Telangana State Council Higher Education

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	CIVIL ENGINEERING 06th May 2024 Shift1
Subject Name :	Civil Engineering
Creation Date :	2024-05-06 19:15:10
Duration :	180
Total Marks :	200
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No
Help Button :	No

Show Reports :	No
Show Progress Bar :	No

CIVIL ENGINEERING

Group Number :	1
Group Id :	7614466
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	200
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Mathematics

Section Id :	76144619
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	50
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1

Sub-Section Id : 76144633

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 1 Question Id : 7614461011 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $A=\begin{pmatrix} k & 1 \\ 1 & k \end{pmatrix}$ and $\left|A^3\right|=27$, then $k=$

Options :

7614464001. ✖ ± 1

7614464002. ✔ ± 2

7614464003. ✖ ± 4

7614464004. ✖ ± 5

Question Number : 2 Question Id : 7614461012 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $A=\begin{pmatrix} 1 & -1 \\ 2 & 1 \end{pmatrix}$ satisfies $aA^2+bA+cI=0$, then $b+2c=$

Options :

7614464005. ✔ 4

7614464006. ✖ 2

7614464007. ✖ -4

7614464008. ✖ 3

Question Number : 3 Question Id : 7614461013 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let (x, y, z) be the solution of the system of equations $x+3y+z=3$, $x+4y+2z=3, -x-2y+3z=-6$ .Then $x^2+y^2+z^2=$

Options :

7614464009. ✖ 12

7614464010. ✖ 9

7614464011. ✖ 6

7614464012. ✔ 3

Question Number : 4 Question Id : 7614461014 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $A=\begin{pmatrix}2 & x+9\\ 1 & 2x\end{pmatrix}$ is invertible,then $x \neq$

Options :

7614464013. ✖ 4

7614464014. ✖ 1

7614464015. ✔ 3

7614464016. ✖ 5

Question Number : 5 Question Id : 7614461015 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of x satisfying $3^{\log_5(x-5)} = \log_5(125)$ is

Options :

7614464017. ✔ 10

7614464018. ✖ 5

7614464019. ✖ 9

7614464020. ✖ 3

Question Number : 6 Question Id : 7614461016 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\frac{4x^2+1}{x^3-1}=\frac{A}{x-1}+\frac{Bx+C}{x^2+x+1}$, then $A-B+C=$

Options :

7614464021. ✖ -3

7614464022. ✔ 0

7614464023. ✖ 2

7614464024. ✖ 1

Question Number : 7 Question Id : 7614461017 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The diameter of the circle $(x-1)^2+(y+3)^2=3$ is

Options :

7614464025. ✖ $\sqrt{3}$

7614464026. ✖ $4\sqrt{3}$

7614464027. ✔ $2\sqrt{3}$

7614464028. ✖ 3

Question Number : 8 Question Id : 7614461018 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the circle $x^2+y^2-3x-2y+c=0$ passes through origin, then $c=$

Options :

7614464029. ✖ -1

7614464030. ✖ 1

7614464031. ✔ 0

7614464032. ✖ ∞

Question Number : 9 Question Id : 7614461019 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The latus rectum of parabola $x^2=4y$ is

Options :

7614464033. ✔ 4

7614464034. ✖ 8

7614464035. ✖ 12

7614464036. ✖ 2

Question Number : 10 Question Id : 7614461020 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The centre of the circle $45x^2+45y^2-60x+36y+19=0$ is

Options :

7614464037. ✖ $(0,0)$

7614464038. ✖ $(60,36)$

7614464039. ✖ $(-60,36)$

7614464040. ✔ $(\frac{2}{3},-\frac{2}{5})$

Question Number : 11 Question Id : 7614461021 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Homogeneous second degree equation $a\,x^2+2hxy+by^2=0$ represents two real and distinct lines through origin if

Options :

7614464041.

✔ $h^2 > ab$

7614464042. ✖ $h^2 = ab$

7614464043. ✖ $h^2 < ab$

7614464044. ✖ $h^2 = a + b$

Question Number : 12 Question Id : 7614461022 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The equation of the circle with extremities (1,3) and (5, 7) of the diameter is

Options :

7614464045. ✖ $x^2 + y^2 + 6x + 10y + 26 = 0$

7614464046. ✔ $x^2 + y^2 - 6x - 10y + 26 = 0$

7614464047. ✖ $x^2 + y^2 - 6x + 10y + 26 = 0$

7614464048. ✖ $x^2 + y^2 - 6x - 10y - 26 = 0$

Question Number : 13 Question Id : 7614461023 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the line passing through the points (a,6a) and (5,6) is perpendicular to the line $3x+4y+5 = 0$, then $7a =$

Options :

7614464049. ✖ -5

7614464050. ✖ -3

7614464051. ✔ -1

7614464052. ✖ -2

Question Number : 14 Question Id : 7614461024 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If (0, k), (1,3) and (82,30) are collinear ,then k =

Options :

7614464053. ✔ $\frac{8}{3}$

7614464054. ✖ $\frac{9}{4}$

7614464055. ✖ $\frac{10}{7}$

7614464056. ✖ $\frac{11}{6}$

Question Number : 15 Question Id : 7614461025 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the two parallel sides of a square are 2x+y+7 = 0,2x+y+5=0,then the area of that square is (in square units is)

Options :

7614464057. ✖ $\frac{3}{5}$

7614464058. ✔ $\frac{4}{5}$

7614464059. ✖ $\frac{6}{5}$

7614464060. ✖ $\frac{7}{5}$

Question Number : 16 Question Id : 7614461026 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The point at two circles $x^2+y^2-4x-2y-4=0, x^2+y^2-12x-8y-12=0$ touches is

Options :

7614464061. ✔ $\left(\frac{-2}{5},\frac{-4}{5}\right)$

7614464062. ✖ $\left(\frac{2}{5},\frac{4}{5}\right)$

7614464063. ✖ $\left(\frac{2}{5},\frac{-4}{5}\right)$

7614464064. ✖ $\left(\frac{-2}{5},\frac{4}{5}\right)$

Question Number : 17 Question Id : 7614461027 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $x+y=k$ is a normal to the parabola $y^2=12x$,then k =

Options :

7614464065. ✖ 5

7614464066. ✔ 9

7614464067. ✖ 7

7614464068. ✖ 3

Question Number : 18 Question Id : 7614461028 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The set of all points where the function $f(x) = x|x|$ is differentiable is

Options :

7614464069. ✖ $(0, \infty)$

7614464070. ✔ $(-\infty, \infty)$

7614464071. ✖ $(-\infty, 0) \cup (0, \infty)$

7614464072. ✖ $(-\infty, 0)$

Question Number : 19 Question Id : 7614461029 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$\lim_{x \to 1} \frac{1 + x + x^2 + \ldots + x^{n-1} - n}{x - 1} =$$

Options :

7614464073. ✖ $n^2 + n$

7614464074. ✖ $\frac{n^2 + n}{2}$

7614464075. ✔ $\frac{n^2-n}{2}$

7614464076. ✖ n^2-n

Question Number : 20 Question Id : 7614461030 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $x=2\cos t, y=2\sin t$,then $\frac{d^2y}{dx^2}$ at $t=\frac{\pi}{4}$ is

Options :

7614464077. ✖ $\frac{1}{\sqrt{2}}$

7614464078. ✔ $-\sqrt{2}$

7614464079. ✖ $\sqrt{3}$

7614464080. ✖ $-\frac{1}{\sqrt{3}}$

Question Number : 21 Question Id : 7614461031 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The equation of the tangent to the curve $y = x^3 - 3x + 2$ at the point $(2, 4)$ is

Options :

7614464081. ✔ $9x - y - 14 = 0$

7614464082. ✖ $9x + y - 14 = 0$

7614464083. ✖ $9x - y + 14 = 0$

7614464084. ✖ $9x + y = 0$

Question Number : 22 Question Id : 7614461032 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $y = a\log x + bx^2 + x$ has its extreme values at $x = -1$ and $x = 2$, then the values of a and b are respectively are

Options :

7614464085. ✖ $-2, 2$

7614464086. ✖ $-4, 4$

7614464087. ✖ $-\frac{1}{3}, 4$

7614464088. ✔ $-\frac{1}{2}, 2$

Question Number : 23 Question Id : 7614461033 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the curves $y^2 = 2x$ and $2xy = k$ cut at right angle,then $k^2 =$

Options :

7614464089. ✖ 4

7614464090. ✔ 8

7614464091. ✖ 16

7614464092. ✖ 9

Question Number : 24 Question Id : 7614461034 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $x^y y^x = 1$,then $\frac{dy}{dx} =$

Options :

7614464093. ✖ $-\frac{y}{x}\left(\frac{x + y\log x}{y + x\log y}\right)$

7614464094. ✖

$\frac{y}{x}\left(\frac{x-\log x}{y+\log y}\right)$

7614464095. ✖ $\frac{y}{x}\left(\frac{y-x\log y}{x+y\log x}\right)$

7614464096. ✔ $-\frac{y}{x}\left(\frac{y+x\log y}{x+y\log x}\right)$

Question Number : 25 Question Id : 7614461035 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $u=\tan^{-1}\left(\frac{x^3+y^3}{x-y}\right), x\neq y$ and if $x\frac{\partial u}{\partial x}+y\frac{\partial u}{\partial y}-\sin ku=0$,then $k=$

Options :

7614464097. ✖ 3

7614464098. ✖ 4

7614464099. ✔ 2

7614464100. ✖ 5

Question Number : 26 Question Id : 7614461036 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The slope of the tangent to the curve xy=1 at (1,1) is

Options :

7614464101. ✖ -2

7614464102. ✔ -1

7614464103. ✖ 1

7614464104. ✖ 2

Question Number : 27 Question Id : 7614461037 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The function $f(x) = xe^{-x}$ $(x \in R)$ attains a maximum value at $x =$

Options :

7614464105. ✖ 2

7614464106. ✖ 1/e

7614464107. ✔ 1

7614464108. ✖ 3

Question Number : 28 Question Id : 7614461038 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The integral value of $\int \frac{Cos2x}{sin^2x\,Cos^2x}dx =$

Options :

7614464109. ✖ $Cosec^2x - Sec^2x + c$

7614464110. ✖ $Cotx + Tanx + c$

7614464111. ✔ $-Cotx - tanx + c$

7614464112. ✖ $Cosecx - Secx + c$

Question Number : 29 Question Id : 7614461039 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\int e^{xCosecx}\,Cosecx(1 - x\,Cotx)dx =$

Options :

7614464113. ✖ $e^{xCotx} + c$

7614464114. ✔ $e^{xCosecx} + c$

7614464115. ✖ $e^{-xCotx} + c$

7614464116. ✖ $e^{-xCos\ ecx} + c$

Question Number : 30 Question Id : 7614461040 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The integral value of $\int_0^{\pi} x\ Sinx\ Cos^4x\ dx$ is

Options :

7614464117. ✖ $\frac{\pi}{10}$

7614464118. ✔ $\frac{\pi}{5}$

7614464119. ✖ $-\frac{\pi}{5}$

7614464120. ✖ $-\frac{\pi}{10}$

Question Number : 31 Question Id : 7614461041 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The area enclosed between the curves $y^2 = x$ and $y = |x|$ is

Options :

7614464121. ✖ $1/3$

7614464122. ✖ 1

7614464123. ✖ $2/3$

7614464124. ✔ $1/6$

Question Number : 32 Question Id : 7614461042 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The differential equation of the family of curves $xy = c_1 e^{x} + c_2 e^{-x}$ is

Options :

7614464125. ✖ $\frac{d^2y}{dx^2} - 2\frac{dy}{dx} - y = 0$

7614464126. ✔ $x\frac{d^2y}{dx^2} + 2\frac{dy}{dx} - xy = 0$

7614464127. ✖ $x\frac{d^2y}{dx^2} - 2\frac{dy}{dx} - y = 0$

7614464128. ✖ $x^2\frac{d^2y}{dx^2} + 2\frac{dy}{dx} - y = 0$

Question Number : 33 Question Id : 7614461043 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $\frac{dy}{dx} - x\tan(y-x) = 1$ is

Options :

7614464129. ✔ $\sin(y-x) = ce^{\frac{x^2}{2}}$

7614464130. ✖ $\cos(y-x) = ce^{\frac{-x^2}{2}}$

7614464131. ✖ $\sin(y+x) = ce^{\frac{-x^2}{2}}$

7614464132. ✖ $\tan(y-x) = ce^{\frac{x^2}{2}}$

Question Number : 34 Question Id : 7614461044 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $xy\frac{dy}{dx} = \frac{1+y^2}{1+x^2}$ is

Options :

7614464133. ✖ $(1+x)(1+y) = cx^2y^2$

7614464134. ✔ $(1+x^2)(1+y^2) = cx^2$

7614464135. ✖ $(1+x^2)(1+y^2)=cy$

7614464136. ✖ $(1+x^2)(1+y^2)=cxy$

Question Number : 35 Question Id : 7614461045 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $\frac{dy}{dx}-\frac{2}{x}y=2x^3+x$ is

Options :

7614464137. ✔ $y=x^4+x^2\log x+cx^2$

7614464138. ✖ $y=x^3+x^2\log x+cx^2$

7614464139. ✖ $y=x^3+x\log x+cx^2$

7614464140. ✖ $y=x^2+x\log x+cx^3$

Question Number : 36 Question Id : 7614461046 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of the differential equation $\sec^2 y\frac{dy}{dx}+x\tan y=x^3$ is

Options :

7614464141. ✖ $\sin y = x^2 + 2 + ce^{\frac{-x^2}{2}}$

7614464142. ✖ $\cos y = 2x^2 - 1 + ce^{\frac{-x^2}{2}}$

7614464143. ✖ $\cot y = x^2 - 2 + ce^{\frac{-x^2}{2}}$

7614464144. ✔ $\tan y = x^2 - 2 + ce^{\frac{-x^2}{2}}$

Question Number : 37 Question Id : 7614461047 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The particular integral of the differential equation $\frac{d^2y}{dx^2} + 16y = e^{-3x} + \cos 4x$ is

Options :

7614464145. ✖ $\frac{1}{7}e^{-3x} + \frac{x}{8}\cos 4x$

7614464146. ✖ $\frac{1}{23}e^{-3x} + \frac{x}{8}\cos 4x$

7614464147. ✔ $\frac{1}{25}e^{-3x} + \frac{x}{8}\sin 4x$

7614464148.

$\frac{1}{36}e^{-3x}+\frac{x}{9}\sin 4x$

Question Number : 38 Question Id : 7614461048 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A particular integral of the differential equation $\frac{d^2y}{dx^2}+\frac{dy}{dx}+y=x^2$ is

Options :

7614464149. x^2+4x

7614464150. $2x^2-x$

7614464151. x^2-8x

7614464152. ✔ x^2-2x

Question Number : 39 Question Id : 7614461049 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The solution of the differential equation $\frac{d^2y}{dx^2}-2\frac{dy}{dx}-15y=0$ subject to the conditions $y'(0)=0, y''(0)=2$ is

Options :

7614464153. $y=\frac{1}{20}e^{3x}+\frac{1}{12}e^{5x}$

7614464154. ✔ $y=\frac{1}{20}e^{5x}+\frac{1}{12}e^{-3x}$

7614464155. ✖ $y=\frac{1}{12}e^{5x}+\frac{1}{20}e^{-3x}$

7614464156. ✖ $y=\frac{1}{20}e^{-5x}+\frac{1}{12}e^{-3x}$

Question Number : 40 Question Id : 7614461050 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$L\left\{\int_0^t e^{-u}\sin u\,du\right\}=$$

Options :

7614464157. ✖ $\frac{1}{s^2+2s+2}$

7614464158. ✖ $\frac{s}{s^2+2s+2}$

7614464159. ✔ $\frac{1}{s\left(s^2+2s+2\right)}$

7614464160. ✖

$$\frac{1}{s\left(s^2+2\right)}$$

Question Number : 41 Question Id : 7614461051 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $L\{f(t)\}=\log\left(\frac{s-1}{s}\right)$,then $f(1)=$

Options :

7614464161. ✔ $1-e$

7614464162. ✖ $e-1$

7614464163. ✖ e

7614464164. ✖ $e+1$

Question Number : 42 Question Id : 7614461052 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$\int_0^\infty \frac{\sin 2t}{t}dt=$$

Options :

7614464165. ✖ π

7614464166. ✖ 0

7614464167. ✖ 2π

7614464168. ✔ $\frac{\pi}{2}$

Question Number : 43 Question Id : 7614461053 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $L\{t\sinh kt\} = \frac{4s}{\left(s^2-4\right)^2}$, then $k =$

Options :

7614464169. ✖ 1

7614464170. ✖ 4

7614464171. ✔ 2

7614464172. ✖ $\frac{1}{2}$

Question Number : 44 Question Id : 7614461054 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let $L^{-1}\left\{\frac{e^{-s}}{s^2+4s+5}\right\}=f(t)$. If $t>1$,then $f(t)=$

Options :

7614464173. ✖ $e^{-2t}\sin t$

7614464174. ✔ $e^{-2(t-1)}\sin(t-1)$

7614464175. ✖ $e^{-2(t+1)}\sin(t+1)$

7614464176. ✖ $e^{2t}\sin t$

Question Number : 45 Question Id : 7614461055 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $L\{f(t)\}=\frac{2s-1}{(s+1)(s-2)}$, then $L\{f(4t)\}=$

Options :

7614464177. ✖ $\frac{2(s+2)}{(s-4)(s+8)}$

7614464178. ✖ $\frac{2(s-1)}{(4s+1)(4s-2)}$

7614464179.

$\frac{s-2}{(s-4)(s+8)}$

7614464180. $\frac{2(s-2)}{(s+4)(s-8)}$

Question Number : 46 Question Id : 7614461056 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $Y(s)$ is the Laplace transform of the solution $y(t)$ of $y''+y=\sin 3t$, $y(0)=0, y'(0)=0$, then $Y(0)=$

Options :

7614464181. 0

7614464182. 3

7614464183. $\frac{1}{3}$

7614464184. $\frac{1}{9}$

Question Number : 47 Question Id : 7614461057 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of the Fourier coefficient a_n in the series expansion of $f(x) = |x|$ in $(-\pi, \pi)$ when n is odd is

Options :

7614464185. ✖ $\frac{4}{\pi n^2}$

7614464186. ✔ $\frac{-4}{\pi n^2}$

7614464187. ✖ $\frac{2}{\pi n^2}$

7614464188. ✖ 0

Question Number : 48 Question Id : 7614461058 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of the Fourier coefficient b_0 in the series expansion of $f(x) = |x\ Sinx|$ in $(-\pi, \pi)$ is

Options :

7614464189. ✔ 0

7614464190. ✖ -2

7614464191. ✖ 2

7614464192. ✖ -1

Question Number : 49 Question Id : 7614461059 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $f(x) = Sinx$ is expressed as Fourier Cosine series in the interval $(0, \pi)$, then the value of a_0 is

Options :

7614464193. ✖ $\frac{2}{\pi}$

7614464194. ✖ $\frac{1}{\pi}$

7614464195. ✔ $\frac{4}{\pi}$

7614464196. ✖ $\frac{-2}{\pi}$

Question Number : 50 Question Id : 7614461060 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\int_0^{\pi} sin6x\ sin4x\ dx =$

Options :

7614464197. ✖ $\frac{\pi}{2}$

7614464198. ✖ π

7614464199. ✖ 1

7614464200. ✔ 0

Physics

Section Id :	76144620
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	76144634
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 51 Question Id : 7614461061 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following equation is dimensionally incorrect for the expression representing displacement 'y' and amplitude 'A' of a particle executing Simple Harmonic Motion with time period 'T'?

Options :

7614464201. ✖ $y = \frac{A}{\sqrt{2}}(\text{Sin}\omega t + \text{Cos}\omega t)$

7614464202. ✖ $y = A\ \text{Sin}\omega t$

7614464203. ✔ $y = \frac{A}{T}\ \text{Sin}(\frac{t}{A})$

7614464204. ✖ $y = A\ \text{Sin}(\frac{4\pi t}{T})$

Question Number : 52 Question Id : 7614461062 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The resultant of two equal forces acting at right angles to each other is 1224 N. Then the magnitude of each force in Newtons.

Options :

7614464205. ✖ 612, 612

7614464206. ✖ 1224, 1224

7614464207. ✔ 865, 865

7614464208. ✖ 432, 432

Question Number : 53 Question Id : 7614461063 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The magnitude of three vectors $\vec{A}, \vec{B}$ & $\vec{C}$ are in order 12,5,13 units and

$\vec{A} + \vec{B} = \vec{C}$, then what will be the angle between the vectors $\vec{A}$ & $\vec{B}$

Options :

7614464209. ✔ 90^0

7614464210. ✖ 60^0

7614464211. ✖ 30^0

7614464212. ✖ 45^0

Question Number : 54 Question Id : 7614461064 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A boy pulls a body of mass 50 kg resting on a flat horizontal surface. Calculate the frictional force if the coefficient of friction is 0.2

Options :

7614464213. ✔ $98.1\ kg.m.s^{-2}$

7614464214. ✖ 15 kg

7614464215. ✖ $98.1 \times 10^3\ g.cm.s^{-2}$

7614464216. ✖ 1500 g

Question Number : 55 Question Id : 7614461065 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If a projectile is thrown with a velocity u at an angle of θ with the horizontal, then the velocity at maximum height during the projectile motion will be:

Options :

7614464217. ✖ $2u \sin\theta$

7614464218. ✖ $u \sin\theta$

7614464219. ✖ $2u \cos\theta$

7614464220. ✔ $u \cos\theta$

Question Number : 56 Question Id : 7614461066 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A child of mass 5 kg is going round a merry-go-round that makes 1 rotation in 3.14 seconds. If the radius of the merry-go-round is 2 m then the centrifugal force on the child will be

Options :

7614464221. ✖ 10 Newton

7614464222. ✖ 20 Newton

7614464223. ✖ 30 Newton

7614464224. ✔ 40 Newton

Question Number : 57 Question Id : 7614461067 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A metal plate of area 100 cm^2 is placed on the surface of a liquid and a force of $1\mu N$ is required to move the plate so as to produce a velocity change 1 cms^{-1} between two successive layers separated by 1 cm. The coefficient of viscosity of the liquid is

Options :

7614464225. ✔ $10^{-4}\ Pa\ s$

7614464226. ✖ $10^{-3}\ Pa\ s$

7614464227. ✖ $10^{-1}\ Pa\ s$

7614464228. ✖ $10\ Pa\ s$

Question Number : 58 Question Id : 7614461068 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Water rises to a height 'h' in a capillary tube of radius 'r' when immersed in water. The mass of the water in the capillary tube is 'm'. The mass of water that will rise in another capillary tube of radius $\frac{r}{2}$ when immersed in water is

Options :

7614464229. ✖ m

7614464230. ✖ 2m

7614464231. ✔ $\frac{m}{2}$

7614464232. ✖ 4m

Question Number : 59 Question Id : 7614461069 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The continuity equation for compressible fluid is (the quantities carry their usual meaning)

Options :

7614464233. ✖ $\rho_2 A_1 v_1 = \rho_1 A_2 v_2$

7614464234. ✖ $A_1 v_1 = A_2 v_2$

7614464235. ✖ $\rho_1 v_1 = \rho_2 v_2$

7614464236. ✔ $\rho_1 A_1 v_1 = \rho_2 A_2 v_2$

Question Number : 60 Question Id : 7614461070 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A block of mass 'm' is moving on frictionless horizontal surface with velocity 5m/sec, compresses an ideal spring by 2m and comes to rest. The ratio of mass 'm' of the block to spring constant 'k' is.

Options :

7614464237. ✖ 25: 4

7614464238. ✔ 4 : 25

7614464239. ✖ 1: 25

7614464240. ✖ 4 : 1

Question Number : 61 Question Id : 7614461071 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the following:

a) Adiabatic Process	i) no volume change takes place.
b) Isochoric Process	ii) no pressure change takes place.
c) Isobaric Process	iii) no temperature change takes place.
d) Isothermal Process	iv) no heat transfer takes place.

Options :

7614464241. ✖ a-iv, b-iii, c-ii, d-i

7614464242. ✖ a-i, b-iv, c-ii, d-iii

7614464243. ✔ a-iv, b-i, c-ii, d-iii

7614464244. ✖ a-i, b-ii, c-iii, d-iv

Question Number : 62 Question Id : 7614461072 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

First law of thermodynamics represents conservation of

Options :

7614464245. ✖ Pressure

7614464246. ✖ Momentum

7614464247. ✖ Entropy

7614464248. ✔ Energy

Question Number : 63 Question Id : 7614461073 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The displacement of a particle executing Simple Harmonic Motion is given by $x = a\,Cos\frac{\pi t}{2}$ where 'x' and 'a' are in metre. The distance covered by it in the time interval between t = 0 sec to t = 4 sec in metre is

Options :

7614464249. ✖ 0

7614464250. ✖ 2a

7614464251. ✔ 4a

7614464252. ✖ 3a

Question Number : 64 Question Id : 7614461074 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A simple pendulum 80 cm long oscillates with amplitude of 0.02 m. The acceleration at the ends of its path is (take g = 10 ms^{-2})

Options :

7614464253. ✖ 0 ms^{-2}

7614464254. ✔ $0.25\ ms^{-2}$

7614464255. ✖ $2.5\ ms^{-2}$

7614464256. ✖ $10\ ms^{-2}$

Question Number : 65 Question Id : 7614461075 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A particle undergoing Simple Harmonic Motion passes through the mean position with a velocity of 2 ms^{-1}. The velocity of the particle at the point where its displacement is half the amplitude is

Options :

7614464257. ✖ $2\sqrt{3}\ ms^{-1}$

7614464258. ✖ $4\sqrt{3}\ ms^{-1}$

7614464259. ✖ $0\ ms^{-1}$

7614464260. ✔ $\sqrt{3}\ ms^{-1}$

Question Number : 66 Question Id : 7614461076 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A boy standing between two parallel walls fires a gun. He hears the first echo after 4 sec and next after 6 sec. The distance between the two walls is (take velocity of sound in air as 340 m/s)

Options :

7614464261. ✖ 680 m

7614464262. ✖ 1020 m

7614464263. ✔ 1700 m

7614464264. ✖ 340 m

Question Number : 67 Question Id : 7614461077 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a good acoustic hall the distribution of sound should be

Options :

7614464265. ✖ Gradually increasing

7614464266. ✖ Exponentially increasing

7614464267. ✖ Randomly change

7614464268. ✔ Uniform

Question Number : 68 Question Id : 7614461078 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two magnetic poles placed 5cm apart in air attract each other with a force of 100 dyne. How far from each other should they be placed to get the force of attraction 25 dyne?

Options :

7614464269. ✔ 10 cm

7614464270. ✖ 4 cm

7614464271. ✖ 2 cm

7614464272. ✖ 6 cm

Question Number : 69 Question Id : 7614461079 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a Wheatstone bridge, the four arms have each a resistance of 50 ohm. The galvanometer current is:

Options :

7614464273. ✖ 0.05 A

7614464274. ✖ 0.5 A

7614464275. ✔ 0 A

7614464276. ✖ 5 A

Question Number : 70 Question Id : 7614461080 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a transformer, the number of turns in secondary and primary coils are 50 and 200 respectively. If 4 A of current is flowing through the primary, the current flowing through the secondary coil is

Options :

7614464277. ✔ 1 A

7614464278. ✖ 2 A

7614464279. ✖ 3 A

7614464280. ✖ 4 A

Question Number : 71 Question Id : 7614461081 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Electrons are ejected when a photosensitive material is illuminated by violet light but not by blue light. Would electrons come out from the same material when it is illuminated by red light?

Options :

7614464281. ✖ Yes

7614464282. ✔ No

7614464283. ✖ Yes, if intensity of incident light is increased

7614464284. ✖ Yes, if material is illuminated for a long time

Question Number : 72 Question Id : 7614461082 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Optical fibres are electrically

Options :

7614464285. ✖ Conductors

7614464286. ✖ Superconductors

7614464287. ✖ Semiconductors

7614464288. ✔ Insulators

Question Number : 73 Question Id : 7614461083 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In superconducting state the material behaves as

Options :

7614464289. ✔ Perfect diamagnetic

7614464290. ✖ Weak diamagnetic

7614464291. ✖ Perfect ferromagnetic

7614464292. ✖ Weak paramagnetic

Question Number : 74 Question Id : 7614461084 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In semiconductors at room temperature

Options :

7614464293. ✖ The conduction band is completely empty

7614464294. ✔ The valence band is partially empty and the conduction band is partially filled

7614464295. ✖ The valence band is completely filled and the conduction band is partially filled

7614464296. ✖ The valence band is completely filled

Question Number : 75 Question Id : 7614461085 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Semiconductors are doped

Options :

7614464297. ✖ To increase the resistivity

7614464298. ✔ To get the desired level of conductivity

7614464299. ✖ To reduce the conductivity

7614464300. ✖ To get the positive temperature coefficient of resistance

Chemistry

Section Id :	76144621
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	76144635

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 76 Question Id : 7614461086 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Number of neutrons present in an element with atomic number 19 and mass number 39.

Options :

7614464301. ✖ 19

7614464302. ✖ 58

7614464303. ✖ 39

7614464304. ✔ 20

Question Number : 77 Question Id : 7614461087 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The dative bond is present in

Options :

7614464305. ✖ Ammonia

7614464306. ✔ Ammonium ion

7614464307. ✖ Urea

7614464308. ✖ Nitrogen

Question Number : 78 Question Id : 7614461088 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following molecules contains coordinate covalent bond?

Options :

7614464309. ✖ NH_2^-

7614464310. ✖ N_2H_4

7614464311. ✔ H_3O^+

7614464312. ✖ H_2O_2

Question Number : 79 Question Id : 7614461089 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Concentrated hydrochloric acid contains 37% (by mass) HCl. The density of its solution is 1.18 g/mL. The molarity of HCl is

Options :

7614464313. ✔ 12.0

7614464314. ✖ 16.03

7614464315. ✖ 6.0

7614464316. ✖ 1.20

Question Number : 80 Question Id : 7614461090 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A colloidal solution can be purified by the method of

Options :

7614464317. ✖ Peptization

7614464318. ✔ Dialysis

7614464319. ✖ Mechanical Dispersion

7614464320. ✖ Oxidation

Question Number : 81 Question Id : 7614461091 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The compound that does not act as a Lewis acid.

Options :

7614464321. ✔ $BaCl_2$

7614464322. ✖ $AlCl_3$

7614464323. ✖ BF_3

7614464324. ✖ $BeCl_2$

Question Number : 82 Question Id : 7614461092 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The pH value of 0.001 M NaOH solution is

Options :

7614464325. ✖ 3

7614464326. ✖ 9

7614464327. ✖ 7

7614464328. ✔ 11

Question Number : 83 Question Id : 7614461093 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The solvent not used for green synthesis is

Options :

7614464329. ✔ Aniline

7614464330. ✖ Room temperature ionic liquids

7614464331. ✖ Bio solvents

7614464332. ✖ Supercritical fluids

Question Number : 84 Question Id : 7614461094 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of these days is celebrated in the form of World Environment Day all around the world?

Options :

7614464333. ✖ July 5th

7614464334. ✖ June 10th

7614464335. ✖ October 20th

7614464336. ✔ June 5th

Question Number : 85 Question Id : 7614461095 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Extra pure water can be obtained by using

Options :

7614464337. ✖ Lime – Soda process

7614464338. ✖ Permutit process

7614464339. ✖ Ion-exchange process

7614464340. ✔ Electrodialysis process

Question Number : 86 Question Id : 7614461096 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Sterilization of water can be done by using

Options :

7614464341. ✔ Ozone

7614464342. ✖ Oxygen

7614464343. ✖ Caustic Potash

7614464344. ✖ Hydrogen peroxide

Question Number : 87 Question Id : 7614461097 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The product formed at cathode when Pt electrodes are used in the electrolysis of Fused NaCl.

Options :

7614464345. ✖ Cl_2

7614464346. ✖ NaOH

7614464347. ✖ HCl

7614464348. ✔ Na

Question Number : 88 Question Id : 7614461098 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the electrochemical equivalent (z) of copper, when 0.3950 g of copper is deposited by a current of 0.5 amperes in 40 minutes.

Options :

7614464349. ✔ 0.0003292 g

7614464350. ✖ 0.003950 g

7614464351. ✖ 0.0001646 g

7614464352. ✖ 0.00164 g

Question Number : 89 Question Id : 7614461099 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Extraction of zinc from zinc blende is achieved by

Options :

7614464353. ✖ Electrolytic reduction

7614464354. ✔ Roasting followed by reduction with carbon

7614464355. ✖ Roasting followed by reduction with another metal

7614464356. ✖ Roasting followed by self-reduction

Question Number : 90 Question Id : 7614461100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In blast furnace iron oxide is reduced by

Options :

7614464357. ✖ Silica

7614464358. ✔ Carbon monoxide

7614464359. ✖ Carbon

7614464360. ✖ Limestone

Question Number : 91 Question Id : 7614461101 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During electrochemical corrosion in acidic environment

Options :

7614464361. ✖ Oxygen evolution occurs

7614464362. ✔ Hydrogen evolution takes place

7614464363. ✖ Oxygen absorption occurs

7614464364. ✖ Hydrogen absorption takes place

Question Number : 92 Question Id : 7614461102 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The process of cementation of iron with zinc powder is known as

Options :

7614464365. ✔ Sheradising

7614464366. ✖ Galvanizing

7614464367. ✖ Zincing

7614464368. ✖ Tinning

Question Number : 93 Question Id : 7614461103 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Bakelite is manufactured by the reaction between

Options :

7614464369. ✖ Urea and formaldehyde

7614464370. ✖ Phthalic acid and ethylene glycol

7614464371. ✖ Ethylene glycol and formaldehyde

7614464372. ✔ Phenol and formaldehyde

Question Number : 94 Question Id : 7614461104 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is an elastomer

Options :

7614464373. ✖ Polystyrene

7614464374. ✔ Buna-S rubber

7614464375. ✖ Melamine

7614464376. ✖ Dacron

Question Number : 95 Question Id : 7614461105 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A good fuel has

Options :

7614464377. ✔ Moderate ignition temperature and high calorific value

7614464378. ✖ High ignition temperature and high calorific value

7614464379. ✖ Low ignition temperature and low calorific value

7614464380. ✖ Low ignition temperature and high calorific value

Question Number : 96 Question Id : 7614461106 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The best example of splash lubrication is

Options :

7614464381. ✖ Wick feed lubricator

7614464382. ✔ Ring lubricator

7614464383. ✖ Grease Gun

7614464384. ✖ Pump lubricator

Question Number : 97 Question Id : 7614461107 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Saturated calomel electrode standard reduction potential value in Volts is

Options :

7614464385. ✖ 0

7614464386. ✖ 0.6990

7614464387. ✖ − 0. 242

7614464388. ✔ + 0.242

Question Number : 98 Question Id : 7614461108 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For the following cell reaction, E° for the cell is

$$Zn_{(s)} + 2Fe^{3+}_{(aq)} \rightleftharpoons 2Fe^{2+}_{(aq)} + Zn^{2+}_{(aq)}$$

(Standard Reduction potentials of Zn and Fe electrodes are – 0.76V and + 0.77V respectively)

Options :

7614464389. ✔ 1.53 V

7614464390. ✖ 0.01 V

7614464391. ✖ – 1.53 V

7614464392. ✖ 0.78 V

Question Number : 99 Question Id : 7614461109 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The gas that is responsible for Bhopal gas tragedy is

Options :

7614464393. ✔ Methyl isocyanate

7614464394. ✖ Methyl chloroformate

7614464395. ✖ Methyl isopropyl ether

7614464396. ✖ Methyl isobutyrate

Question Number : 100 Question Id : 7614461110 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following gases is largely responsible for acid – rain?

Options :

7614464397. ✖ CO and CO_2

7614464398. ✖ NO and NO_2

7614464399. ✔ SO_2 and NO_2

7614464400. ✖ N_2 and O_2

CIVIL ENGINEERING

Section Id :	76144622
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100

Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	76144636
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 101 Question Id : 7614461111 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The resultant of two equal forces P making angle of θ is given by

Options :

7614464401. ✖ $2\ P\ \sin(\theta/2)$

7614464402. ✔ $2\ P\ \cos\ (\theta/2)$

7614464403. ✖ $2\ P\ \tan(\theta/2)$

7614464404. ✖ $2\ P\ \cot(\theta/2)$

Question Number : 102 Question Id : 7614461112 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A body of mass 'm' placed at a height 'h' above the ground, start falling down from rest. When the body falls from a height h to h/2, it will possess

Options :

7614464405. ✖ Only potential energy.

7614464406. ✖ Only Kinetic energy.

7614464407. ✔ Equal kinetic and potential energy.

7614464408. ✖ More kinetic energy and less potential energy.

Question Number : 103 Question Id : 7614461113 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The centroid of an equilateral triangle with each side 'a' is _____ from any of three sides

Options :

7614464409. ✖ $\sqrt{3}a/2$

7614464410. ✖ $2\sqrt{3}a$

7614464411. ✔ $a/2\sqrt{3}$

7614464412. ✖ $3\sqrt{2}a$

Question Number : 104 Question Id : 7614461114 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the resultant of two equal forces has the same magnitude as either of the forces, then the angle between the two forces is

Options :

7614464413. ✖ 30°

7614464414. ✖ 60°

7614464415. ✖ 90°

7614464416. ✔ 120°

Question Number : 105 Question Id : 7614461115 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The moment of inertia of a rectangular section having width 'b' and depth 'd' about an axis passing through its CG and parallel to the depth 'd' is

Options :

7614464417. ✔ $\frac{db^3}{12}$

7614464418. ✖ $\frac{bd^3}{12}$

7614464419. ✖ $\frac{db^3}{36}$

7614464420. ✖ $\frac{bd^3}{36}$

Question Number : 106 Question Id : 7614461116 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The stress corresponding to a load up to which the strain totally disappears upon the removal of the load is called

Options :

7614464421. ✖ Unit stress

7614464422. ✔ Elastic stress

7614464423. ✖ Yield stress

7614464424. ✖ Ultimate stress

Question Number : 107 Question Id : 7614461117 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the Rigidity modulus of a material is equal to one-third of its Young's modulus of elasticity, then the Poisson's ratio of the material is equal to

Options :

7614464425. ✖ 0

7614464426. ✖ 0.25

7614464427. ✖ 0.33

7614464428. ✔ 0.5

Question Number : 108 Question Id : 7614461118 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The strain in a direction at right angles to the direction of applied force is known as

Options :

7614464429. ✖ Longitudinal strain

7614464430. ✔ Lateral strain

7614464431. ✖ Volumetric strain

7614464432. ✖ Shear strain

Question Number : 109 Question Id : 7614461119 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

One kgf/cm^2 is equal to _____ in SI units

Options :

7614464433. ✖ $9.81\ N/m^2$

7614464434. ✖ $3.21\ N/m^2$

7614464435. ✔ $98.1 \times 10^3\ N/m^2$

7614464436. ✖ $32.1 \times 10^3\ N/m^2$

Question Number : 110 Question Id : 7614461120 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The maximum number of reaction components at a hinge placed on roller is __

Options :

7614464437. ✔ 1

7614464438. ✖ 2

7614464439. ✖ 3

7614464440. ✖ 4

Question Number : 111 Question Id : 7614461121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For a steel bar having rectangular cross section (300 mm x 20 mm) the ratio of radius of gyration with respect to major axis of bending to that of minor axis of bending $\frac{K_{xx}}{K_{yy}}$ is _____

Options :

7614464441. ✖ 300 x 20

7614464442. ✖ 300 ÷ 20

7614464443. ✖ $300^2 + 20^2$

7614464444. ✔ 20 ÷ 300

Question Number : 112 Question Id : 7614461122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Property of a material by virtue of which a body returns to its original shape after removal of the load is known as

Options :

7614464445. ✖ Ductility

7614464446. ✖ Plasticity

7614464447. ✔ Resilience

7614464448. ✖ Brittleness

Question Number : 113 Question Id : 7614461123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At the neutral axis of the beam, shear stress is

Options :

7614464449. ✖ 0

7614464450. ✖ Minimum

7614464451. ✔ Maximum

7614464452. ✖ Infinity

Question Number : 114 Question Id : 7614461124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A tensile force (P) is acting on a body of length (L) and Area of Cross Section (A). The Change in the length would be

Options :

7614464453. ✖ PE/AL

7614464454. ✖ AL/P

7614464455. ✔ PL/AE

7614464456. ✖ P/LAE

Question Number : 115 Question Id : 7614461125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Poisson's ratio for steel lies in the range of

Options :

7614464457. ✖ 0.20 to 0.25

7614464458. ✔ 0.27 to 0.30

7614464459. ✖ 0.33 to 0.43

7614464460. ✖ 0.43 to 0.53

Question Number : 116 Question Id : 7614461126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The modulus of Elasticity (E) and Modulus of Rigidity (C) are related by, when 'm' indicates poisson's ratio

Options :

7614464461. ✖ $E = (C+3K)/(9KC)$

7614464462. ✖ $C = 3(m-2)/mE$

7614464463. ✔ $C = E/2(m+1)$

7614464464. ✖ $C = mE/2(m-2)$

Question Number : 117 Question Id : 7614461127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In case of circular section

Options :

7614464465. ✖ $\tau_{max} = 3/2\tau_{mean}$

7614464466. ✖ $\tau_{max} = \tau_{mean}$

7614464467. ✖ $\tau_{max} = 2/3\tau_{mean}$

7614464468. ✔ $\tau_{max} = 4/3\tau_{mean}$

Question Number : 118 Question Id : 7614461128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A cantilever beam 4 m long carries 3 point loads of 3 kN, 5 kN and 1 kN at distances of 1 m, 2 m and 4 m respectively from fixed end. What will be the moment developed at the fixed end.

Options :

7614464469. ✖ 20 kNm

7614464470. ✖ 22 kNm

7614464471. ✖ 18 kNm

7614464472. ✔ 17 kNm

Question Number : 119 Question Id : 7614461129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two shafts of different diameters d_1 and d_2 are made from same material and are of same length. Under the same torque T the ratio of strain energy U_1 / U_2 is

Options :

7614464473. ✖ d_2/d_1

7614464474. ✔ $(d_2/d_1)^2$

7614464475. ✖ $(d_2/d_1)^3$

7614464476. ✖ $(d_1/d_2)^4$

Question Number : 120 Question Id : 7614461130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

According to Euler's Column theory, the crippling load for a column L where one end is fixed and the other end is hinged is

Options :

7614464477. ✖ $(\pi^2 EI)/l^2$

7614464478. ✖ $(\pi^2 EI)/4l^2$

7614464479. ✔

$(2\pi^2 EI)/l^2$

7614464480. ✖ $(4\pi^2 EI)/l^2$

Question Number : 121 Question Id : 7614461131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Value of maximum deflection of a simply supported beam with Uniformly distributed load is

Options :

7614464481. ✖ $wl^2/24EI$

7614464482. ✖ $wl^3/48EI$

7614464483. ✔ $5wl^4/384EI$

7614464484. ✖ $5wl^2/384EI$

Question Number : 122 Question Id : 7614461132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Bending moment of a Solid Circular Section is given by

Options :

7614464485. ✖ $\sigma \pi d^4/64$

7614464486. ✖ $\sigma \pi d^3/64$

7614464487. ✖ $\sigma \pi d^2/32$

7614464488. ✔ $\sigma \pi d^3/32$

Question Number : 123 Question Id : 7614461133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Value of Maximum Shear Stress intensity in a Rectangular Cross Section is

Options :

7614464489. ✖ $\frac{2}{3}\frac{F}{bd}$

7614464490. ✔ $\frac{3}{2}\frac{F}{bd}$

7614464491. ✖ $\frac{4}{3}\frac{F}{bd}$

7614464492. ✖ $\frac{3}{4}\frac{F}{bd}$

Question Number : 124 Question Id : 7614461134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The column whose slenderness ratio is less than 12 is called as

Options :

7614464493. ✔ Short column

7614464494. ✖ Long column

7614464495. ✖ Weak column

7614464496. ✖ Medium column

Question Number : 125 Question Id : 7614461135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Euler's Bernoulli Equation is

Options :

7614464497. ✔ $M = EI\frac{d^2y}{dx^2}$

7614464498. ✖ $F = EI\frac{d^2y}{dx^2}$

7614464499. ✖ $M = EI\frac{d^2y}{dt^2}$

7614464500. ✖ $F = EI\frac{d^2y}{dt^2}$

Question Number : 126 Question Id : 7614461136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The limiting depth of neutral axis in a Reinforced Concrete section in which the tensile steel used has a yield strength of fy is _____, if d=effective depth of the section.

Options :

7614464501. ✔ 0.0035 d / (0.0055 + 0.87 fy/E)

7614464502. ✖ 0.0035 d + (0.0055 + 0.87 fy/E)

7614464503. ✖ (0.0055 + 0.87 fy/E) / 0.0035 d

7614464504. ✖ 0.0035 d / (0.002 + 0.87 fy/E)

Question Number : 127 Question Id : 7614461137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Quicker method to find out the weight of the bar of circular cross-section, if diameter given is in mm

Options :

7614464505. ✖ $d^2/172.2$

7614464506. ✔ $d^2/162.2$

7614464507. ✖ $d^2/182.2$

7614464508. ✖ $d^2/165.2$

Question Number : 128 Question Id : 7614461138 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is considered under limit state of collapse

Options :

7614464509. ✖ Deflection of beam

7614464510. ✖ Cracking in a beam

7614464511. ✔ Strength of beam

7614464512. ✖ Durability

Question Number : 129 Question Id : 7614461139 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The stress block parameters used in the flexure design of RC beam are

Options :

7614464513. ✔ $0.36f_{ck}bX$ and $0.42X$

7614464514. ✖ $0.45f_{ck}bX$ and $0.42X$

7614464515. ✖ $0.36f_{ck}X$ and $0.33X$

7614464516. ✖ $0.45f_{ck}bX$ and $0.33X$

Question Number : 130 Question Id : 7614461140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In general, If the stirrup spacing is doubled then the shear capacity of the stirrups is

Options :

7614464517. ✖ Increased by two times

7614464518. ✔ Reduced by half

7614464519. ✖ Decreased by two times

7614464520.

✖ No change

Question Number : 131 Question Id : 7614461141 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The distance between lines of action of compression and tension is called

Options :

7614464521. ✖ Depth of neutral axis

7614464522. ✔ Lever arm

7614464523. ✖ Critical depth

7614464524. ✖ Effective depth

Question Number : 132 Question Id : 7614461142 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Identify the true statement:
In case of singly reinforced RC beam, Increasing (fck/fy) ratio

Options :

7614464525. ✖ Increases the neutral axis depth

7614464526. ✖ Decreases the lever arm

7614464527. ✖ Decreases the Balanced percent of tension steel

7614464528. ✔ Increases the Moment of resistance of under reinforced section

Question Number : 133 Question Id : 7614461143 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which condition will satisfy for over reinforced section

Options :

7614464529. ✖ $x_u < x_{umax}$

7614464530. ✔ $x_u > x_{umax}$

7614464531. ✖ $x_u = x_{umax}$

7614464532. ✖ $x_u \leq x_{umax}$

Question Number : 134 Question Id : 7614461144 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The difference between the most probable value of quantity and its observed value is

Options :

7614464533. ✖ True error

7614464534. ✖ Weighted observation

7614464535. ✖ Conditional error

7614464536. ✔ Residual error

Question Number : 135 Question Id : 7614461145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In measuring horizontal angles, the theodolite should be turned

Options :

7614464537. ✖ Anticlockwise from forward station to back station

7614464538. ✖ Anticlockwise from back station to forward station

7614464539. ✖ Clockwise from forward station to back station

7614464540. ✔ Clockwise from back station to forward station

Question Number : 136 Question Id : 7614461146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In order to measure horizontal angle more accurately than a vernier

Options :

7614464541. ✔ Method of repetition is used

7614464542. ✖ Method of reiteration is used

7614464543. ✖ Method of deflection angles is used

7614464544. ✖ Method of double observations is used

Question Number : 137 Question Id : 7614461147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In the prismatic compass

Options :

7614464545. ✖ The magnetic needle moves with the box

7614464546. ✖ The line of the sight does not move with the box

7614464547. ✔ The magnetic needle and graduated circle do not move with the box

7614464548. ✖ The graduated circle is fixed to the box and the magnetic needle always remains in the N-S direction

Question Number : 138 Question Id : 7614461148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The fundamental principle of surveying is to work from the

Options :

7614464549. ✖ Higher level to lower level

7614464550. ✔ Whole to the part

7614464551. ✖ Lower level to higher level

7614464552. ✖ Part to the whole

Question Number : 139 Question Id : 7614461149 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The resection by two point problem as compared to three point problem

Options :

7614464553. ✖ Gives more accurate solution

7614464554. ✖ Takes less time

7614464555. ✔ Requires more labour

7614464556. ✖ Cannot be compared

Question Number : 140 Question Id : 7614461150 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The process of establishing intermediate points between two end points which are not inter visible, using a Theodolite is known as

Options :

7614464557. ✖ Interpolation

7614464558. ✔ Balancing-in

7614464559. ✖ Ranging

7614464560. ✖ Lining - in

Question Number : 141 Question Id : 7614461151 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

With rise of temperature, the sensitivity of a bubble tube

Options :

7614464561. ✔ Decreases

7614464562. ✖ Increases

7614464563. ✖ Remains unaffected

7614464564. ✖ Varies randomly

Question Number : 142 Question Id : 7614461152 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When the magnetic declination is $5^{\circ}20'$ east, the magnetic bearing of the sum at noon will be

Options :

7614464565. ✖ $95^{\circ}20'$

7614464566. ✖ $174^{\circ}40'$

7614464567. ✖ $185^{\circ}20'$

7614464568. ✔ $354^{\circ}40'$

Question Number : 143 Question Id : 7614461153 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Branch of surveying in which the horizontal and vertical distances of points are obtained by instrumental observations are known as

Options :

7614464569. ✖ Hydrographic surveying

7614464570. ✖ Plane table surveying

7614464571. ✔ Tachometric surveying

7614464572. ✖ Chain Surveying

Question Number : 144 Question Id : 7614461154 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Intersection method of detailed plotting is most suitable for

Options :

7614464573. ✖ Plains

7614464574. ✔ Hilly areas

7614464575. ✖ Urban areas

7614464576. ✖ Forests

Question Number : 145 Question Id : 7614461155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Magnetic declination at a place is said to be ____ when magnetic north is east of the true north

Options :

7614464577. ✖ East

7614464578. ✖ West

7614464579. ✔ North

7614464580. ✖ South

Question Number : 146 Question Id : 7614461156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Viscosity of fluid is measured in

Options :

7614464581. ✔ Ns/m^2

7614464582. ✖ N/m^2

7614464583. ✖ m^2/s

7614464584. ✖ m/s

Question Number : 147 Question Id : 7614461157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In case of flow net, the streamlines and potential lines are

Options :

7614464585. ✖ Inclined at 45^0

7614464586. ✖ Parallel to each other

7614464587. ✔ Perpendicular to each other

7614464588. ✖ Inclined at 60^0

Question Number : 148 Question Id : 7614461158 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The head of water over an orifice is H and the coefficient of velocity is Cv, the theoretical velocity of water would be (assume g= Acceleration due to gravity)

Options :

7614464589. ✖ $\sqrt{2gH}$ / Cv

7614464590. ✖ $\sqrt{2gCvH}$

7614464591. ✔ Cv $\sqrt{2gH}$

7614464592. ✖ H $\sqrt{2gCv}$

Question Number : 149 Question Id : 7614461159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of specific weight of a liquid to the specific weight of pure water at standard temperature is called as

Options :

7614464593. ✖ Density of a liquid

7614464594. ✔ Specific gravity of a liquid

7614464595. ✖ Compressibility of the liquid

7614464596. ✖ Surface tension of a liquid

Question Number : 150 Question Id : 7614461160 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the Group A with Group-B.

	Group-A			**Group-B**
a)	Pitot tube		1.	Pressure in pipe
b)	Manometer		2.	Velocity of flow
c)	Venturimeter		3.	Wind velociy
d)	Anemometer		4.	Discharge in pipe

Options :

7614464597. ✖ a-3, b-1, c-4, d-2

7614464598. ✔ a-2, b-1, c-4, d-3

7614464599. ✖ a-4, b-3, c-2, d-1

7614464600. ✖ a-3, b-2, c-1, d-4

Question Number : 151 Question Id : 7614461161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The mercury does not wet the glass, this property of the liquid is known as

Options :

7614464601. ✔ Cohesion

7614464602. ✖ Adhesion

7614464603. ✖ Viscosity

7614464604. ✖ Condensation

Question Number : 152 Question Id : 7614461162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When the pressure intensity at a point is more than the local atmospheric pressure, then the difference of these two pressures is called as

Options :

7614464605. ✖ Guage pressure

7614464606. ✖ Absolute pressure

7614464607. ✔ Positive guage pressure

7614464608. ✖ Vaccum pressure

Question Number : 153 Question Id : 7614461163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Francis turbine is

Options :

7614464609. ✖ An axial flow reaction turbine

7614464610. ✖ A radial flow impulse turbine

7614464611. ✖ An impulse turbine

7614464612. ✔ A radial flow reaction turbine

Question Number : 154 Question Id : 7614461164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Draft tube is used for discharging water from the exit of

Options :

7614464613. ✔ Kaplan turbine

7614464614. ✖ Pelton wheel

7614464615. ✖ Orifice

7614464616. ✖ Mouthpiece

Question Number : 155 Question Id : 7614461165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The water pressure per meter length on a vertical masonry wall of a dam is

Options :

7614464617. ✖ $w * \frac{H}{2}$

7614464618. ✖ $w * H$

7614464619. ✔ $w * H^2/_2$

7614464620. ✖ $w * H^2/_4$

Question Number : 156 Question Id : 7614461166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The term $V^2/2g$ is known as

Options :

7614464621. ✖ Potential energy

7614464622. ✔ Kinetic energy per unit weight

7614464623. ✖ Datum head

7614464624. ✖ Pressure energy per unit weight

Question Number : 157 Question Id : 7614461167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A flow in which each liquid particle has a definite path, and the paths of individual particles do not cross each other is called as

Options :

7614464625. ✖ Steady flow

7614464626. ✖ Uniform flow

7614464627. ✔ Stream line flow

7614464628. ✖ Turbulent flow

Question Number : 158 Question Id : 7614461168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The hydraulic mean depth for a circular pipe of diameter (d) is

Options :

7614464629. ✖ d/2

7614464630. ✖ d/3

7614464631. ✔ d/4

7614464632. ✖ d/6

Question Number : 159 Question Id : 7614461169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A structure constructed on a irrigation canal for the purpose of extracting some of its water (utilizing for some other purposes) is known as

Options :

7614464633. ✖ Fall

7614464634. ✖ Regulator

7614464635. ✖ Dam

7614464636. ✔ Escape

Question Number : 160 Question Id : 7614461170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Science that deals with the physical features and conditions of water on the earth is known as

Options :

7614464637. ✖ Hydrometer

7614464638. ✔ Hydrography

7614464639. ✖ Hydrosphere

7614464640. ✖ Hydrome

Question Number : 161 Question Id : 7614461171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Amount of precipitation is measured by

Options :

7614464641. ✔ Rain gauge

7614464642. ✖ Filters

7614464643. ✖ Osmoscope

7614464644. ✖ Turbidimeter

Question Number : 162 Question Id : 7614461172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of the area of a crop irrigated and the quantity of water required during the entire period of growth is known as

Options :

7614464645. ✖ Delta

7614464646. ✖ Duty

7614464647. ✔ Crop period

7614464648. ✖ Base period

Question Number : 163 Question Id : 7614461173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

High flood discharge in fan shaped catchment in old Bombay state is measured by

Options :

7614464649. ✖ Ryve's Formula

7614464650. ✔ Inglis Formula

7614464651. ✖ Fanning's formula

7614464652. ✖ Dicken's formula

Question Number : 164 Question Id : 7614461174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When the irrigation canal and drain are at the same level, then the cross drainage is _____

Options :

7614464653. ✖ Syphon Aqueduct

7614464654. ✖ Super Passage

7614464655. ✔ Level Crossing

7614464656. ✖ Canal Syphon

Question Number : 165 Question Id : 7614461175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

pH value of water used for irrigation purposes should be

Options :

7614464657. ✖ Between 3 and 6

7614464658. ✔ Between 6 and 8.5

7614464659. ✖ Between 8.5 and 12

7614464660. ✖ Greater than 12

Question Number : 166 Question Id : 7614461176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The width of the meandering belt is

Options :

7614464661. ✔ Transverse distance between the apex point of one curve and apex point on reverse

7614464662. ✖ Transverse distance along the river between tangent point of one curve and tangent points on other curve of same order

7614464663. ✖ Axial distance along the river between tangent point of one curve and tangent point of other curve of same order

7614464664. ✖ Axial distance along the river between apex point of one curve and apex point of reverse curve

Question Number : 167 Question Id : 7614461177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Garret's diagram is a graphical method of designing a channel based on

Options :

7614464665. ✖ Lacey's theory

7614464666. ✔ Kennedy's theory

7614464667. ✖ Gibb's theory

7614464668. ✖ Khosla's theory

Question Number : 168 Question Id : 7614461178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of head recovered to the head put in an outlet is called as

Options :

7614464669. ✔ Efficiency

7614464670. ✖ Sensitivity

7614464671. ✖ Flexibility

7614464672. ✖ Proportionality

Question Number : 169 Question Id : 7614461179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The hydrology cycle is expressed by the equation where

P = Precipitation, E = Evaporation, R = Run off

Options :

7614464673. ✖ $P = E - R$

7614464674. ✔ $P = E + R$

7614464675. ✖ $P = E \times R$

7614464676. ✖ $P = E / R$

Question Number : 170 Question Id : 7614461180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The water content at which plants can no longer extract sufficient water from the soil for growth is called

Options :

7614464677. ✖ Available moisture

7614464678. ✔ Permanent wilting point

7614464679. ✖ Field capacity

7614464680. ✖ Saturation capacity

Question Number : 171 Question Id : 7614461181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The most economical central angle of a constant angle arch dam is approximately

Options :

7614464681. ✖ 180^0

7614464682. ✔ 133^0

7614464683. ✖ 90^0

7614464684. ✖

45^0

Question Number : 172 Question Id : 7614461182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Material generally preferred for highway embankments is

Options :

7614464685. ✔ Granular soil

7614464686. ✖ Organic soil

7614464687. ✖ Silts

7614464688. ✖ Clays

Question Number : 173 Question Id : 7614461183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A Road sign indicating 'No Parking' is

Options :

7614464689. ✖ Warning sign

7614464690. ✖ Prohibitory sign

7614464691. ✖ Informatory sign

7614464692. ✔ Mandatory sign

Question Number : 174 Question Id : 7614461184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The height of high level of the vehicle which is visible to the driver is called

Options :

7614464693. ✖ Clear distance

7614464694. ✔ Sight distance

7614464695. ✖ Visible distance

7614464696. ✖ Safe distance

Question Number : 175 Question Id : 7614461185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Staggered rail joints are generally provided

Options :

7614464697.

✖ On bridges

7614464698. ✔ On curves

7614464699. ✖ In tunnels

7614464700. ✖ In stations

Question Number : 176 Question Id : 7614461186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

'Crossing clearance' is the distance between Crossing Rail and

Options :

7614464701. ✖ Check rail

7614464702. ✖ Tongue rail

7614464703. ✖ Points

7614464704. ✔ Wing rail

Question Number : 177 Question Id : 7614461187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which year did Jayakar committee submit its report

Options :

7614464705. ✖ 1927

7614464706. ✖ 1929

7614464707. ✔ 1928

7614464708. ✖ 1930

Question Number : 178 Question Id : 7614461188 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The arrangements of rails which permit trains to cross another track and also to divert to the other track, is called

Options :

7614464709. ✔ Diamond crossing with double slip

7614464710. ✖ Cross over with double cross

7614464711. ✖ Turnout

7614464712. ✖ Split crossing

Question Number : 179 Question Id : 7614461189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of ruling gradient in plain, as recommended by Indian Roads Congress is:

Options :

7614464713. ✖ 1 in 20

7614464714. ✔ 1 in 30

7614464715. ✖ 1 in 40

7614464716. ✖ 1 in 10

Question Number : 180 Question Id : 7614461190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The super-elevation is

Options :

7614464717. ✔ Directly proportional to the velocity of vehicles

7614464718. ✖ Directly proportional to the width of pavement

7614464719. ✖ Inversely proportional to the velocity of vehicles

7614464720. ✖ Inversely proportional to the width of pavement

Question Number : 181 Question Id : 7614461191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A Water bound macadam road is an example of

Options :

7614464721. ✖ Concrete pavement

7614464722. ✖ Rigid pavement

7614464723. ✔ Flexible pavement

7614464724. ✖ Semi rigid pavement

Question Number : 182 Question Id : 7614461192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The portion of a road surface, which is used by vehicular traffic is known as

Options :

7614464725. ✔ Carriage-way

7614464726. ✖ Shoulder

7614464727. ✖ Subway

7614464728. ✖ Pathway

Question Number : 183 Question Id : 7614461193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Indian Road Congress (IRC) was setup in the year

Options :

7614464729. ✖ 1930

7614464730. ✔ 1934

7614464731. ✖ 1948

7614464732. ✖ 1956

Question Number : 184 Question Id : 7614461194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Most commonly used pump for lifting water in water supply mains with high flow and low pressure requirements is

Options :

7614464733. ✖ Rotator type pump

7614464734. ✖ Reciprocating pump

7614464735. ✖ Centrifugal pump

7614464736. ✔ Axial flow pump

Question Number : 185 Question Id : 7614461195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In slow sand filters, the turbidity of raw water can be removed upto only

Options :

7614464737. ✔ 60 mg/litre

7614464738. ✖ 75 mg/litre

7614464739. ✖ 100 mg/litre

7614464740. ✖ 150 mg/litre

Question Number : 186 Question Id : 7614461196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The specific retention is least in case of

Options :

7614464741. ✖ Clay

7614464742. ✖ Sand

7614464743. ✖ Silt

7614464744. ✔ Coarse gravel

Question Number : 187 Question Id : 7614461197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

B.O.D. of treated water should be

Options :

7614464745. ✔ Nil

7614464746. ✖ 10 ppm

7614464747. ✖ 20 ppm

7614464748. ✖ 30 ppm

Question Number : 188 Question Id : 7614461198 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Population Growth Curve is

Options :

7614464749. ✖ Straight line

7614464750. ✖ Parabolic curve

7614464751. ✖ Circular curve

7614464752. ✔ S-Shaped curve

Question Number : 189 Question Id : 7614461199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

High turbidity of water can be determined by

Options :

7614464753. ✖ Turbidity tube

7614464754. ✔ Jacksons turbidimeter

7614464755. ✖ Baylis turbidimeter

7614464756. ✖ Hellipe turbidimeter

Question Number : 190 Question Id : 7614461200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As per Indian standards, water consumption per capita per day for domestic purpose is

Options :

7614464757. ✖ 85 litres

7614464758. ✖ 100 litres

7614464759. ✖ 115 litres

7614464760. ✔ 135 litres

Question Number : 191 Question Id : 7614461201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Dissolved impurities consists of

Options :

7614464761. ✖ Bacteria

7614464762. ✔ Iron

7614464763. ✖ Fungi

7614464764. ✖ Silt

Question Number : 192 Question Id : 7614461202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The maximum permissible chlorine content for public supplies should be between

Options :

7614464765. ✔ 0.1 to 0.2 ppm

7614464766. ✖ 0.3 to 0.4 ppm

7614464767. ✖ 1.2 to 4.0 ppm

7614464768. ✖ 6.5 to 8.0 ppm

Question Number : 193 Question Id : 7614461203 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In designing a water works for a city to meet water demand for public use a precision about _____ of the total consumption is made

Options :

7614464769. ✖ 5%

7614464770. ✔ 10%

7614464771. ✖ 20%

7614464772. ✖ 30%

Question Number : 194 Question Id : 7614461204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Seasoning of timber is essential to remove

Options :

7614464773. ✔ Sap from timber

7614464774. ✖ Knots from timber

7614464775. ✖ Twisted fibre from timber

7614464776. ✖ Hard part of the timber

Question Number : 195 Question Id : 7614461205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Quick lime is a

Options :

7614464777. ✖ Carbonate of lime

7614464778. ✖ Oxide of Calcium

7614464779. ✔ Product left after calcination of lime stone

7614464780. ✖ Lime treated with water

Question Number : 196 Question Id : 7614461206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

One of the following is not a mineral admixture.

Options :

7614464781. ✖ Fly-ash

7614464782. ✖ Silicafume

7614464783. ✔ Superplasticizer

7614464784. ✖ Slag

Question Number : 197 Question Id : 7614461207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A brick which is half as wide as a full brick, is called

Options :

7614464785. ✖ Mitred closer

7614464786. ✖ Bevelled closer

7614464787. ✖ King closer

7614464788. ✔ Queen closer

Question Number : 198 Question Id : 7614461208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A roof that has slope in four directions is called

Options :

7614464789. ✖ Lean to roof

7614464790. ✖ Gable roof

7614464791. ✔ Hip roof

7614464792. ✖ Flat roof

Question Number : 199 Question Id : 7614461209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Ultimate Strength of Cement is provided by

Options :

7614464793. ✖ Silica

7614464794. ✔ Di-Calcium Silicate

7614464795. ✖ Tri-Calcium Silicate

7614464796. ✖ Tri-Calcium Aluminate

Question Number : 200 Question Id : 7614461210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An assembled product made of Veneers and Adhesives is called as

Options :

7614464797. ✖ Board

7614464798. ✖ Plank

7614464799. ✔ Plywood

7614464800. ✖ Batten