

National Testing Agency

Question Paper Name: Master of Computer Applications 28th May 2019 Shift1 Set1
Subject Name: MASTER OF COMPUTER APPLICATIONS
Creation Date: 2019-05-28 15:19:47
Duration: 180
Total Marks: 100
Display Marks: Yes
Share Answer Key With Delivery Engine: Yes
Actual Answer Key: Yes

Master of Computer Applications

Group Number : 1
Group Id : 128206107
Group Maximum Duration : 0
Group Minimum Duration : 120
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 100

PART A

Section Id : 128206160
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 100
Number of Questions to be attempted: 100
Section Marks: 100
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 128206262
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 1282065711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which word is ODD among the following?

- (a) Seat
- (b) Steering wheel
- (c) Wiper
- (d) car

Options :

- 12820622583. A
- 12820622584. B
- 12820622585. C
- 12820622586. D

**Question Number : 2 Question Id : 1282065712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Playing is related to ground as Swimming is related to

- (a) Water
- (b) Tank
- (c) Pool
- (d) Pond

Options :

- 12820622587. A
- 12820622588. B
- 12820622589. C
- 12820622590. D

**Question Number : 3 Question Id : 1282065713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Which is the most appropriate word for '?' ?

Banana	Fruit	Market
Novels	?	Book store

- (a) Vegetable
- (b) Shopping
- (c) Story
- (d) Book

Options :

- 12820622591. A
- 12820622592. B
- 12820622593. C
- 12820622594. D

**Question Number : 4 Question Id : 1282065714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Hammer is to Ironsmith. Pen is to ...

- (a) Author
- (b) Writer
- (c) Student
- (d) Teacher

Options :

- 12820622595. A
- 12820622596. B

12820622597. C

12820622598. D

Question Number : 5 Question Id : 1282065715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The next term in the series 0, 1, 1, 2, 4, 7, 13, ...

(a) 24

(b) 18

(c) 20

(d) 22

Options :

12820622599. A

12820622600. B

12820622601. C

12820622602. D

Question Number : 6 Question Id : 1282065716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

25	10	15
36	12	24
49	?	42

The value for '?' is

(a) 14

(b) 22

(c) 7

(d) 18

Options :

12820622603. A

12820622604. B

12820622605. C

12820622606. D

Question Number : 7 Question Id : 1282065717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The most relevant word to knowledge is

(a) School

(b) Book

(c) Teacher

(d) Learning

Options :

12820622607. A

12820622608. B

12820622609. C

12820622610. D

Question Number : 8 Question Id : 1282065718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is ODD word?

- (a) Centimeter
- (b) Inch
- (c) Yard
- (d) Kiloliter

Options :

- 12820622611. A
- 12820622612. B
- 12820622613. C
- 12820622614. D

Question Number : 9 Question Id : 1282065719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If 'RIST' is written as '7614', and 'MTAL' is written as '5423'.
Then, 'RAIL' written in that code as

- (a) 5429
- (b) 7124
- (c) 7263
- (d) 6412

Options :

- 12820622615. A
- 12820622616. B
- 12820622617. C
- 12820622618. D

Question Number : 10 Question Id : 1282065720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Mohan walks 5cm towards right, takes a left turn and walks 10cm again. He then takes another left turn and walks 15cm. He then takes a final left turn and walks 10cm before stopping. He is from the starting point at the distance of

- (a) 20cm
- (b) 15cm
- (c) 10cm
- (d) 5cm

Options :

- 12820622619. A
- 12820622620. B
- 12820622621. C
- 12820622622. D

Question Number : 11 Question Id : 1282065721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The next term of the series 6, 5, 24, 25, 144, ...

- (a) 160
- (b) 165
- (c) 170
- (d) 175

Options :

12820622623. A

12820622624. B

12820622625. C

12820622626. D

Question Number : 12 Question Id : 1282065722 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When a monkey's baby was 30 days old, it started eating banana and ate one banana. Its appetite grew and each day it ate $\frac{3}{2}$ times of the previous day. How old will it be when it can eat at least five bananas?

- (a) 32
- (b) 34
- (c) 38
- (d) 40

Options :

12820622627. A

12820622628. B

12820622629. C

12820622630. D

Question Number : 13 Question Id : 1282065723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A student gets a Bachelor Degree only after passing all the written papers and submitting the assignments. Out of 200 students, 150 passed all their written papers and 160 submitted their assignments. How many students did get their Bachelor Degree?

- (a) At least 110
- (b) Exactly 160
- (c) At least 140
- (d) At least 150

Options :

12820622631. A

12820622632. B

12820622633. C

12820622634. D

Question Number : 14 Question Id : 1282065724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If three cows graze the grass of a ground in eight days, how many cows can eat that grass in two days?

- (a) 6
- (b) 9
- (c) 12
- (d) 15

Options :

- 12820622635. A
- 12820622636. B
- 12820622637. C
- 12820622638. D

Question Number : 15 Question Id : 1282065725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $3^x \cdot 3^y \cdot 3^z = 81$, then $x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$ will be

- (a) 16
- (b) 12
- (c) 9
- (d) 6

Options :

- 12820622639. A
- 12820622640. B
- 12820622641. C
- 12820622642. D

Question Number : 16 Question Id : 1282065726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If the average of three numbers a, b, and z is $(a + b) - a.b$. Then z will be

- (a) $(a+b)/(a.b) - 3.a.b$
- (b) $2(a+b) - 3.a.b$
- (c) $3(a+b) - a.b$
- (d) $3(a+b) - 3.a.b$

Options :

- 12820622643. A
- 12820622644. B
- 12820622645. C
- 12820622646. D

Question Number : 17 Question Id : 1282065727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A rectangular vessel of size 2cm x 5cm x 8cm full of water is emptied to a cylindrical container having the base diameter is 8cm. Its height will be

- (a) $5/\pi$
- (b) $15/\pi$
- (c) $10/\pi$
- (d) 20

Options :

- 12820622647. A
- 12820622648. B
- 12820622649. C
- 12820622650. D

Question Number : 18 Question Id : 1282065728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A taxi car needs to go from city A to city B, which are 300 Km apart. It covers one third of this distance at a speed 100 Km/h, one fifth of the remaining distance in 2 hours and the rest of the distance at the speed of 80 Km/h. The average speed of the taxi car is

- (a) 90 Km/h
- (b) 80 Km/h
- (c) 70 Km/h
- (d) 60Km/h

Options :

- 12820622651. A
- 12820622652. B
- 12820622653. C
- 12820622654. D

Question Number : 19 Question Id : 1282065729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

There are 100 students in a class out which 70 study Mathematics, 80 study English. How many students do study both Mathematics and English?

- (a) 20
- (b) 30
- (c) 40
- (d) 50

Options :

- 12820622655. A
- 12820622656. B
- 12820622657. C
- 12820622658. D

Question Number : 20 Question Id : 1282065730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The next term in the series is
RLDR, SMCQ, TNBP,

- (a) UOAO
- (b) VOKO
- (c) OKPR
- (d) WPST

Options :

- 12820622659. A
- 12820622660. B
- 12820622661. C
- 12820622662. D

Question Number : 21 Question Id : 1282065731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Parity bit helps in

- (a) Finding error of multiple bits
- (b) Correcting error of multiple bits
- (c) Both
- (d) None of them

Options :

- 12820622663. A
- 12820622664. B
- 12820622665. C
- 12820622666. D

Question Number : 22 Question Id : 1282065732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$(1110.01)_2$ is

- (a) $(14.25)_{10}$
- (b) $(12.75)_{10}$
- (c) $(13.25)_{10}$
- (d) $(14.75)_{10}$

Options :

- 12820622667. A
- 12820622668. B
- 12820622669. C
- 12820622670. D

Question Number : 23 Question Id : 1282065733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The 9's complement of 325800 is

- (a) 674199
- (b) 773299
- (c) 684389
- (d) 696789

Options :

- 12820622671. A
- 12820622672. B
- 12820622673. C
- 12820622674. D

Question Number : 24 Question Id : 1282065734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A digital system does not have a discrete element

- (a) Electric impulses
- (b) Decimal digits
- (c) Arithmetic operations
- (d) Digital counters

Options :

- 12820622675. A
- 12820622676. B
- 12820622677. C
- 12820622678. D

Question Number : 25 Question Id : 1282065735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In C language, the memory can be allocated to a variable *var* at compile time by using

- (a) `malloc(var)`
- (b) `calloc(var)`
- (c) `realloc(var)`
- (d) declaring *var* with appropriate type

Options :

- 12820622679. A
- 12820622680. B
- 12820622681. C
- 12820622682. D

Question Number : 26 Question Id : 1282065736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The bitwise operator that can help make '0' as '1' of a particular bit in a number in C language is

- (a) &&
- (b) &
- (c) |
- (d) ||

Options :

- 12820622683. A
- 12820622684. B
- 12820622685. C
- 12820622686. D

Question Number : 27 Question Id : 1282065737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An array of five pointers to integer is declared by

- (a) `int *ptr[5]();`
- (b) `int **ptr[5];`
- (c) `int (*ptr[5])();`
- (d) `int ***ptr[5]`

Options :

- 12820622687. A
- 12820622688. B
- 12820622689. C
- 12820622690. D

Question Number : 28 Question Id : 1282065738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The declaration `int (*p)()` signifies

- (a) p is a pointer to a function
- (b) p is a function of pointer variable
- (c) p is a pointer to a function that returns int
- (d) p is a function pointer

Options :

- 12820622691. A
- 12820622692. B
- 12820622693. C
- 12820622694. D

Question Number : 29 Question Id : 1282065739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

```
#include<stdio.h>
int main()
{
    FILE *fp, *fq, *fr;
    fp = fopen("file1.c", "r");
    fq = fopen("file2.c", "r");
    fr = fopen("file3.c", "r");
    fclose(fp, fq, fr);
    return 0;
}
```

The files can be closed using the *fclose()* in this program is

- (a) file1.c, file2.c, file3.c
- (b) file1.c, file2.c
- (c) file1.c
- (d) none of them

Options :

- 12820622695. A
- 12820622696. B
- 12820622697. C
- 12820622698. D

Question Number : 30 Question Id : 1282065740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The non-linear data structure is

- (a) stack
- (b) arrays
- (c) strings
- (d) trees

Options :

- 12820622699. A
- 12820622700. B
- 12820622701. C
- 12820622702. D

Question Number : 31 Question Id : 1282065741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The data structure used to hold a node in breath-first search in a graph is

- (a) tree
- (b) array
- (c) queue
- (d) stack

Options :

- 12820622703. A
- 12820622704. B
- 12820622705. C

12820622706. D

Question Number : 32 Question Id : 1282065742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A list in which the pointer points to a next node is called

- (a) single linked list
- (b) double linked list
- (c) circular linked list
- (d) Array of pointers

Options :

12820622707. A

12820622708. B

12820622709. C

12820622710. D

Question Number : 33 Question Id : 1282065743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The quicksort method in average case has the order

- (a) $O(n)$
- (b) $O(n^2)$
- (c) $O(n \log_2 n)$
- (d) $O(n^2 - 1)$

Options :

12820622711. A

12820622712. B

12820622713. C

12820622714. D

Question Number : 34 Question Id : 1282065744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a tree, the terminal nodes have degree

- (a) 3
- (b) 2
- (c) 1
- (d) 0

Options :

12820622715. A

12820622716. B

12820622717. C

12820622718. D

Question Number : 35 Question Id : 1282065745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A critical section must have the number of processes to avoid the race condition

- (a) 0
- (b) 1
- (c) 2
- (d) 3

Options :

- 12820622719. A
- 12820622720. B
- 12820622721. C
- 12820622722. D

Question Number : 36 Question Id : 1282065746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Inter process communication (IPC) is needed

- (a) to execute a process
- (b) to execute all processes
- (c) to communicate to different processes
- (d) to allow processes to synchronize an activity

Options :

- 12820622723. A
- 12820622724. B
- 12820622725. C
- 12820622726. D

Question Number : 37 Question Id : 1282065747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Thrashing is sometime necessary, but it does not execute a given process. It can be avoided

- (a) by keeping pages of the working set of the programs in main memory
- (b) increasing the CPU speed
- (c) increasing I/O processor speed
- (d) all of them

Options :

- 12820622727. A
- 12820622728. B
- 12820622729. C
- 12820622730. D

Question Number : 38 Question Id : 1282065748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Page stealing is related to

- (a) an efficient system
- (b) taking page frames from other working sets
- (c) tuning the goal
- (d) taking larger space from the disk space for pages, which are memory-out.

Options :

- 12820622731. A
- 12820622732. B
- 12820622733. C
- 12820622734. D

Question Number : 39 Question Id : 1282065749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fragmentation in a file system

- (a) occurs if file system is not used properly
- (b) can always be prevented
- (c) can temporarily be removed by compaction
- (d) can be removed by deleting temporary files

Options :

- 12820622735. A
- 12820622736. B
- 12820622737. C
- 12820622738. D

Question Number : 40 Question Id : 1282065750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Consider the statement, "Either $-2 \leq x \leq -1$ or $1 \leq x \leq 2$." Negation of this statement is

- (a) $x < -2$ or $2 < x$ or $-1 < x < 1$
- (b) $x < -2$ or $2 < x$
- (c) $-2 < x < 2$
- (d) $x \leq -2$ or $2 \leq x$ or $-1 < x < 1$

Options :

- 12820622739. A
- 12820622740. B
- 12820622741. C
- 12820622742. D

Question Number : 41 Question Id : 1282065751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The function $((p \vee (r \vee q)) \wedge \sim(\sim q \wedge \sim r))$ is equal to the function

- (a) $q \vee r$
- (b) $((p \vee r) \vee q) \wedge (p \vee r)$
- (c) $(p \wedge q) \vee (p \wedge r)$
- (d) $(p \vee q) \wedge \sim(p \vee r)$

Options :

- 12820622743. A
- 12820622744. B
- 12820622745. C
- 12820622746. D

Question Number : 42 Question Id : 1282065752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The cardinality of the set $S = \{\frac{p}{q} \mid p, q \in \mathbb{N}^+, p, q \leq 10\}$ is

- (a) 55
- (b) 57
- (c) 60
- (d) 63

Options :

- 12820622747. A
- 12820622748. B
- 12820622749. C
- 12820622750. D

Question Number : 43 Question Id : 1282065753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let S be a set of strings of 1's and 0's that is recursively defined as follows.

- i. $1 \in S, 100 \in S$.
- ii. If $s \in S$, then $11s \in S$.
- iii. If $s \in S$, then $00s \in S$.
- iv. Nothing but strings generated as per rules 1, 2, and 3 are elements in S.

The following is not an element of S

- (a) 001
- (b) 1100111
- (c) 001100001
- (d) 101100001

Options :

- 12820622751. A
- 12820622752. B
- 12820622753. C
- 12820622754. D

Question Number : 44 Question Id : 1282065754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Define R, a relation, on $N \times N$: for all a, b, x, y in N, $(a, b)R(x, y)$ iff $ay = bx$. Which is true?

- (a) R is reflexive only
- (b) R is symmetric only
- (c) R is transitive only
- (d) all are true

Options :

- 12820622755. A
- 12820622756. B
- 12820622757. C
- 12820622758. D

Question Number : 45 Question Id : 1282065755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let f be a mapping from A to B, where A and B are non-empty sets. Then f is a function only if

- (a) it is one-one
- (b) it is onto
- (c) All elements in B are associated with some element(s) of A
- (d) None of them

Options :

- 12820622759. A
- 12820622760. B
- 12820622761. C
- 12820622762. D

Question Number : 46 Question Id : 1282065756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a relational model, a relation is considered as a

- (a) Table
- (b) Tuple
- (c) Attribute
- (d) Row

Options :

- 12820622763. A
- 12820622764. B
- 12820622765. C
- 12820622766. D

Question Number : 47 Question Id : 1282065757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The attributes in an E-R diagram are represented by

- (a) circle
- (b) ellipse
- (c) triangle
- (d) rectangle

Options :

- 12820622767. A
- 12820622768. B
- 12820622769. C
- 12820622770. D

Question Number : 48 Question Id : 1282065758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The COUNT function in SQL returns the number of

- (a) Values
- (b) Distinct rows
- (c) Distinct values
- (d) Distinct groups

Options :

- 12820622771. A
- 12820622772. B
- 12820622773. C
- 12820622774. D

Question Number : 49 Question Id : 1282065759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The key used to represent the relationship between two tables is called

- (a) Primary key
- (b) Secondary key
- (c) Foreign key
- (d) Super key

Options :

- 12820622775. A
- 12820622776. B
- 12820622777. C
- 12820622778. D

Question Number : 50 Question Id : 1282065760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The operation that makes a transaction permanent in databases is

- (a) View
- (b) Commit
- (c) Rollback
- (d) Flashback

Options :

12820622779. A

12820622780. B

12820622781. C

12820622782. D

Question Number : 51 Question Id : 1282065761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $f(x) = ax^2 + bx + c$ be a polynomial that takes both positive and negative values as x varies over all real numbers. What is the relation satisfied by the coefficients?

(a) $c < \left(\frac{b}{2}\right)^2$

(b) $ac < \left(\frac{b}{2}\right)^2$

(c) $c > \left(\frac{b}{a}\right)^2$

(d) $bc > (2a)^2$

Options :

12820622783. A

12820622784. B

12820622785. C

12820622786. D

Question Number : 52 Question Id : 1282065762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A fair coin is tossed successively until a head appears. What is the chance of making at least 3 tosses?

(a) $1/4$

(b) $3/4$

(c) $3/8$

(d) $3/16$

Options :

12820622787. A

12820622788. B

12820622789. C

12820622790. D

Question Number : 53 Question Id : 1282065763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let α, β be the roots of polynomial $f(x) = 2x^2 - 7x + 4$. The value of difference of the roots $|\alpha - \beta|$ is

(a) $17/2$

(b) 17

(c) $\sqrt{17}/2$

(d) $\sqrt{17}$

Options :

12820622791. A

12820622792. B

12820622793. C

12820622794. D

Question Number : 54 Question Id : 1282065764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a gathering of students, the probability of a student having tea is 0.5, that of a student having coffee is 0.7 and that of a student having neither tea nor coffee is 0.1. What is the probability of a student having both tea and coffee?

(a) 0.1

(b) 0.3

(c) 0.4

(d) 0.5

Options :

12820622795. A

12820622796. B

12820622797. C

12820622798. D

Question Number : 55 Question Id : 1282065765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Given that $x = -2$ is a root of the polynomial $f(x) = x^3 - 19x - 30$, which of these is another root of $f(x)$?

(a) 3

(b) 7

(c) 12

(d) 5

Options :

12820622799. A

12820622800. B

12820622801. C

12820622802. D

Question Number : 56 Question Id : 1282065766 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

How many different committees of 3 people consisting of 2 men and 1 woman can be made from a group consisting of 10 men and 7 women?

- (a) 630
- (b) 315
- (c) 70
- (d) None of the above

Options :

- 12820622803. A
- 12820622804. B
- 12820622805. C
- 12820622806. D

Question Number : 57 Question Id : 1282065767 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The remainder obtained after $x^4 + x^2 + x + 1$ is divided by $x^2 + x + 1$ is

- (a) 1
- (b) x
- (c) $x + 1$
- (d) 0

Options :

- 12820622807. A
- 12820622808. B
- 12820622809. C
- 12820622810. D

Question Number : 58 Question Id : 1282065768 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the maximum value of the integral $\int_a^b (9 - x^2) dx$ over all possible real numbers a, b satisfying the condition $a \leq b$?

- (a) 3
- (b) 6
- (c) 36
- (d) 54

Options :

- 12820622811. A
- 12820622812. B
- 12820622813. C
- 12820622814. D

Question Number : 59 Question Id : 1282065769 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following is a group?

- (a) Real numbers under multiplication
- (b) Positive real numbers under multiplication
- (c) Real $n \times n$ matrices under multiplication
- (d) Integers under multiplication

Options :

12820622815. A

12820622816. B

12820622817. C

12820622818. D

Question Number : 60 Question Id : 1282065770 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

For the curve $xy = \sqrt{x^2 + y^2}$, the slope $\frac{dy}{dx}$ at any point is given by

- (a) $\frac{x(1-y^2)}{y(1-x^2)}$
- (b) $-\frac{x(1-y^2)}{y(1-x^2)}$
- (c) $\frac{(1-y^2)}{(1-x^2)}$
- (d) $-\frac{(1-y^2)}{(1-x^2)}$

Options :

12820622819. A

12820622820. B

12820622821. C

12820622822. D

Question Number : 61 Question Id : 1282065771 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The determinant $\begin{vmatrix} 1 & 5 & 3 \\ 1 & 10 & 6 \\ 1 & 15 & 9 \end{vmatrix}$ is

- (a) 0
- (b) 3
- (c) 5
- (d) 6

Options :

12820622823. A

12820622824. B

12820622825. C

12820622826. D

Question Number : 62 Question Id : 1282065772 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A fair coin is tossed successively four times. What is the probability of getting exactly three heads?

(a) $\frac{1}{4}$

(b) $\frac{3}{4}$

(c) $\frac{7}{8}$

(d) 1

Options :

12820622827. A

12820622828. B

12820622829. C

12820622830. D

Question Number : 63 Question Id : 1282065773 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The eigenvalues of $\begin{pmatrix} 5 & 1 \\ -1 & 3 \end{pmatrix}$ are

(a) 4,4

(b) 5,3

(c) 1,-1

(d) 4,-4

Options :

12820622831. A

12820622832. B

12820622833. C

12820622834. D

Question Number : 64 Question Id : 1282065774 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The methods for computing the roots of polynomial equations have order of convergence in the order

(a) Bisection method > secant method > Newton method

(b) Secant method > bisection method > Newton method

(c) Newton method > secant method > bisection method

(d) Secant method > Newton method > bisection method

Options :

12820622835. A

12820622836. B

12820622837. C

12820622838. D

Question Number : 65 Question Id : 1282065775 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The number of solutions of $\begin{pmatrix} 1 & 2 & 7 \\ 1 & 7 & 9 \\ 1 & 2 & 7 \end{pmatrix} x = \begin{pmatrix} 1 \\ 2 \\ 1 \end{pmatrix}$ is

- (a) 0
- (b) 1
- (c) Infinite
- (d) None of the above

Options :

12820622839. A

12820622840. B

12820622841. C

12820622842. D

Question Number : 66 Question Id : 1282065776 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The indefinite integral $\int x 2^x dx$ equals

- (a) $(x - 1)2^x / \ln(2)$
- (b) $(x \ln(2) - 1)2^x / \ln(2)^2$
- (c) $\ln(2)$
- (d) $(x \ln(2) - 1)2^x / \ln(2)$

Options :

12820622843. A

12820622844. B

12820622845. C

12820622846. D

Question Number : 67 Question Id : 1282065777 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An eigenvector corresponding to the eigenvalue $\lambda = 8$ for matrix $A = \begin{pmatrix} 7 & 3 \\ 2 & 2 \end{pmatrix}$ is

- (a) $\begin{pmatrix} 3 \\ 1 \end{pmatrix}$
- (b) $\begin{pmatrix} 3 \\ -1 \end{pmatrix}$
- (c) $\begin{pmatrix} -1 \\ 2 \end{pmatrix}$
- (d) $\begin{pmatrix} 1 \\ 2 \end{pmatrix}$

Options :

- 12820622847. A
- 12820622848. B
- 12820622849. C
- 12820622850. D

Question Number : 68 Question Id : 1282065778 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $[x]$ denote the greatest integer function of x . What is the value of the integral

$$\int_{1/2}^1 [2x^2 + x] dx ?$$

- (a) $23/24$
- (b) $(7 - \sqrt{17})/4$
- (c) $(-1 + \sqrt{17})/4$
- (d) $(7 + \sqrt{17})/4$

Options :

- 12820622851. A
- 12820622852. B
- 12820622853. C
- 12820622854. D

Question Number : 69 Question Id : 1282065779 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The matrix $\begin{pmatrix} 1 & 1 & 1 \\ 1 & 2 & 3 \\ 1 & 1 & 4 \end{pmatrix}$ satisfies which one of the following properties?

- (a) Symmetric
- (b) Orthogonal
- (c) Invertible
- (d) Singular

Options :

- 12820622855. A
- 12820622856. B
- 12820622857. C
- 12820622858. D

Question Number : 70 Question Id : 1282065780 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let $y\sqrt{x^2 + a^2} = \log(\sqrt{x^2 + a^2} - x)$ for some constant a . Then the derivative $\frac{dy}{dx}$ is given by

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

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

(c) $\frac{xy+1}{\sqrt{x^2+a^2}}$

(d) $-\frac{xy+1}{\sqrt{x^2+a^2}}$

Options :

12820622859. A

12820622860. B

12820622861. C

12820622862. D

Question Number : 71 Question Id : 1282065781 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The distance of the point P(5, 2) to the line passing through (1, 4) and (4, 0) is

(a) 2

(b) 5

(c) 8

(d) 10

Options :

12820622863. A

12820622864. B

12820622865. C

12820622866. D

Question Number : 72 Question Id : 1282065782 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The centroid of triangle A(0, 3), B (4, 0), C(5, 3) is

(a) $(9/2, 3)$

(b) $(3, 2)$

(c) $(4, 5)$

(d) $(3, 4)$

Options :

12820622867. A

12820622868. B

12820622869. C

12820622870. D

Question Number : 73 Question Id : 1282065783 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The point that divides the line segment of the points (5, -2, 1) and (3, 4, -5) in the ratio 1:3 externally is

- (a) (3, -5, -1/2)
- (b) (9/2, -1/2, -1/2)
- (c) (6, -5, 4)
- (d) (6, -1/2, 4)

Options :

- 12820622871. A
- 12820622872. B
- 12820622873. C
- 12820622874. D

Question Number : 74 Question Id : 1282065784 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The equation of plane passing through the points (2, 3, -4) and (1, -1, 3) and parallel to the x-axis is

- (a) $7y + 4z = 5$
- (b) $5y + z = 11$
- (c) $y - 2z = -7$
- (d) $4y + 2z = 2$

Options :

- 12820622875. A
- 12820622876. B
- 12820622877. C
- 12820622878. D

Question Number : 75 Question Id : 1282065785 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The eccentricity of ellipse $x^2/a^2 + y^2/b^2 = 1$ is

- (a) $\sqrt{1 + \frac{b^2}{a^2}}$
- (b) $\sqrt{1 - \frac{a^2}{b^2}}$
- (c) $\sqrt{1 - \frac{b^2}{a^2}}$
- (d) $\sqrt{1 + \frac{a^2}{b^2}}$

Options :

- 12820622879. A
- 12820622880. B

12820622881. C

12820622882. D

Question Number : 76 Question Id : 1282065786 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\cos^{-1}\left(\frac{1-x^2}{1+x^2}\right) \text{ is}$$

(a) $2\tan^{-1}(x)$

(b) $6\tan^{-1}(x)$

(c) $\sec^{-1}(x)$

(d) $3\cot^{-1}(x)$

Options :

12820622883. A

12820622884. B

12820622885. C

12820622886. D

Question Number : 77 Question Id : 1282065787 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$$\cos(\tan^{-1}(\sin(\cot^{-1}(x)))) \text{ is}$$

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

(b) $\sqrt{\frac{1-x^2}{2+x^2}}$

(c) $\sqrt{\frac{1+x^2}{4+x^2}}$

(d) $\sqrt{\frac{x^2-1}{x^2-2}}$

Options :

12820622887. A

12820622888. B

12820622889. C

12820622890. D

Question Number : 78 Question Id : 1282065788 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

$\sin^{-1}(x) + \sin^{-1}(\sqrt{1-x^2})$ is

(a) $\frac{\pi}{3}$

(b) $\frac{\pi}{2}$

(c) $\frac{\pi}{4}$

(d) 1

Options :

12820622891. A

12820622892. B

12820622893. C

12820622894. D

Question Number : 79 Question Id : 1282065789 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of $(-1)^{\frac{1}{3}}$ is

(a) $\cos\left(\frac{\pi}{3}\right) + i \sin\left(\frac{\pi}{3}\right)$

(b) $\cos\left(\frac{\pi}{4}\right) + i \sin\left(\frac{\pi}{4}\right)$

(c) $\cos\left(\frac{2\pi}{5}\right) + i \sin\left(\frac{2\pi}{5}\right)$

(d) $\cos\left(\frac{3\pi}{7}\right) + i \sin\left(\frac{3\pi}{7}\right)$

Options :

12820622895. A

12820622896. B

12820622897. C

12820622898. D

Question Number : 80 Question Id : 1282065790 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of series $\sum \frac{1}{n^2}$ is

(a) $\frac{\pi^2}{3}$

(b) $\frac{\pi^2}{4}$

(c) $\frac{\pi^2}{5}$

(d) $\frac{\pi^2}{6}$

Options :

- 12820622899. A
- 12820622900. B
- 12820622901. C
- 12820622902. D

Question Number : 81 Question Id : 1282065791 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

- A. The product of two even permutations is even.
- B. The product of two odd permutations is odd.

- (a) statement A is true
- (b) statement B is true
- (c) both statements A and B are true
- (d) both statements A and B are false

Options :

- 12820622903. A
- 12820622904. B
- 12820622905. C
- 12820622906. D

Question Number : 82 Question Id : 1282065792 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The group (G, o) is commutative if, for all a, b in G , the following holds.

- (a) $(aob)^{-1} = b^{-1}oa^{-1}$
- (b) $(aob)^{-1} = a^{-1}ob^{-1}$
- (c) $(aob)^{-1} = aob$
- (d) $(aob)^{-1} = boa$

Options :

- 12820622907. A
- 12820622908. B
- 12820622909. C
- 12820622910. D

Question Number : 83 Question Id : 1282065793 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In a cyclic group, the following is not correct.

- (a) It must have some generator
- (b) It must be abelian
- (c) there is no relation among the elements
- (d) generator need not be unique

Options :

- 12820622911. A

12820622912. B
12820622913. C
12820622914. D

Question Number : 84 Question Id : 1282065794 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Let (G, \circ) be a group such that, for all a, b in G , $a \circ b = a + b - 3$. The identity element of this group is

- (a) -3
(b) 2
(c) 3
(d) 1

Options :

12820622915. A
12820622916. B
12820622917. C
12820622918. D

Question Number : 85 Question Id : 1282065795 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The Cartesian product $Z \times Z = \{(a, b) \mid a, b \in Z\}$ with operation $+$ defined as $x + y = (a + c, b + d)$. Which is not correct?

- (a) it is associative
(b) it is commutative
(c) it has inverse of each element
(d) it has identity element as $(1, 0)$

Options :

12820622919. A
12820622920. B
12820622921. C
12820622922. D

Question Number : 86 Question Id : 1282065796 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which function is not uniformly continuous on $(0, 1)$?

- (a) x^2
(b) $1/x^2$
(c) $\sin(x)$
(d) $\sin(x)/x$

Options :

12820622923. A

12820622924. B
12820622925. C
12820622926. D

Question Number : 87 Question Id : 1282065797 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is not true about $s_n = 1/n$?

- (a) sequence converges to 0
(b) $\lim \sup s_n = 0$
(c) $\lim_{n \rightarrow \infty} \sum_{i=1}^n s_i = L$, for some finite L
(d) series $\sum s_n^2$ converges

Options :

12820622927. A
12820622928. B
12820622929. C
12820622930. D

Question Number : 88 Question Id : 1282065798 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following must be true for a continuous function on (a, b) ?

- (a) function achieves its maximum on (a, b)
(b) function is bounded
(c) if $f(a) = 5$ and $f(b) = 9$, then $f(c) = 7$, for some c in (a, b)
(d) none of them

Options :

12820622931. A
12820622932. B
12820622933. C
12820622934. D

Question Number : 89 Question Id : 1282065799 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Consider the function $f(x) = 3x - 7$. Then f^2 is given as

- (a) $9x - 28$
(b) $9x^2 - 42x + 49$
(c) $6x - 14$
(d) $9x^2 - 49$

Options :

12820622935. A
12820622936. B
12820622937. C

12820622938. D

Question Number : 90 Question Id : 1282065800 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

If $f(x) = 1/(1-x)$, then $f(f(f(x)))$ is

(a) $1/(1-x)^2$

(b) $(x-1)^2$

(c) x

(d) x^3

Options :

12820622939. A

12820622940. B

12820622941. C

12820622942. D

Question Number : 91 Question Id : 1282065801 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of $\lim_{x \rightarrow \infty} \frac{\tan x}{x}$ is

(a) 1

(b) 0

(c) -1

(d) does not exist

Options :

12820622943. A

12820622944. B

12820622945. C

12820622946. D

Question Number : 92 Question Id : 1282065802 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of integral $\int_0^{\infty} \frac{x^{n+1}}{x+1} dx$, for $0 < n < 1$, is

(a) $\frac{\pi}{\cot nx}$

(b) $\frac{\pi}{\cos nx}$

(c) $\frac{\pi}{\tan nx}$

(d) $\frac{\pi}{\sin nx}$

Options :

12820622947. A

12820622948. B

12820622949. C

12820622950. D

Question Number : 93 Question Id : 1282065803 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of integral $\int_0^{\infty} x^{n-1} e^{-x} dx$, n is a positive integer, is

(a) $n!$

(b) $\frac{e}{n!}$

(c) e^{-1}

(d) e^{-2}

Options :

12820622951. A

12820622952. B

12820622953. C

12820622954. D

Question Number : 94 Question Id : 1282065804 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of integral $\int_0^{\pi/2} \log \sin x dx$ is

(a) $\log_e 2$

(b) $\frac{\pi}{n!}$

(c) $\frac{\pi}{2} \log_e 2$

(d) $\log_e \pi$

Options :

12820622955. A

12820622956. B

12820622957. C

12820622958. D

Question Number : 95 Question Id : 1282065805 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of integral $\int_0^{\infty} \frac{\sin ax}{x} dx, a > 0,$ is

(a) $\frac{\pi}{2}$

(b) π

(c) $\log_e 2$

(d) $\log_e \pi$

Options :

12820622959. A

12820622960. B
12820622961. C
12820622962. D

Question Number : 96 Question Id : 1282065806 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The value of integral $\int_0^{\infty} \frac{\sin^2 x}{x^2} dx$ is

- (a) $\log_e \pi$
(b) $\frac{\pi}{4}$
(c) $\log_e 2$
(d) $\frac{\pi}{2}$

Options :

12820622963. A
12820622964. B
12820622965. C
12820622966. D

Question Number : 97 Question Id : 1282065807 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The values of scalars a, b such that for all vectors A and B, $a(2A-7B) + 2aB - 2(2A-bB) = 0$ are

- (a) $a = 3, b = 5$
(b) $a = 2, b = 5$
(c) $a = 1, b = 7$
(d) $a = 0, b = 3$

Options :

12820622967. A
12820622968. B
12820622969. C
12820622970. D

Question Number : 98 Question Id : 1282065808 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The magnitude of the vector (4, -3, 2) is

- (a) 5
(b) 6
(c) 8
(d) $\sqrt{29}$

Options :

12820622971. A

12820622972. B
12820622973. C
12820622974. D

**Question Number : 99 Question Id : 1282065809 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

The dot product of vectors $(2, -5, 1)$ and $(-4, 1, 7)$ is

- (a) 7
- (b) 5
- (c) -6
- (d) -8

Options :

12820622975. A
12820622976. B
12820622977. C
12820622978. D

**Question Number : 100 Question Id : 1282065810 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical**

Correct Marks : 1 Wrong Marks : 0

Two vectors A and B are perpendicular if

- (a) $A \cdot B = 1$
- (b) $A \cdot B = 0$
- (c) $A \times B = 1$
- (d) $A \times B = 0$

Options :

12820622979. A
12820622980. B
12820622981. C
12820622982. D