Question Paper Name:	Ceramic Technology 30th April 2019 Shift1
Subject Name:	Ceramic Technology
Share Answer Key With Delivery Engine:	Yes
Actual Answer Key:	Yes

	Mathematics
Number of Questions:	50
Display Number Panel:	Yes
Group All Questions:	No

Question Number : 1 Question Id : 67809437657 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The adjoint of $A = \begin{pmatrix} 1 & 4 & -2 \\ -2 & -5 & 4 \\ 1 & -2 & 1 \end{pmatrix}$ is

Options :

1. $\begin{pmatrix} 1 & 4 & -2 \\ -2 & -5 & 4 \\ 1 & -2 & 1 \end{pmatrix}$

2. $\begin{pmatrix} 1 & 4 & -2 \\ -2 & -5 & 4 \\ 1 & -2 & 1 \end{pmatrix}$

3. $\begin{pmatrix} 3 & 0 & 6 \\ 6 & 3 & 0 \\ 9 & 6 & 3 \end{pmatrix}$

4. $\begin{pmatrix} 3 & 2 & 1 \\ 4 & 1 & -1 \\ 0 & 3 & 4 \end{pmatrix}$

Question Number : 2 Question Id : 67809437658 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If A is a square matrix of order 3 then (adj A).A=

ZOLLEGE.in

1. [illegible]

2. $A\times(\text{adj } A)$

3. $A\text{-}(\text{adj } A)$

4. $A+(\text{adj } A)$

Question Number : 3 Question Id : 67809437659 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The inverse of $A=\begin{pmatrix}2 & 3\\ 2 & 5\end{pmatrix}$ is

Options :

1. $\begin{pmatrix}5/4 & -3/4\\ 1/2 & 1/2\end{pmatrix}$

2. $\begin{pmatrix}5/4 & 3/4\\ -1/2 & 1/2\end{pmatrix}$

3. $\begin{pmatrix}5/4 & -5/4\\ -1/2 & 1/2\end{pmatrix}$

4. $\begin{pmatrix}5/4 & -3/4\\ -1/2 & 1/2\end{pmatrix}$

Question Number : 4 Question Id : 67809437660 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $A=\begin{pmatrix}3 & 2 & x\\ 4 & 1 & -1\\ 0 & 3 & 4\end{pmatrix}$ is a singular matrix then the value of x is

Options :

1. $11/12$

2. $-11/12$

Z@LLEGE.in

3.

4. $5/4$

Question Number : 5 Question Id : 67809437661 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $A=\begin{pmatrix} 3 & 1 \\ -1 & 2 \end{pmatrix}$ then $A^2 - 5A + 7I$ is

Options :

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

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

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

4. $\begin{pmatrix} 2 & 3 \\ 2 & 5 \end{pmatrix}$

Question Number : 6 Question Id : 67809437662 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Resolve $\frac{3x+7}{(x-1)(x-2)}$ into partial fractions

Options :

1. $\frac{12}{(x-2)} - \frac{10}{(x-1)}$

2. $\frac{13}{(x-2)} - \frac{10}{(x-1)}$

3. $\frac{13}{(x-5)} - \frac{10}{(x-1)}$

4. $\frac{13}{(x-2)} - \frac{10}{(x-7)}$

Z@LLEGE.in

Resolve $\frac{5x^4+1}{x^3-1}$ into partial fractions

Options :

1. $\frac{12}{(x-2)} - \frac{10}{(x-1)}$

2. $\frac{13}{(x-2)} - \frac{10}{(x-1)}$

3. $\frac{13}{(x-5)} - \frac{10}{(x-1)}$

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

Question Number : 8 Question Id : 67809437664 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $tan^2\theta + sec\theta = 5$ then the value of $\cos\theta$ is

Options :

1. $-1/3$ *or* $1/2$

2. $-11/12$ *or* $1/2$

3. $13/12$ or $-1/3$

4. $5/4$ *or* $1/2$

Question Number : 9 Question Id : 67809437665 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $16sin^3\theta + 8cos^3\theta$ is

Options :

1. 3

2. 1

There is no correct option. All students will be given marks.

Z@LLEGE.in

4. 0

Question Number : 10 Question Id : 67809437666 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $sin\alpha = {}^{15}/_{17}$, $cos\beta = {}^{12}/_{13}$ then the value of $sin(\alpha + \beta)$ is

Options :

1. ${}^{110}/_{105}$

2. ${}^{-121}/_{152}$

3. ${}^{220}/_{221}$

4. ${}^{5}/_{4}$

Question Number : 11 Question Id : 67809437667 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $cos20^0 cos40^0 cos60^0 cos80^0$ is

Options :

1. ${}^{11}/_{12}$

2. ${}^{1}/_{16}$

3. ${}^{13}/_{12}$

4. ${}^{5}/_{4}$

Question Number : 12 Question Id : 67809437668 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\frac{\cos 17^0 + \sin 17^0}{\cos 17^0 - \sin 17^0}$ is

Z@LLEGE.in

2. $\tan 65^0$

3. $\tan 60^0$

4. $\tan 62^0$

Question Number : 13 Question Id : 67809437669 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\sin\frac{\pi}{5}\sin\frac{2\pi}{5}\sin\frac{3\pi}{5}\sin\frac{4\pi}{5} =$

Options :

1. $\frac{4}{15}$

2. $\frac{5}{16}$

3. $\frac{-5}{16}$

4. $\frac{7}{15}$

Z@LLEGE.in

Question Number : 14 Question Id : 67809437670 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\tan^{-1}x + \tan^{-1}y + \tan^{-1}z = \frac{\pi}{2}$ then the value of $xy + yz + zx$ is

Options :

1. -1

2. 3

3. 5

4. 1

Question Number : 15 Question Id : 67809437671 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The general solution of $4\cos^2 x - 3 = 0$ is

ZOLLEGE.in

2. $2n\pi \pm \frac{7\pi}{6}$

3. $3n\pi \pm \frac{5\pi}{6}$

4. $2n\pi \pm \frac{11\pi}{6}$

Question Number : 16 Question Id : 67809437672 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The modulus of a complex number $\sqrt{3}+i$ is

Options :

1. -2

2. 3

3. 2

4. 5

Question Number : 17 Question Id : 67809437673 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $(a-b)^2 cos^2\left(\frac{C}{2}\right)+(a+b)^2 sin^2\left(\frac{C}{2}\right)$ is

Options :

1. C^3

2. C

3. C^5

4. C^2

Question Number : 18 Question Id : 67809437674 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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

Z@LLEGE.in

2. $-2\cos n\theta$

3. $3\cos\theta$

4. $2\sin n\theta$

Question Number : 19 Question Id : 67809437675 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $2tan^{-1}\left(\frac{1}{3}\right)+tan^{-1}\left(\frac{1}{7}\right)$ is

Options :

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

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

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

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

Z@LLEGE.in

Question Number : 20 Question Id : 67809437676 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The length of the major axis of the ellipse: $4x^2+3y^2=48$ is

Options :

1. 10

2. 11

3. 12

4. 13

There is no correct option. All students will be given marks.

Question Number : 21 Question Id : 67809437677 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The Centre of the ellipse: $9x^2+25y^2-18x+100y-116=0$ is

Options :

ZOLLEGE.in

2. $(-1,-2)$

3. $(1,-2)$

4. $(1,2)$

Question Number : 22 Question Id : 67809437678 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The equation of the parabola with vertex $(2,-1)$ and focus $(2,-3)$ is

Options :

1. $x^2-4x+8y+12=0$

2. $x^2-4x-8y-12=0$

3. $x^2+4x-8y-12=0$

4. $x^2+5x-8y-11=0$

Question Number : 23 Question Id : 67809437679 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The length of the latus rectum of the hyperbola: $\frac{x^2}{9}-\frac{y^2}{16}=1$ is

Options :

1. 9 units

2. 5 units

There is no correct option. All students will be given marks.

3. 6 units

4. 13 units

Question Number : 24 Question Id : 67809437680 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the length of latus rectum is $\frac{9}{2}$ and the distance between its foci is 10 then the equation of hyperbola is

Options :

Z@LLEGE.in

1.

2. $\frac{x^2}{18} - \frac{y^2}{9} = 1$

3. $\frac{x^2}{16} - \frac{y^2}{6} = 1$

4. $\frac{x^2}{16} - \frac{y^2}{9} = 1$

Question Number : 25 Question Id : 67809437681 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The equation of the parabola with focus at (-3.2) and vertex (-2.2) is

Options :

1. $x^2 - 4x + 8y + 12 = 0$

2. $x^2 + 5x - 8y - 11 = 0$

3. $y^2 + 4x - 4y + 12 = 0$

4. $x^2 - 4x - 8y - 12 = 0$

Question Number : 26 Question Id : 67809437682 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = \frac{a+bx}{b-ax}$ then the derivative of y with respect to x is

Options :

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

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

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

4. $\frac{a+b}{(b-ax)^2}$

Z@LLEGE.in

If $y = \frac{2+3\sinh x}{3+2\sinh x}$ then the derivative of y with respect to x is

Options :

1. $\frac{5\cosh x}{(3+2\sinh x)^2}$

2. $\frac{5\sinh x}{(3+2\sinh x)^2}$

3. $\frac{5\sin x}{(3-2\cosh x)^2}$

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

Question Number : 28 Question Id : 67809437684 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The range of x for which the function $x^3 - 3x^2 - 45x + 2$ is increasing with x is

Options :

1. $(3,-5)$

2. $(-3,-5)$

There is no correct option. All students will be given marks.

3. $(3,5)$

4. $(-3,5)$

Question Number : 29 Question Id : 67809437685 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If u is a homogeneous function of x and y with degree n then $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} =$

Options :

1. $-nu$

2. $n^2 u$

3. nu

ZOLLEGE.in

Question Number : 30 Question Id : 67809437686 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The angle between the curves $y = x^2 + 3x - 7$ and $y^2 = 2x + 5$ at $(2,3)$ is

Options :

1. $\tan\theta = 2$

2. $\sec\theta = 2$

3. $\cos\theta = 1$

4. $\sin\theta = 3$

Question Number : 31 Question Id : 67809437687 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The maximum value of the function $2x^3 - 12x^2 + 18x + 5$ is

Options :

1. 13

2. 12

3. 10

4. 15

Question Number : 32 Question Id : 67809437688 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The three sides of a trapezium are equal each being 6" long then the area of the trapezium when it is maximum is

Options :

1. 27 square units

2. 33 square units

3. $27\sqrt{3}$ square units

4. $29\sqrt{3}$ square units

Z@LLEGE.in

Orientation : Vertical

The interval in which the function $f(x) = x^2 log x$ is an increasing function is

Options :

1. $(1 , e^{-1/2})$

2. $(2 , e^{-1/2})$

3. $(0 , e^{1/2})$

4. $(0 , e^{-1/2})$

Question Number : 34 Question Id : 67809437690 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The stationary points and the corresponding values of the function $f(x) = x^3 - 9x^2 + 15x - 1$ is

Options :

1. 6.-26

2. 3.-26

3. 6.26

4. -6.-26

Question Number : 35 Question Id : 67809437691 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $u = \log\left(\frac{x^2+y^2}{x+y}\right)$ then $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} =$

Options :

1. 2

2. 4

3. 5

4. 1

Z@LLEGE.in

Orientation : Vertical

The value of $\int \log x \, dx$ is

Options :

1. $x \log x + x + c$

2. $x^2 \log x - x + c$

3. $x \log x - x + c$

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

Question Number : 37 Question Id : 67809437693 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\lim_{n \to \infty} \left[\frac{1}{n+1} + \frac{1}{n+2} + \cdots .. + \frac{1}{n+n}\right]$ is

Options :

1. $\log 2$

2. $\log 3$

3. $-\log 2$

4. $\log n$

Z@LLEGE.in

Question Number : 38 Question Id : 67809437694 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int \frac{\cos \sqrt{x}}{\sqrt{x}} dx$ is

Options :

1. $2 \sin \sqrt{x} + c$

2. $3 \sin \sqrt{x} + c$

3. $2 \sin x + c$

ZOLLEGE.in

Question Number : 39 Question Id : 67809437695 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The area enclosed between the curve $y^2 = 4ax$ and the line $x = 2y$ is

Options :

1. $\frac{64}{5}$ sq. units

2. $\frac{64}{3}$ sq. units

3. $\frac{65}{4}$ sq. units

4. $\frac{63}{4}$ sq. units

Question Number : 40 Question Id : 67809437696 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int_1^{\frac{\pi}{2}} sin^2 x\, dx$ is

Options :

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

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

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

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

Question Number : 41 Question Id : 67809437697 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int_1^4 \left(\sqrt{x} + \frac{1}{\sqrt{x}}\right) dx$ is

Options :

1. $\frac{20}{3}$

ZOLLEGE.in

2.

3. $\frac{10}{3}$

4. $\frac{15}{3}$

Question Number : 42 Question Id : 67809437698 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int_0^{\pi/4} \sqrt{1+sin2x}\, dx =$

Options :

1. -1

2. -3

3. 3

4. 1

Question Number : 43 Question Id : 67809437699 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int_0^{\pi/2} \frac{sinx}{1+cos^2x}\, dx =$

Options :

1. $\pi/4$

2. $-\pi/4$

3. $\pi/3$

4. $\pi/2$

Question Number : 44 Question Id : 67809437700 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The particular integral of $(D^2+5D+6)y = e^x$ is

Z@LLEGE.in

1. $\frac{}{12}$

2. $\frac{e^{2x}}{12}$

3. $\frac{e^{x}}{12}$

4. $\frac{e^{x}}{6}$

Question Number : 45 Question Id : 67809437701 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Form the differential equation by eliminating the arbitrary constant a from $ay^2 = x^3$

Options :

1. $\frac{dy}{dx} = \frac{3y}{2x}$

2. $\frac{dy}{dx} = \frac{2x}{3y}$

3. $\frac{dy}{dx} = \frac{x}{y}$

4. $\frac{dy}{dx} = \frac{2y}{x}$

Z@LLEGE.in

Question Number : 46 Question Id : 67809437702 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of $\frac{dy}{dx} + y = e^{-x}$ is

Options :

1. $(x + c)e^{-x}$

2. $(x - c)e^{x}$

3. $(x + c)e^{x}$

4. $(x + c)e^{-2x}$

ZOLLEGE.in

Orientation : Vertical

The complementary function of $(D^2 + 3D + 2)y = 8sin5x$ is

Options :

1. $c_1e^{-x} + c_2e^{-2x}$

2. $c_1e^{x} + c_2e^{2x}$

3. $c_1e^{-x} + c_2e^{2x}$

4. $c_1e^{2x} + c_2e^{3x}$

Question Number : 48 Question Id : 67809437704 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of exact differential equation $2xy\,dx + x^2dy = 0$ is

Options :

1. $x^2y^2 = c$

2. $x^2y = c$

3. $x^3y = c$

4. $x^2y^3 = c$

Z@LLEGE.in

Question Number : 49 Question Id : 67809437705 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Form the differential equation representing the family of curves $x^2 = 4ay$ .where a is any arbitrary constant

Options :

1. $x\frac{dy}{dx} - 2y = 0$

2. $x\frac{dy}{dx} + 2y = 0$

3. $x\frac{dy}{dx} - 6y = 0$

4. $x\frac{dy}{dx} - y = 0$

ZOLLEGE.in

Orientation : Vertical

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

Options :

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

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

3. $y \sin x = \frac{-\cos 5x}{4} + c$

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

Physics

Number of Questions:	25
Display Number Panel:	Yes
Group All Questions:	No

Z@LLEGE.in

Question Number : 51 Question Id : 67809437707 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In the equation $\frac{\alpha}{t^2} = Fv + \frac{\beta}{x^2}$ the dimensional formula for [α], [β] is (here t = time, F= force, v = velocity, x = distance)

Options :

1. MLT^{-1}, MLT^{-3}

2. ML^2T, ML^4T^2

3. ML^2T^{-1}, ML^4T^{-3}

4. ML^3T^{-1}, MLT^{-3}

Question Number : 52 Question Id : 67809437708 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following quantities has not been expressed in proper units?

Options :

ZOLLEGE.in

2. Surface tension=N/m

3. Pressure = N/m^2

4. Energy=kg m/s

Question Number : 53 Question Id : 67809437709 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Three vectors A, B and C satisfy the relation A.B=0 and A.C=0. The vector A is parallel to

Options :

1. B

2. C

3. B.C

4. BxC

Z@LLEGE.in

Question Number : 54 Question Id : 67809437710 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If three vectors A, B and C are 12, 5 and 13 in magnitude such that C=A+B, then the angle between A and B is

Options :

1. 60^0

2. 90^0

3. 120^0

4. 30^0

Question Number : 55 Question Id : 67809437711 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

ZOLLEGE.in

after 3 seconds of its fall and then allowed to fall again. The time taken by the stone to reach the ground for the remaining distance is

Options :

1. 2 s

2. 6 s

3. 4 s

4. 1 s

Question Number : 56 Question Id : 67809437712 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The range of projectile fired at an angle of 15^0 is 50m. If it is fired with the same speed at an angle of 45^0, its range will be

Options :

1. 25 m

2. 37 m

3. 50 m

4. 100 m

Question Number : 57 Question Id : 67809437713 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A freely falling body acquires a velocity 'v' m/s in falling through a distance of 80m. How much further distance should it fall, so as to acquire a velocity of '2v' m/s?(Take g=10 m/s^2)

Options :

1. 240 m

2. 200 m

3. 400 m

4. 280 m

ZOLLEGE.in

A block is projected along a rough horizontal road with a speed of 10 m/s. If the coefficient of kinetic friction is 0.10, how far will it travel before coming to rest ?

Options :

1. 50 m

2. 60 m

3. 40 m

4. 10 m

Question Number : 59 Question Id : 67809437715 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What force is required to push a 200 N body up a 30^0 smooth incline with an acceleration of 2 m/s^2? The force is to be applied along the plane is (Take g=10 m/s^2)

Options :

1. 40 N

2. 60 N

3. 80 N

4. 140 N

Question Number : 60 Question Id : 67809437716 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A block of mass 2 kg rests on a rough inclined plane making an angle of 30^0 with the horizontal. The coefficient of static friction between the block and the plane is 0.7. The frictional force on the block is

Options :

1. 9.8N

2. 0.78 x 9.8 N

3. 9.8 x √3 N

4. 0.7 x 9.8√3 N

Z@LLEGE.in

Orientation : Vertical

A man moves on a straight horizontal road with a block of mass 2 kg in his hand. If he covers a distance of 40 m with an acceleration of 0.5 m/s^2, the work done by the man on the block during the motion is (Take g=10 m/s^2)

Options :

1. 40 J

2. 1 J

3. 80 J

4. 20 J

Question Number : 62 Question Id : 67809437718 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In a factory it is desired to lift 2000 kg of metal through a distance of 12 m in 1 minute. The minimum horse power of the engine to be used is

Options :

1. 3.5

2. 5.3

3. 4.3

4. 5.8

Question Number : 63 Question Id : 67809437719 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Energy harnessed from flowing water is called -------- energy

Options :

1. Hydel

2. Solar

3. Tidal

4. Geothermal

Z@LLEGE.in

When a particle executing simple harmonic motion passes through the mean position, it has

Options :

1. minimum K.E and maximum P.E.

2. maximum K.E and maximum P.E.

3. maximum K.E and minimum P.E.

4. mimimum K.E. and mimimum P.E.

Question Number : 65 Question Id : 67809437721 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A particle of mass 200 g executes a simple harmonic motion. The restoring force is provided by a spring of spring constant 80 N/m. The time period is

Options :

1. 0.2 s

2. 0.41 s

3. 0.31 s

4. 0.5 s

Question Number : 66 Question Id : 67809437722 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The temperature at which the speed of sound will be double of its value at 0^0C is

Options :

1. 819^0 C

2. 850^0C

3. 919^0C

4. 900^0C

Question Number : 67 Question Id : 67809437723 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Z@LLEGE.in

Options :

1. The frequency of the source is increased

2. The velocity of sound in the medium is increased

3. The wavelength of sound in the medium towards the observer is decreased

4. The amplitude of vibration of the particles is increased.

Question Number : 68 Question Id : 67809437724 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A cinema hall has a volume of 7500 m^3. The total absorption in the hall if the reverberation time of 1.5 s is to be maintained is

Options :

1. 800 OWU

2. 925 OWU

3. 950 OWU

4. 825 OWU

Question Number : 69 Question Id : 67809437725 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

One mole of oxygen is heated at constant pressure starting at 0^0C. The heat energy that must be supplied to the gas to double its volume is

Options :

1. 2.5 x 273 x R

2. 3.5 x 273 x R

3. 2.5 x 546 x R

4. 3.5 x 546 x R

Question Number : 70 Question Id : 67809437726 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Z@LLEGE.in

of the gas is released and the temperature of the remaining gas is raised by 30°C, the new pressure will be

Options :

1. 12.24 atm

2. 11.67 atm

3. 13.79 atm

4. 11 atm

Question Number : 71 Question Id : 67809437727 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The temperature of 5 gm of air is raised from 0^0 C to 1^0 C. The increase in the internal energy of air is (C_v = 0.172 cal/gm/ ^{0}C and J = 4.18 x 10^7 erg/cal)

Options :

1. 3.595 x 10^7 erg

2. 3 x 10^7 erg

3. 4.5 x 10^7 erg

4. 2.595 x 10^7 erg

Question Number : 72 Question Id : 67809437728 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In all reversible processes entropy of the system

Options :

1. decreases

2. increases

3. remains constant

4. remains zero

Question Number : 73 Question Id : 67809437729 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Z@LLEGE.in

($\gamma = 7/5$), the value of γ for the mixture is

Options :

1. 1.40

2. 1.50

3. 1.53

4. 3.07

Question Number : 74 Question Id : 67809437730 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Electrons are emitted with zero velocity from a certain metal surface when it is exposed to radiations of wavelength 7000 A^0. The work function of the metal is

Options :

1. 1 eV

2. 1.52 eV

3. 2.52 eV

4. 1.77 eV

Question Number : 75 Question Id : 67809437731 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A superconducting material exhibits

Options :

1. zero conductivity and complete diamagnetism

2. zero resistivity and complete paramagnetism

3. infinite conductivity and complete paramagnetism

4. zero resistivity and complete diamagnetism

Z@LLEGE.in

Question Number : 76 Question Id : 67809437732 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The splitting of spectral lines in a strong magnetic field is called

Options :

1. Stark effect

2. Pauli Exclusion Principle

3. Zeeman effect

4. Aufbau Principle

Question Number : 77 Question Id : 67809437733 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Bohr's model can explain

Options :

1. The spectrum of hydrogen atom only

2. The spectrum of hydrogen molecule

3. The solar spectrum

4. Spectrum of an atom or ion containing one electron only

Question Number : 78 Question Id : 67809437734 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. 2

2. 6

3. 10

4. 14

Z@LLEGE.in

Orientation : Vertical

Magnesium Atomic number is 12, which of the following is the electronic configuration

Options :

1. $1S^2\ 2S^1\ 2P^6\ 3S^2$

2. $1S^2\ 2S^2\ 2P^5\ 3S^2$

3. $1S^2\ 2S^2\ 2P^6\ 3S^2$

4. $1S^2\ 2S^2\ 2P^6\ 3S^1 3d^1$

Question Number : 80 Question Id : 67809437736 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

N_2 molecule contains

Options :

1. Covalent bond

2. Ionic bond

3. Hydrogen bond

4. Metalic bond

Question Number : 81 Question Id : 67809437737 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

One mole of any of the particles contains

Options :

1. $6.023X\ 10^{-23}$

2. $6.022X\ 10^{23}$

3. $60.23X\ 10^{23}$

4. $6.023X\ 10^{25}$

Question Number : 82 Question Id : 67809437738 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The normality of the solution obtained by dissolving 4 gm of NaOH in 1Litre is

Z@LLEGE.in

2. 0.1N

3. 0.5N

4. 0.02N

Question Number : 83 Question Id : 67809437739 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Molecular weight of H_2SO_4 is

Options :

1. 92

2. 96

3. 98

4. 99

Question Number : 84 Question Id : 67809437740 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A Lewis acid 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 : 67809437741 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

P^H of a solution is 9.5, the solution is

Options :

1. Basic

2. Acidic

Z@LLEGE.in

4. Amphoteric

Question Number : 86 Question Id : 67809437742 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Laws of electrolysis were given by

Options :

1. Ostwald

2. Faraday

3. Arrhenius

4. Volta

Question Number : 87 Question Id : 67809437743 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Common electrolyte used in the salt bridge is

Options :

1. NaOH

2. $NaCO_3$

3. KCl

4. KOH

Question Number : 88 Question Id : 67809437744 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Standard Reduction Potential of an element is equal to

Options :

1. 1 X Its reduction potential

2. -1 X Its standard oxidation potential

3. -1 X Its reduction potential

4. 1 X Its standard oxidation potential

Z@LLEGE.in

The standard emf for the cell reaction, $Zn+Cu^{+2} \rightarrow Cu + Zn^{2+}$ is 1.10 V at 25°C. The emf of the cell reaction when 0.1 M Cu^{+2} and 0.1 M Zn^{+2} solutions are used at 25°C is

Options :

1. 1.10V
2. 0.11V
3. -1.10V
4. -0.11V

Question Number : 90 Question Id : 67809437746 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which chemical is responsible for permanent hardness of water?

Options :

1. KCl
2. $MgCl_2$
3. NaCl
4. AgCl

Question Number : 91 Question Id : 67809437747 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Permutit is chemically

Options :

1. Sodium Silicate
2. Aluminium Silicate
3. Hydrated Sodium alumino silicate
4. Calicium silicate

Z@LLEGE.in

Orientation : Vertical

The cation exchange resin possesses

Options :

1. Acidic group

2. Basic group

3. Amphoteric group

4. Benzo group

Question Number : 93 Question Id : 67809437749 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Chemically the rust is

Options :

1. Fe_2O_3

2. Fe_2O_3. FeO

3. $Fe_2O_3.XH_2O$

4. Fe_2O_3 . NH_3

Z@LLEGE.in

Question Number : 94 Question Id : 67809437750 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Galvanizing is the process of coating iron with

Options :

1. Mg

2. Cu

3. Au

4. Zn

Question Number : 95 Question Id : 67809437751 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

ZOLLEGE.in

Options :

1. Bakelite

2. Polystyrene

3. Polythene

4. Nylon

Question Number : 96 Question Id : 67809437752 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Isoprene is a monomer of

Options :

1. Starch

2. Cellulose

3. Natural rubber

4. Lignin

Z@LLEGE.in

Question Number : 97 Question Id : 67809437753 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Buna-S 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 : 67809437754 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Main constituent of natural gas is

ZOLLEGE.in

2. Methane

3. Butane

4. Carbon Monoxide

Question Number : 99 Question Id : 67809437755 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Ozone layer is present at

Options :

1. Staratosphere

2. Inosphere

3. Thermosphere

4. Atmosphere

Question Number : 100 Question Id : 67809437756 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The amount of DO required to aerobically decompose biodegradable organic matter of a given volume of water is

Options :

1. Biochemical Oxygen Demand

2. Biological Oxygen Demand

3. Chemical Oxygen demand

4. Biomagnification

Ceramic Technology

Number of Questions:	100
Display Number Panel:	Yes
Group All Questions:	No

ZOLLEGE.in

The formula of Kaolin is

Options :

1. $Al_2O_32SiO_22H_2O$

2. $Al_2O_34SiO_22H_2O$

3. $Al_2O_35SiO_2$

4. $Al_2O_36SiO_2$

Question Number : 102 Question Id : 67809437758 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a primary clay?

Options :

1. Ball clay

2. China clay

3. Fire clay

4. Than ball clay

Z@LLEGE.in

Question Number : 103 Question Id : 67809437759 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Study of minerals is called

Options :

1. Geology

2. Petrology

3. Mineralogy

4. Oligology

Question Number : 104 Question Id : 67809437760 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Hardness of Diamond on Moh's scale is

ZOLLEGE.in

2. 8

3. 9

4. 10

Question Number : 105 Question Id : 67809437761 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The word 'ceramic' is meant for _____.

Options :

1. soft material

2. hard material

3. burnt material

4. dry material

Question Number : 106 Question Id : 67809437762 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

During sintering densification is not due to

Options :

1. atomic diffusion

2. surface diffusion

3. bulk diffusion

4. grain growth

Question Number : 107 Question Id : 67809437763 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The Muscovite is known as

Options :

1. White mica

Z@LLEGE.in

3. red mica

4. Brown mica

Question Number : 108 Question Id : 67809437764 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Talc is used in ceramic processes as a

Options :

1. Floculent

2. Defloculent

3. Lubricant

4. Anti sticking agent

Question Number : 109 Question Id : 67809437765 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a Renewable Energy Source?

Options :

1. Producer gas

2. Water gas

3. Hydrogen gas

4. Coal gas

Question Number : 110 Question Id : 67809437766 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The structure of Alumina is

Options :

1. Cubic

2. Hexagonal

3. Tetragonal

ZOLLEGE.in

Question Number : 111 Question Id : 67809437767 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The fuller's earth is

Options :

1. Kaolinite

2. Montmorilonite

3. Mica

4. Diatomite

Question Number : 112 Question Id : 67809437768 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The fumed silica is widely used to make

Options :

1. Glass

2. Castable refractories

3. Ceramic tiles

4. Cement

Question Number : 113 Question Id : 67809437769 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The chemical formula of calcium feldspar

Options :

1. $CaO\ Al_2O_3\ 2SiO_2$

2. $CaO\ MgO\ 2SiO_2$

3. $CaO\ Al_2O_3\ SiO_2$

4. $CaO2Al_2O_3\ 2SiO_2$

Z@LLEGE.in

.Which of the following raw material is toxic?

Options :

1. Pyrophilite

2. Asbestos

3. Vermicellite

4. mica

Question Number : 115 Question Id : 67809437771 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The Andresen pipette is used to measure

Options :

1. Moisture content

2. Plasticity

3. Particle size

4. Surface area

Question Number : 116 Question Id : 67809437772 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which law is used in sedimentation method?

Options :

1. Stoke's law

2. Raoult's law

3. Henrey's law

4. Gibb's law

Question Number : 117 Question Id : 67809437773 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following material is used in Fireclay refractories?

Options :

Z@LLEGE.in

2. Magnesite

3. Chromite

4. Dolomite

Question Number : 118 Question Id : 67809437774 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which is not a characteristic property of ceramic material?

Options :

1. high temperature stability

2. high mechanical strength

3. low elongation

4. low hardness

Question Number : 119 Question Id : 67809437775 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Major ingredient of traditional ceramics is

Options :

1. silica

2. clay

3. steel

4. Wood

Question Number : 120 Question Id : 67809437776 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The following ceramic product is mostly used as pigment in paints

Options :

1. TiO_2

2. SiO_2

ZOLLEGE.in

4. ZrO_2

Question Number : 121 Question Id : 67809437777 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Hot isostatic pressing is not a viable option, if the chief criterion is

Options :

1. strength without grain growth

2. low cost

3. zero porosity

4. processing refractory ceramics

Question Number : 122 Question Id : 67809437778 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a primary rock?

Options :

1. limestone

2. Dolomite

3. Quartz

4. calcite

Question Number : 123 Question Id : 67809437779 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Alabite is

Options :

1. sodium alumino silicate

2. sodium alumino calcium silicate

3. calcium silicate

ZOLLEGE.in

Question Number : 124 Question Id : 67809437780 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The source of Zirconia is

Options :

1. Andalusite

2. Badylite

3. Kyanite

4. Silimanite

Question Number : 125 Question Id : 67809437781 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Vitrified tiles have porosity of

Options :

1. 0%

2. 20%

3. 10%

4. 15%

Question Number : 126 Question Id : 67809437782 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Common bricks come under

Options :

1. White ware

2. Porcelain

3. Heavy clay ware

4. Stone ware

Z@LLEGE.in

Orientation : Vertical

Bone ash is used in

Options :

1. Porcelain

2. Bone china

3. Stone ware

4. Earthen ware

Question Number : 128 Question Id : 67809437784 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which kiln is used for firing of Tiles?

Options :

1. Rotary kiln

2. Roller hearth kiln

3. Updraft kiln

4. Down draft kiln

Z@LLEGE.in

Question Number : 129 Question Id : 67809437785 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a flux?

Options :

1. Quartz

2. Clay

3. Zirconia

4. Feldspar

Question Number : 130 Question Id : 67809437786 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following shaping method is used for sanitary ware?

ZOLLEGE.in

1. Slip casting

2. Extrusion

3. Pressing

4. Jigger and Jollying

Question Number : 131 Question Id : 67809437787 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Ceramics consist of

Options :

1. ionic & covalent bonding

2. covalent bonding

3. hydrogen bonding

4. co-ordinate covalent bond

Question Number : 132 Question Id : 67809437788 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a periodic kiln ?

Options :

1. Tunnel kiln

2. Down draft kiln

3. Rotary kiln

4. Roller hearth kiln

Question Number : 133 Question Id : 67809437789 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following oxide refractory has highest melting point?

Options :

1. Alumina

ZOLLEGE.in

3. Zirconia

4. Magnesia

Question Number : 134 Question Id : 67809437790 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a high alumina refractory material?

Options :

1. Diaspore

2. Kyanite

3. Silimanite

4. periclase

Question Number : 135 Question Id : 67809437791 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Magnesite refractories are not generally used in

Options :

1. Electric furnace wall

2. Steel melting furnace

3. Open hearth furnace

4. Besmen converter

Question Number : 136 Question Id : 67809437792 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following bricks has close value of RUL and PCE?

Options :

1. Silica bricks

2. Dolomite bricks

ZOLLEGE.in

4. High alumina bricks

Question Number : 137 Question Id : 67809437793 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

.....is the measure of strength of refractory under combined action of heat and load

Options :

1. PCE

2. CCS

3. RUL

4. CMOR

Question Number : 138 Question Id : 67809437794 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

With increase in alumina content of fireclay brick, the PCE value

Options :

1. increases

2. decreases

3. remain unchanged

4. decreases linearly

Question Number : 139 Question Id : 67809437795 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The Crown of glass melting furnace is constructed with

Options :

1. Magnesia bricks

2. Silica bricks

3. Fire clay bricks

4. Dolomite bricks

ZOLLEGE.in

Orientation : Vertical

The Hearth of Blast furnace is constructed with

Options :

1. AZS bricks

2. Alumina bricks

3. Carbon bricks

4. Magnesite bricks

Question Number : 141 Question Id : 67809437797 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a neutral refractory?

Options :

1. Magnesite

2. SiC

3. Chromite

4. Graphite

Z@LLEGE.in

Question Number : 142 Question Id : 67809437798 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which is not an acidic refractory?

Options :

1. Silica

2. Fire clay

3. High alumina

4. Carbon

Question Number : 143 Question Id : 67809437799 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

ZOLLEGE.in

Options :

1. Fire clay

2. silica

3. Silicon carbide

4. Magnesite

Question Number : 144 Question Id : 67809437800 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Magneiste bricks have poor resistance to attack by ..... slags

Options :

1. Basic

2. Lime

3. acidic

4. chrome

Question Number : 145 Question Id : 67809437801 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

..... bricks should not be used in oxidizing atmosphere

Options :

1. Fireclay

2. Alumina

3. Carbon

4. Magnesite

Question Number : 146 Question Id : 67809437802 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Porosity of silica brick varies from

Options :

Z@LLEGE.in

2. 10-20%

3. 45-60%

4. 65-70%

Question Number : 147 Question Id : 67809437803 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Periclase refractory mainly contains

Options :

1. CaO

2. MgO

3. ZrO_2

4. SiO_2

Question Number : 148 Question Id : 67809437804 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Maximum alumina content in high alumina refractory is

Options :

1. 40%

2. 50%

3. 10%

4. 90%

Question Number : 149 Question Id : 67809437805 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The formula of Mullite is

Options :

1. $3Al_2O_3\ 2SiO_2$

Z@LLEGE.in

3. Al_2O_3 $2SiO_2$

4. $2Al_2O_3$ SiO_2

Question Number : 150 Question Id : 67809437806 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following types of glass accounts for about 90% of manufactured glass?

Options :

1. Potash-lime glass

2. Soda-lime glass

3. Potash-lead glass

4. Soda-lead glass

Question Number : 151 Question Id : 67809437807 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The two types of soda-lime glass- flat glass and container glass differ in:

Options :

1. Application and production method

2. Application and chemical composition

3. Production method and chemical composition

4. Application, production method and chemical composition

Question Number : 152 Question Id : 67809437808 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which type of glass is used in the manufacture of artificial gems, bulbs, lenses, etc?

Options :

1. Soda-lime glass

2. Special glass

ZOLLEGE.in

4. Common glass

Question Number : 153 Question Id : 67809437809 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What changes are observed when a glass is heated?

Options :

1. It becomes softer

2. It bursts

3. It solidifies

4. It disintegrates

Question Number : 154 Question Id : 67809437810 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Chromatic glass is used in:

Options :

1. ICU and meeting rooms

2. Aquariums

3. Mobile screen protectors

4. Floors

Question Number : 155 Question Id : 67809437811 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of following is not a process involved in glass production?

Options :

1. Extrusion

2. Forming and shaping

3. Heat treatment

ZOLLEGE.in

Question Number : 156 Question Id : 67809437812 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which forming method is used for the production of narrow neck container glass bottles?

Options :

1. Blowing

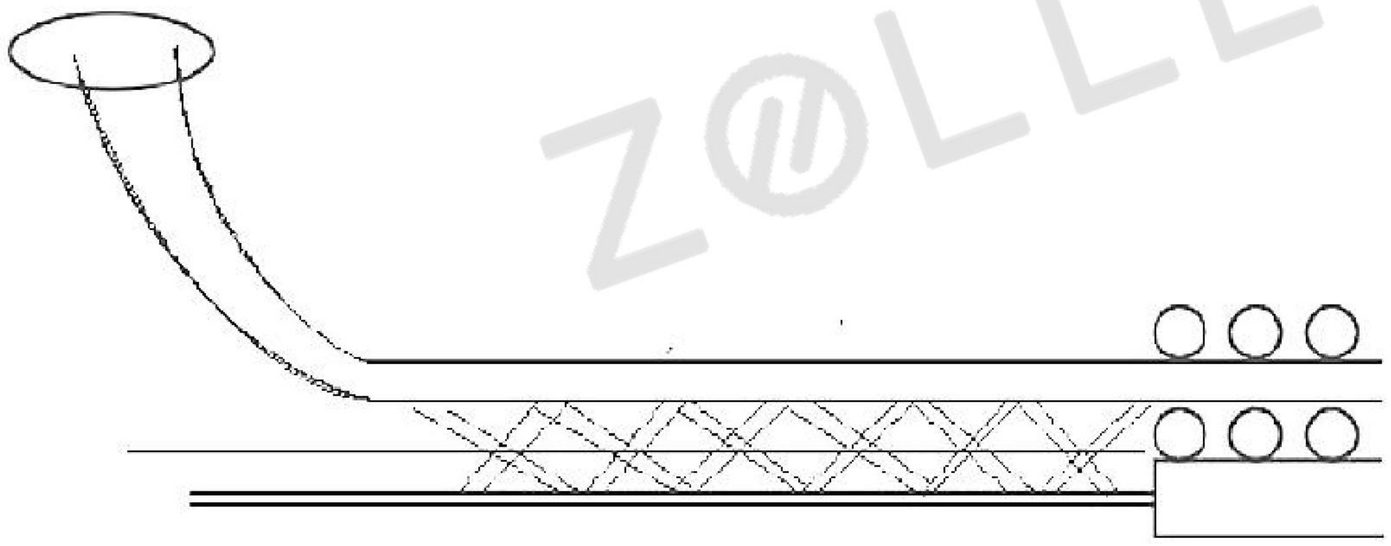
2. Pressing

3. Drawing

4. Casting

Question Number : 157 Question Id : 67809437813 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which forming operation does the below figure represent?



Options :

1. Drawing

2. Pressing

3. Floating

4. Rolling

Question Number : 158 Question Id : 67809437814 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The temperature at which a non-crystalline material transforms from a supercooled liquid to rigid glass is

ZOLLEGE.in

2. Glass transition temperature

3. Boiling point

4. Crystalline temperature

Question Number : 159 Question Id : 67809437815 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Glasses show evidence of _____ fractures.

Options :

1. No

2. Brittle

3. Ductile

4. Oblique

Z@LLEGE.in

Question Number : 160 Question Id : 67809437816 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the melting temperature of fused quartz?

Options :

1. 1118°C

2. 1328°C

3. 1528°C

4. 1728°C

Question Number : 161 Question Id : 67809437817 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the crown type of glass ?

Options :

1. Laboratory apparatus grade

ZOLLEGE.in

3. Sealing type

4. Ultraviolet transmitting type

Question Number : 162 Question Id : 67809437818 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What are lead glasses used for?

Options :

1. Kitchenware

2. Optical components

3. Electronic tubes

4. Temperature thermometers

Question Number : 163 Question Id : 67809437819 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a Network former?

Options :

1. B_2O_3

2. Na_2O

3. CaO

4. K_2O

Question Number : 164 Question Id : 67809437820 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Fiber glass is invented by Russell Games Slayter in

Options :

1. 1932

2. 1934

3. 1936

ZOLLEGE.in

Question Number : 165 Question Id : 67809437821 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A type of glass that darkens when exposed to sunlight is

Options :

1. Chromogenic glass

2. Thermo chromic glass

3. Photo chromic glass

4. Electro chromic

Question Number : 166 Question Id : 67809437822 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is inside an insulated glass?

Options :

1. PVC

2. PVB

3. Dry air

4. Weather strip

Question Number : 167 Question Id : 67809437823 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Why is natural cement used very limitedly?

Options :

1. Brown in Colour

2. Standard consistency is not met with

3. Sets too quickly

4. Particle size is too fine

Question Number : 168 Question Id : 67809437824 Display Question Number : Yes Single Line Question Option : No Option

Z@LLEGE.in

Options :

1. William Aspdin, 1824

2. William Aspdin, 1840s

3. Joseph Aspdin, 1840s

4. Joseph Aspdin, 1824

Question Number : 169 Question Id : 67809437825 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the meaning of soundness of cement?

Options :

1. Ability to flow when mixed

2. Ability to make ringing noise when struck

3. Ability to form strong and sound structure

4. Ability to retain volume after setting.

Question Number : 170 Question Id : 67809437826 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the minimum initial setting time of Ordinary Portland cement?

Options :

1. 1 hour

2. 30 minutes

3. 15 minutes

4. 30 hours

Question Number : 171 Question Id : 67809437827 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Use of coarser cement particles leads to:

Options :

1. Low durability

ZOLLEGE.in

3. Low consistency

4. Higher soundness

Question Number : 172 Question Id : 67809437828 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Green cement is:

Options :

1. Green coloured cement

2. Cement mixed with plant products

3. Cement mixed with recycled materials

4. Cement mixed with green alga

Question Number : 173 Question Id : 67809437829 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is released during the production of clinker?

Options :

1. $CaCO_3$

2. CO_2

3. $Ca(OH)_2$

4. CO

Question Number : 174 Question Id : 67809437830 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In the soundness test, the whole assembly is immersed in water for

Options :

1. 30 minutes

2. 1 hour

3. 24 hours

Z@LLEGE.in

Question Number : 175 Question Id : 67809437831 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Soundness of cement is tested by

Options :

1. Vicat apparatus

2. Le Chatalier apparatus

3. soundness meter

4. Duff Abrams apparatus

Question Number : 176 Question Id : 67809437832 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The temperature of the antiferromagnetic to paramagnetic transition is called

Options :

1. antiferromagnetic curie temp.

2. Curie- Weiss temp

3. Neel temp

4. Debye temp.

Question Number : 177 Question Id : 67809437833 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a major contributor of engineering ceramics?

Options :

1. SiC

2. SiO_2

3. Si_3N_4

4. Al_2O_3

Question Number : 178 Question Id : 67809437834 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

ZOLLEGE.in

Options :

1. TiO_2

2. SiO_2

3. UO_2

4. ZrO_2

Question Number : 179 Question Id : 67809437835 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Alumina is a

Options :

1. Bioinert Ceramics

2. Bioactive ceramics

3. Bioresorbable ceramics

4. Bioinvolve ceramics

Question Number : 180 Question Id : 67809437836 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Super conductors have a resistance of

Options :

1. 0

2. 5

3. 10

4. 3

Question Number : 181 Question Id : 67809437837 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The most commonly used semiconductor is .....

Options :

1. Germanium

Z@LLEGE.in

3. Carbon

4. Sulphur

Question Number : 182 Question Id : 67809437838 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An n-type semiconductor is .....

Options :

1. Positively charged

2. Negatively charged

3. Electrically neutral

4. Can't tell

Question Number : 183 Question Id : 67809437839 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A hole in a semiconductor is defined as .....

Options :

1. A free electron

2. The incomplete part of an electron pair bond

3. A free proton

4. A free neutron

Question Number : 184 Question Id : 67809437840 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The energy gap in Diamond is

Options :

1. 5.4eV

2. 2-3eV

3. 1.1eV

ZOLLEGE.in

Question Number : 185 Question Id : 67809437841 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following material has high dielectric constant ?

Options :

1. $BaZrO_3$

2. $BaTiO_3$

3. $SrTiO_3$

4. $ZrSiO_3$

Question Number : 186 Question Id : 67809437842 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In presence of which gas is the fuel burnt to generate energy in form of heat?

Options :

1. Oxygen

2. Hydrogen

3. Methane

4. Nitrogen

Question Number : 187 Question Id : 67809437843 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following fuel has the highest calorific value ?

Options :

1. Peat

2. Coke

3. Bituminous coal

4. Anthratic coal

Question Number : 188 Question Id : 67809437844 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Z@LLEGE.in

Options :

1. Tunnel kiln

2. Down draft kiln

3. Rotary kiln

4. Roller hearth kiln

Question Number : 189 Question Id : 67809437845 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A radiation pyrometer is used for temperatures

Options :

1. upto 100°C

2. 100-250°C

3. 250-500°C

4. above 500°C

Question Number : 190 Question Id : 67809437846 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An optical pyrometer works on the principle of

Options :

1. Expansion of fuels

2. Mono-chromatic radiation

3. change of electric resistance

4. Total radiation

Question Number : 191 Question Id : 67809437847 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The first coat applied on metal sheet for enameling is

Options :

Z@LLEGE.in

2. white coat

3. colored coat

4. Ground coat

Question Number : 192 Question Id : 67809437848 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A glassy coating on metal surface is called

Options :

1. Enamel

2. Glaze

3. Glass

4. glass-ceramic

Question Number : 193 Question Id : 67809437849 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which chemical is used for pickling of metal sheet?

Options :

1. citric acid

2. HF acid

3. HCl

4. Ammonia

Question Number : 194 Question Id : 67809437850 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following process is used to release the stress in metal sheet ?

Options :

1. tempering

2. annealing

ZOLLEGE.in

4. neutralizing

Question Number : 195 Question Id : 67809437851 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following coatings has a glass composition?

Options :

1. Paint

2. Galvanized

3. Enamel

4. Anodized

Question Number : 196 Question Id : 67809437852 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is used as Opacifier in Glazes ?

Options :

1. Na_2O

2. CaO

3. MgO

4. CaF_2

Question Number : 197 Question Id : 67809437853 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which glazes are used for temperature above 1200°C?

Options :

1. Soft glazes

2. Hard glazes

3. Medium glazes

4. Salt glazes

Z@LLEGE.in

Orientation : Vertical

Quenched glass is called

Options :

1. frit

2. glaze

3. enamel

4. cement

Question Number : 199 Question Id : 67809437855 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

High amount of frit is used in

Options :

1. Soft glazes

2. Hard glazes

3. Medium glazes

4. Salt glazes

Z@LLEGE.in

Question Number : 200 Question Id : 67809437856 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The glaze used on sewer pipes is

Options :

1. Soft glazes

2. Hard glazes

3. Medium glazes

4. Salt glazes

ZOLLEGE.in