

BSTET (Class 11-12)

**Previous Year Paper
(Math)**

02 Nov, 2025 Shift 1

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Exam Name	STET Exam 2025
Paper	Paper II
Roll No	
Participant Name	
Test Center Name	
Test Date	02/11/2025
Test Time	9:00 AM - 11:30 AM

Section : Part I Math(213)

Q.1 Let us consider the statement " $S(n): n^2 - n + 41$ is prime" then which of the following is true?

- Ans ☒ A. $s(5)$ is false but $s(3)$ is true
☒ B. $s(5)$ is true but $s(3)$ is false
☒ C. Both $s(3)$ and $s(5)$ are false
☒ D. Both $s(3)$ and $s(5)$ are true

Question Type : MCQ
 Question ID : 4335765490
 Option 1 ID : 43357621957
 Option 2 ID : 43357621958
 Option 3 ID : 43357621959
 Option 4 ID : 43357621960
 Status : Answered
 Chosen Option : D

Q.2 In a metric space E , if $A \subseteq E$, then interior of A is

- Ans ☒ A. Closed set
☒ B. Open set
☒ C. semi-open set
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765606
 Option 1 ID : 43357622421
 Option 2 ID : 43357622422
 Option 3 ID : 43357622423
 Option 4 ID : 43357622424
 Status : Answered
 Chosen Option : A

Q.3 Every sequentially compact metric space is

Ans ☒ A. compact

☐ B. non compact

☐ C. open

☐ D. closed

Question Type : MCQ

Question ID : 4335765664

Option 1 ID : 43357622653

Option 2 ID : 43357622654

Option 3 ID : 43357622655

Option 4 ID : 43357622656

Status : Answered

Chosen Option : A

Q.4 If p be a prime number and $1^{p-1} + 2^{p-1} + \dots + (p-1)^{p-1} \equiv x \pmod{p}$ then $x = \dots$

Ans ☐ A. 0

☐ B. 1

☒ C. -1

☐ D. None of these

Question Type : MCQ

Question ID : 4335765566

Option 1 ID : 43357622261

Option 2 ID : 43357622262

Option 3 ID : 43357622263

Option 4 ID : 43357622264

Status : Answered

Chosen Option : B

Q.5 The Wronskian determinant of two solutions of a second-order linear differential equation is:

Ans ☐ A. Always zero

☐ B. Always positive

☐ C. Either zero or non-zero

☒ D. Constant if coefficients are constant

Question Type : MCQ

Question ID : 4335765669

Option 1 ID : 43357622673

Option 2 ID : 43357622674

Option 3 ID : 43357622675

Option 4 ID : 43357622676

Status : Answered

Chosen Option : A

Q.6 The point of intersection of the line of action of the resultant hydrostatic force and the submerged surface is called

- Ans ☒ A. centre of mass
☒ B. centre of pressure
☒ C. centre of gravity
☒ D. centre of buoyancy

Question Type : MCQ
 Question ID : 4335765550
 Option 1 ID : 43357622197
 Option 2 ID : 43357622198
 Option 3 ID : 43357622199
 Option 4 ID : 43357622200
 Status : Answered
 Chosen Option : C

Q.7 Let σ and τ be the permutations defined by $\sigma = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 1 & 3 & 5 & 7 & 9 & 6 & 4 & 8 & 2 \end{pmatrix}$ and $\tau = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\ 7 & 8 & 3 & 4 & 9 & 6 & 5 & 2 & 1 \end{pmatrix}$

Then

- Ans ☒ A. σ and τ generate the group of permutations on $\{1,2,3,4,5,6,7,8,9\}$
☒ B. σ is contained in the group generated by τ .
☒ C. τ is contained in the group generated by σ
☒ D. σ and τ are in the same conjugacy class .

Question Type : MCQ
 Question ID : 4335765516
 Option 1 ID : 43357622061
 Option 2 ID : 43357622062
 Option 3 ID : 43357622063
 Option 4 ID : 43357622064
 Status : Answered
 Chosen Option : D

Q.8 If $\vec{a} \cdot (\vec{b} + \vec{c}) \times (\vec{a} + 2\vec{b} + 3\vec{c}) = K [\vec{a} \vec{b} \vec{c}]$ then $K = ?$

- Ans ☒ A. 1
☒ B. 2
☒ C. 3
☒ D. 5

Question Type : MCQ
 Question ID : 4335765616
 Option 1 ID : 43357622461
 Option 2 ID : 43357622462
 Option 3 ID : 43357622463
 Option 4 ID : 43357622464
 Status : Answered
 Chosen Option : D

Q.9

$$16^{16} \equiv$$

- Ans ☒ A. $16 \bmod 17$
☒ B. $0 \bmod 17$
☒ C. $1 \bmod 17$
☒ D. $2 \bmod 17$

Question Type : MCQ
 Question ID : 4335765564
 Option 1 ID : 43357622253
 Option 2 ID : 43357622254
 Option 3 ID : 43357622255
 Option 4 ID : 43357622256
 Status : Answered
 Chosen Option : A

Q.10 if the dual of the LPP, have finite optimal solution , the primal process

- Ans ☒ A. finite optimal solution
☒ B. unbounded solution
☒ C. no solution
☒ D. infinite solution

Question Type : MCQ
 Question ID : 4335765624
 Option 1 ID : 43357622493
 Option 2 ID : 43357622494
 Option 3 ID : 43357622495
 Option 4 ID : 43357622496
 Status : Answered
 Chosen Option : A

Q.11

For the curve $y = f(x) = \frac{x^2+1}{x^2-9}$

- Ans ☒ A. $x = 3$ is a vertical asymptote
☒ B. The horizontal asymptote is $y = 1$
☒ C. $x = -3$ is a vertical asymptote
☒ D. All of these

Question Type : MCQ
 Question ID : 4335765496
 Option 1 ID : 43357621981
 Option 2 ID : 43357621982
 Option 3 ID : 43357621983
 Option 4 ID : 43357621984
 Status : Answered
 Chosen Option : A

Q.12 If a force $\vec{f}$ is derivable from a potential function ϕ then...

- Ans
- ☒ A. $\nabla \cdot \vec{f} = 0$
 - ☒ B. $\nabla \times \vec{f} = 0$
 - ☒ C. $\nabla \phi = 0$
 - ☒ D. $\nabla^2 \phi = 0$

Question Type : MCQ
 Question ID : 4335765612
 Option 1 ID : 43357622445
 Option 2 ID : 43357622446
 Option 3 ID : 43357622447
 Option 4 ID : 43357622448
 Status : Answered
 Chosen Option : B

Q.13 If F be the resultant attraction at an external point P be due to a uniform rod AB then, the direction of F divides $\angle APB$ in the ratio

- Ans
- ☒ A. 1 : 1
 - ☒ B. 1 : 2
 - ☒ C. 2 : 1
 - ☒ D. None of these

Question Type : MCQ
 Question ID : 4335765625
 Option 1 ID : 43357622497
 Option 2 ID : 43357622498
 Option 3 ID : 43357622499
 Option 4 ID : 43357622500
 Status : Answered
 Chosen Option : C

Q.14 Let A be a 3×3 matrix with real entries. Which of the following assertions is FALSE?

- Ans
- ☒ A. A must have a real eigenvalue.
 - ☒ B. If the determinant of A is 0, then 0 is an eigenvalue of A.
 - ☒ C. If the determinant of A is negative and 3 is an eigenvalue of A, then A must have three real eigenvalues.
 - ☒ D. If the determinant of A is positive and 3 is an eigenvalue of A, then A must have three real eigenvalues.

Question Type : MCQ
 Question ID : 4335765484
 Option 1 ID : 43357621933
 Option 2 ID : 43357621934
 Option 3 ID : 43357621935
 Option 4 ID : 43357621936
 Status : Answered
 Chosen Option : C

Q.15 The surface integral of the curl of a function over a surface bounded by a closed surface is equal to

- Ans ☒ A. The line integral of the function around that surface
☒ B. The line integral of the particular vector function around that surface
☒ C. The line integral around the surface
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765525
 Option 1 ID : 43357622097
 Option 2 ID : 43357622098
 Option 3 ID : 43357622099
 Option 4 ID : 43357622100
 Status : Answered
 Chosen Option : A

Q.16 A die is thrown. Let A be the event that the number obtained is greater than 3 and B be the event that the number obtained is less than 5. Then $P(A \cup B)$ is

- Ans ☒ A. 0
☒ B. 1
☒ C. 2/5
☒ D. 3/5

Question Type : MCQ
 Question ID : 4335765556
 Option 1 ID : 43357622221
 Option 2 ID : 43357622222
 Option 3 ID : 43357622223
 Option 4 ID : 43357622224
 Status : Answered
 Chosen Option : B

Q.17 A particle describes a parabola $y^2 = 4ax$ where the force F at any point p (x,y) is always directed perpendicularly to ax is, then, at any P

- Ans ☒ A. $F \propto \frac{1}{y^3}$
☒ B. $F \propto \frac{1}{y^2}$
☒ C. $F \propto \frac{1}{y}$
☒ D. $F \propto y^2$

Question Type : MCQ
 Question ID : 4335765615
 Option 1 ID : 43357622457
 Option 2 ID : 43357622458
 Option 3 ID : 43357622459
 Option 4 ID : 43357622460
 Status : Answered
 Chosen Option : B

Q.18 For a particle moving under a central force, its motion will be

- Ans ☒ A. along the helix
- ☒ B. in a plane
- ☒ C. in space
- ☒ D. None of these

Question Type : MCQ
Question ID : 4335765541
Option 1 ID : 43357622161
Option 2 ID : 43357622162
Option 3 ID : 43357622163
Option 4 ID : 43357622164
Status : Answered
Chosen Option : A

Q.19 The order of Newton-Raphson method is

- Ans ☒ A. 0
- ☒ B. 1
- ☒ C. 2
- ☒ D. None

Question Type : MCQ
Question ID : 4335765544
Option 1 ID : 43357622173
Option 2 ID : 43357622174
Option 3 ID : 43357622175
Option 4 ID : 43357622176
Status : Answered
Chosen Option : C

Q.20 The resultant fluid pressure on a plane area immersed in the fluid acts at a point called the

- Ans ☒ A. Centre of gravity
- ☒ B. Centre of pressure
- ☒ C. Central point
- ☒ D. None of these

Question Type : MCQ
Question ID : 4335765628
Option 1 ID : 43357622509
Option 2 ID : 43357622510
Option 3 ID : 43357622511
Option 4 ID : 43357622512
Status : Answered
Chosen Option : D

Q.21 The equation of the tangent to the curve $y = \sin^{-1}(\sin^2 x)$ at $x = 0$ is

- Ans ☐ A. $y = 0$
☐ B. $x = 0$
☐ C. $y = x$
☒ D. $y + x = 0$

Question Type : MCQ
 Question ID : 4335765498
 Option 1 ID : 43357621989
 Option 2 ID : 43357621990
 Option 3 ID : 43357621991
 Option 4 ID : 43357621992
 Status : Answered
 Chosen Option : D

Q.22 If $\lim_{n \rightarrow \infty} a_n = \ell$. Where $a_n > 0 \forall n$ then $(a_1, a_2, \dots, a_n)^{\frac{1}{n}} = 1$ Above theorem is known as

- Ans ☐ A. Cauchy's first theorem on limits
☒ B. Cauchy's second theorem on limits
☐ C. Maclaurin's theorem
☐ D. Leibnitz theorem

Question Type : MCQ
 Question ID : 4335765572
 Option 1 ID : 43357622285
 Option 2 ID : 43357622286
 Option 3 ID : 43357622287
 Option 4 ID : 43357622288
 Status : Answered
 Chosen Option : A

Q.23 Let $f(z) = \sum_{n=1}^{\infty} \frac{z^n}{n}$, which converges for $|z| < 1$. What is the largest domain to which f can be analytically continued?

- Ans ☐ A. $C \setminus \{1\}$
☐ B. $|z| < 2$
☒ C. $C \setminus [1, \infty)$
☐ D. $C \setminus \{-1\}$

Question Type : MCQ
 Question ID : 4335765532
 Option 1 ID : 43357622125
 Option 2 ID : 43357622126
 Option 3 ID : 43357622127
 Option 4 ID : 43357622128
 Status : Answered
 Chosen Option : C

Q.24 In regular falsi method, the point of intersection of the curve AB and x-axis is replaced by

- Ans ☒ A. Point of intersection of x=axis and chord AB
☒ B. Point of intersection of y=axis and chord AB
☒ C. Point of intersection of y-axis and curve AB
☒ D. Point of intersection of x=axis and y-axis

Question Type : MCQ
 Question ID : 4335765679
 Option 1 ID : 43357622713
 Option 2 ID : 43357622714
 Option 3 ID : 43357622715
 Option 4 ID : 43357622716
 Status : Answered
 Chosen Option : B

Q.25

The D.E whose linearly independent solutions are $\cos 2x$, $\sin 2x$ and e^{-x} is.....

- Ans ☒ A. $(D^3 + D^2 + 4D + 4)y = 0$
☒ B. $(D^3 - D^2 + 4D - 4)y = 0$
☒ C. $y^2 \left(\frac{dy}{dx} + 1 \right) = a^2$
☒ D. $(D^3 - D^2 - 4D + 4)y = 0$

Question Type : MCQ
 Question ID : 4335765578
 Option 1 ID : 43357622309
 Option 2 ID : 43357622310
 Option 3 ID : 43357622311
 Option 4 ID : 43357622312
 Status : Answered
 Chosen Option : B

Q.26 Let $U=X-5$ and $V= 40-X$. The correlation coefficient between U and V is.

- Ans ☒ A. -1
☒ B. +1
☒ C. 5/40
☒ D. 0

Question Type : MCQ
 Question ID : 4335765634
 Option 1 ID : 43357622533
 Option 2 ID : 43357622534
 Option 3 ID : 43357622535
 Option 4 ID : 43357622536
 Status : Answered
 Chosen Option : B

Q.27 Consider the field C together with the Euclidean topology. Let K be a proper subfield of C that is not contained in R . Which one of the following statements is necessarily true?

- Ans ☒ A. K is dense in C
- ☐ B. K is an algebraic extension of Q
- ☐ C. C is an algebraic extension of K .
- ☐ D. The smallest closed subset of C containing K is NOT a field.

Question Type : MCQ
Question ID : 4335765649
Option 1 ID : 43357622593
Option 2 ID : 43357622594
Option 3 ID : 43357622595
Option 4 ID : 43357622596
Status : Answered
Chosen Option : B

Q.28 The first approximation to a real root of the equation $x^3 - 3x^3 - 2 = 0$ by Regular Falsi method between 3 and 4 is

- Ans ☐ A. 3.375
- ☐ B. 3.5
- ☒ C. 3.125
- ☐ D. 3.25

Question Type : MCQ
Question ID : 4335765543
Option 1 ID : 43357622169
Option 2 ID : 43357622170
Option 3 ID : 43357622171
Option 4 ID : 43357622172
Status : Answered
Chosen Option : C

Q.29

The value of $\left(\frac{1+\sqrt{2}+i}{1+\sqrt{2}-i}\right)^4$ is.....

- Ans ☐ A. 0
- ☐ B. 1
- ☒ C. -1
- ☐ D. i

Question Type : MCQ
Question ID : 4335765557
Option 1 ID : 43357622225
Option 2 ID : 43357622226
Option 3 ID : 43357622227
Option 4 ID : 43357622228
Status : Answered
Chosen Option : A

Q.30 Consider the function f defined by $f(z) = \frac{1}{1-z-z^2}$ for $z \in \mathbb{C}$ such that $1 - z - z^2 \neq 0$.

Which of the following statements is true?

Ans ☒ A.

f is an entire function.

☒ B.

f has a simple pole at $z = 0$.

☒ C.

f has a Taylor series expansion $f(z) = \sum_{n=0}^{\infty} a_n z^n$, where coefficients a_n are recursively defined as follows: $a_0 = 1, a_1 = 0$ and $a_{n+2} = a_n + a_{n+1}$ for $n \geq 0$.

☒ D.

f has a Taylor series expansion $f(z) = \sum_{n=0}^{\infty} a_n z^n$, where coefficients a_n are recursively defined as follows: $a_0 = 1, a_1 = 1$ and $a_{n+2} = a_n + a_{n+1}$ for $n \geq 0$.

Question Type : MCQ

Question ID : 4335765485

Option 1 ID : 43357621937

Option 2 ID : 43357621938

Option 3 ID : 43357621939

Option 4 ID : 43357621940

Status : Answered

Chosen Option : D

Q.31 The Wronskian of $y_1 = \sin 2x$ and $y_2 = \cos 2x$, which are solutions of the D.E. $y'' + 4y = 0$ is-

Ans ☒ A. 0

☒ B. 1

☒ C. -2

☒ D. 2

Question Type : MCQ

Question ID : 4335765579

Option 1 ID : 43357622313

Option 2 ID : 43357622314

Option 3 ID : 43357622315

Option 4 ID : 43357622316

Status : Answered

Chosen Option : C

Q.32 The intersection of sequence of open intervals $]-1/n, 1/n[$, $n=1,2,3,\dots$ on the real line $\mathbb{R}$ with the usual metric is

- Ans ☒ A. Open
☒ B. Closed
☒ C. neither open nor closed
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765605
 Option 1 ID : 43357622417
 Option 2 ID : 43357622418
 Option 3 ID : 43357622419
 Option 4 ID : 43357622420
 Status : Answered
 Chosen Option : A

Q.33 The number of sylow subgroup(s) of order 3 of a given group of order 33 is

- Ans ☒ A. 5
☒ B. 3
☒ C. 1
☒ D. 0

Question Type : MCQ
 Question ID : 4335765647
 Option 1 ID : 43357622585
 Option 2 ID : 43357622586
 Option 3 ID : 43357622587
 Option 4 ID : 43357622588
 Status : Answered
 Chosen Option : D

Q.34

Let $f(z) = \frac{1}{e^z - 1}$, then

- Ans ☒ A. f is an entire function
☒ B. f has pole at $z=2n\pi i$ with residue 1 for $n \in \mathbb{Z}$
☒ C. f has an essential singularity at $z=0$
☒ D. f has removable singularity at $z=2n\pi i$, $n \in \mathbb{Z}$

Question Type : MCQ
 Question ID : 4335765528
 Option 1 ID : 43357622109
 Option 2 ID : 43357622110
 Option 3 ID : 43357622111
 Option 4 ID : 43357622112
 Status : Answered
 Chosen Option : D

Q.35 Let V be a finite dimensional vector space and W is a subspace of V . Let W° denote the annihilator of W . Let us consider the following two statements:
Statement (i) : $\dim W + \dim W^\circ = \dim V$
Statement (ii) : $W^\circ = W$.
Then

- Ans ☒ A. Both statements (i) and (ii) are true
☒ B. Statement (i) is true but (ii) is false
☒ C. Statement (i) is false and statement (ii) is true
☒ D. Both statement (i) and (ii) are false

Question Type : MCQ
Question ID : 4335765519
Option 1 ID : 43357622073
Option 2 ID : 43357622074
Option 3 ID : 43357622075
Option 4 ID : 43357622076
Status : Answered
Chosen Option : B

Q.36 Monge's method is used for solving:

- Ans ☒ A. First order linear PDEs
☒ B. Second order PDEs
☒ C. Elliptic equations
☒ D. Non-linear PDEs

Question Type : MCQ
Question ID : 4335765672
Option 1 ID : 43357622685
Option 2 ID : 43357622686
Option 3 ID : 43357622687
Option 4 ID : 43357622688
Status : Answered
Chosen Option : B

Q.37 The set of all non-singular square matrices of order n with real elements is

- Ans ☒ A. an abelian group with respect to multiplication of matrices
☒ B. a group with respect to multiplication of matrices
☒ C. not a semi-group with respect to multiplication of matrices
☒ D. None of the above

Question Type : MCQ
Question ID : 4335765593
Option 1 ID : 43357622369
Option 2 ID : 43357622370
Option 3 ID : 43357622371
Option 4 ID : 43357622372
Status : Answered
Chosen Option : A

Q.38 Let F_4, F_8 , and F_{16} be finite fields of 4, 8 and 16 elements respectively. Then

Ans

☒ A. F_4 is isomorphic to a subfield of F_8

☒ B. F_8 is isomorphic to a subfield of F_{16}

☒ C. F_4 is isomorphic to a subfield of F_{16}

☒ D. None of these

Question Type : MCQ

Question ID : 4335765517

Option 1 ID : 43357622065

Option 2 ID : 43357622066

Option 3 ID : 43357622067

Option 4 ID : 43357622068

Status : Answered

Chosen Option : C

Q.39 The point on the curve $y^2 = x$, where the tangent makes an angle of $\frac{\pi}{4}$ with x - axis is

Ans ☒ A. (1/2, 1/4)

☒ B. (2,4)

☒ C. (1/4, 1/2)

☒ D. (1, 1)

Question Type : MCQ

Question ID : 4335765497

Option 1 ID : 43357621985

Option 2 ID : 43357621986

Option 3 ID : 43357621987

Option 4 ID : 43357621988

Status : Answered

Chosen Option : A

Q.40 A parabolic partial differential equation satisfies:

Ans ☒ A. $B^2 - 4AC > 0$

☒ B. $B^2 - 4AC = 0$

☒ C. $B^2 - 4AC < 0$

☒ D. None of these

Question Type : MCQ

Question ID : 4335765675

Option 1 ID : 43357622697

Option 2 ID : 43357622698

Option 3 ID : 43357622699

Option 4 ID : 43357622700

Status : Answered

Chosen Option : A

Q.41

The backward difference approximation of y_i^1 is

Ans

☐ A. $\frac{y_{i+1} - y_i}{h}$

☒ B. $\frac{y_i - y_{i-1}}{h}$

☐ C. $\frac{y_i - y_{i-1}}{2h}$

☐ D. None of these

Question Type : MCQ

Question ID : 4335765621

Option 1 ID : 43357622481

Option 2 ID : 43357622482

Option 3 ID : 43357622483

Option 4 ID : 43357622484

Status : Answered

Chosen Option : C

Q.42

If ϕ is Euler's Phi-function then $\phi(\phi(\phi(\phi(2^{10})))) = \dots$

Ans ☐ A. 32

☒ B. 64

☐ C. 128

☐ D. 256

Question Type : MCQ

Question ID : 4335765563

Option 1 ID : 43357622249

Option 2 ID : 43357622250

Option 3 ID : 43357622251

Option 4 ID : 43357622252

Status : Answered

Chosen Option : B

Q.43

If S be a closed surface for which $\iint_S \vec{r} \cdot \hat{n} \, ds = 10$, then the Volume enclosed by S is

Ans ☐ A. 30

☐ B. 3/10

☒ C. 10/3

☐ D. 20/3

Question Type : MCQ

Question ID : 4335765596

Option 1 ID : 43357622381

Option 2 ID : 43357622382

Option 3 ID : 43357622383

Option 4 ID : 43357622384

Status : Answered

Chosen Option : C

Q.44 Which method is generally used to solve linear homogeneous equations with constant coefficients?

- Ans ☒ A. Laplace Transform
☒ B. Power Series Method
☒ C. Characteristic Equation Method
☒ D. Runge-Kutta Method

Question Type : MCQ
 Question ID : 4335765661
 Option 1 ID : 43357622641
 Option 2 ID : 43357622642
 Option 3 ID : 43357622643
 Option 4 ID : 43357622644
 Status : Answered
 Chosen Option : A

Q.45 The work done in moving a particle in a force field $\vec{f} = 2xy\vec{i} - 3x\vec{j} - 5z\vec{k}$ along the curve $x=t, y=t^2 + 1, z = 2t^2$ from $t=0$ to $t=1$ is?

- Ans ☒ A. $-\frac{19}{2}$ units
☒ B. -10 units
☒ C. $-\frac{21}{2}$ units
☒ D. $-\frac{23}{2}$ units

Question Type : MCQ
 Question ID : 4335765613
 Option 1 ID : 43357622449
 Option 2 ID : 43357622450
 Option 3 ID : 43357622451
 Option 4 ID : 43357622452
 Status : Answered
 Chosen Option : D

Q.46 In the group $U(15)$ of residue class modulo 15, the order of 7 is

- Ans ☒ A. 1
☒ B. 2
☒ C. 3
☒ D. 4

Question Type : MCQ
 Question ID : 4335765588
 Option 1 ID : 43357622349
 Option 2 ID : 43357622350
 Option 3 ID : 43357622351
 Option 4 ID : 43357622352
 Status : Answered
 Chosen Option : A

Q.47 If A_i be countably infinite set for $i=1,2,3,\dots$, then $\bigcup_{i=1}^{\infty} A_i$ is

- Ans ☒ A. Countably finite
☒ B. Countably infinite
☒ C. Uncountable
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765561
 Option 1 ID : 43357622241
 Option 2 ID : 43357622242
 Option 3 ID : 43357622243
 Option 4 ID : 43357622244
 Status : Answered
 Chosen Option : B

Q.48 Homomorphism is a/an..... Relation

- Ans ☒ A. Reflexive
☒ B. symmetric
☒ C. Equivalence relation
☒ D. Transitive

Question Type : MCQ
 Question ID : 4335765666
 Option 1 ID : 43357622661
 Option 2 ID : 43357622662
 Option 3 ID : 43357622663
 Option 4 ID : 43357622664
 Status : Answered
 Chosen Option : C

Q.49 The statement

“Any canonical tableau can be interpreted both as a canonical maximization linear programming problem and a canonical minimization linear programming problem is

- Ans ☒ A. True
☒ B. false
☒ C. May be true
☒ D. May be false

Question Type : MCQ
 Question ID : 4335765548
 Option 1 ID : 43357622189
 Option 2 ID : 43357622190
 Option 3 ID : 43357622191
 Option 4 ID : 43357622192
 Status : Answered
 Chosen Option : A

Q.50 Which one of following is equal to $1^{37} + 2^{37} + 3^{37} + \dots + 88^{37}$ in $\mathbb{Z}/89\mathbb{Z}$?

Ans ☒ A. 88

☐ B. -88

☐ C. -2

☐ D. 0

Question Type : MCQ

Question ID : 4335765518

Option 1 ID : 43357622069

Option 2 ID : 43357622070

Option 3 ID : 43357622071

Option 4 ID : 43357622072

Status : Answered

Chosen Option : B

Q.51 Euler's ϕ -function is defined as

Ans ☐ A. $\phi(n) = n-1$, n is an integer

☒ B. $\phi(p^k) = p^k - p^{k-1}$, p, k are integers

☐ C.

$\phi(p^k) = p^k + p^{k-1}$, p is prime number and k is an integer

☐ D.

$\phi(p^k) = p^k (1 - \frac{1}{p})$, p is a prime number and k is positive integer

Question Type : MCQ

Question ID : 4335765494

Option 1 ID : 43357621973

Option 2 ID : 43357621974

Option 3 ID : 43357621975

Option 4 ID : 43357621976

Status : Answered

Chosen Option : C

Q.52 The relation between the operators, E , and Δ is given by

Ans ☒ A. $E \equiv 1 + \Delta$

☐ B. $1 - E \equiv \Delta$

☐ C. $1 + E \equiv \Delta$

☐ D. $E \equiv 1 - \Delta$

Question Type : MCQ

Question ID : 4335765639

Option 1 ID : 43357622553

Option 2 ID : 43357622554

Option 3 ID : 43357622555

Option 4 ID : 43357622556

Status : Answered

Chosen Option : C

Q.53 A vertical triangular plane area, submerged in water with one side in the free surface, vertex down ward and latitude 'h'. The depth of the centre of pressure from the water surface is

- Ans ☒ A. $h/4$
☒ B. $h/3$
☒ C. $2h/3$
☒ D. $h/2$

Question Type : MCQ
 Question ID : 4335765656
 Option 1 ID : 43357622621
 Option 2 ID : 43357622622
 Option 3 ID : 43357622623
 Option 4 ID : 43357622624
 Status : Answered
 Chosen Option : C

Q.54 If $P(A) = 0.3$, $P(B) = 0.78$ and $P(A \cup B) = 0.92$ then $P(A \cap B)$ is

- Ans ☒ A. 0.62
☒ B. 0.546000000000000004
☒ C. 0.64
☒ D. 0.48

Question Type : MCQ
 Question ID : 4335765631
 Option 1 ID : 43357622521
 Option 2 ID : 43357622522
 Option 3 ID : 43357622523
 Option 4 ID : 43357622524
 Status : Answered
 Chosen Option : B

Q.55

$$\oint_C \vec{r} \times d\vec{r} = \dots\dots\dots$$

- Ans ☒ A. 0

- ☒ B. $\iint_S \vec{n} \, ds$
☒ C. $\frac{1}{2} \iint_S \vec{n} \, ds$
☒ D. $2 \iint_S \vec{n} \, ds$

Question Type : MCQ
 Question ID : 4335765597
 Option 1 ID : 43357622385
 Option 2 ID : 43357622386
 Option 3 ID : 43357622387
 Option 4 ID : 43357622388
 Status : Answered
 Chosen Option : C

Q.56

The general integral of $y^2 zp + x^2 zq = xy^2$ is

Ans

✗ A. $\varphi(x^2 - y^2, y^2 - z^2) = 0$

✗ B. $\varphi(x^3 - y^3, x^3 - z^3) = 0$

✗ C. $\varphi(x^3 - y^3, x^2 - z^2) = 0$

✓ D. $\varphi(x^2 - y^2, x^3 - z^3) = 0$

Question Type : MCQ

Question ID : 4335765510

Option 1 ID : 43357622037

Option 2 ID : 43357622038

Option 3 ID : 43357622039

Option 4 ID : 43357622040

Status : Answered

Chosen Option : B

Q.57 The plane $ax+by+cz=0$ cuts the cone $yz+zx+xy=0$ in perpendicular lines. If,

Ans

✗ A. $\frac{b+c}{a} + \frac{c+a}{b} + \frac{a+b}{c} = 0$

✓ B. $\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = 0$

✗ C. $\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = 1$

✗ D. $a+b+c = 0$

Question Type : MCQ

Question ID : 4335765569

Option 1 ID : 43357622273

Option 2 ID : 43357622274

Option 3 ID : 43357622275

Option 4 ID : 43357622276

Status : Answered

Chosen Option : C

Q.58 The solution curves of the given differential equation $xdx+dy=0$ are given by a family of

- Ans ☒ A. Circles
☒ B. Parabolas
☒ C. Ellipses
☒ D. Straight lines pass through origin

Question Type : MCQ
 Question ID : 4335765644
 Option 1 ID : 43357622573
 Option 2 ID : 43357622574
 Option 3 ID : 43357622575
 Option 4 ID : 43357622576
 Status : Answered
 Chosen Option : A

Q.59 A topological space x is connected iff only subset which are simultaneously open and closed is

- Ans ☒ A. any non-empty set of X
☒ B. any complement of subset of X
☒ C. ϕ and x are only subsets
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765609
 Option 1 ID : 43357622433
 Option 2 ID : 43357622434
 Option 3 ID : 43357622435
 Option 4 ID : 43357622436
 Status : Answered
 Chosen Option : B

Q.60 The P.D.E of the family of surface $z=x+y+f(xy)$ is

- Ans ☒ A. $Xp=yq$
☒ B. $Xp-yq=x-y$
☒ C. $Xp+yq=x+y$
☒ D. $Xp=-yq$

Question Type : MCQ
 Question ID : 4335765583
 Option 1 ID : 43357622329
 Option 2 ID : 43357622330
 Option 3 ID : 43357622331
 Option 4 ID : 43357622332
 Status : Answered
 Chosen Option : C

Q.61 A singular solution of the given differential equation is

- Ans ☒ A. Either a general solution or a particular solution
- ☒ B. Neither a general solution nor a particular solution but contains the arbitrary constant
- ☒ C. Neither a general solution nor a particular solution and does not contain any arbitrary constant
- ☒ D. Known as a general solution

Question Type : MCQ
Question ID : 4335765643
Option 1 ID : 43357622569
Option 2 ID : 43357622570
Option 3 ID : 43357622571
Option 4 ID : 43357622572
Status : Answered
Chosen Option : B

Q.62 If the extreme values of $u = x^2 + y^2 + z^2$ be found subject to Conditions $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$ and $lx + my + nz = 0$ and λ_1, λ_2 be Lagrange's undetermined multipliers, then $\lambda_1 =$

- Ans ☒ A. -x
- ☒ B. -y
- ☒ C. -z
- ☒ D. I

Question Type : MCQ
Question ID : 4335765599
Option 1 ID : 43357622393
Option 2 ID : 43357622394
Option 3 ID : 43357622395
Option 4 ID : 43357622396
Status : Answered
Chosen Option : A

Q.63 $Z = px + qy + f(p, q)$ is known as.....

- Ans ☒ A. Euler's equation
- ☒ B. Lagrange's equation
- ☒ C. Monge's equation
- ☒ D. Clairaur's equation

Question Type : MCQ
Question ID : 4335765584
Option 1 ID : 43357622333
Option 2 ID : 43357622334
Option 3 ID : 43357622335
Option 4 ID : 43357622336
Status : Answered
Chosen Option : C

Q.64 The set of fourth roots of unity

- Ans ☒ A. does not form a group with respect to addition
☒ B. forms an abelian group with respect to addition
☒ C. forms an abelian group with respect to multiplication
☒ D. forms a group with respect to addition

Question Type : MCQ

Question ID : 4335765586

Option 1 ID : 43357622341

Option 2 ID : 43357622342

Option 3 ID : 43357622343

Option 4 ID : 43357622344

Status : Answered

Chosen Option : C

Q.65 Which of the following functions is uniformly continuous on the interval (0, 1)?

Ans ☒ A.

$$f(x) = \sin \frac{1}{x}$$

☒ B.

$$f(x) = e^{-1/x^2}$$

☒ C.

$$f(x) = e^x \cos \frac{1}{x}$$

☒ D.

$$f(x) = \cos x \cos \frac{\pi}{x}$$

Question Type : MCQ

Question ID : 4335765483

Option 1 ID : 43357621929

Option 2 ID : 43357621930

Option 3 ID : 43357621931

Option 4 ID : 43357621932

Status : Answered

Chosen Option : C

Q.66 In planetary motion the sun is always

- Ans ☒ A. On the centre of circular orbit
☒ B. On one focus of the ellipse
☒ C. in the middle of two foci of ellipse
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765539
 Option 1 ID : 43357622153
 Option 2 ID : 43357622154
 Option 3 ID : 43357622155
 Option 4 ID : 43357622156
 Status : Answered
 Chosen Option : B

Q.67 A function ' f ' from one metric space (X, d) to (Y, p) is continuous at $x = p$ if for all $\epsilon > 0$, $\exists \delta > 0$ such that

- Ans ☒ A. $d(x, p) < \delta$
☒ B. $d(x, p) = 1$
☒ C. $d(x, p) > \delta$
☒ D. $d(x, p) = 0$

Question Type : MCQ
 Question ID : 4335765535
 Option 1 ID : 43357622137
 Option 2 ID : 43357622138
 Option 3 ID : 43357622139
 Option 4 ID : 43357622140
 Status : Answered
 Chosen Option : C

Q.68

Let $f: \mathbb{R} \rightarrow \mathbb{R}$ be a differentiable function such that f and its derivative f' have no common zeros in $[0, 1]$. Which one of the following statements is true?

- Ans ☒ A. f never vanishes in $[0, 1]$
☒ B. f has at most finitely many zeros in $[0, 1]$
☒ C. f has infinitely many zeros in $[0, 1]$
☒ D. $f(1/2) = 0$

Question Type : MCQ
 Question ID : 4335765506
 Option 1 ID : 43357622021
 Option 2 ID : 43357622022
 Option 3 ID : 43357622023
 Option 4 ID : 43357622024
 Status : Answered
 Chosen Option : B

Q.69 Variation of parameters is applicable to:

- Ans ☒ A. Only homogeneous equations
☒ B. Linear non-homogeneous differential equations
☒ C. Non-linear differential equations
☒ D. Only partial differential equations

Question Type : MCQ
 Question ID : 4335765667
 Option 1 ID : 43357622665
 Option 2 ID : 43357622666
 Option 3 ID : 43357622667
 Option 4 ID : 43357622668
 Status : Answered
 Chosen Option : B

Q.70 A second order linear PDE is classified as hyperbolic if:

- Ans ☒ A. $B^2 - 4AC > 0$
☒ B. $B^2 - 4AC = 0$
☒ C. $B^2 - 4AC < 0$
☒ D. $A = B = C = 0$

Question Type : MCQ
 Question ID : 4335765673
 Option 1 ID : 43357622689
 Option 2 ID : 43357622690
 Option 3 ID : 43357622691
 Option 4 ID : 43357622692
 Status : Answered
 Chosen Option : C

Q.71 The modulus of an Eigen value of an orthogonal matrix is

- Ans ☒ A. 0
☒ B. -1
☒ C. 1
☒ D. 2

Question Type : MCQ
 Question ID : 4335765590
 Option 1 ID : 43357622357
 Option 2 ID : 43357622358
 Option 3 ID : 43357622359
 Option 4 ID : 43357622360
 Status : Answered
 Chosen Option : A

Q.72 The number of normal(s) that can be drawn from a given point (α, β, γ) to the ellipsoid

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1 \text{ is}$$

- Ans ☐ A. 2
☐ B. 3
☐ C. 4
☒ D. 6

Question Type : MCQ
 Question ID : 4335765499
 Option 1 ID : 43357621993
 Option 2 ID : 43357621994
 Option 3 ID : 43357621995
 Option 4 ID : 43357621996
 Status : Answered
 Chosen Option : B

Q.73 White solving the equation $x^2 - 3x + 1 = 0$ using Newton Raphson method the initial guess of the root is as 1, then the value of the root will be

- Ans ☐ A. 1
☒ B. 0
☐ C. 1.5
☐ D. 0.5

Question Type : MCQ
 Question ID : 4335765677
 Option 1 ID : 43357622705
 Option 2 ID : 43357622706
 Option 3 ID : 43357622707
 Option 4 ID : 43357622708
 Status : Answered
 Chosen Option : D

Q.74

The integral $\int_0^{\infty} \frac{x \tan^{-1} x}{(1 + x^4)^{\frac{1}{3}}} dx$ is

- Ans ☐ A. Convergent
☐ B. Bounded
☒ C. Convergent to $\pi/2$
☐ D. Divergent

Question Type : MCQ
 Question ID : 4335765503
 Option 1 ID : 43357622009
 Option 2 ID : 43357622010
 Option 3 ID : 43357622011
 Option 4 ID : 43357622012
 Status : Answered
 Chosen Option : B

Q.75 A metric space (E, d) be such that every Cauchy sequence in (E, d) is convergent in (E, d) , then metric space is

- Ans ☒ A. Incomplete
☒ B. complete
☒ C. quasi-complete
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765607
 Option 1 ID : 43357622425
 Option 2 ID : 43357622426
 Option 3 ID : 43357622427
 Option 4 ID : 43357622428
 Status : Answered
 Chosen Option : B

Q.76 If optimal solution exists in Dual simplex Algorithm, then

- Ans ☒ A. $\text{Max } f = -\max(-g)$
☒ B. $\text{Max } f = -\min g$
☒ C. $\text{Max } f = -\max g$
☒ D. $\text{Max } f = -\min(-g)$

Question Type : MCQ
 Question ID : 4335765549
 Option 1 ID : 43357622193
 Option 2 ID : 43357622194
 Option 3 ID : 43357622195
 Option 4 ID : 43357622196
 Status : Answered
 Chosen Option : B

Q.77 Virtual work refers to

- Ans ☒ A. Virtual work done by virtual forces
☒ B. Virtual work done by Actual forces.
☒ C. Actual work done by virtual forces
☒ D. Actual work done by Actual forces.

Question Type : MCQ
 Question ID : 4335765538
 Option 1 ID : 43357622149
 Option 2 ID : 43357622150
 Option 3 ID : 43357622151
 Option 4 ID : 43357622152
 Status : Answered
 Chosen Option : B

Q.78 Let A be an $n \times n$ matrix with complex entries. If $n \geq 4$, which one of the following statements is true?

- Ans ☒ A. A does not have any non-zero invariant subspace in $\mathbb{C}^n$
- ☒ B. A has an invariant subspace in $\mathbb{C}^n$ of dimension $n-3$
- ☒ C. All eigenvalues of A are real numbers.
- ☒ D. A^2 does not have any invariant subspace in $\mathbb{C}^n$ of dimension $n-1$

Question Type : MCQ
Question ID : 4335765530
Option 1 ID : 43357622117
Option 2 ID : 43357622118
Option 3 ID : 43357622119
Option 4 ID : 43357622120
Status : Answered
Chosen Option : C

Q.79 Let $\phi(x, y)$ be a velocity potential and $\psi(x, y)$ be the stream function. Then the complex potential $W(z) = \phi + i\psi$ is analytic if

- Ans ☒ A. ϕ and ψ be Harmonic
- ☒ B. ϕ and ψ Follow the equation of Kausi Reman
- ☒ C. Be compressible
- ☒ D. ψ should be always zeros

Question Type : MCQ
Question ID : 4335765554
Option 1 ID : 43357622213
Option 2 ID : 43357622214
Option 3 ID : 43357622215
Option 4 ID : 43357622216
Status : Answered
Chosen Option : A

Q.80

The complete integral of $x^2 p^2 + y^2 q^2 = z^2$ is

- Ans ☒ A. $z = x^{\cos \alpha} \cdot y^{\sin \alpha} \cdot k$
- ☒ B. $z = x^{\cos \alpha} \cdot y^{\sin \beta} k$
- ☒ C. $z = x^{\cos \alpha} \cdot y^{\sin \alpha}$
- ☒ D. None of these

Question Type : MCQ
Question ID : 4335765511
Option 1 ID : 43357622041
Option 2 ID : 43357622042
Option 3 ID : 43357622043
Option 4 ID : 43357622044
Status : Answered
Chosen Option : B

Q.81

Consider the series $\sum_{n=1}^{\infty} a_n$, where $a_n = (-1)^{n+1}(\sqrt{n+1} - \sqrt{n})$. Which of the following statements is true?

- Ans ☒ A. The series is divergent
☒ B. The series is convergent
☒ C. The series is conditionally convergent
☒ D. The series is absolutely convergent.

Question Type : MCQ
 Question ID : 4335765481
 Option 1 ID : 43357621921
 Option 2 ID : 43357621922
 Option 3 ID : 43357621923
 Option 4 ID : 43357621924
 Status : Answered
 Chosen Option : C

Q.82 The Dual of the dual is the

- Ans ☒ A. Dual
☒ B. Primal
☒ C. either primal or dual
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765652
 Option 1 ID : 43357622605
 Option 2 ID : 43357622606
 Option 3 ID : 43357622607
 Option 4 ID : 43357622608
 Status : Answered
 Chosen Option : C

Q.83 Suppose $\{v_1, v_2, \dots, v_n\}$ is a basis of an inner product space V such that the Gram matrix $G(\{v_i, v_j\})$ satisfies $\det(G) = 0$. Which of the following statements is true?

- Ans ☒ A. Vector $\{v_i\}$ are linearly dependent
☒ B. Vector $\{v_i\}$ are orthonormal
☒ C. Vector $\{v_i\}$ form an orthogonal basis
☒ D. Vector $\{v_i\}$ are linearly independent

Question Type : MCQ
 Question ID : 4335765522
 Option 1 ID : 43357622085
 Option 2 ID : 43357622086
 Option 3 ID : 43357622087
 Option 4 ID : 43357622088
 Status : Answered
 Chosen Option : D

Q.84 If A and B are non-empty separated sets in a topological space X then $A \cup B$ is

- Ans ☒ A. Connected
☒ B. Disconnected
☒ C. Open
☒ D. None of these

Question Type : MCQ
 Question ID : 4335765610
 Option 1 ID : 43357622437
 Option 2 ID : 43357622438
 Option 3 ID : 43357622439
 Option 4 ID : 43357622440
 Status : Answered
 Chosen Option : A

Q.85 If Z be the height of a point, above the surface of the earth, then the pressure of that point=....

- Ans ☒ A. P_{gdz}
☒ B. $-p_{gdz}$
☒ C. G_{dz}
☒ D. $-g_{dz}$

Question Type : MCQ
 Question ID : 4335765630
 Option 1 ID : 43357622517
 Option 2 ID : 43357622518
 Option 3 ID : 43357622519
 Option 4 ID : 43357622520
 Status : Answered
 Chosen Option : B

Q.86 The dimension of the vector space formed by $n \times n$ matrices such that trace of each matrix is zero is

- Ans ☒ A. $n(n \times n)$
☒ B. n^2
☒ C. $n^2 - 1$
☒ D. $n(n-1)$

Question Type : MCQ
 Question ID : 4335765650
 Option 1 ID : 43357622597
 Option 2 ID : 43357622598
 Option 3 ID : 43357622599
 Option 4 ID : 43357622600
 Status : Answered
 Chosen Option : D

Q.87 Consider the PDE $u_t = u_{xx} + u_{yy}$ in $\mathbb{R}^2$. Which of the following is a fundamental solution (Green's function) at the origin?

Ans

- ☒ A. $\frac{1}{4\pi t} e^{-\frac{x^2+y^2}{4t}}$
- ☒ B. $\frac{1}{2\pi t} e^{-\frac{x^2+y^2}{4t}}$
- ☒ C. $\frac{1}{\sqrt{4\pi t}} e^{-\frac{x^2+y^2}{2t}}$
- ☒ D. $\delta(x)\delta(y)\delta(t)$

Question Type : MCQ

Question ID : 4335765513

Option 1 ID : 43357622049

Option 2 ID : 43357622050

Option 3 ID : 43357622051

Option 4 ID : 43357622052

Status : Answered

Chosen Option : A

Q.88 The correct statement regarding metric spaces is

- Ans ☒ A. A metric space is compact iff it is complete and totally bounded.
- ☒ B. Every contradiction mapping on a complete metric space has multiple fixed points.
- ☒ C. Connectedness of metric space implies that it is compact
- ☒ D. Uniform continuity of a function between metric spaces implies continuity and vice-versa.

Question Type : MCQ

Question ID : 4335765533

Option 1 ID : 43357622129

Option 2 ID : 43357622130

Option 3 ID : 43357622131

Option 4 ID : 43357622132

Status : Answered

Chosen Option : A

Q.89 If $A = \begin{bmatrix} 3 & -2 \\ 4 & -2 \end{bmatrix}$ satisfies matrix equation $A^2 - KA + 2I = 0$, then what is the value of K?

- Ans ☒ A. 0
- ☒ B. 1
- ☒ C. 2
- ☒ D. 3

Question Type : MCQ

Question ID : 4335765594

Option 1 ID : 43357622373

Option 2 ID : 43357622374

Option 3 ID : 43357622375

Option 4 ID : 43357622376

Status : Answered

Chosen Option : B

Q.90 The principle of superposition is applicable to:

- Ans ☒ A. Non-linear equations
☒ B. Linear homogeneous equations
☒ C. Linear non-homogeneous equations
☒ D. All of the above

Question Type : MCQ
 Question ID : 4335765658
 Option 1 ID : 43357622629
 Option 2 ID : 43357622630
 Option 3 ID : 43357622631
 Option 4 ID : 43357622632
 Status : Answered
 Chosen Option : B

Q.91 If the temperature be constant and the altitude increases in A.P the pressure _____ in _____ atmospheric

- Ans ☒ A. Increase , A.P
☒ B. Increases , G.P
☒ C. Decrease , A.P
☒ D. Decrease , G.P

Question Type : MCQ
 Question ID : 4335765629
 Option 1 ID : 43357622513
 Option 2 ID : 43357622514
 Option 3 ID : 43357622515
 Option 4 ID : 43357622516
 Status : Answered
 Chosen Option : D

Q.92 The relation "congruence modulo m " is _____ over the set of integers, where m is a positive integer

- Ans ☒ A. Reflexive
☒ B. Symmetric
☒ C. Transitive
☒ D. All of these

Question Type : MCQ
 Question ID : 4335765636
 Option 1 ID : 43357622541
 Option 2 ID : 43357622542
 Option 3 ID : 43357622543
 Option 4 ID : 43357622544
 Status : Answered
 Chosen Option : B

Q.93

The Series: $\sum (-1)^{n-1} \frac{1}{n^p}$ is:

- Ans ☒ A. divergent for every value of p
☒ B. Convergent for every value of p
☒ C. Convergent for $p > 0$
☒ D. divergent for $p > 0$

Question Type : MCQ

Question ID : 4335765574

Option 1 ID : 43357622293

Option 2 ID : 43357622294

Option 3 ID : 43357622295

Option 4 ID : 43357622296

Status : Answered

Chosen Option : B

Q.94

$\mu y_x + \frac{1}{2} \delta y_x = E^{\frac{n}{2}} y_x$, where μ average δ = central
and E is shifting operator then n is

- Ans ☒ A. -1
☒ B. 1
☒ C. -2
☒ D. 2

Question Type : MCQ

Question ID : 4335765620

Option 1 ID : 43357622477

Option 2 ID : 43357622478

Option 3 ID : 43357622479

Option 4 ID : 43357622480

Status : Answered

Chosen Option : D

Q.95 Let $A \in M^n(C)$ be a normal matrix. Which one of the following statements is always true?

- Ans ☒ A. A is diagonalizable by a unitary matrix.
☒ B. A is diagonalizable by a similarity transform but not necessarily unitary.
☒ C. A is nilpotent.
☒ D. A has only real eigenvalues.

Question Type : MCQ

Question ID : 4335765653

Option 1 ID : 43357622609

Option 2 ID : 43357622610

Option 3 ID : 43357622611

Option 4 ID : 43357622612

Status : Answered

Chosen Option : B

Q.96 Which of the following statements about Homeomorphism is true?

- Ans ☒ A. Homeomorphism preserves only closed sets.
☒ B. Homeomorphism preserve only open sets.
☒ C. Homeomorphism preserves both open and closed sets
☒ D. Homeomorphism does not preserve any set.

Question Type : MCQ
 Question ID : 4335765662
 Option 1 ID : 43357622645
 Option 2 ID : 43357622646
 Option 3 ID : 43357622647
 Option 4 ID : 43357622648
 Status : Answered
 Chosen Option : A

Q.97

Let $a_n = \sqrt{7 + \sqrt{7 + \sqrt{7 + \dots}}}$ having n radical signs,

then by methods of mathematical induction which is true

- Ans ☒ A. $a_n > 7, \forall n \geq 1$
☒ B. $a_n < 7, \forall n \geq 1$
☒ C. $a_n < 4, \forall n \geq 1$
☒ D. $a_n < 3, \forall n \geq 1$

Question Type : MCQ
 Question ID : 4335765489
 Option 1 ID : 43357621953
 Option 2 ID : 43357621954
 Option 3 ID : 43357621955
 Option 4 ID : 43357621956
 Status : Answered
 Chosen Option : B

Q.98

The general solution of $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} = 0$ is of the form

- Ans ☒ A. $u=f(x+iy)+g(x-iy)$
☒ B. $u=cf(x-iy)$
☒ C. $u=f(x+y)+g(x-y)$
☒ D. $u=g(x+iy)$

Question Type : MCQ
 Question ID : 4335765509
 Option 1 ID : 43357622033
 Option 2 ID : 43357622034
 Option 3 ID : 43357622035
 Option 4 ID : 43357622036
 Status : Answered
 Chosen Option : A

Q.99 . If f be an increasing differentiable functions and the curve passes through $(1,1)$ and has length $\int_1^3 \sqrt{1 + \frac{4}{x^2}} dx$ then the curve is?

Ans

✗ A. $y = 1 + x^2$

✗ B. $y = x^2 - 1$

✓ C. $y = 1 + 2\ln x$

✗ D. $y = 2\ln x - 1$

Question Type : MCQ

Question ID : 4335765567

Option 1 ID : 43357622265

Option 2 ID : 43357622266

Option 3 ID : 43357622267

Option 4 ID : 43357622268

Status : Answered

Chosen Option : D

Q.10 The equation $x^2 + y^2 + z^2 + 2x + 2y + dz + 2 = 0$ represents a cone for

Ans ✓ A. (a) $d=0$ and all values of c

✗ B. (b) no value of c and d

✗ C. (c) $c=d=0$

✗ D. c एवं d के प्रत्येक मान के लिए

Question Type : MCQ

Question ID : 4335765571

Option 1 ID : 43357622281

Option 2 ID : 43357622282

Option 3 ID : 43357622283

Option 4 ID : 43357622284

Status : Answered

Chosen Option : A

Section : Part II

Q.10 सीखने के लिए पुनर्बलन की अवधारणा पेश करने वाले पहले अमेरिकी मनोवैज्ञानिक थे

Ans ✗ A. बीएफ स्किनर

✓ B. ईएल थार्नडाइक

✗ C. गलितेरिक

✗ D. इनमें से कोई नहीं

Question Type : MCQ

Question ID : 4335763484

Option 1 ID : 43357613933

Option 2 ID : 43357613934

Option 3 ID : 43357613935

Option 4 ID : 43357613936

Status : Answered

Chosen Option : A

Q.10 पढ़ाने से पहले शिक्षक करता है-
2

- Ans ☒ A. उद्देश्यों की पहचान
☒ B. शिक्षण पाठ योजना तैयार करना
☒ C. छात्रों की रुचि को जानें
☒ D. उपरोक्त सभी

Question Type : MCQ
Question ID : 4335763685
Option 1 ID : 43357614737
Option 2 ID : 43357614738
Option 3 ID : 43357614739
Option 4 ID : 43357614740
Status : Answered
Chosen Option : D

Q.10 निचली कक्षाओं में पर्यावरण अध्ययन विषय के प्रति रुचि पैदा करने के लिए शिक्षण विधि का प्रयोग किया
3 जाना चाहिए

- Ans ☒ A. आगमन
☒ B. मनोरंजक और खेल संबंधी
☒ C. रटना
☒ D. निगमन

Question Type : MCQ
Question ID : 4335763647
Option 1 ID : 43357614585
Option 2 ID : 43357614586
Option 3 ID : 43357614587
Option 4 ID : 43357614588
Status : Answered
Chosen Option : B

Q.10 शिक्षण के एक मॉडल का वर्णन है
4

- Ans ☒ A. शिक्षक का व्यवहार जिसमें शिक्षक और छात्र की बातचीत शामिल है
☒ B. शिक्षण व्यवहार सहित सीखने का माहौल
☒ C. शिक्षार्थी - व्यक्तित्व विशेषताओं सहित व्यवहार
☒ D. विषय वस्तु सहित इसकी तार्किक संरचना

Question Type : MCQ
Question ID : 4335764261
Option 1 ID : 43357617041
Option 2 ID : 43357617042
Option 3 ID : 43357617043
Option 4 ID : 43357617044
Status : Answered
Chosen Option : D

Q.10 पाठ्यचर्या का दार्शनिक आधार के साथ संबंधित है:
5

- Ans ☒ A. विचार
☒ B. इतिहास
☒ C. अर्थव्यवस्था
☒ D. विषय वस्तु

Question Type : MCQ
Question ID : 4335764223
Option 1 ID : 43357616889
Option 2 ID : 43357616890
Option 3 ID : 43357616891
Option 4 ID : 43357616892
Status : Answered
Chosen Option : D

Q.10 निम्नलिखित में से कौन सा शिक्षण सिद्धांत है/हैं?
6
(i) मनोवैज्ञानिक से तार्किक तक
(ii) विश्लेषण से संश्लेषण तक
(iii) ठोस से अमूर्त तक
(iv) प्रकृति का अनुसरण करना

- Ans ☒ A. (i), (ii), और (iii)
☒ B. (i), (ii), और (iv)
☒ C. (i), (iii), और (iv)
☒ D. उपरोक्त सभी

Question Type : MCQ
Question ID : 4335763465
Option 1 ID : 43357613857
Option 2 ID : 43357613858
Option 3 ID : 43357613859
Option 4 ID : 43357613860
Status : Answered
Chosen Option : B

Q.10 विभाजन के सिद्धांत के अनुसार विषय वस्तु को विभिन्न चरणों में बाँट देना चाहिए
7

- Ans ☒ A. इसे कक्षा में क्रमबद्ध एवं व्यवस्थित तरीके से आसानी से प्रस्तुत किया जा सकता है
☒ B. बच्चों को अपने पाठ में रुचि लेने के लिए प्रेरित किया जाता है
☒ C. शिक्षक विभिन्न रणनीतियों का उपयोग कर सकता है
☒ D. बच्चे स्वयं सीख सकते हैं

Question Type : MCQ
Question ID : 4335763421
Option 1 ID : 43357613681
Option 2 ID : 43357613682
Option 3 ID : 43357613683
Option 4 ID : 43357613684
Status : Answered
Chosen Option : A

Q.10 ब्लूम के शैक्षिक उद्देश्यों के वर्गीकरण को निम्न में वर्गीकृत किया गया है।
8

- Ans ☒ A. पांच क्षेत्र(डोमेन)
☒ B. छह क्षेत्र(डोमेन)
☒ C. चार क्षेत्र(डोमेन)
☒ D. तीन क्षेत्र(डोमेन)

Question Type : MCQ
Question ID : 4335763496
Option 1 ID : 43357613981
Option 2 ID : 43357613982
Option 3 ID : 43357613983
Option 4 ID : 43357613984
Status : Answered
Chosen Option : A

Q.10 निम्नलिखित में से कौन रणनीति की अनुमोदक शैली का उदाहरण है?
9

- Ans ☒ A. व्याख्यान
☒ B. ट्यूटोरियल
☒ C. समूह चर्चा
☒ D. ये सभी

Question Type : MCQ
Question ID : 4335763591
Option 1 ID : 43357614361
Option 2 ID : 43357614362
Option 3 ID : 43357614363
Option 4 ID : 43357614364
Status : Answered
Chosen Option : D

Q.11 समावेशी शिक्षा _____ के सिद्धांत पर आधारित है।
0

- Ans ☒ A. सामाजिक संतुलन
☒ B. समता एवं समान अवसर
☒ C. सामाजिक अस्तित्व एवं वैश्वीकरण
☒ D. विश्व बंधुता

Question Type : MCQ
Question ID : 4335763946
Option 1 ID : 43357615781
Option 2 ID : 43357615782
Option 3 ID : 43357615783
Option 4 ID : 43357615784
Status : Answered
Chosen Option : B

Q.11 बच्चे का मानसिक स्वास्थ्य किससे प्रभावित होता है?

1

- Ans
- ☒ A. माता-पिता की आकांक्षा
 - ☒ B. शिक्षक का व्यवहार
 - ☒ C. सहकर्मी व्यवहार
 - ☒ D. इनमें से एक से अधिक

Question Type : MCQ

Question ID : 4335764336

Option 1 ID : 43357617341

Option 2 ID : 43357617342

Option 3 ID : 43357617343

Option 4 ID : 43357617344

Status : Answered

Chosen Option : D

Q.11 प्रोजेक्ट या असाइनमेंट जो छात्रों को अपनी समझ को मूल तरीके से प्रदर्शित करने की अनुमति देता है,
2 इसका एक उदाहरण है

Ans

- ☒ A. बनाना
- ☒ B. समझ
- ☒ C. विश्लेषण करना
- ☒ D. अनुप्रयोग करना

Question Type : MCQ

Question ID : 4335763704

Option 1 ID : 43357614813

Option 2 ID : 43357614814

Option 3 ID : 43357614815

Option 4 ID : 43357614816

Status : Answered

Chosen Option : B

Q.11 निम्नलिखित में से कौन सा कथन सत्य नहीं है/हैं?
3

- Ans
- ☒ A. शिक्षण सिर्फ एक कला है
 - ☒ B. शिक्षकों को केवल प्रशिक्षित किया जा सकता है
 - ☒ C. शिक्षक पैदा होते हैं
 - ☒ D. उपरोक्त सभी

Question Type : MCQ

Question ID : 4335763452

Option 1 ID : 43357613805

Option 2 ID : 43357613806

Option 3 ID : 43357613807

Option 4 ID : 43357613808

Status : Answered

Chosen Option : D

Q.11 Selecting one course of action among various alternatives is
4

- Ans ☒ A. Planning
☒ B. Organizing
☒ C. Decision making
☒ D. Coordinating

Question Type : MCQ
Question ID : 4335763910
Option 1 ID : 43357615637
Option 2 ID : 43357615638
Option 3 ID : 43357615639
Option 4 ID : 43357615640
Status : Answered
Chosen Option : C

Q.11 सीखने का अर्थ है:
5

- Ans ☒ A. शिक्षण प्रक्रिया
☒ B. पाठ्यचर्या परिवर्तन
☒ C. व्यवहार में परिवर्तन
☒ D. इनमें से कोई नहीं

Question Type : MCQ
Question ID : 4335764168
Option 1 ID : 43357616669
Option 2 ID : 43357616670
Option 3 ID : 43357616671
Option 4 ID : 43357616672
Status : Answered
Chosen Option : C

Q.11 Development of a learner is linked to:
6

- Ans ☒ A. Effective development
☒ B. Cognitive development
☒ C. Psychomotor development
☒ D. Sensorimotor development

Question Type : MCQ
Question ID : 4335764225
Option 1 ID : 43357616897
Option 2 ID : 43357616898
Option 3 ID : 43357616899
Option 4 ID : 43357616900
Status : Answered
Chosen Option : B

Q.11 _____ के अध्ययन से छात्र की प्रयोग और विश्लेषण करने की क्षमता में सुधार होता है
7

- Ans
- ☒ A. इतिहास
 - ☒ B. भाषा
 - ☒ C. गणित
 - ☒ D. विज्ञान

Question Type : MCQ
Question ID : 4335764305
Option 1 ID : 43357617217
Option 2 ID : 43357617218
Option 3 ID : 43357617219
Option 4 ID : 43357617220
Status : Answered
Chosen Option : A

Q.11 How much time is required for presentation of Micro Teaching Lesson Plan?
8

- Ans
- ☒ A. 6 min
 - ☒ B. 10 minutes
 - ☒ C. 15 minutes
 - ☒ D. 45 minutes

Question Type : MCQ
Question ID : 4335763768
Option 1 ID : 43357615069
Option 2 ID : 43357615070
Option 3 ID : 43357615071
Option 4 ID : 43357615072
Status : Answered
Chosen Option : D

Q.11 Which one of the following best describes a teacher's role?
9

- Ans
- ☒ A. Teacher's most important role in the classroom is to maintain discipline
 - ☒ B. A teacher should adhere to the prescribed textbook
 - ☒ C. Completing the syllabus on time leaving enough time for revision is important
 - ☒ D. Creating a relaxed space where children learn through dialogue and inquiry

Question Type : MCQ
Question ID : 4335763930
Option 1 ID : 43357615717
Option 2 ID : 43357615718
Option 3 ID : 43357615719
Option 4 ID : 43357615720
Status : Answered
Chosen Option : C

Q.12 शिक्षा किसी राष्ट्र की संस्कृति को न केवल संरक्षित करती है बल्कि

- Ans ☒ A. संस्कृति को लोकप्रिय बनाता है और जनोन्मुखी बनाता है
☒ B. संस्कृति को समृद्ध बनाता है
☒ C. संस्कृति को परिभाषित करता है
☒ D. उसे आध्यात्मिक बनाता है

Question Type : MCQ
 Question ID : 4335764053
 Option 1 ID : 43357616209
 Option 2 ID : 43357616210
 Option 3 ID : 43357616211
 Option 4 ID : 43357616212
 Status : Answered
 Chosen Option : A

Q.12 जब आपसे कहा जाए कि आप अपनी कक्षा में एक मानसिक रूप से विकसित बच्चे को शामिल करें, तो

- Ans ☒ A. ऐसा करने से इनकार करेंगे
☒ B. प्रिंसिपल से अनुरोध करेंगे कि बच्चे को ऐसे बच्चे के लिए बने सेक्शन में डाल दिया जाए
☒ C. कक्षा में ऐसे बच्चे को नज़रअंदाज करें,
☒ D. ऐसे छात्रों को पढ़ाने के तरीके सीखेंगे और बच्चे को स्वीकार करेंगे

Question Type : MCQ
 Question ID : 4335764033
 Option 1 ID : 43357616129
 Option 2 ID : 43357616130
 Option 3 ID : 43357616131
 Option 4 ID : 43357616132
 Status : Answered
 Chosen Option : D

Q.12 Teacher effectiveness is the major area of

- Ans ☒ A. pedagogy
☒ B. sociology
☒ C. technology
☒ D. philosophy

Question Type : MCQ
 Question ID : 4335763950
 Option 1 ID : 43357615797
 Option 2 ID : 43357615798
 Option 3 ID : 43357615799
 Option 4 ID : 43357615800
 Status : Answered
 Chosen Option : A

Q.12 सफल शिक्षण कुछ निश्चित सिद्धांतों पर आधारित है;
3

- Ans
- ☒ A. गतिविधि का सिद्धांत
 - ☒ B. लक्ष्य का सिद्धांत
 - ☒ C. बहुत अधिक काम के सिद्धांत
 - ☒ D. सहसंबंध के सिद्धांत

Question Type : MCQ
Question ID : 4335763822
Option 1 ID : 43357615285
Option 2 ID : 43357615286
Option 3 ID : 43357615287
Option 4 ID : 43357615288
Status : Answered
Chosen Option : A

Q.12 टॉप-डाउन विधि है
4

- Ans
- ☒ A. निगमन
 - ☒ B. वर्णनात्मक
 - ☒ C. अन्वेषात्मक
 - ☒ D. जाँच पड़ताल

Question Type : MCQ
Question ID : 4335763610
Option 1 ID : 43357614437
Option 2 ID : 43357614438
Option 3 ID : 43357614439
Option 4 ID : 43357614440
Status : Answered
Chosen Option : A

Q.12 कौन सा आकलन मूल्यांकन तकनीक एक छात्र के प्रदर्शन की तुलना पूर्व निर्धारित मानक या मानदंड से
5 करती है?

- Ans
- ☒ A. रचनात्मक आकलन
 - ☒ B. योगात्मक आकलन
 - ☒ C. नैदानिक आकलन
 - ☒ D. मानक-संदर्भित आकलन

Question Type : MCQ
Question ID : 4335764128
Option 1 ID : 43357616509
Option 2 ID : 43357616510
Option 3 ID : 43357616511
Option 4 ID : 43357616512
Status : Answered
Chosen Option : D

Q.12 सूक्ष्म शिक्षण सर्वोत्तम उदाहरण है.....का
6

- Ans
- ☒ A. रोल प्ले
 - ☒ B. सिमुलेशन
 - ☒ C. प्रदर्शन
 - ☒ D. मानस मंथन

Question Type : MCQ
Question ID : 4335763744
Option 1 ID : 43357614973
Option 2 ID : 43357614974
Option 3 ID : 43357614975
Option 4 ID : 43357614976
Status : Answered
Chosen Option : D

Q.12 यह किसने कहा था कि "पाठ रणनीति पाठ्यचर्या की एक बड़ी विकास योजना का एक हिस्सा है"?
7

- Ans
- ☒ A. ई स्टोन्स
 - ☒ B. एस मॉरिस
 - ☒ C. बंडुरा
 - ☒ D. दोनों [ए] और [बी]

Question Type : MCQ
Question ID : 4335763589
Option 1 ID : 43357614353
Option 2 ID : 43357614354
Option 3 ID : 43357614355
Option 4 ID : 43357614356
Status : Answered
Chosen Option : D

Q.12 Provision of good educational environment is
8

- Ans
- ☒ A. Instructional task
 - ☒ B. None instructional task
 - ☒ C. Both Instructional and None instructiona task
 - ☒ D. None

Question Type : MCQ
Question ID : 4335763891
Option 1 ID : 43357615561
Option 2 ID : 43357615562
Option 3 ID : 43357615563
Option 4 ID : 43357615564
Status : Answered
Chosen Option : A

Q.12 यदि उत्तर पुस्तिका का मूल्यांकन पढ़ाने वाले शिक्षक के अलावा किसी अन्य शिक्षक द्वारा किया जाता है तो निम्नलिखित में से क्या होगा?

- Ans
- ☒ A. छात्रों को कम अंक मिलेंगे
 - ☒ B. छात्रों के वास्तविक ज्ञान स्तर का पता चलेगा
 - ☒ C. छात्रों में आत्मविश्वास बढ़ेगा
 - ☒ D. छात्रों के साथ अन्यायपूर्ण और पक्षपातपूर्ण व्यवहार नहीं किया जाएगा

Question Type : MCQ
Question ID : 4335764057
Option 1 ID : 43357616225
Option 2 ID : 43357616226
Option 3 ID : 43357616227
Option 4 ID : 43357616228
Status : Answered
Chosen Option : B

Q.13 सूक्ष्म शिक्षण क्या नहीं है?

- Ans
- ☒ A. शिक्षण चरणों का एक सेट
 - ☒ B. तत्काल सहायक प्रतिक्रिया के साथ एक शिक्षण-सिमुलेशन अभ्यास
 - ☒ C. एक शिक्षक प्रशिक्षण अवधारणा
 - ☒ D. वास्तविक कक्षा सेटिंग के लिए शिक्षक उम्मीदवारों को तैयार नहीं करता है

Question Type : MCQ
Question ID : 4335763846
Option 1 ID : 43357615381
Option 2 ID : 43357615382
Option 3 ID : 43357615383
Option 4 ID : 43357615384
Status : Answered
Chosen Option : D

Section : Part III

Q.13 एक सिलेंडर के घुमावदार मुख को ---- के रूप में खोला जा सकता है

- Ans
- ☒ A. आयत.
 - ☒ B. वृत्त
 - ☒ C. त्रिकोण
 - ☒ D. इनमें से कोई नहीं

Question Type : MCQ
Question ID : 4335764678
Option 1 ID : 43357618709
Option 2 ID : 43357618710
Option 3 ID : 43357618711
Option 4 ID : 43357618712
Status : Answered
Chosen Option : B

Q.13 Which one among the following tissues help to connect two bones ?"

2

- Ans ☒ A. Tendons
☒ B. Ligaments
☒ C. Areolar tissue
☒ D. Cartilage

Question Type : MCQ
 Question ID : 4335764475
 Option 1 ID : 43357617897
 Option 2 ID : 43357617898
 Option 3 ID : 43357617899
 Option 4 ID : 43357617900
 Status : Answered
 Chosen Option : B

Q.13 भारतीय जंगली गधा (गोर-खुर) _____ में पाया जाता है

3

- Ans ☒ A. सुंदरवन
☒ B. असम के जंगल
☒ C. कच्छ का रण
☒ D. कावेरी डेल्टा

Question Type : MCQ
 Question ID : 4335764628
 Option 1 ID : 43357618509
 Option 2 ID : 43357618510
 Option 3 ID : 43357618511
 Option 4 ID : 43357618512
 Status : Answered
 Chosen Option : B

Q.13 In the given number series what number will come in place of the question mark
 4 Symbol.

15, 25, 45, 85, 165, ?

- Ans ☒ A. 255
☒ B. 280
☒ C. 325
☒ D. 345

Question Type : MCQ
 Question ID : 4335764857
 Option 1 ID : 43357619425
 Option 2 ID : 43357619426
 Option 3 ID : 43357619427
 Option 4 ID : 43357619428
 Status : Answered
 Chosen Option : C

Q.13 Some equations are solved on the basis of certain system. Find the correct answer for

5 the unsolved equation on that basis.

$$5 \times 4 \times 3 = 70,$$

$$6 \times 5 \times 4 = 140$$

$$7 \times 6 \times 5 = ?$$

Ans ☒ A. 210

☒ B. 220

☒ C. 230

☒ D. 240

Question Type : MCQ

Question ID : 4335764979

Option 1 ID : 43357619913

Option 2 ID : 43357619914

Option 3 ID : 43357619915

Option 4 ID : 43357619916

Status : Answered

Chosen Option : D

Q.13 Pasteurization is the process of heating milk:

6

Ans ☒ A. above boiling point

☒ B. below boiling point

☒ C. above 500 degree Celsius

☒ D. below 500 degree Celsius

Question Type : MCQ

Question ID : 4335764562

Option 1 ID : 43357618245

Option 2 ID : 43357618246

Option 3 ID : 43357618247

Option 4 ID : 43357618248

Status : Answered

Chosen Option : B

Q.13 एक व्यक्ति पूरब दिशा की ओर चलना प्रारम्भ करता है। 10M चलने के बाद वायी और मुड़ जाता है, 15M

7 चलने के बाद वह पुनः बायी ओर मुड़ जाता है। वह अंत में किस दिशा में जा रहा है?

Ans ☒ A. पश्चिम

☒ B. उत्तर

☒ C. दक्षिण

☒ D. दक्षिण- पूरब

Question Type : MCQ

Question ID : 4335764911

Option 1 ID : 43357619641

Option 2 ID : 43357619642

Option 3 ID : 43357619643

Option 4 ID : 43357619644

Status : Answered

Chosen Option : A

Q.13 सुनीता द्वारा प्री-बोर्ड परीक्षा में प्राप्तांक नीचे दिए गए हैं:

8 विषय अंक
अंग्रेजी 72
हिंदी 84
गणित 96
विज्ञान 80
सामाजिक विज्ञान 68

यदि उपर्युक्त आँकड़ों का एक पाई चार्ट बनाया जाता है, तो सुनीता द्वारा गणित में प्राप्त अंकों को दर्शाने वाले त्रिज्यखंड का कोण कितना होगा ?

- Ans ☒ A. 75.6 डिग्री
☒ B. 72 डिग्री
☒ C. 86.4 डिग्री
☒ D. 64.8 डिग्री

Question Type : MCQ
Question ID : 4335764791
Option 1 ID : 43357619161
Option 2 ID : 43357619162
Option 3 ID : 43357619163
Option 4 ID : 43357619164
Status : Answered
Chosen Option : C

Q.13 How many factors does a Prime number have?

9

- Ans ☒ A. 1
☒ B. 2
☒ C. 3
☒ D. 4

Question Type : MCQ
Question ID : 4335764702
Option 1 ID : 43357618805
Option 2 ID : 43357618806
Option 3 ID : 43357618807
Option 4 ID : 43357618808
Status : Answered
Chosen Option : B

Q.14 Choose the correct option instead of the question mark in the given question.

0

India : New Delhi :: Japan : ?

- Ans ☒ A. Chicago
☒ B. Colombo
☒ C. Tokyo
☒ D. Dhaka

Question Type : MCQ
Question ID : 4335764821
Option 1 ID : 43357619281
Option 2 ID : 43357619282
Option 3 ID : 43357619283
Option 4 ID : 43357619284
Status : Answered
Chosen Option : C

Q.14 Which of the following statements with reference to Sleet is/are correct?

- 1 (1) Sleet is frozen raindrops and refrozen melted snow-water.
 - (2) It occurs when a layer of air with the temperature below freezing point overlies a warm layer near the ground surface
- Select the answer using the code given below:

Ans ☒ A. 1 only ,
☒ B. 2 only
☒ C. Both 1 and 2
☒ D. Neither 1 nor 2

Question Type : MCQ
 Question ID : 4335764397
 Option 1 ID : 43357617585
 Option 2 ID : 43357617586
 Option 3 ID : 43357617587
 Option 4 ID : 43357617588
 Status : Answered
 Chosen Option : A

Q.14 The length of the longest pole that can be placed on the floor of a room is 10m and the
 2 length of the longest pole that can be placed in a room is $10\sqrt{2}$ m. What is the height of the room?

Ans ☒ A. 10.5 m
☒ B. 10.2 m
☒ C. 10 m
☒ D. 20 m

Question Type : MCQ
 Question ID : 4335764738
 Option 1 ID : 43357618949
 Option 2 ID : 43357618950
 Option 3 ID : 43357618951
 Option 4 ID : 43357618952
 Status : Answered
 Chosen Option : C

Q.14 निर्देश :- A,B,C,D,E तथा F छः दोस्त एक-दूसरे के आमने-सामने एक घरे में बैठे है। A,D और B के बीच
 3 तथा F,C और E के बीच में बैठा है। C,B के बायीं ओर तीसरा है। A,B के ठीक दायें बैठा है।
 61. F और D के बीच कौन है ?

Ans ☒ A. B
☒ B. C
☒ C. D
☒ D. E

Question Type : MCQ
 Question ID : 4335764946
 Option 1 ID : 43357619781
 Option 2 ID : 43357619782
 Option 3 ID : 43357619783
 Option 4 ID : 43357619784
 Status : Answered
 Chosen Option : B

Q.14 In British India, which one among the following Acts permitted detention without trial
4 for up to two years ?

- Ans ☒ A. Regulating Act, 1773
☒ B. Rowlatt Act, 1919
☒ C. Pitt's India Act, 1784
☒ D. Government of India Act, 1935.

Question Type : MCQ
Question ID : 4335764462
Option 1 ID : 43357617845
Option 2 ID : 43357617846
Option 3 ID : 43357617847
Option 4 ID : 43357617848
Status : Answered
Chosen Option : B

Q.14 निम्नलिखित में से कौन सा कथन सही नहीं है ?
5

- Ans ☒ A. फारसी सिर्फ मुगल साम्राज्य तथा दिल्ली सल्तनत में ही उच्च प्रशासन की भाषा नहीं थी, बल्कि वह राजपूत राज्यों के दरबारों तक भी फैली हुई थी ।
☒ B. सिराजुद्दीन अली आरजू ने यह विचार प्रतिस्थापित किया कि फारसी और हिंदी में कुछ बुनियादी समानताएँ थीं।
☒ C. 1639-40 में लिखित अपनी किताब बहार-ए अजम में टेकचंद बहार ने ऐसे कवियों और गद्यात्मक रचनाओं के उद्धरण दिए हैं ।
☒ D. फारसी के हिंदी की स्थानीय बोलियों के संपर्क में आने से एक नई भाषा उर्दू अस्तित्व में आई।

Question Type : MCQ
Question ID : 4335764358
Option 1 ID : 43357617429
Option 2 ID : 43357617430
Option 3 ID : 43357617431
Option 4 ID : 43357617432
Status : Answered
Chosen Option : B

Q.14 Integrated Pest Management (IPM) is a method that combines -----.
6

- Ans ☒ A. Chemical pesticides and biological control
☒ B. Genetic modification and fertilizers
☒ C. Crop rotation and soil improvement
☒ D. All of these

Question Type : MCQ
Question ID : 4335764582
Option 1 ID : 43357618325
Option 2 ID : 43357618326
Option 3 ID : 43357618327
Option 4 ID : 43357618328
Status : Answered
Chosen Option : A

Q.14 What role does a central bank play in financial stability?

7

- Ans ☒ A. It provides liquidity to the financial system during crises
- ☒ B. It issues bonds to finance government expenditure
- ☒ C. It directly manages corporate tax policies
- ☒ D. It sets wages for employees in financial institutions

Question Type : MCQ

Question ID : 4335764425

Option 1 ID : 43357617697

Option 2 ID : 43357617698

Option 3 ID : 43357617699

Option 4 ID : 43357617700

Status : Answered

Chosen Option : A

Q.14 Manure contains a large amount of

8

- Ans ☒ A. Inorganic matter..
- ☒ B. Organic matter
- ☒ C. Humus
- ☒ D. Black soil

Question Type : MCQ

Question ID : 4335764656

Option 1 ID : 43357618621

Option 2 ID : 43357618622

Option 3 ID : 43357618623

Option 4 ID : 43357618624

Status : Answered

Chosen Option : C

Q.14 निर्देश : निम्नलिखित प्रश्नों के उत्तर देने के लिए सही / सबसे उपयुक्त विकल्प चुनिए ।

9

एक शिक्षिका अपनी कक्षा में दैनिक जीवन की परिस्थितियों में से विभिन्न उदाहरणों की चर्चा करती है, जैसे कई अन्य पटरियों को पार करती हुए एक रेल पटरी, दो अथवा अधिक सड़कों को पार करती हुई एक सड़क, अंग्रेजी वर्णमाला जैसे 'H', 'Z' इत्यादि।

निम्नलिखित में से किस/किन अवधारणा/अवधारणाओं का परिचय इन उदाहरणों द्वारा दिया जा सकता है ?

- A. रेखाखंड
- B. तिर्यक छेदी रेखा
- C. समांतर रेखाएँ
- D. समकोण

सही विकल्प का चयन कीजिए :

- Ans ☒ A. B और C
- ☒ B. केवल A
- ☒ C. A और D
- ☒ D. केवल B

Question Type : MCQ

Question ID : 4335764781

Option 1 ID : 43357619121

Option 2 ID : 43357619122

Option 3 ID : 43357619123

Option 4 ID : 43357619124

Status : Answered

Chosen Option : A

Q.15 Gukesh D, an internationally famous sports person is associated with
0

- Ans
- ☒ A. Carrom
 - ☒ B. Ludo
 - ☒ C. Chess
 - ☒ D. Tennis

Question Type : **MCQ**
 Question ID : **4335764513**
 Option 1 ID : **43357618049**
 Option 2 ID : **43357618050**
 Option 3 ID : **43357618051**
 Option 4 ID : **43357618052**
 Status : **Answered**
 Chosen Option : **C**

