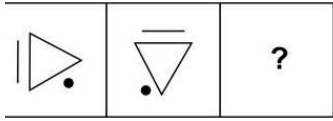
Question ID : 50389011179
Status : Answered
Chosen Option : 1

चयन करें जो तीसरे पद से उसी प्रकार संबंधित है जिस प्रकार दूसरा पद पहले पद से संबंधित है।

: ?

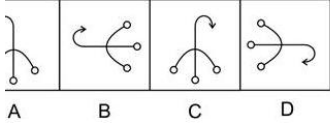
Question ID : 50389011178
Status : Answered
Chosen Option : 1

चयन करें जो प्रश्नवाचक चिह्न को प्रतिस्थापित करेगा और श्रृंखला को सही ढंग से पूर्ण करेगा।



adda247

प्रश्न-आकृति 'Q' के समान है। उस आकृति का चयन करें।



Question ID : 50389011201

Status : Answered

Chosen Option : 2

एक निश्चित संख्या में मुर्गियाँ और भैंसें हैं। यदि सभी भैंसों और मुर्गियों के सिरों की संख्या 80 होती है, तो उनका योग 80 होता है। जब उनके पैरों की गणना की जाती है, तो उनका योग 200 के पास मौजूद भैंसों की संख्या क्या है?

Question ID : 50389011195

Status : Answered

Chosen Option : 2

राहुल भाई-भाई हैं। गीता, अनिल की बेटी है। राहुल, गीता का इकलौता बेटा है। राहुल का अनिल से

Question ID : 50389011202

Status : Answered

Chosen Option : 1

कों से बनने वाली सबसे बड़ी संख्या और सबसे छोटी संख्या का योग क्या होगा?

ए सभी अंक पाँच अंकों की सबसे बड़ी और सबसे छोटी संख्या में मौजूद अवश्य होने चाहिए।)

।8

।9

।9

।9

Question ID : 50389011207

Status : Answered

Chosen Option : 4

र विकल्पों में से तीन में कोई न कोई समानता है। उस विकल्प का चयन करें जो अन्य सभी से

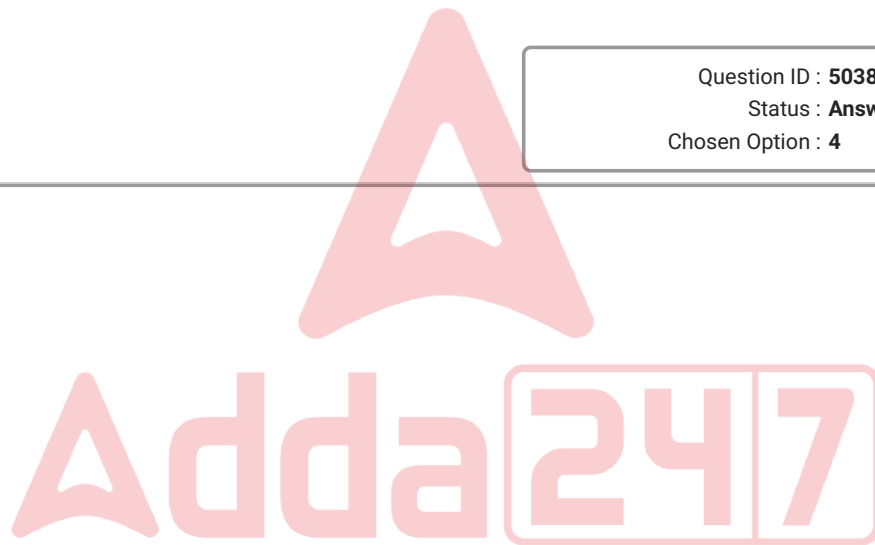
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र

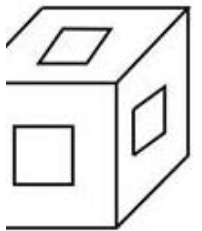
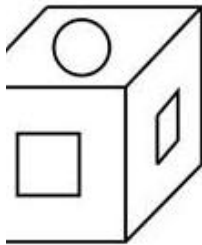
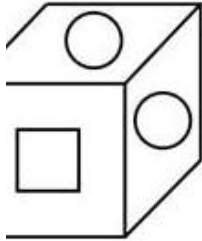
Question ID : 50389011186

Status : Answered

Chosen Option : 4



गर खुले घन के जाल को मोड़कर एक घन बनाया जाता है, तो कौन-सा घन (विकल्पों में से) बनाया



adda247

Question ID : 50389011176

Status : Answered

Chosen Option : 2

चयन करें जो तीसरे पद से उसी प्रकार संबंधित है जिस प्रकार दूसरा पद पहले पद से संबंधित है।

HL : ?

Question ID : 50389011177
Status : Answered
Chosen Option : 1

में से तीन के बीच एक निश्चित समानता है। उस विकल्प (शब्द-युग्म) का चयन करें जो अन्य गत है।

सक - चिकित्सालय

क्ता - न्यायालय

ता - मंच

5 - स्टीयरिंग

Question ID : 50389011197
Status : Answered
Chosen Option : 4

र विकल्पों में से तीन में कोई न कोई समानता है। उस विकल्प का चयन करें जो अन्य सभी से

श, खरहा (जंगली खरगोश), हिरण

भेड़िया, रीछ

सर्प, गरुड़

करी, गाय

Question ID : 50389011187
Status : Answered
Chosen Option : 3

चयन करें जो तीसरे शब्द से उसी प्रकार संबंधित है जिस प्रकार दूसरा शब्द पहले शब्द से

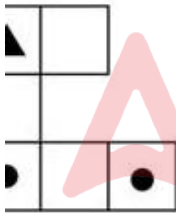
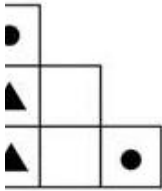
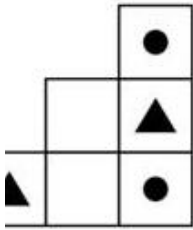
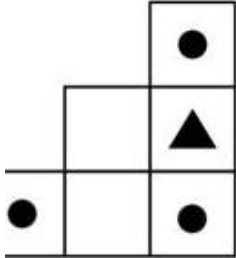
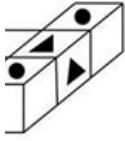
ड्रेड्स :: वृद्धि : ?

Fats)

खाद्य (Roughage)

(Starch)

यों में से कौन सा विकल्प नीचे दर्शाए गए चित्र के शीर्ष दृश्य को सही ढंग से दर्शाता है?



Adda247

Question ID : 50389011206

Status : Answered

Chosen Option : 1

चयन करें जो तीसरे शब्द से उसी प्रकार संबंधित है जिस प्रकार दूसरा शब्द पहले शब्द से

करी : ?

ाना

ाना

Question ID : 50389011183
Status : Answered
Chosen Option : 1

ाई की पत्नी है। लीला के पति मनोहर का एक भाई केदार और एक बहन है। हेमा की बेटी मनीषा
संबंध है?

/ममेरी/मौसेरी/फुफेरी बहन

ामी/मौसी/बुआ

/भतीजी

Question ID : 50389011203
Status : Answered
Chosen Option : 3

में से तीन के बीच एक निश्चित समानता है। उस विकल्प (शब्द-युग्म) का चयन करें जो अन्य
गत है।

वृंद (Lead)

यों - दल (Swarm)

- समूह (Herd)

झुंड (Flock)

Question ID : 50389011198
Status : Answered
Chosen Option : 1

n कितने विशिष्ट अभाज्य गुणनखंड (distinct prime factors) हैं?

Question ID : 50389011209
Status : Answered

योगिता में छह खिलाड़ियों ने भाग लिया है। पहले चक्र में कितने मैच खेले जाएंगे जिसमें प्रत्येक प्रतिभागी के साथ वास्तव में एक ही बार खेलता है?

Question ID : 50389011196
Status : Answered
Chosen Option : 1

सबसे बड़ी संख्या कौन सी है जो 14 और 15 दोनों से पूर्णतः विभाज्य है?

)
)
)
)

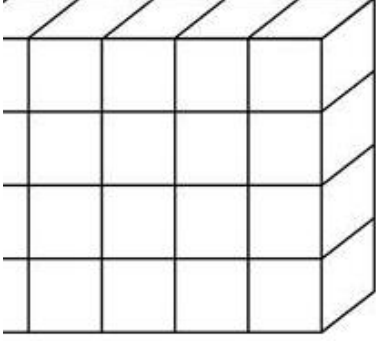
Question ID : 50389011208
Status : Answered
Chosen Option : 1

भाषा में, यदि आम को केले के रूप में कूटबद्ध किया गया था; केले को संतरे के रूप में कूटबद्ध संतरे को चेरी के रूप में कूटबद्ध किया गया था; और चेरी को सेब के रूप में कूटबद्ध किया गया भाषा में निम्नलिखित में से कौन सा फल नींबू-वंश के फल (citrus fruit) का उदाहरण होगा?

Adda247

Question ID : 50389011189
Status : Answered
Chosen Option : 3

शकृतल ढें कलतने घनीड खंड हैं?



Question ID : 50389011204

Status : Answered

Chosen Option : 1

वडन करें जो तीसरे शडड से उसी डरकड संबंडलत है कलस डरकड दूसरल शडड डहले शडड से

डन :: रलडुरलंग : ?

क डैडलन

लन

Question ID : 50389011184

Status : Answered

Chosen Option : 1

डडन करें जो डी गई संखडल शुरुखलल ढें डुरशनवलकक कललुड (?) के स्थलन डर आएगी।

256, ?

)

)

:

चयन करें जो दी गई संख्या श्रृंखला में प्रश्नवाचक चिह्न (?) के स्थान पर आएगी।

, 30, ?

Question ID : 50389011192
Status : Answered
Chosen Option : 4

'tea is hot' को 'chi mus tus' के रूप में कूटबद्ध किया जाता है; 'coffee is sweet' को 'bin' में कूटबद्ध किया जाता है; और 'tea and coffee' को 'chi hut bin' के रूप में कूटबद्ध किया गया है। कूट भाषा में 'hot' शब्द के लिए निम्नलिखित में से कौन सा शब्द कूट होगा?

Question ID : 50389011191
Status : Answered
Chosen Option : 3

चयन करें जो तीसरे पद से उसी प्रकार संबंधित है जिस प्रकार दूसरा पद पहले पद से संबंधित है।

?

Adda247

Question ID : 50389011180
Status : Answered
Chosen Option : 1

Knowledge

Following is NOT correctly paired, about air pollutant and its effect?

Sulfur Dioxide – Bronchial-spasms.

Carbon Dioxide – Acid Rains.

Carbon Monoxide – Acute toxicity.

Lead – Retarded mental growth in children.

Choose the statement regarding the advantages of traffic signals.

Quality of traffic is improved.

Right-angled collision accidents may be reduced.

Rear-end collisions may be decreased.

It increases the traffic handling capacity of most of the intersections at grade.

Question ID : 50389011289
Status : Answered
Chosen Option : 3

What is the maximum spacing between the expansion joints with rough interface in concrete pavements as per IRC?

10 m.

12 m.

15 m.

18 m.

Question ID : 50389011224
Status : Answered
Chosen Option : 3

Which of the following pairs is not correctly matched regarding types of road surface and IRC value of camber in very heavy rainfall range place?

Sand macadam, and gravel pavement → 1 in 33.

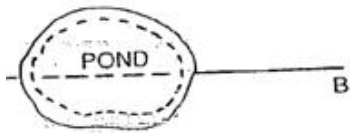
Thin bituminous surface → 1 in 65.

Concrete and high type bituminous surface → 1 in 50.

Worth surface → 1 in 25.

Question ID : 50389011290
Status : Answered
Chosen Option : 2

type of obstruction is offered by the following condition?



There is no type of obstacle.

It is suitable for ranging only.

It is suitable for chaining only.

It is suitable for both chaining and ranging.

Question ID : 50389011261
Status : Answered
Chosen Option : 3

A pipe section of diameter 25 cm, velocity of flow is 2m/s. Calculate the velocity of a smaller section with 20 cm diameter, in the pipe.

5 m/s.

n/s.

n/s.

s.

Question ID : 50389011231
Status : Answered
Chosen Option : 3

Which of the following is NOT a desirable factor for selection of a dam/reservoir site?

A suitable site for the spillway should be available in the near vicinity.

A suitable foundation must be available.

The length of dam should be as large as possible.

The reservoir basin should be reasonably water-tight.

Question ID : 50389011236
Status : Answered
Chosen Option : 3

The crop is 0.864 m and the base period is 130 days. What is the duty of the crop (in cumec)?

1

10

Which of the following is a FALSE statement regarding the factors that influence the thickness of the boundary layer formation along a flat smooth plate.

Boundary layer thickness is considerably affected by the pressure gradient in the direction of flow.

Boundary layer thickness is directly proportional to the kinematic viscosity of the fluid greater is the boundary layer thickness.

Boundary layer thickness decreases with the increase in the velocity of flow of the incoming stream of fluid.

Boundary layer thickness decreases as the distance from the leading-edge increases.

Question ID : 50389011233
Status : Answered
Chosen Option : 1

Read the following statements carefully and select the correct option.

Either a circular or a parabola may be used for vertical curve.

The rate of change in grade is variable throughout in a parabolic vertical curve, along the horizontal axis.

Both statements are True.

Statement 1 is True and statement 2 is False.

Statement 1 is False and statement 2 is True.

Both statements are false.

Question ID : 50389011270
Status : Answered
Chosen Option : 1

What is the value of limiting (balanced) moment of resistance of R. C. C. beam of width 250 mm and effective depth 400 mm, reinforced with three bars of 16 mm diameter of grade M30 concrete.

100 kN-m.

120 kN-m.

150 kN-m.

180 kN-m.

Question ID : 50389011228
Status : Answered
Chosen Option : 1

Which of the following is NOT a method of error calculation in the theory of errors?

Method of true and most probable values.

Method of difference of true and observed value.

Method of difference of most probable and observed values.

QUEFACTION phenomenon about soil failure?

ing failure of sand under heavy loads.

re of soil slopes.

re of soil under Liquid retaining hydraulic structures.

l loses its shear strength due to oscillatory motion.

Question ID : 50389011285
Status : Answered
Chosen Option : 4

owing expression was given by Von Karman for estimation of hydrodynamic pressure (P_e) in Gravity

r above the base, α_h = horizontal acceleration coefficient, w = unit weight of water & c = dimensionless
ding upon slope of the upstream face and depth of reservoir:

$55 \alpha_h w H^2$

$\alpha_h w H$

$\alpha_h w H^3$

$55 \alpha_h w H^2$

Question ID : 50389011242
Status : Answered
Chosen Option : 3

se the latitudes and departures of sides were calculated as under-

= 1.5 m & \sum departure = -0.5 m;

be the length of closing error?

1.5) m

2.5) m

2.0) m

4.0) m

Question ID : 50389011263
Status : Answered
Chosen Option : 2

the following statements as True/False.

Measurement of flow in open channels is generally made by means of venturimeter, and orificemeter.

In open channels and rivers the flow is estimated by dividing the flow section into smaller sections and determining the average velocity for each by means of

Statement 1 is False.

Statement 2 is True.

Statement S1 is False and statement S2 is True.

Statement S1 is True and statement S2 is False.

Question ID : 50389011234
Status : Answered
Chosen Option : 3

FALSE statement regarding the 'STANDARD PENETRATION TEST'.

Standard Penetration Test is extremely useful for determining the angle of shearing resistance of soils.

Standard Penetration Test cannot be used to determine the unconfined compressive strength of soils.

Standard Penetration Test is the most commonly used in-situ test, especially for cohesionless soils.

Standard Penetration Test is extremely useful for determining the relative density of cohesionless soils.

Question ID : 50389011282
Status : Answered
Chosen Option : 2

As per 'Standard General Construction in Steel- Code of practice'; for deep welds, where the depth of penetration beyond the root run is a minimum of 2.4 mm, the size of fillet should be as:

1.5 times leg size - 2.4 mm.

1.5 times leg size + 2.4 mm.

2 times leg size + (2*2.4) mm.

2 times leg size + 2.4 mm.

Question ID : 50389011221
Status : Answered
Chosen Option : 1

Flow in an irrigation channel is 2.5 m and the value of critical velocity ratio is 0.47. The critical velocity (m/sec) of the channel according to Kennedy's theory?

1.6*(2)^{0.16}.

1.6*(2.5)^{0.64}.

1.0*(1.55)^{0.64}.

1.5*(0.55)^{0.64}.

Question ID : 50389011241
Status : Answered
Chosen Option : 2

Between two horizontal plates is filled with a fluid of viscosity of 1.2 N-s/m² and upper plate is moving with a velocity of 2m/s. What is the value of shear stress in the fluid?

0 N/m²

1.2 N/m²

2.4 N/m²

2.4 N/m²

Question ID : 50389011230
Status : Answered
Chosen Option : 4

A curve whose radius is variable, is known as:

1. A straight line curve.

2. A circular curve.

3. A parabolic curve.

4. A hyperbolic curve.

Question ID : 50389011264
Status : Answered
Chosen Option : 1

Following expression represents the angularity number for the aggregate, used in the following instruction?

W = weight of aggregate in the cylinder, G = specific gravity of aggregate

- $\frac{100C}{WG}$
- $\frac{67W}{CG}$
- $\frac{100G}{CW}$
- $\frac{100W}{CG}$

Question ID : 50389011226
Status : Answered
Chosen Option : 4

Which of the following is a CORRECT statement regarding the stiffeners in a steel plate girder.

1. Stiffeners of any type may perform more than one function but their design should also satisfy the other requirements also.

2. Transverse stiffeners are provided at the supports of plate girder.

3. Compression stiffeners are provided to transmit tensile forces applied to a web through a flange.

4. Longitudinal stiffeners are attached to the bottom flange plate of the plate girder.

Question ID : 50389011219
Status : Answered
Chosen Option : 4

Which of the following is a CORRECT statement regarding the optical communication system which allows speech to be transmitted from the transmitter to the receiver.

1. It is a communication system which allows speech to be transmitted from the transmitter to the receiver.

2. It is a communication system which allows speech to be transmitted from the transmitter to the receiver.

3. It is a communication system which allows speech to be transmitted from the transmitter to the receiver.

4. It is a communication system which allows speech to be transmitted from the transmitter to the receiver.

Question ID : 50389011268
Status : Answered
Chosen Option : 4

Correct population forecasting method, which can be represented mathematically by the formula:

$$Q \left(\frac{r+100}{100} \right)^n$$

where Q = initial population, r = annual growth rate, n = number of decades.

Correct answer: **Arithmetic increment method.**

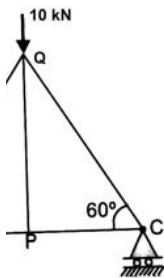
Incorrect options: **Geometric increase method.**

Arithmetic increase method.

Exponential rate method.

Question ID : 50389011257
Status : Answered
Chosen Option : 2

Correct value of axial load in the member 'PQ' of the given pin jointed plane frame.



Correct answer: **10 sin 60 kN.**

Incorrect options: **10 sin 30 kN.**

Question ID : 50389011217
Status : Answered
Chosen Option : 3

Correct answer: **100 cm.**

Incorrect options: **50 cm.**

100 cm.

50 cm.

100 cm.

Question ID : 50389011239
Status : Answered
Chosen Option : 3

as drawn with R. F. = (1/2000). The sheet of map shrinks with shrinkage ratio 1 calculate the corrected scale (R. F.) for the map?

300)

200)

4000)

300)

Question ID : 50389011259

Status : Answered

Chosen Option : 2

n test, when the load is changed from 150 kN/m^2 to 200 kN/m^2 , the void ratio changes from 0.60 to the coefficient of volume change.

1600) m^2/kN .

1600) kN/m^2 .

05/ $\log 1.33$).

1000) m^2/kN .

Question ID : 50389011280

Status : Answered

Chosen Option : 4

ample of Active sensor in Remote sensing, from the following sensors.

r scanner.

ision camera.

rn Beam Vidicon.

ro-optical scanner.

Question ID : 50389011272

Status : Answered

Chosen Option : 4

following is an example of time dependent non-Newtonian fluid?

otropic.

ham.

idoplastic.

ant.

Question ID : 50389011229

Status : Answered

Chosen Option : 4

___ is generally placed inside the tail exhaust pipe of the automobile to control pollution due to partially oxidized emissions.

one collector.

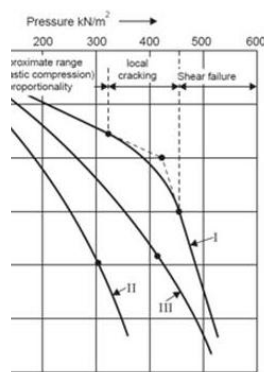
ic filter.

rostatic precipitator.

lytic convertor.

Question ID : 50389011248
 Status : Answered
 Chosen Option : 2

depicts typical load-settlement curves from plate load tests for different type of soils. Select the correct pair.



Option I ---- Typical of loose sand or soft clay, wherein local shear failure occurs.

Option II ---- Typical of dense sand or gravel or stiff clay, wherein general shear failure occurs.

Option I ---- Typical of dense sand or gravel or stiff clay, wherein general shear failure occurs.

Option II ---- Typical of many c - φ soils which exhibit characteristics intermediate between general shear failure and local shear failure.

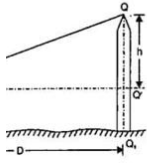


Question ID : 50389011279
 Status : Answered
 Chosen Option : 1

As per 'Standard General Construction in Steel- Code of practice'; Shear resistance at contact surface between steel base and concrete/grout may be calculated using coefficient of:

Question ID : 50389011222
 Status : Answered

reduced level of top of tower (point Q) given in figure with accessible base and neglecting the effect of refraction. Reduced level of point 'P' = X, D= horizontal distance. α = angle, h'= height of instrument.



- $h' + D \cdot \tan \alpha + 0.06735 \cdot D^2$]
- + $h' + D \cdot \tan \alpha - 0.06735 \cdot D^2$]
- + $h' + D \cdot \tan \alpha$]
- + $h' - D \cdot \tan \alpha$]

Question ID : 50389011265
 Status : Answered
 Chosen Option : 3

Following group is an example of ground-based platform regarding Remote

- stationary satellite and sun-synchronous satellite.
- ions, Aircraft, Helicopter, and Drones.
- ler, Tower, Crane, and Truck.
- altitude aircraft and high-altitude aircraft.

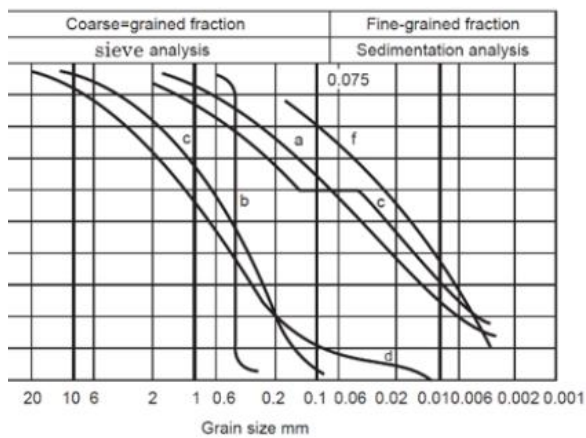
Question ID : 50389011271
 Status : Answered
 Chosen Option : 3

In dispersion studies, ELR, stands for:

- ogical light ratio.
- onmental light ratio.
- onmental lapse rate.
- ogical lapse rate.

Question ID : 50389011246
 Status : Answered
 Chosen Option : 3

The following curve represents a 'poorly graded soil', given in figure below?



e 'd'.

e 'b'.

e 'a'.

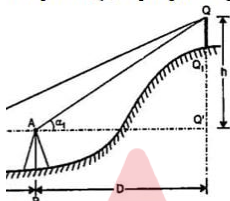
e 'f'.

Question ID : 50389011276

Status : Answered

Chosen Option : 2

Instrument stations are in same vertical plane as the elevated object and the instrument axes are at same level, L. of point 'Q', as per given figure.,



α_1 = angle at instrument at 'P', α_2 = angle at instrument at 'R', b = distance between two instruments, D = distance between first instrument and foot of elevated object; R. L. of B. M. = Reduced level of bench mark.

$$\text{L. of B. M.} + S - \frac{(b * \cos \alpha_1 * \cos \alpha_2)}{\cos (\alpha_1 - \alpha_2)}$$

$$\text{L. of B. M.} + S + \frac{(b * \cos \alpha_1 * \cos \alpha_2)}{\cos (\alpha_1 - \alpha_2)}$$

$$\text{L. of B. M.} + S + \frac{(b * \sin \alpha_1 * \sin \alpha_2)}{\sin (\alpha_1 - \alpha_2)}$$

$$\text{L. of B. M.} - S + \frac{(b * \sin \alpha_1 * \sin \alpha_2)}{\sin (\alpha_1 - \alpha_2)}$$

INCORRECT statement from the following, regarding GPS.

ANSIT user at the equator can obtain a position fix at the average of about 10

GPS satellites are placed in orbits with orbital radius approximately of 1500Km.

satellite constellation of GPS consists of 24 satellites.

can provide three-dimensional positioning system.

Question ID : 50389011274
Status : Answered
Chosen Option : 4

Which of the following represent the lines joining points of equal dip?

Isobars lines.

Isoline lines.

Isoclines lines.

Isoneic lines.

Question ID : 50389011262
Status : Answered
Chosen Option : 2

Which of the following is not classified as a part of Refuse?

Plastics.

Waste paper.

Animal excreta.

Household waste.

Question ID : 50389011249
Status : Answered
Chosen Option : 1

Which of the following statements are True/False.

1. Betti's reciprocal principle is based on the concept of the influence line as a deflection.

2. Betti's reciprocal principle is the straight application of Maxwell's reciprocal theorem.

3. Both statements S1 and S2 are False.

4. Both S1 and S2 are True.

5. Statement S1 is True and statement S2 is False.

6. Statement S1 is False and statement S2 is True.

Question ID : 50389011218

the following statements as True/False.

are generally less effective in removing gaseous pollutants than towers.

is an effective device for removing gaseous pollutants from industry's

tion units, activated carbon beds cannot effectively catch hydrocarbon, H₂S

Statement S2 & S3 are True but S1 is False.

Statement S1 & S3 are True but S2 is False.

Statement S1 & S2 are True but S3 is False.

Statement S1 & S2 are False but S3 is True.

Question ID : 50389011247

Status : Answered

Chosen Option : 3

of continuous flow type sedimentation tank, if A= theoretical detention period
actual average time taken by a batch of water in passing through the settling
tank will be the displacement efficiency?

3

Question ID : 50389011255

Status : Answered

Chosen Option : 2

Following is defined as under?

The rate of doing work by a travelling sound wave in the direction of
propagation of the wave."

Power of sound.

Sound intensity.

Sound pressure.

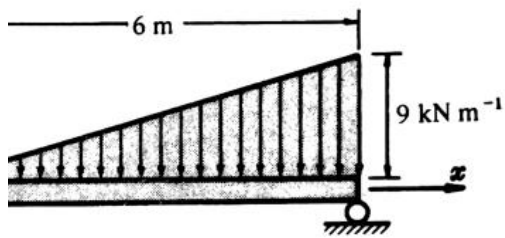
Sound spectra.

Question ID : 50389011251

Status : Answered

Chosen Option : 1

What is the value of maximum shear force for the given beam in figure below?



- √.
- √.
- √.
- √.

Question ID : 50389011214
Status : Answered
Chosen Option : 4

Which of the following is the pipe network for water supply; in which, a closed ring of main is laid around/on the periphery of the area to be served?

- Radial system.
- Grid system.
- Loop system.
- Interlocking system.

Question ID : 50389011256
Status : Answered
Chosen Option : 2

What is the steepest gradient permitted on a 4° curve for a Meter Gauge line (Indian). The ruling gradient for the section is specified as 0.62%.

- 250.
- 200.
- 264.
- 150.

Question ID : 50389011291
Status : Answered
Chosen Option : 1

Which is the correct equation regarding the non-recording rain gauge.

- Height of rain fallen = Volume of water collected * Area of aperture of the gauge
- Height of rain fallen = Volume of water collected + Area of aperture of the gauge

Maximum height of capillary fringe in a soil with void ratio of 0.50 and effective size of 0.015 mm.

- n.
- n.
- n.
- n.

Question ID : 50389011283
Status : Answered
Chosen Option : 4

Friction is the friction between _____ surfaces.

- smooth
- rough
- very smooth
- very rough

Question ID : 50389011212
Status : Answered
Chosen Option : 1

Correct relationship for a shaft of uniform circular cross-section.

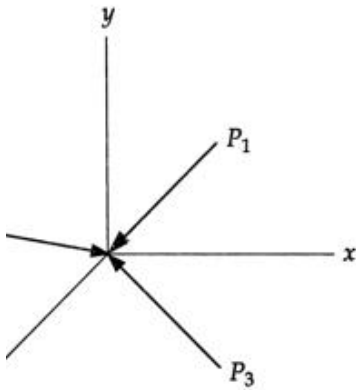
- Flexural Rigidity = Modulus of Rigidity - Polar moment of Inertia
- Flexural Rigidity = Modulus of Rigidity + Polar moment of Inertia
- Flexural Rigidity = Modulus of Rigidity/Polar moment of Inertia
- Flexural Rigidity = Modulus of Rigidity * Polar moment of Inertia

Question ID : 50389011216
Status : Answered
Chosen Option : 3

Which is NOT CORRECTLY paired from the following, the source of noise and its noise level

- Propeller type, take-off, at 300 m → 90 to 100
- Jet, take-off, at about 300 m → 100 to 110
- Truck traffic (Highways) → 60 to 75
- Jet aircraft (at about 30 m) → 90 to 110

the forces (p_1, p_2, p_3) , given in the figure below?



anar non-concurrent forces.

coplanar non-concurrent forces.

coplanar concurrent forces.

anar concurrent forces.

Question ID : 50389011211

Status : Answered

Chosen Option : 4

the following statements as True/False.

of viscous fluid must satisfy the no-slip condition at the solid boundary.

dary-layer exists in flow of ideal fluids.

pt of boundary-layer divides the flow into two zones.

gements S1 and S3 are True but S2 is False.

ment S1 is True but statements S2 & S3 are False.

ree statements are True.

ree statements are False.

Question ID : 50389011232

Status : Answered

Chosen Option : 1

· Bio-chemical oxygen demand in waste water is also known as:

ification demand.

hureous demand.

bined demand.

WRONG statement from the following, related to the LAPLACE'S EQUATION analysis.

One family represents the equipotential lines along which the potential or total head is constant.

Laplace's equation can be solved if the boundary conditions at the inlet and exit are specified.

Laplace's equation represents two families of curves which are parallel to each other.

One family represents the flow lines along which the flow takes place.

Question ID : 50389011284
Status : Answered
Chosen Option : 3

WRONG statement related to the characteristics of spillway crest gate, which consists of a hollow steel cylinder or drum spanning the spillway.

It is made of 12 boards.

It has 12 vertical gates.

It is made of logs and Needles.

It has 12 gates.

Question ID : 50389011243
Status : Answered
Chosen Option : 4

WRONG statement related to the characteristics of Rubbish in Indian cities.

Rubbish has a density varying between 50 to 400 kg/m³.

Rubbish includes rags paper pieces, broken pieces of glass and furniture, cardboard, etc.

Rubbish includes all non-putrescible wastes except ashes.

Rubbish constitutes more than 50% of the total municipal solid waste.

Question ID : 50389011250
Status : Answered
Chosen Option : 2

WRONG following is also named as 'Loose Needle method' in traversing?

It is a sit tape traversing.

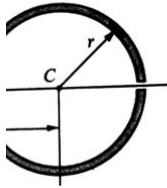
It is a chain and compass traversing.

It is a line traversing.

It is a table traversing.

Question ID : 50389011266
Status : Answered
Chosen Option : 2

If a slit circular tube of constant thickness is shown in figure below. Calculate the distance 'e' from the center (C) to the shear center (S), if the radius $r = 20$ cm.



3 cm.

3 cm.

$3/\pi$ cm.

0 cm.

Question ID : 50389011215

Status : Answered

Chosen Option : 4

Following is a classification of Piles based on the "Mode of Transfer of Loads"?

End pile, Concrete piles, Timber piles.

End bearing piles, Friction piles, Combined end bearing and friction piles.

Replacement piles, Non-displacement piles.

Sheet piles, Sheet piles, Compaction piles.

Question ID : 50389011278

Status : Answered

Chosen Option : 2

Which of the following is not a source of ammonia nitrogen in sewage?

Protein of ammonia nitrogen and organic nitrogen.

Protein of ammonia nitrogen and nitrites.

Protein of nitrites and nitrates.

Protein of organic nitrogen and nitrates.

Question ID : 50389011253

Status : Answered

Chosen Option : 4

Which of the following evaporation pan is adopted by Indian standard IS: 5973-1970 for evaporation?

One of 1.22 m square in plan and 25.5 cm in depth.

One of 1.22 m in diameter and 25.5 cm in depth.

One of 92 cm square in plan and 46 cm deep.

One of 90 cm square in plan and 45 cm deep.

is the intensity of loading that will cause a permissible settlement or
lement for the structure.

Ultimate bearing capacity.

bearing pressure.

ressure intensity.

rate bearing capacity.

Question ID : 50389011286

Status : Answered

Chosen Option : 2

minimum depth of foundation required as per Rankine's analysis, for a
intensity of loading at base is 171kN/m^2 , unit weight of soil = 19kN/m^3 and
ring resistance = 30° .

n.

n.

n.

m.

Question ID : 50389011287

Status : Answered

Chosen Option : 3

is-matched pair about type of Airport and the maximum value of longitudinal
taxiway, as per ICAO.

'B' airport ----- 1.5%.

'C' airport ----- 3.0 %

'A' airport ----- 1.0%.

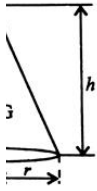
'E' airport ----- 3.0 %.

Question ID : 50389011292

Status : Answered

Chosen Option : 2

ie of 'y', the distance of center of gravity, for the given HOLLOW CONE in the figure below?



Question ID : 50389011210
Status : Answered
Chosen Option : 3

numbers of orbital planes and satellites in one orbit for a GPS, respectively?

fty-four and Six.

nd Four.

and Twenty-eight.

e and Four.

Question ID : 50389011273
Status : Answered
Chosen Option : 1

ange of 'probable error of computed distance' for the tertiary triangulation?

20,000 to 1 in 50,000.

5,000 to 1 in 20,000.

1000 to 1 in 5000.

50,000 to 1 in 250,000.

Question ID : 50389011269
Status : Answered
Chosen Option : 1

The category of the given traffic sign given in the figure.



Prohibitory sign.

Mandatory sign.

Warning sign.

Prohibitory sign.

Question ID : 50389011288

Status : Answered

Chosen Option : 1

of friction, A= total area of steel in cm^2 across the slab width, S= allowable tensile stress in steel in kg/cm², h= thickness in cm, W= unit weight of cement concrete in kg/m^3 , b= slab width in m; then what is the spacing of contraction joints (LC) in reinforced cement concrete pavements?

$$L_c = \frac{200SA}{bhWf}$$

$$L_c = \frac{20000S}{Wf}$$

$$L_c = \frac{200bhW}{SAf}$$

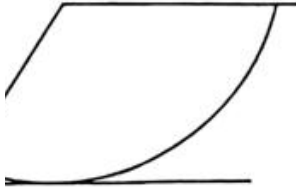
$$L_c = \frac{200WSb}{Shf}$$

Question ID : 50389011225

Status : Answered

Chosen Option : 4

ype of slope failure of soil is represented by the given figure?



Rotational Failure.

slational Failure.

Rotational Failure.

ound Failure.

Question ID : 50389011281
Status : Answered
Chosen Option : 1

value of combined correction due to refraction and curvature for a distance of

9 m

m.

8 m.

m.

Question ID : 50389011258
Status : Answered
Chosen Option : 1

LSE statement regarding soil classification according to 'INDIAN STANDARD
ION (ISC system)'.

< cotton soils of India lie partly above A-line and partly below A-line.

are broadly divided in three divisions as- Coarse-grained, Fine-grained and
> soil (as Peat).

se of coarse-grained soils, if fines are more than 12%, border line cases require

fine-grained soils in ISC system are subdivided into three categories.

Question ID : 50389011277
Status : Answered
Chosen Option : 3

Two-phase traffic signal is designed by Webster's method. Determine the signal cycle, if the sum of all critical flow ratios is 0.50 and the all-red time for pedestrian crossing is 13 seconds.

30 seconds.

35 seconds.

40 seconds.

45 seconds.

Question ID : 50389011223
Status : Answered
Chosen Option : 1

In pavement design, the ratio of contact pressure to tyre pressure is known as:

stiffness factor.

friction ratio factor.

contact factor.

stability factor.

Question ID : 50389011227
Status : Answered
Chosen Option : 1

The minimum turning radius of the taxiway for an airport serving large subsonic jet planes. The speed of turning is 60 kmph and assume friction coefficient between tyre and pavement surface as 0.15.

85 m.

75 m.

65 m.

55 m.

Question ID : 50389011293
Status : Answered
Chosen Option : 2

Which of the following is a WRONG assumption of DUPUIT-THIEM THEORY for analysis of flow towards a well?

The aquifer has infinite lateral extent.

The well is of small size and has negligible storage.

The flow is turbulent and Darcy's law is not incorporated in this analysis.

The flow lines are radial.

Question ID : 50389011238
Status : Answered
Chosen Option : 2

Peak factor' is defined as the ratio between the number of vehicles counted in one hour and _____ the number counted during the highest fifteen minutes.

1.5 times.

1.8 times.

2 times.

2.5 times.

Question ID : 50389011294
Status : Answered
Chosen Option : 2

Shrinkage limit minus natural water content of a soil to its plasticity index is known as

Shrinkage index

Shrinkage index

Shrinkage index

Shrinkage index

Question ID : 50389011275
Status : Answered
Chosen Option : 4

Which of the following forces are not omitted by the principle of Virtual Work, which of the following forces do work and are not omitted?

Force in a light inextensible string.

Force normal to the direction of displacement.

Concentrated load on the mid span of a simply supported beam.

Reaction at smooth pins and hinges which do not move.

Question ID : 50389011213
Status : Answered
Chosen Option : 4

Which of the following is a FALSE statement regarding the advantages of a Barrage?

It is suitable for inspection and repair of various structures.

Outflow can be easily regulated by gates.

Highway can be provided easily over the structure with small additional cost.

Initial cost of the Barrage is quite low.

Question ID : 50389011244
Status : Answered
Chosen Option : 4

value of shape factor for a rectangular steel beam cross-section of
1, as per plastic analysis of steel structures design concept.

Question ID : 50389011220

Status : Answered

Chosen Option : 4

