

Question Paper Preview

Question Paper Name :	Agricultural Engineering 14th Sep 2020 Shift1
Subject Name :	Agricultural Engineering
Duration :	180
Total Marks :	200
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Is this Group for Examiner? :	No

Mathematics

Section Number :	1
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	50
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes

Question Number : 1 Question Id : 61097512425 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $\begin{vmatrix} 15-x & 11 & 10 \\ 11-3x & 17 & 16 \\ 7-x & 14 & 13 \end{vmatrix} = 0$ then the value of x is

Options :

1. 6

2. 5

3. 7

4. -6

Question Number : 2 Question Id : 61097512426 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The co-factors of the elements 2,-5 in the matrix $\begin{pmatrix} -1 & 0 & 5 \\ 1 & 2 & -2 \\ -4 & -5 & 3 \end{pmatrix}$ is

Options :

1. 16,3

2. 17,-3

3. 17,3

4. -17,-3

Question Number : 3 Question Id : 61097512427 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

The solution of the following simultaneous linear equations by using Cramer's rule $3x+4y+5z=18$:

$$2x-y+8z=13; \quad 5x-2y+7z=20 \quad \text{is}$$

Options :

1. $-3, -1, 1$

2. $3, 1, 1$

3. $3, 0, 1$

4. $3, 1, -1$

Question Number : 4 Question Id : 61097512428 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

If $A = \begin{pmatrix} 0 & 4 & -2 \\ -4 & 0 & 8 \\ 2 & -8 & x \end{pmatrix}$ is a skew symmetric matrix then the value of x is

Options :

1. 1

2. -8

3. -4

4. 0

Question Number : 5 Question Id : 61097512429 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

The adjoint of the matrix $A = \begin{pmatrix} 1 & 3 & 3 \\ 1 & 4 & 3 \\ 1 & 3 & 4 \end{pmatrix}$ is

Options :

1. $\begin{pmatrix} 0 & 4 & -2 \\ 4 & -2 & 8 \\ 2 & -8 & 0 \end{pmatrix}$

2. $\begin{pmatrix} 7 & -3 & -3 \\ -1 & 1 & 0 \\ -1 & 0 & 1 \end{pmatrix}$

3. $\begin{pmatrix} 7 & 3 & 3 \\ 1 & 1 & 0 \\ 1 & 0 & 1 \end{pmatrix}$

4. $\begin{pmatrix} 5 & 4 & 2 \\ 4 & 2 & 8 \\ 2 & -8 & 0 \end{pmatrix}$

Question Number : 6 Question Id : 61097512430 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

Resolve the rational function $\frac{5x+1}{(x+2)(x-1)}$ into partial fractions

Options :

1. $\frac{3}{x+2} + \frac{2}{x-1}$

$$2. \quad \frac{3}{x+2} - \frac{2}{x-1}$$

$$3. \quad \frac{-3}{x+2} + \frac{2}{x-1}$$

$$4. \quad \frac{3}{x-2} + \frac{2}{x+1}$$

Question Number : 7 Question Id : 61097512431 Question Type : MCQ Display Question
 Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
 Orientation : Vertical

Resolve the rational function $\frac{x^2}{(x^2+1)^2}$ into partial fractions

Options :

$$1. \quad \frac{x}{x^2+1} + \frac{x}{(x^2+1)^2}$$

$$2. \quad \frac{x}{x^2-1} - \frac{x}{(x^2+1)^2}$$

$$3. \quad \frac{x}{x^2+1} - \frac{x}{(x^2-1)^2}$$

$$4. \quad \frac{x}{x^2+1} - \frac{x}{(x^2+1)^2}$$

Question Number : 8 Question Id : 61097512432 Question Type : MCQ Display Question
 Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
 Orientation : Vertical

Suppose that A, B, C are positive and $A + B + C = 90^\circ$ then the value of $\sum \tan A \tan B$ is

Options :

1. -1

2. -2

3. 1

4. 3

Question Number : 9 Question Id : 61097512433 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\cos 100^\circ \cos 40^\circ + \sin 100^\circ \sin 40^\circ$ is

Options :

1. $\frac{1}{2}$

2. $-\frac{1}{2}$

3. $\frac{1}{4}$

4. $\frac{1}{8}$

Question Number : 10 Question Id : 61097512434 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $\frac{\cos \alpha}{a} = \frac{\sin \alpha}{b}$ then the value of $a \cos 2\alpha + b \sin 2\alpha$ is

Options :

1. $-a$

2. b

3. a

4. $-a$

Question Number : 11 Question Id : 61097512435 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $x + \frac{1}{x} = 2 \cos \theta$ then the value of $x^3 + \frac{1}{x^3}$ is

Options :

1. $2 \cos 3\theta$

2. $2 \cos 2\theta$

3. $3 \cos 3\theta$

4. $2 \sin 3\theta$

Question Number : 12 Question Id : 61097512436 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $\sin x + \sin y = \frac{1}{4}$ and $\cos x + \cos y = \frac{1}{3}$ then the value of $\tan\left(\frac{x+y}{2}\right)$ is

Options :

1. $-\frac{3}{4}$

2. $\frac{5}{4}$

3. $\frac{7}{4}$

4. $\frac{3}{4}$

Question Number : 13 Question Id : 61097512437 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The general solution for $\sqrt{3}\cos\theta = \sin\theta$ is

Options :

1. $-n\pi + \frac{\pi}{3}$

2. $n\pi + \frac{\pi}{3}$

3. $n\pi - \frac{\pi}{3}$

4. $n\pi + \frac{2\pi}{3}$

Question Number : 14 Question Id : 61097512438 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The common solution for $\cos\theta = -\frac{1}{\sqrt{2}}$, $\tan\theta = -1$ is

Options :

1. $n\pi + \frac{2\pi}{3}$

2. $2n\pi + \frac{5\pi}{3}$

3. $5n\pi + \frac{\pi}{3}$

4. $2n\pi + \frac{3\pi}{4}$

Question Number : 15 Question Id : 61097512439 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If x is an acute angle and $\sin(x + 10^\circ) = \cos(3x - 68^\circ)$ then the value of x is

Options :

1. -37°

2. 37°

3. 38°

4. 10°

Question Number : 16 Question Id : 61097512440 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\tan^{-1}(2) + \tan^{-1}(3)$ is

Options :

1. $\frac{3\pi}{4}$

2. $\frac{3\pi}{5}$

3. $\frac{5\pi}{4}$

4. $\frac{\pi}{4}$

Question Number : 17 Question Id : 61097512441 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\cos \left[\sin^{-1} \left(\frac{1}{2} \right) + \cos^{-1} \left(-\frac{\sqrt{3}}{2} \right) \right]$ is

Options :

1. 0

2. 1

3. 3

4. -1

Question Number : 18 Question Id : 61097512442 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The modulus of the complex number $(-1 - \sqrt{3}i)$ is

Options :

1. 1

2. 6

3. 2

4. 4

Question Number : 19 Question Id : 61097512443 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The value of $\left(\frac{\sqrt{3}}{2} + \frac{i}{2}\right)^5 - \left(\frac{\sqrt{3}}{2} - \frac{i}{2}\right)^5$ is

Options :

1. i

2. $-i$

3. $2i$

4. $-3i$

Question Number : 20 Question Id : 61097512444 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The radius of the circle of the equation $x^2 + y^2 - 4x - 8y - 41 = 0$ is

Options :

1. $\sqrt{31}$

2. $\sqrt{41}$

3. $\sqrt{71}$

4. $\sqrt{61}$

Question Number : 21 Question Id : 61097512445 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If the line $2y = 5 + k$ is a tangent to the parabola $y^2 = 6x$ then the value of k is

Options :

1. $\frac{2}{5}$

2.

$\frac{3}{5}$

3. $\frac{6}{5}$

4. $\frac{7}{5}$

Ans : no correct option

Question Number : 22 Question Id : 61097512446 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The length of latus rectum of the ellipse $9x^2 + 16y^2 = 144$ is

Options :

1. $\frac{7}{2}$

2. $\frac{9}{2}$

3. $\frac{3}{2}$

4. $\frac{5}{2}$

Question Number : 23 Question Id : 61097512447 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The centre of the hyperbola $4x^2 - 5y^2 - 16x + 10y + 31 = 0$ is

Options :

1. $(2,1)$
2. $(3,1)$
3. $(-2,1)$
4. $(2,-1)$

Question Number : 24 Question Id : 61097512448 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The angle between two tangents drawn from the point $(1,4)$ to the parabola $y^2 = 12x$ is

Options :

1. $\tan^{-1}(2)$
2. $\tan^{-1}(3)$
3. $\tan^{-1}(5)$
4. $\tan^{-1}\left(\frac{1}{2}\right)$

Question Number : 25 Question Id : 61097512449 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The length of the tangent from $(1,3)$ to the circle $x^2 + y^2 - 2x + 4y - 11 = 0$ is

Options :

1. -3

2. 3

3. 5

4. 4

Question Number : 26 Question Id : 61097512450 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\lim_{x \rightarrow 0} \left(\frac{\sqrt{1+x}-1}{x} \right)$ is

Options :

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

2. $-\frac{1}{3}$

3. $\frac{1}{5}$

4. $\frac{1}{2}$

Question Number : 27 Question Id : 61097512451 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The derivative of $f(x) = \frac{a-x}{a+x}$ ($x \neq -a$) is

Options :

1. $\frac{-2a}{(a+x)^2}$

2. $\frac{2a}{(a+x)^2}$

3. $\frac{-2a}{(a-x)^2}$

4. $\frac{2a}{(a-x)^2}$

Question Number : 28 Question Id : 61097512452 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $x = a \left[\cos t + \log \left(\tan \frac{t}{2} \right) \right]$, $y = a \sin t$ then $\frac{dy}{dx}$ is

Options :

1. $-\tan t$

2. $\tan t$

3. $\tan t + \sin t$

4. $\sin t$

Question Number : 29 Question Id : 61097512453 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

If an error of 3% occurs in measuring the side of a cube then the percentage error in its volume is

Options :

1. -9

2. 7

3. 8

4. 9

Question Number : 30 Question Id : 61097512454 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

The slope of the tangent to the curve $y = 5x^2$ at the point $x = -1$ is

Options :

1. 10

2. 7

3. -10

4. -9

Question Number : 31 Question Id : 61097512455 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

The angle between the curves $xy = 2$ and $x^2 + 4y = 0$ is

Options :

1. $-\tan^{-1}(3)$

2. $\tan^{-1}(3)$

3. $\sin^{-1}(3)$

4. $\cos^{-1}(3)$

Question Number : 32 Question Id : 61097512456 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical

For all values of a and b , $f(x) = x^3 + 3ax^2 + 3a^2x + 3a^3 + b$ is

Options :

1. Increasing only

2. Decreasing only

3. Increasing and Decreasing

4. maximum

Question Number : 33 Question Id : 61097512457 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The minimum value of $f(x) = 4x^2 - 4x + 11$ for any x in R is

Options :

1. -10 at $x = \frac{1}{2}$

2. 10 at $x = -\frac{1}{2}$

3. 8 at $x = \frac{1}{2}$

4. 10 at $x = \frac{1}{2}$

Question Number : 34 Question Id : 61097512458 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $z = \log(\tan x + \tan y)$ then $(\sin 2x) \frac{\partial z}{\partial x} + (\sin 2y) \frac{\partial z}{\partial y}$ is

Options :

1. 2

2. -2

3. 4

4. ⁶

Question Number : 35 Question Id : 61097512459 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $u = \tan^{-1}\left(\frac{x^2+y^2}{x+y}\right)$ then $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y}$ is

Options :

1. $-\frac{1}{2} \sin 2u$

2. $-\frac{1}{2} \cos 2u$

3. $\frac{1}{2} \sin 2u$

4. $\frac{1}{2} \tan 2u$

Question Number : 36 Question Id : 61097512460 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The value of $\int \sin^2 x \, dx$ on R is

Options :

1. $\frac{x}{2} + \frac{\sin 2x}{4} + c$

2. $\frac{x}{2} - \frac{\sin 3x}{4} + c$

3. $\frac{x}{2} - \frac{\cos 2x}{4} + c$

4. $\frac{x}{2} - \frac{\sin 2x}{4} + c$

Question Number : 37 Question Id : 61097512461 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The value of $\int x\sqrt{x} dx$ on $(0,\infty)$ is

Options :

1. $\frac{2}{5}x^{5/2} + c$

2. $-\frac{2}{5}x^{5/2} + c$

3. $\frac{2}{5}x^{-5/2} + c$

4. $\frac{2}{3}x^{3/2} + c$

Question Number : 38 Question Id : 61097512462 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The value of $\int_0^2 \sqrt{4-x^2} dx$ is

Options :

1.

$$\frac{\pi}{2}$$

2. $-\frac{\pi}{2}$

3. π

4. $-\pi$

Question Number : 39 Question Id : 61097512463 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\int_{\pi/6}^{\pi/3} \frac{\sqrt{\sin x}}{\sqrt{\sin x} + \sqrt{\cos x}} dx$ is

Options :

1. $\frac{\pi}{2}$

2. $\frac{\pi}{12}$

3. $-\frac{\pi}{12}$

4. π

Question Number : 40 Question Id : 61097512464 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The area enclosed by the curves $y = 3x$ and $y = 6x - x^2$ in square units is

Options :

1. $\frac{7}{2}$

2. $\frac{5}{2}$

3. $\frac{3}{2}$

4. $\frac{9}{2}$

Question Number : 41 Question Id : 61097512465 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\int \frac{e^x(1+x)}{(2+x)^2} dx$ on $I \in R \setminus \{-2\}$ is

Options :

1. $\frac{e^x}{2+x} + C$

2. $-\frac{e^x}{2+x} + C$

3. $\frac{e^x}{2-x} + C$

4. $\frac{e^{3x}}{2+x} + C$

Question Number : 42 Question Id : 61097512466 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\int \frac{1}{1+4x^2} dx$ on $\mathbb{R}$ is

Options :

1. $-\frac{1}{2}\tan^{-1}(2x) + c$

2. $\frac{1}{2}\tan^{-1}(5x) + c$

3. $-\frac{1}{2}\tan^{-1}(x) + c$

4. $\frac{1}{2}\tan^{-1}(2x) + c$

Question Number : 43 Question Id : 61097512467 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\int \frac{2x^2-5x+1}{x^2(x^2-1)} dx$ is

Options :

1. $\frac{1}{x} + \log \left| \frac{x^5}{(x^2-1)(x+1)^3} \right| + C$

2. $\frac{1}{x} - \log \left| \frac{x^5}{(x^2-1)(x+1)^3} \right| + C$

3. $\frac{1}{x} + \log \left| \frac{x^5}{(x^2+1)(x+1)^3} \right| + C$

4. $\frac{1}{x} - \log \left| \frac{x^5}{(x^2+1)(x+1)^3} \right| + C$

Question Number : 44 Question Id : 61097512468 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The solution of $\frac{dy}{dx} = \frac{x-2y+1}{2x-4y}$ is

Options :

1. $(x+2y)^2 + 2x = c$

2. $(x-2y)^2 - 2x = c$

3. $(x-2y)^2 + 2x = c$

4. $(x-4y)^2 + 2x = c$

Question Number : 45 Question Id : 61097512469 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The solution of the homogeneous differential equation $xy^2 dy - (x^3 + y^3) dx = 0$ is

Options :

1. $y^3 = -3x^3 \log(xc)$

2. $y^3 = 3x^3 \log(x/c)$

3. $y^3 = 3x^3 \log(x^2 c)$

4. $y^3 = 3x^3 \log(xc)$

Question Number : 46 Question Id : 61097512470 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The solution of the linear differential equation $\frac{dy}{dx} + y \cot x = \cos x$ is

Options :

1. $y - \sin x = -\frac{\cos 2x}{4} + c$

2. $y/\sin x = -\frac{\cos 2x}{4} + c$

3. $y \sin x = -\frac{\cos 2x}{4} + c$

4. $y \sin x = \frac{\cos 2x}{4} + c$

Question Number : 47 Question Id : 61097512471 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The solution of Bernoulli's equation $x^3 \frac{dy}{dx} - x^2 y = -y^4 \cos x$ is

Options :

1. $\frac{x^2}{y^3} = 3 \sin x + c$

2. $\frac{x^2}{y^3} = -3 \sin x + c$

3. $\frac{x^2}{y^3} = 3 \sin x^3 + c$

4. $\frac{x^4}{y^4} = 3 \sin x + c$

Question Number : 48 Question Id : 61097512472 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The particular integral for the differential equation $(D^2 + 3D + 2)y = 12x^2$ is

Options :

1. $6x^2 + 18x - 21$

2. $6x^2 - 18x + 21$

3. $-6x^2 + 18x - 21$

4. $6x^2 + 18x + 21$

Question Number : 49 Question Id : 61097512473 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The particular integral for the differential equation $6\frac{d^2y}{dx^2} + 17\frac{dy}{dx} + 12y = e^{-x}$ is

Options :

1. $-e^{-x}$

2. e^x

3. e^{-2x}

4. e^{-x}

Question Number : 50 Question Id : 61097512474 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The particular integral for the differential equation $(D^2 - 4D + 13)y = \cos 2x$ is

Options :

1. $\frac{1}{145}(9 \cos 2x - 8 \sin 2x)$

2. $\frac{1}{145}(9 \cos 2x + 8 \sin 2x)$

3. $\frac{1}{145}(-9 \cos 2x - 8 \sin 2x)$

4. $\frac{1}{135}(9 \cos 2x - 8 \sin 2x)$

Physics

Section Number :	2
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes

Question Number : 51 Question Id : 61097512475 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Young's modulus of steel is $2 \times 10^{11} \text{ N m}^{-2}$. Its value in dyne cm^{-2} is

Options :

1. 2×10^{12}

2. 2×10^{10}

3. 2×10^8

4. 2×10^{-11}

Question Number : 52 Question Id : 61097512476 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Dimension of velocity gradient is

Options :

1. $[M^0 L^0 T^{-1}]$

2. $[ML^{-1}T^{-1}]$

3. $[M^0 LT^{-1}]$

4. $[ML^0 T^{-1}]$

Question Number : 53 Question Id : 61097512477 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Unit vector parallel to the resultant of vectors $A = 4\hat{i} - 3\hat{j}$ and $B = 8\hat{i} + 8\hat{j}$ will be

Options :

1. $\frac{24\hat{i} + 5\hat{j}}{13}$

2. $\frac{12\hat{i} + 5\hat{j}}{13}$

$$\frac{6\hat{i}+5\hat{j}}{13}$$

3.

$$\frac{12\hat{i}-5\hat{j}}{13}$$

4.

Question Number : 54 Question Id : 61097512478 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The resultant of two forces $3P$ and $2P$ is R . If the first force is doubled, then the resultant is also doubled. The angle between the two forces is

Options :

1. 60°

2. 120°

3. 30°

4. 135°

Question Number : 55 Question Id : 61097512479 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A particle is projected vertically upward with a speed of 40 m/s , then the velocity of the particle 2 seconds before it reaches the maximum height is (Take $g = 10 \text{ m/s}^2$)

Options :

1.

20 m s²

2. 4.2 m s²

3. 9.8 m s²

4. 10 m s²

Question Number : 56 Question Id : 61097512480 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A car moving with constant acceleration covered the distance between two points 60 m apart in 6 s. Its speed as it passes the second point was 15 m s. The acceleration is

Options :

1. $\frac{1}{3} \text{ ms}^{-2}$

2. $\frac{2}{3} \text{ ms}^{-2}$

3. $\frac{3}{5} \text{ ms}^{-2}$

4. $\frac{5}{3} \text{ ms}^{-2}$

Question Number : 57 Question Id : 61097512481 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A stone is thrown vertically upwards. When stone is at half of its maximum height, its speed is 10 ms^{-1} ; then the maximum height attained by the stone is ($g=10 \text{ m s}^{-2}$)

Options :

1. 25m

2. 10m

3. 15m

4. 20m

Question Number : 58 Question Id : 61097512482 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Identify the correct statement.

Options :

1. Static friction depends on the area of contact.

2. Kinetic friction depends on the area of contact.

3. Coefficient of static friction does not depend on the area of the surface in contact.

4. Coefficient of kinetic friction is less than the coefficient of static friction.

Question Number : 59 Question Id : 61097512483 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The coefficient of friction between the tyres and the road is 0.25. The maximum speed with which a car can be driven round a curve of radius 40 m without skidding is (assume $g=10\text{ m s}^{-2}$)

Options :

1. 40 ms^{-1}
2. 20 ms^{-1}
3. 15 ms^{-1}
4. 10 ms^{-1}

Question Number : 60 Question Id : 61097512484 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

During a projectile motion, if the maximum height is equal to the horizontal range, then the angle of projection with the horizontal is

Options :

1. $\tan^{-1}(1)$
2. $\tan^{-1}(2)$
3. $\tan^{-1}(4)$

4. $\tan^{-1}(3)$

Question Number : 61 Question Id : 61097512485 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The potential energy of a certain spring when stretched through a distance S is 10 joule. The amount of work (in joule) that must be done on this spring to stretch it through additional distance S will be

Options :

1. 30

2. 40

3. 10

4. 20

Question Number : 62 Question Id : 61097512486 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A machine gun fires six bullets per second into a target. The mass of each bullet is 3 g and the speed is 500 m/s. The power delivered to the bullets is

Options :

1. 1.5 kW

2. 2.25 kW

3. 0.75 kW

4. 375 kW

Question Number : 63 Question Id : 61097512487 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is the cheapest renewable energy ?

Options :

1. Solar energy

2. Wind energy

3. Hydel energy

4. Nuclear energy

Question Number : 64 Question Id : 61097512488 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The maximum velocity of particle executing simple harmonic motion with an amplitude of 7 mm is 4.4 m/s. The time period of oscillation is

Options :

1. 100 s

2. 10 s

3. 0.1 s

4. 0.01 s

Question Number : 65 Question Id : 61097512489 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Two waves of lengths 50 cm and 51 cm produced 12 beats per second. The velocity of sound is

Options :

1. 340 m/s

2. 331 m/s

3. 306 m/s

4. 360 m/s

Question Number : 66 Question Id : 61097512490 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The apparent frequency of the whistle of an engine changes in the ratio 9:8 as the engine passes a stationary observer. If the velocity of the sound is 340 ms^{-1} , then the velocity of the engine is

Options :

1. 40 m/s

2. 20 m/s

3. 340 m/s

4. 180 m/s

Question Number : 67 Question Id : 61097512491 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Quality of sound is decided by

Options :

1. loudness

2. intensity

3. number of overtones

4. frequency

Question Number : 68 Question Id : 61097512492 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Inaudibility limit is

Options :

1. one hundredth of initial intensity

2. one tenth of initial intensity
3. one thousandth of initial intensity
4. one millionth of initial intensity

Question Number : 69 Question Id : 61097512493 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A Carnot's engine operates with source at 127°C and sink at 27°C . If the source supplies 40 kJ of heat energy, the work done by the engine is

Options :

1. 30 kJ
2. 10 kJ
3. 4 kJ
4. 1 kJ

Question Number : 70 Question Id : 61097512494 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A monoatomic gas initially at 17°C is suddenly compressed to one eighth of its original volume. The temperature after compression is

Options :

1. 1160K
2. 36.25K
3. 2320K
4. 887K

Question Number : 71 Question Id : 61097512495 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Two cylinders of volumes 20 cc and 30 cc have gases at pressures 40 cm and 50 cm of Hg under the same temperature. If they are connected by a very narrow pipe the pressure in cm of Hg will be

Options :

1. 45
2. 50
3. 46
4. 15

Question Number : 72 Question Id : 61097512496 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In an adiabatic expansion, a gas does 25J of work while in an adiabatic compression 100J of work is done on a gas. The change of internal energy in the two processes respectively are

Options :

1. 25J and -100J
2. - 25J and 100J
3. -25J and -100J
4. 25J and 100J

Question Number : 73 Question Id : 61097512497 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The volume of one mole of an ideal gas changes from V to 2V at temperature of 300 K. If R is universal gas constant, then work done in this process is

Options :

1. $300R\ln 2$
2. $600R\ln 2$
3. $300\ln 2$
4. $600\ln 2$

Question Number : 74 Question Id : 61097512498 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The maximum kinetic energy of the photoelectrons emitted from a surface is dependent on the

Options :

1. intensity of incident radiation
2. potential of the collector electrode
3. frequency of incident radiation
4. angle of incident of radiation of the surface

Question Number : 75 Question Id : 61097512499 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In an optical fibre, relation between refractive index of core (n_1) and refractive index of cladding (n_2) is

Options :

1. $n_1 > n_2$
2. $n_1 < n_2$
3. $n_1 = n_2$
4. $n_1 \ll n_2$

Section Number :	3
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Display Number Panel :	Yes
Group All Questions :	Yes
Mark As Answered Required? :	Yes

Question Number : 76 Question Id : 61097512500 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The nucleus consists of

Options :

1. Proton and electron
2. Proton and Neutron
3. Proton and Duterium
4. Proton and photan

Question Number : 77 Question Id : 61097512501 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The shape of P-Orbital is

Options :

1. Spherical

2. Dumbbell
3. Double Dumbbell
4. Oval

Question Number : 78 Question Id : 61097512502 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The maximum number of electrons that a f-orbital can accommodate is

Options :

1. 2
2. 6
3. 10
4. 14

Question Number : 79 Question Id : 61097512503 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In NaCl formation Sodium is donating ----- electrons

Options :

1. 0

2. 2

3. 1

4. 3

Question Number : 80 Question Id : 61097512504 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

O₂ molecule contains

Options :

1. Covalent bond

2. Ionic bond

3. Hydrogen bond

4. Metallic bond

Question Number : 81 Question Id : 61097512505 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Avagadro Number is

Options :

1. 6.023×10^{-23}

2. 6.023×10^{23}

3. 60.23×10^{23}

4. 6.023×10^{25}

Question Number : 82 Question Id : 61097512506 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The normality of the solution obtained by dissolving 8 gm of NaOH in 1 Litre is

Options :

1. 2N

2. 0.2N

3. 0.25N

4. 0.02N

Question Number : 83 Question Id : 61097512507 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Molecular weight of MgSO_4 is

Options :

1. 120

2. 121

3. 119

4. 122

Question Number : 84 Question Id : 61097512508 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A Lewis base is a substance which

Options :

1. Accept protons
2. Accept a lone pair of electrons
3. Donate protons
4. Donate a lone pair of electrons

Question Number : 85 Question Id : 61097512509 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

P^H of a solution is 4.5. the solution is

Options :

1. Basic
2. Acidic

3. Neutral
4. Amphoteric

Question Number : 86 Question Id : 61097512510 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

One Faraday is equal to

Options :

1. 96485 C
2. 98485 C
3. 96465 C
4. 96585 C

Question Number : 87 Question Id : 61097512511 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Common electrolyte used in the salt bridge is

Options :

1. NaOH
2. NaCl

3. KCl
4. KOH

Question Number : 88 Question Id : 61097512512 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

SI Units of Electrical conductivity are

Options :

1. Seimens per meter
2. Seimens per centimeter
3. Seimens per millimeter
4. Seimens per kilometer

Question Number : 89 Question Id : 61097512513 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Calculate the standard e.m.f of the Zn-Cu cell, if the cell is represented as $\text{Zn} \mid \text{Zn}^{2+} \parallel \text{Cu}^{2+} \mid \text{Cu}$ ($E^0_{\text{Zn}^{2+}/\text{Zn}} = 0.86$ and ($E^0_{\text{Cu}^{2+}/\text{Cu}} = 0.34$).

Options :

1. 1.20V
2. 0.52V

3. -1.20V

4. -0.11V

Question Number : 90 Question Id : 61097512514 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Permanent Hardness is caused due to

Options :

1. Carbonates and Bicarbonates

2. Carbonates and Sulphates

3. Chlorides and Sulphates

4. Chlorides and Carbonates

Question Number : 91 Question Id : 61097512515 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Permutit is chemically

Options :

1. Sodium Silicate

2. Aluminium Silicate

3. Hydrated Sodium alumino silicate
4. Calcium silicate

Question Number : 92 Question Id : 61097512516 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The anion exchange resin possesses

Options :

1. Acidic group
2. Basic group
3. Amphoteric group
4. Benzo group

Question Number : 93 Question Id : 61097512517 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Chemically the rust is

Options :

1. Fe_2O_3
2. $\text{Fe}_2\text{O}_3, \text{FeO}$

3. $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$

4. $\text{Fe}_2\text{O}_3 \cdot \text{NH}_3$

Question Number : 94 Question Id : 61097512518 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The gradual loss of a metal by chemical or electrochemical action of environment is called

Options :

1. Corrosion

2. Caustic embrittlement

3. Priming

4. foaming

Question Number : 95 Question Id : 61097512519 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which of the following is a thermosetting plastic ?

Options :

1. Bakelite

2. Polystyrene

3. Polythene
4. Nylon

Question Number : 96 Question Id : 61097512520 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Tetra Fluoro Ethane is a monomer of

Options :

1. Teflon
2. Nylon
3. Styrene
4. Rubber

Question Number : 97 Question Id : 61097512521 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Buna-N is a copolymer of

Options :

1. Butadiene and Styrene
2. Butadiene and Acrylonitrile

3. Butadiene and Isoprene
4. Formaldehyde and Styrene

Question Number : 98 Question Id : 61097512522 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Main constituent of Producer gas is

Options :

1. $\text{CO} + \text{N}_2$
2. $\text{CO} + \text{H}_2$
3. $\text{CO} + \text{CO}_2$
4. $\text{CO}_2 + \text{H}_2$

Question Number : 99 Question Id : 61097512523 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Ozone layer is present at

Options :

1. Stratosphere
2. Mesosphere
- 3.

Thermosphere

4. Atmosphere

Question Number : 100 Question Id : 61097512524 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Acid Rain is caused due to

Options :

1. Chloro Fluoro Carbons

2. Methane

3. Oxides of Sulphur and Nitrogen

4. Carbon monoxide

Agricultural Engineering

Section Number :	4
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100
Display Number Panel :	Yes
Group All Questions :	Yes

Mark As Answered Required? :

Yes

Question Number : 101 Question Id : 61097512525 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Improved form of marking gauge which has two scribing pins is

Options :

1. Simple scribing block
2. Scriber
3. Scribing knife
4. Mortise gauge

Question Number : 102 Question Id : 61097512526 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Hacksaw blade thickness is

Options :

1. 0.5 mm
2. 0.6 mm
3. 0.7 mm
4. 0.8 mm

Question Number : 103 Question Id : 61097512527 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Example for permanent mould casting is

Options :

1. Investment
2. Gravity die
3. Shell
4. Sand

Question Number : 104 Question Id : 61097512528 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Tool post of lathe is located on the top of

Options :

1. Tail piece
2. Saddle
3. Apron
4. Compound rest

Question Number : 105 Question Id : 61097512529 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Following mechanism makes the carriage to engage or disengage with lead screw

Options :

1. feeding mechanism
2. Half-nut mechanism
3. Gear mechanism
4. Screw mechanism

Question Number : 106 Question Id : 61097512530 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

To machine flat surfaces production, suitable milling operation is

Options :

1. Form milling
2. End milling
3. Plain milling
4. Profile milling

Question Number : 107 Question Id : 61097512531 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Kinetic viscosity of liquid having 5 poise viscosity and 0.8 specific gravity is

Options :

1. 6.25×10^{-4} stokes
2. 6.25×10^{-2} stokes
3. 6.25×10^{-3} stokes
4. $6.25 \times 10^{-4} \text{ m}^2/\text{s}$

Question Number : 108 Question Id : 61097512532 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Total pressure on an immersed liquid surface at an angle θ with the liquid surface is

Options :

1. $wA\bar{x}$
2. $wA\bar{x} \sin \theta$
3. $wA\bar{x} \cos \theta$
4. $wA\bar{x} \tan \theta$

Question Number : 109 Question Id : 61097512533 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A flow whose streamline may be represented by a straight line flow is known as

Options :

1. Stream function
2. One-dimensional flow
3. Incompressible flow
4. Unsteady flow

Question Number : 110 Question Id : 61097512534 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The head of liquid causing discharge through drowned orifice under pressure between connecting vessels is

Options :

1. Difference of liquid levels
2. Difference of pressure heads
3. Difference of liquid levels + Difference of pressure heads
4. Difference of liquid levels - Difference of pressure heads

Question Number : 111 Question Id : 61097512535 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A 3000 m³ water tank having 1.5 m wide rectangular notch and the height of the water above the sill is 1 m. The value of C_{dL} 0.61. The time needed to empty the tank is

Options :

1. 1111 s

2. 2222 s

3. 3333 s

4. 4444 s

Question Number : 112 Question Id : 61097512536 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Wetted perimeter of trapezoidal channel of side slopes 1:1.5 with bottom width 1.5 m and

depth of flow 2.5 m is

Options :

1. 6.8 m

2. 6.0 m

3. 9.4 m

4. 10.5 m

Question Number : 113 Question Id : 61097512537 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Refrigeration system works on which law of thermodynamics ?

Options :

1. Zeroth
2. First
3. Second
4. Third

Question Number : 114 Question Id : 61097512538 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Solid fuel used for generation of thermal power is

Options :

1. Wood
2. Charcoal
3. Peat
4. Lignite

Question Number : 115 Question Id : 61097512539 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Internal energy of a perfect gas is a function of

Options :

1. Volume
2. Pressure
3. Enthalpy
4. Temperature

Question Number : 116 Question Id : 61097512540 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Compression ratio of diesel engine is

Options :

1. 14:1 to 22:1
2. 5:1 to 8:1
3. 10:1 to 19:1
4. 4:1 to 10:1

Question Number : 117 Question Id : 61097512541 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Primary winding of ignition coil is made of copper wire of diameter

Options :

1. 0.8 mm

2. 0.6 mm

3. 1.0 mm

4. 0.9 mm

Question Number : 118 Question Id : 61097512542 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which of the following is not used to measure the distance?

Options :

1. Tape

2. Pacing

3. Pedometer

4. Barometer

Question Number : 119 Question Id : 61097512543 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Fore and back bearings of a line differ exactly by

Options :

1. 60°

2. 90°
3. 180°
4. 360°

Question Number : 120 Question Id : 61097512544 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Instrument used in measuring distance is

Options :

1. Offset rods
2. Whites
3. Plumb bob
4. Chain

Question Number : 121 Question Id : 61097512545 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Compass is based on the following method of traversing

Options :

1. By the chain angles
2. By the free or loose needle method

3. By the fast needle method
4. By rake angle

Question Number : 122 Question Id : 61097512546 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In levelling, which denotes the shifting of the level?

Options :

1. Back sight
2. Fore sight
3. Change point
4. Bench Mark

Question Number : 123 Question Id : 61097512547 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A curve followed by another curve having the centre in the opposite side is called as a

Options :

1. Reverse curve
2. Simple curve

3. Compound curve
4. Transition curve

Question Number : 124 Question Id : 61097512548 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Method of interpolation adopted for greater accuracy in drawing of contour map is

Options :

1. Estimation
2. Graphical
3. Arthimatical calculation
4. Cross-sectional

Question Number : 125 Question Id : 61097512549 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Turning of the telescope of the Theodolite in clock-wise direction about it's vertical axis in a horizontal plane is called

Options :

1. Left swing
2. Right swing

3. Plunging
4. Face change

Question Number : 126 Question Id : 61097512550 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If main scale reading of theodolite is $344^{\circ}-40'$ and vernier division is 16, the measured angle is

Options :

1. $345^{\circ}-40'-20''$
2. $344^{\circ}-40'-20''$
3. $344^{\circ}-45'-20''$
4. $345^{\circ}-45'-20''$

Question Number : 127 Question Id : 61097512551 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If angles with theodolite are taken in direct and inverted position, then it is called as

Options :

1. Index error
2. Swinging

3. Double sighting
4. Centering

Question Number : 128 Question Id : 61097512552 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Measure of the sharpness of the corners of the solid is

Options :

1. Circularity
2. Sphericity
3. Linearity
4. Roundness

Question Number : 129 Question Id : 61097512553 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Time of retardation compared to time for total strain, in case of creep is about

Options :

1. 63%
2. 37%
3. 100%

4. 0%

Question Number : 130 Question Id : 61097512554 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For a free flowing bulk solid, the flow function (FF) value is

Options :

1. $FF < 2$
2. $4 > FF > 2$
3. $10 > FF > 4$
4. $FF > 10$

Question Number : 131 Question Id : 61097512555 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Recommended speed of belt for carrying grain derivatives is

Options :

1. 3.5 m/s
2. 2.8 m/s
3. 2.5 m/s

4. 2.0 m/s

Question Number : 132 Question Id : 61097512556 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Best drum screen cleaner is

Options :

1. Concentric
2. Series consecutive
3. Parallel consecutive
4. Eccentric

Question Number : 133 Question Id : 61097512557 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Centre of gravity of an equilateral triangle with each side equal to 'a' cm is at which

distance from any of three sides

Options :

1. $\frac{a\sqrt{3}}{2}$

2. $\frac{a\sqrt{2}}{3}$

3. $\frac{a}{2\sqrt{3}}$

4. $\frac{a}{3\sqrt{2}}$

Question Number : 134 Question Id : 61097512558 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If F_1 and F_2 are two forces acting at a point 'O' at an angle α then the resultant is

Options :

1. $R = \sqrt{(F_1^2 + F_2^2 + 2 F_1 F_2 \cos(90 - \alpha))}$

2. $R = \sqrt{(F_1^2 + F_2^2 - 2 F_1 F_2 \cos(90 + \alpha))}$

3. $R = \sqrt{(F_1^2 + F_2^2 - 2 F_1 F_2 \cos \alpha)}$

4. $R = \sqrt{(F_1^2 + F_2^2 + 2 F_1 F_2 \cos \alpha)}$

Question Number : 135 Question Id : 61097512559 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Load lifted/effort applied is called as

Options :

1. Velocity ratio

2. Mechanical advantage
3. Pitch
4. Effort

Question Number : 136 Question Id : 61097512560 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A combination of kinematic pairs, joined in such a way that the relative motion between the links is completely constrained, is called as

Options :

1. Structure
2. Mechanism
3. Kinematic chain
4. Inversion

Question Number : 137 Question Id : 61097512561 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Moment of inertia of a rectangle of width 'b' and depth d about the base AB is

Options :

$$1. \quad I_{AB} = \frac{rd^2b^2}{32}$$

$$2. \quad I_{AB} = \frac{rd^2b}{64}$$

$$3. \quad I_{AB} = \frac{bd^3}{3}$$

$$4. \quad I_{AB} = \frac{bd^3}{12}$$

Question Number : 138 Question Id : 61097512562 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Separation of dry and wet grains is possible with

Options :

1. Inclined belt
2. Concentric drum
3. Indented disc
4. Pneumatic separator

Question Number : 139 Question Id : 61097512563 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Fineness is represented by whole numbers of

Options :

1. 1-10
2. 1-13
3. 1-16
4. 1-20

Question Number : 140 Question Id : 61097512564 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If the material is passed only once through equipment, then the process of grinding is

Options :

1. Closed circuit
2. Open circuit
3. Free crushing
4. Choke feeding

Question Number : 141 Question Id : 61097512565 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Filter aid increases

Options :

1. Resistance of cake
2. Porosity of cake
3. Density of cake
4. Temperature of cake

Question Number : 142 Question Id : 61097512566 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Air velocity to keep the grains in suspension is

Options :

1. 15-30 m/s
2. 20-35 m/s
3. 30-40 m/s
4. 35-55 m/s

Question Number : 143 Question Id : 61097512567 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In centrifugal dehusker, the rotational speed of impeller is

Options :

1. 2000-2500 rpm

2. 1500-2000 rpm
3. 2500-3000 rpm
4. 3000-3500 rpm

Question Number : 144 Question Id : 61097512568 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For conditioning the pulses by alternate wetting and drying after sun drying, moisture is added

to the pulses to the tune of

Options :

1. 3.5%
2. 4.5%
3. 5.5%
4. 6.5%

Question Number : 145 Question Id : 61097512569 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In Jadavpur university method of parboiling, steaming time is about

Options :

1. 3.5 min
2. 5.5 min
3. 4.5 min
4. 1.5 min

Question Number : 146 Question Id : 61097512570 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Differential speed of wheat mill is

Options :

1. 2:1
2. 3.5:1
3. 3:1
4. 2.5:1

Question Number : 147 Question Id : 61097512571 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In hydraulic press ghani, the percent oil loss (left with cake) is

Options :

1. 3-6%

2. 7-8%
3. 8-10%
4. 10-12%

Question Number : 148 Question Id : 61097512572 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Type of bunds formed at extreme ends of the contour bund is

Options :

1. Supplemental bunds
2. Side bunds
3. Shoulder bunds
4. Marginal bunds

Question Number : 149 Question Id : 61097512573 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In modified USLE, the new factor introduced is

Options :

1. Rainfall factor
2. Soil factor

3. Slope factor
4. Runoff factor

Question Number : 150 Question Id : 61097512574 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Order of erosion with respect to configuration

Options :

1. Convex > Concave > Complex
2. Convex > Complex > Concave
3. Concave > Complex > Convex
4. Concave > Convex > Complex

Question Number : 151 Question Id : 61097512575 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Type of bed load sampler having high trap efficiency is

Options :

1. Basket
2. Tray

3. Pressure difference
4. All of these

Question Number : 152 Question Id : 61097512576 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For design of permanent structures, number of years of rainfall data is to be considered for the design is

Options :

1. 10-20
2. 20-30
3. 25-50
4. 30-60

Question Number : 153 Question Id : 61097512577 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Vertical suction of a plough influences

Options :

1. Pulverization
2. Depth of cut
3. Width of cut

4. Direction of pull

Question Number : 154 Question Id : 61097512578 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Back furrow is caused while ploughing is done

Options :

1. Centre to side
2. Side to centre
3. One way ploughing
4. Two way

Question Number : 155 Question Id : 61097512579 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Devise used to cut the furrow slice vertically from a land ahead of the plough bottom is

Options :

1. Gunnel
2. Coulter
3. Jointer

4. Gauge wheel

Question Number : 156 Question Id : 61097512580 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Method of ploughing in which plough works round a strip of unploughed land is

Options :

1. Gathering
2. Casting
3. Head land
4. Dead furrow

Question Number : 157 Question Id : 61097512581 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Thickness of disc of standard disc plough varies from

Options :

1. 60 to 90 mm
2. 5 to 10 mm
3. 40 to 60 mm
4. 25 to 30 mm

Question Number : 158 Question Id : 61097512582 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Night temperature of greenhouse crops is generally in the range of

Options :

1. 1 to 5 °C
2. 10 to 15 °C
3. 7 to 21 °C
4. 15 to 50 °C

Question Number : 159 Question Id : 61097512583 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Common types of cooling pads are made of

Options :

1. Wood
2. Aluminium
3. Glass
4. Cellulose

Question Number : 160 Question Id : 61097512584 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Ability of air to remove solar heat from the greenhouse depends upon its

Options :

1. Volume
2. Weight
3. Mass
4. Speed

Question Number : 161 Question Id : 61097512585 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which type of greenhouse is constructed on hilly terrains?

Options :

1. Lean-to type
2. Ridge and furrow type
3. Uneven span type
4. Quonset type

Question Number : 162 Question Id : 61097512586 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Perimeter watering system in greenhouse can be used for crop production in

Options :

1. Benches
2. Trenches
3. Soil
4. Trays

Question Number : 163 Question Id : 61097512587 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Rocker sprayers are operated at pressure

Options :

1. 10 to 14 kg cm²
2. 14 to 18 kg cm²
3. 18 to 20 kg cm²
4. 20 to 24 kg cm²

Question Number : 164 Question Id : 61097512588 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Maximum spray angle of fan nozzle is

Options :

1. 60°

2. 70°

3. 80°

4. 90°

Question Number : 165 Question Id : 61097512589 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Clearance between knife and ledger plate of a reaper ranges from

Options :

1. 0.5 to 1.0mm

2. 1 to 10mm

3. 0.1 to 5mm

4. 5 to 10mm

Question Number : 166 Question Id : 61097512590 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Corn picker was first invented by

Options :

1. William F. Ketchum
2. Edmund Quiney
3. Darcy
4. William Watson

Question Number : 167 Question Id : 61097512591 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In machines with tapered spindles, the seed cotton is removed from the spindles by means of rotating

Options :

1. Straight spindles
2. Sprocket chain
3. Spindle moistner
4. Doffer plate

Question Number : 168 Question Id : 61097512592 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

With a solar focusing type collector, highest temperature that can be achieved is about

Options :

1. 100 °C
2. 300 °C
3. 500 °C
4. 1000 °C

Question Number : 169 Question Id : 61097512593 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Doubling the diameter of the rotor will result in increase in the available wind power by

Options :

1. One fold
2. Two fold
3. Threefold
4. Four fold

Question Number : 170 Question Id : 61097512594 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Wind speeds in relation to height

Options :

1. Decreases
2. Increases
3. No change
4. May increase or decrease

Question Number : 171 Question Id : 61097512595 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Flat plate collectors are not suitable for applications where the temperature is above

Options :

1. 50 °C
2. 75 °C
3. 100 °C
4. 150 °C

Question Number : 172 Question Id : 61097512596 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Beam radiation is also known as

Options :

1. Solar radiation
2. Direct radiation
3. Diffusion radiation
4. Global radiation

Question Number : 173 Question Id : 61097512597 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Length recommended for border irrigation in light soils is

Options :

1. 60-120 m
2. 100-180 m
3. 150-300 m
4. 300-400 m

Question Number : 174 Question Id : 61097512598 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which is the most economical layout of the tile drainage system?

Options :

1. Grid iron
2. Herring bone
3. Random drain
4. Interceptor drain

Question Number : 175 Question Id : 61097512599 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In the random field drain system, the minimum cross-sectional area should be

Options :

1. 0.5 m^2
2. 1.0 m^2
3. 2.0 m^2
4. 5.0 m^2

Question Number : 176 Question Id : 61097512600 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Inundation irrigation system is also called as

Options :

1. Flood irrigation
2. Flow irrigation
3. Lift irrigation
4. Border irrigation

Question Number : 177 Question Id : 61097512601 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Perforated pipe sprinkler is best suited, when height of crop doesn't exceed

Options :

1. 10-40 cm
2. 30-70 cm
3. 60-90 cm
4. 100 cm

Question Number : 178 Question Id : 61097512602 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Substances with one or two valence electrons are called as

Options :

1. Transistors

2. Resistors
3. Insulators
4. Good conductors

Question Number : 179 Question Id : 61097512603 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Unit of electric flux density is

Options :

1. Coulomb m^3
2. Coulomb m^2
3. Coulomb m
4. Coulomb

Question Number : 180 Question Id : 61097512604 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In which motor, field coil windings are connected in parallel

Options :

1. Shunt wound D.C. motor

2. A.C. motor
3. Series wound D.C. motor
4. Compound wound D.C motor

Question Number : 181 Question Id : 61097512605 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Rotating part of the motor is called as

Options :

1. Armature
2. Rotor
3. Commutator
4. Fan

Question Number : 182 Question Id : 61097512606 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Differences in the electric potentials of two charged bodies is known as

Options :

1. Conductance

2. Current
3. Potential difference
4. Power

Question Number : 183 Question Id : 61097512607 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A hydrograph is a plot of

Options :

1. Rainfall intensity and time
2. Runoff discharge and time
3. Cumulative rainfall and time
4. Cumulative runoff and time

Question Number : 184 Question Id : 61097512608 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A part of rainfall that infiltrates and moves laterally through the upper crusts of soil is

Options :

1. Direct runoff
2. Overland flow

3. Base flow

4. Interflow

Question Number : 185 Question Id : 61097512609 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A unit hydrograph has one unit of

Options :

1. Peak discharge

2. Direct runoff

3. Rainfall duration

4. Base period

Question Number : 186 Question Id : 61097512610 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Flows in small streams are usually due to

Options :

1. Overland flow

2. Base flow

3. Interflow
4. Sub-surface flow

Question Number : 187 Question Id : 61097512611 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Relief of watershed has the units

Options :

1. m
2. km
3. sq.m
4. sq.km

Question Number : 188 Question Id : 61097512612 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Application efficiency in drip irrigation system is

Options :

1. 90%
2. 85%

80%

3.

75%

4.

Question Number : 189 Question Id : 61097512613 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Drip irrigation is not suitable for

Options :

1. Vegetables

2. Wheat

3. Fruit crops

4. Tobacco

Question Number : 190 Question Id : 61097512614 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Most important component of sprinkler irrigation system is

Options :

1. Laterals

2. Sub main

3. Sprinkler head

4. Pipe

Question Number : 191 Question Id : 61097512615 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Type of system adopted for mango crop is

Options :

1. On line

2. In line

3. Sprinkler

4. Micro sprinkler

Question Number : 192 Question Id : 61097512616 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Design operating pressure head in drip irrigation system is

Options :

1. 10 m

2. 12 m

3. 14 m

4. 8 m

Question Number : 193 Question Id : 61097512617 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Tractor flywheel having a gear is called as

Options :

1. Ring gear

2. Crown wheel

3. Bull gear

4. Helical gear

Question Number : 194 Question Id : 61097512618 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A gear which is used in the differential unit of tractor to transmit power at 90° is

Options :

1. Helical gear

2. Bevel gear

3. Bull gear
4. Straight spur gear

Question Number : 195 Question Id : 61097512619 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Point on the tractor body at which its weight may be considered as acting is called as

Options :

1. Centre of gravity
2. Wheel base
3. Toe-in
4. Centre of resistance

Question Number : 196 Question Id : 61097512620 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A wheel or an attachment to a wheel with spaced cross bars for improving the traction of the tractor in a wet field is called as

Options :

1. Pneumatic wheel
2. Gauge wheel

3. Cage wheel
4. Rear furrow wheel

Question Number : 197 Question Id : 61097512621 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Temperature range of psychrophilic bacteria for survival is

Options :

1. 0-20 °C
2. 20-40 °C
3. 40-70 °C
4. 75-80 °C

Question Number : 198 Question Id : 61097512622 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In which of the following gasifier, Gas produced leaves from the bottom ?

Options :

1. Updraft
2. Downdraft

3. Cross draft
4. Side draft

Question Number : 199 Question Id : 61097512623 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Pressure range in case of binderless briquetting process in kg cm^{-2} is

Options :

1. 1200-2000
2. 500-1000
3. 100-200
4. 50-100

Question Number : 200 Question Id : 61097512624 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

With a cubic meter of bio gas, 1 HP engine can run approximately for

Options :

1. 5 h
2. 2 h
3. Cannot run

4. 10 h

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