National Testing Agency

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Data Science Artifical Intelligence Cyber Security And Computer Science

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Data Science Artifical Intelligence Cyber Security And Computer Science

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Sub-Section Id :	680191294
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Is Section Default? :	null

Question Number : 1 Question Id : 68019113251 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statements regarding RAID and choose the right one.
(A). RAID 3 requires only a single redundant disk.
(B). In RAID 4 scheme, two different parity calculations are carried out and stored in seperate blocks on different disks.
(C). RAID 5 distributes the parity strips across all disks.
(D). In RAID 2 the number of redundant disks are proportional to the log of the number of data disks.

Choose the ***correct*** answer from the options given below:

1. (A) and (B) only.
2. (B), (C) and (D) only.
3. (A), (B) and (D) only.
4. (A), (C) and (D) only.

Options :

68019152301. 1

68019152302. 2

68019152303. 3

68019152304. 4

Question Number : 2 Question Id : 68019113252 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In case of DMA, after the completion of the transfer , the processor is required to be notified of the completion . This is done through _____

1. Burst Signal
2. Interrupt signal
3. Acknowledgement Signal
4. Completion Signal

Options :

68019152305. 1

68019152306. 2

68019152307. 3

68019152308. 4

Question Number : 3 Question Id : 68019113253 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In a two level memory hierarchy, the access time of the cache memory is 12 nsec and the access time of the main memory is 1.5 msec. The hit ratio is 0.98. What is the average access time of the two level memory system?

1. 13.5 nesc
2. 42 nsec
3. 7.56 nsec
4. 41.76 nsec

Options :

68019152309. 1

68019152310. 2

68019152311. 3

68019152312. 4

Question Number : 4 Question Id : 68019113254 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		LIST II	
A.	Supervisor mode	I.	Entered when the processor encounters a software interrupt instruction
B.	Abort Mode	II.	Entered in response to memory fault
C.	Fast interrupt mode	III.	Entered whenever the processor recieves an interrupt signal from the designated fast interrupt source.
D.	Interrupt mode	IV.	Whenever the processor receives an interrupt signal from any other interrupted source.

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
2. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
3. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
4. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)

Options :

68019152313. 1

68019152314. 2

68019152315. 3

68019152316. 4

Question Number : 5 Question Id : 68019113255 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Deallocation of stack of thread and register contexts will take place _____

1. at the termination of thread
2. At the time of thread blocking
3. at the time of thread spawning
4. at the time of unblocking the thread

Options :

68019152317. 1

68019152318. 2

68019152319. 3

68019152320. 4

Question Number : 6 Question Id : 68019113256 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		LIST II	
A.	Unsegmented unpaged memory	I.	Segmentation define logical memory partitions and paging manages the allocation of memory within partition.
B.	Unsegmented paged memory	II.	Memory is viewed as a collection of logical address spaces.
C.	Segmented unpaged memory	III.	Virtual address is the same as the physical address.
D.	Segmented paged memory	IV.	Memory is viewed as a paged linear address space.

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
2. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
3. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
4. (A) - (II), (B) - (IV), (C) - (III), (D) - (I)

Options :

68019152321. 1

68019152322. 2

68019152323. 3

68019152324. 4

Question Number : 7 Question Id : 68019113257 Question Type : MCQ Option Shuffling : No Is

Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If L and $\bar{L}$ are recursively enumerable then L is

1. Regular
2. Context-free
3. Context-sensitive
4. Recursive

Options :

68019152325. 1

68019152326. 2

68019152327. 3

68019152328. 4

Question Number : 8 Question Id : 68019113258 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let P be a regular language and Q be a context free language such that $Q \subseteq P$. (For example, let P be the language represented by the regular expression p^*q^* and Q be $\{p^nq^n \mid n \in N\}$). Then which of the following is always regular?

1. $P \cap Q$
2. P-Q
3. $\sum^*$-P
4. $\sum^*$-Q

Options :

68019152329. 1

68019152330. 2

68019152331. 3

68019152332. 4

Question Number : 9 Question Id : 68019113259 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following languages are context-free?

(A). L= $\{0^i 1^j / i \neq j\}$

(B). L= $\{0^i 1^j / i = j\}$

(C). L= $\{0^i 1^j / i = 2j+1\}$

(D). L= $\{0^i 1^j / i \neq 2j\}$

Choose the ***correct*** answer from the options given below:

1. (A), (B) and (D) only.
2. (B) and (C) only.
3. (A) and (B) only.
4. (A), (B), (C) and (D).

Options :

68019152333. 1

68019152334. 2

68019152335. 3

68019152336. 4

Question Number : 10 Question Id : 68019113260 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statement.

Finite Languages satisfy the pumping lemma by having n= _____. (Consider p as maximum string length in the language L)

1. p*
2. p+1
3. p-1
4. p^2

Options :

68019152337. 1

68019152338. 2

68019152339. 3

68019152340. 4

Question Number : 11 Question Id : 68019113261 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let $\sum$ be a finite non- empty alphabet and let $2^{\sum^*}$ be the power set of $\sum^*$. Which one of the following is true?

1. Both $2^{\sum^*}$ and $\sum^*$ are countable.
2. $2^{\sum^*}$ is countable and $\sum^*$ is uncountable.
3. $2^{\sum^*}$ is uncountable and $\sum^*$ is countable.
4. Both $2^{\sum^*}$ and $\sum^*$ are uncountable.

Options :

68019152341. 1

68019152342. 2

68019152343. 3

68019152344. 4

Question Number : 12 Question Id : 68019113262 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In a class B subnet, we know the IP address of one host and the mask as given below:
IP address = 125.134.112.66
Mask = 255.255.224.0
what is the first address(Network address)?

1. 125.134.96.0
2. 125.134.112.0
3. 125.134.112.66
4. 125.134.0.0

Options :

68019152345. 1

68019152346. 2

68019152347. 3

68019152348. 4

Question Number : 13 Question Id : 68019113263 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		LIST II	
A.	Greedy best first search	I.	Space complexity is o(d) where d= depth of deepest optimal solution.
B.	A*	II.	Incomplete even if the search space is finite.
C.	Recursive best first search	III.	Optimal, if optimal solution is reachable, otherwise returns the best reachable optimal solution.
D.	SMA*	IV.	Computation and space complexity is too high.

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (IV), (C) - (III), (D) - (I)
2. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
3. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
4. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)

Options :

68019152349. 1

68019152350. 2

68019152351. 3

68019152352. 4

Question Number : 14 Question Id : 68019113264 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following "Laws" is Asimov's first and most important law of robotics?

1. Robot actions must never result in damage to the robot.
2. Robots must never take actions harmful to humans.
3. Robots must follow the directions given by humans.
4. Robots must make business a greater profit.

Options :

68019152353. 1

68019152354. 2

68019152355. 3

68019152356. 4

Question Number : 15 Question Id : 68019113265 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is meant by factoring?

1. Removal of redundant variable.
2. Removal of redundant literal.
3. Addition of redundant literal.
4. Addition of redundant variable.

Options :

68019152357. 1

68019152358. 2

68019152359. 3

68019152360. 4

Question Number : 16 Question Id : 68019113266 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

What is a perception check?

1. A cognitive bias that makes us listen only to information we already agree with.
2. A method, teachers use to reward good listners in the classroom.
3. Any factor that gets in the way of good listening and decreases our ability to interpret correctly.
4. A response that allows you to state your interpretation and ask your partner whether or not that interpretation is correct.

Options :

68019152361. 1

68019152362. 2

68019152363. 3

68019152364. 4

Question Number : 17 Question Id : 68019113267 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		LIST II	
A.	Unification	I.	Previous sub goal to find alternative solutions.
B.	Deep back tracking	II.	The entire conjunctive goal is executed.
C.	Forward movement	III.	Variable can be done with a constant, another variable or a function.
D.	Shallow back tracking	IV.	Choose sub goal with possible unifier.

Choose the **correct** answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
2. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
3. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
4. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)

Options :

68019152365. 1

68019152366. 2

68019152367. 3

68019152368. 4

Question Number : 18 Question Id : 68019113268 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the FOL sentence F: $\forall x(\exists y\ R(x,y))$. Assuming non-empty logical domains, which of the sentences below are implied by F?

(A). $\exists y(\exists x\ R(x,y))$

(B). $\exists y(\forall x\ R(x,y))$

(C). $\forall y(\exists x\ R(x,y))$

(D). $\sim\exists x(\forall y\ \sim R(x,y))$

Choose the **correct** answer from the options given below:

1. (C) and (D) only.
2. (A) and (D) only.
3. (A) and (B) only.
4. (B) and (C) only.

Options :

68019152369. 1

68019152370. 2

68019152371. 3

68019152372. 4

Question Number : 19 Question Id : 68019113269 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

	LIST I		**LIST II**
A.	$\lim_{n\to\infty}\left(1-\frac{1}{n}\right)^{2n}$	I.	1
B.	$\lim_{x\to 1}(1-x^2)\{\log(1-x)\}^{-1}$	II.	e
C.	$\lim_{x\to\infty}(1+x^2)^{e^{-x}}$	III.	e^2
D.	$\lim_{x\to\infty}\left(1+\frac{2}{x}\right)^{x}$	IV.	e^{-2}

Choose the **correct** answer from the options given below:

1. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
2. (A) - (II), (B) - (IV), (C) - (III), (D) - (I)
3. (A) - (IV), (B) - (II), (C) - (I), (D) - (III)
4. (A) - (IV), (B) - (II), (C) - (III), (D) - (I)

Options :

68019152373. 1

68019152374. 2

68019152375. 3

68019152376. 4

Question Number : 20 Question Id : 68019113270 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let A be 2 X 2 matrix with element $a_{11}=a_{12}=a_{21}=+1$ and $a_{22}=-1$. Then the eigenvalues of matrix A^{19} are

1. 1024 *and* – 1024
2. $512\sqrt{2}\ and - 512\sqrt{2}$
3. $1024\sqrt{2}\ and - 1024\sqrt{2}$
4. $4\sqrt{2}\ and - 4\sqrt{2}$

Options :

68019152377. 1

68019152378. 2

68019152379. 3

68019152380. 4

Question Number : 21 Question Id : 68019113271 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Equation $e^x-1=0$ is required to be solved using newton Raphson's method with an initial guess $x_0=-1$. Then after one step of newton's method, estimate x_1 of the solution will be given by

1. 0.71828
2. 0.36784
3. 0.20587
4. 0.0000

Options :

68019152381. 1

68019152382. 2

68019152383. 3

68019152384. 4

Question Number : 22 Question Id : 68019113272 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following system of equations:

$x_1+x_2+x_3= 1$

$x_1+2x_2+3x_3= 2$

$x_1+4x_2+\alpha x_3= 4$

has a unique solution. possible value (s) for α is/are

1. 0
2. Either 0 or 1
3. One of 0, 1 or -1
4. Any real number other than 5

Options :

68019152385. 1

68019152386. 2

68019152387. 3

68019152388. 4

Question Number : 23 Question Id : 68019113273 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If $x \in [0,1]$, and f(x) and g(x) are defined as $f(x)= \sin(\cos(\frac{\pi x}{4}))$ and $g(x)= \cos(\sin(\frac{\pi x}{4}))$ then

1. f is monotonic increasing and g is monotonic decreasing.
2. f is monotonic increasing and g is monotonic increasing.
3. f is monotonic decreasing and g is monotonic decreasing.
4. f is monotonic decreasing and g is monotonic increasing.

Options :

68019152389. 1

68019152390. 2

68019152391. 3

68019152392. 4

Question Number : 24 Question Id : 68019113274 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The simultaneous equation on the boolean variables x,y,z and w,
$x+y+z= 1$
$xy= 0$
$xy+w= 1$
$xy+ \overline{z} = 0$
have the following solution for x,y,z and w, respectively-

1. 0100
2. 1011
3. 1000
4. 1101

Options :

68019152393. 1

68019152394. 2

68019152395. 3

68019152396. 4

Question Number : 25 Question Id : 68019113275 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following statements are not true?
(A). When a boolean variable is multiplied by it's complement, the result is the variable.
(B). A VHDL program consist of an entity and an architecture.
(C). Multiplication in boolean algebra is equivalent to the NAND function.
(D). "The complement of a product of variables is equal to the sum of the complements of each variable." is a statement of Demorgan's theorem.
Choose the **correct** answer from the options given below:

1. (B), (C) and (D) only.
2. (A) and (C) only.
3. (A) and (D) only.
4. (A), (B) and (C) only.

Options :

68019152397. 1

68019152398. 2

68019152399. 3

68019152400. 4

Question Number : 26 Question Id : 68019113276 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

An FPGA with an embedded logic function that can not be programmed is said to be

1. Non-volatile
2. Platform
3. Hard core
4. Soft core

Options :

68019152401. 1

68019152402. 2

68019152403. 3

68019152404. 4

Question Number : 27 Question Id : 68019113277 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A system transmits a block of information containing ten packets each with eight data bits, a start bit and a stop bit. Additional "overhead" bits include a 4-bit synchronization code at the beginning of the block and a parity bit at the end of the block. What is the transmission efficiency?

1. 75.6%
2. 80.5%
3. 78.8%
4. 76.2%

Options :

68019152405. 1

68019152406. 2

68019152407. 3

68019152408. 4

Question Number : 28 Question Id : 68019113278 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A pulse is applied to each input of a 2-input NAND gate. One pulse goes high at t = 0 and goes back low at t = 1 ms. The other pulse goes high at t = 0 and goes back low at t = 3 ms.
The output pulse can be described as follows:

1. It goes low at t = 0 and back high at t = 3 ms.
2. It goes low at t = 0.8 ms and back high at t = 3 ms.
3. It goes low at t = 0.8 ms and back high at t = 1 ms.
4. It goes low at t = 0.8 ms and back low at t = 1 ms.

Options :

68019152409. 1

68019152410. 2

68019152411. 3

68019152412. 4

Question Number : 29 Question Id : 68019113279 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Add the following Hexadecimal numbers:
$DF_{16} + AC_{16}$

1. AF_{16}
2. $7B_{16}$
3. $18B_{16}$
4. BA_{16}

Options :

68019152413. 1

68019152414. 2

68019152415. 3

68019152416. 4

Question Number : 30 Question Id : 68019113280 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following statement(s) is/are correct about Stacking in the context of machine learning?
(A). A logistic regression will definitely work better in the second stage as compare to other classification models.
(B). A machine learning model is trained on predictions of multiple machine learning models.
(C). First stage models are trained on full/partial feature space of training data.
Choose the **correct** answer from the options given below:

1. (B) and (C) only.
2. (A) and (B) only.
3. (A) and (C) only.
4. (B) only.

Options :

68019152417. 1

68019152418. 2

68019152419. 3

68019152420. 4

Question Number : 31 Question Id : 68019113281 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which is/are true about bias and variance?
(A). High bias means that the model is underfitting.
(B). High variance means that the model is overfitting.
(C). High bias means that the model is overfitting.
(D). Bias and variance are inversely proportional to each other.
Choose the **correct** answer from the options given below:

1. (B), (C) and (D) only.
2. (B) and (D) only.
3. (A), (B) and (D) only.
4. (C) and (D) only.

Options :

68019152421. 1

68019152422. 2

68019152423. 3

68019152424. 4

Question Number : 32 Question Id : 68019113282 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given $(x_1, y_1), (x_2, y_2), \ldots\ldots, (x_n, y_n)$ best fitting data to $y = f(x)$ by least squares requires minimization of

1. $\sum_{i=1}^{n}[y_i - f(x_i)]$
2. $\sum_{i=1}^{n}|yi - f(xi)|$
3. $\sum_{i=1}^{n}[y_i - f(x_i)]^2$
4. $\sum_{i=1}^{n}[yi - \ ]2, = \frac{\sum_{i=1}^{n}(y_i)}{n}$

Options :

68019152425. 1

68019152426. 2

68019152427. 3

68019152428. 4

Question Number : 33 Question Id : 68019113283 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following activation function output is zero-centered?

1. Hyperbolic tangent
2. Sigmoid
3. Softmax
4. Rectified Linear Unit (ReLU)

Options :

68019152429. 1

68019152430. 2

68019152431. 3

68019152432. 4

Question Number : 34 Question Id : 68019113284 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is/are true about outliers.
(A). Linear Regression is not sensitive to outliers.
(B). Outliers can never be present in the test set.
(C). Outlier is a data point that is significantly close to other data points.
(D). The nature of our business problem determines how outliers are used.
Choose the ***correct*** answer from the options given below:

1. (A) and (B) only.
2. (B) and (D) only.
3. (A), (C) and (D) only.
4. (D) only.

Options :

68019152433. 1

68019152434. 2

68019152435. 3

68019152436. 4

Question Number : 35 Question Id : 68019113285 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A natural way to visualize the process of training a self organizing map is called ____.

1. Kohonen movie
2. Kohonen map
3. Frame
4. Scatter gram

Options :

68019152437. 1

68019152438. 2

68019152439. 3

68019152440. 4

Question Number : 36 Question Id : 68019113286 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A 4 input neurons has weights 1,2,3,4 respectively. The transfer function is linear with the constant of proportionality being equal to 2. The inputs are 4,10,5 and 20 respectively. The output will be

1. 238
2. 76
3. 119
4. 123

Options :

68019152441. 1

68019152442. 2

68019152443. 3

68019152444. 4

Question Number : 37 Question Id : 68019113287 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statements and choose the correct one-
(A). Segmentation is a memory management scheme that supports user view of memory.
(B). In paging, physical memory is broken into fix-sized blocks called pages.
(C). In paging, logical memory is also broken into blocks of the same size called frames.
Choose the ***correct*** answer from the options given below:

1. (A) and (B) only.
2. (B) only.
3. (B) and (C) only.
4. (A) only.

Options :

68019152445. 1

68019152446. 2

68019152447. 3

68019152448. 4

Question Number : 38 Question Id : 68019113288 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		LIST II	
A.	Disk scheduling	I.	Round robin
B.	Batch processing	II.	SCAN
C.	Time sharing	III.	LIFO
D.	Interrupt processing	IV.	FIFO

Choose the ***correct*** answer from the options given below:

1. (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
2. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
3. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
4. (A) - (II), (B) - (I), (C) - (IV), (D) - (III)

Options :

68019152449. 1

68019152450. 2

68019152451. 3

68019152452. 4

Question Number : 39 Question Id : 68019113289 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider a logical address space of eight pages of 1024 words each, mapped into a physical memory of 32 frames. How many bits are there in the logical address and in physical address respectively?

1. 10, 5
2. 15, 13
3. 13, 15
4. 15,10

Options :

68019152453. 1

68019152454. 2

68019152455. 3

68019152456. 4

Question Number : 40 Question Id : 68019113290 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following set of processes with the length of the CPU- burst time given in milliseconds:

Process	Burst Time	Priority
P_1	10	3
P_2	1	1
P_3	2	3
P_4	1	4
P_5	5	2

The processes are assumed to have arrived in order P1, P2, P3, P4, P5 all at time 0. What is the waiting time of process P4 for Shortest Job First, a non- preemptive priority scheduling and Round Robin (Quantum=1) scheduling algorithms respectively?

1. 18, 3, 1
2. 3, 1, 18
3. 1, 18, 3
4. 18, 1, 3

Options :

68019152457. 1

68019152458. 2

68019152459. 3

68019152460. 4

Question Number : 41 Question Id : 68019113291 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statements and choose the correct one.
(A). Job schedulers select processes from the pool and loads them into memory for execution.
(B). Short term scheduler selects among the processes that are ready to execute and allocate the CPU to one of them.
(C). Medium term scheduler increase the degree of multiprogramming.

Choose the ***correct*** answer from the options given below:

1. (A) only.
2. (A) and (B) only.
3. (A) and (C) only.
4. (B) and (C) only.

Options :

68019152461. 1

68019152462. 2

68019152463. 3

68019152464. 4

Question Number : 42 Question Id : 68019113292 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A magnetic disk pack has the following specifications:

16 surfaces, 128 tracks per surface, 256 sectors per track, 512 bytes per sector.

Calculate the capacity of the disk pack.

1. 256 MB
2. 512 MB
3. 1024 MB
4. 128 MB

Options :

68019152465. 1

68019152466. 2

68019152467. 3

68019152468. 4

Question Number : 43 Question Id : 68019113293 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Cycle stealing mode of DMA operation involves.

1. DMA controller taking over the address data and control buses while a block of data is transferred between memory and I/O device.
2. While the microprocessor is executing a program, an interface circuit takes over control of address, data, control buses when not in use by microprocessor.
3. Data transfer takes place between the I/O device and memory during every alternate clock cycle.
4. The DMA control waiting for the microprocessor to finish execution of the program and then takes over the buses.

Options :

68019152469. 1

68019152470. 2

68019152471. 3

68019152472. 4

Question Number : 44 Question Id : 68019113294 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Each instruction in an assembly language program has the following fields. What is correct sequence of these fields?
(A). Label field
(B). Mnemonic field
(C). Operand field
(D). Comment field
Choose the ***correct*** answer from the options given below:

1. (A), (B), (C), (D).
2. (B), (A), (D), (C).
3. (A), (C), (B), (D).
4. (B), (D), (A), (C).

Options :

68019152473. 1

68019152474. 2

68019152475. 3

68019152476. 4

Question Number : 45 Question Id : 68019113295 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following in 8085 microprocessor performs HL = HL + HL?

1. DAD D
2. DAD H
3. DAD B
4. DAD SP

Options :

68019152477. 1

68019152478. 2

68019152479. 3

68019152480. 4

Question Number : 46 Question Id : 68019113296 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The contents of register (BL) and register (AL) of 8085 microprocessor are 49 H and 3 AH respectively. The contents of AL, the status of carry flag (CF) and sign flag (SF) after executing ' SUB AL, BL ' assembly language instruction are

1. AL = F1H; CF = 1; SF =1
2. AL = 0FH; CF = 1; SF =1
3. AL = F0H; CF = 0; SF =0
4. AL = 1FH; CF = 1; SF =1

Options :

68019152481. 1

68019152482. 2

68019152483. 3

68019152484. 4

Question Number : 47 Question Id : 68019113297 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Choose the software interrupt from the following list?

1. INTR
2. RST 6.5
3. RST 5
4. TRAP

Options :

68019152485. 1

68019152486. 2

68019152487. 3

68019152488. 4

Question Number : 48 Question Id : 68019113298 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The number of wait states required to interface 8279 to 8086 with 8MHz clock are

1. 2
2. 3
3. 1
4. 5

Options :

68019152489. 1

68019152490. 2

68019152491. 3

68019152492. 4

Question Number : 49 Question Id : 68019113299 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

_____ is not a requirement of digital signatures.

1. having a public private key pair
2. Being Computationally Feasible
3. Being easily recognizable
4. Being easily Verifiable

Options :

68019152493. 1

68019152494. 2

68019152495. 3

68019152496. 4

Question Number : 50 Question Id : 68019113300 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Rail fence technique is an example of

1. Substitution Cipher
2. Transposition Cipher
3. Product Cipher
4. Ceaser Cipher

Options :

68019152497. 1

68019152498. 2

68019152499. 3

68019152500. 4

Question Number : 51 Question Id : 68019113301 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the DES algorithm the round input is 32 bits, which is expanded to 48 bits via

1. Scaling of the existing bits
2. Duplication of the existing bits
3. Addition of zeros
4. Addition of ones

Options :

68019152501. 1

68019152502. 2

68019152503. 3

68019152504. 4

Question Number : 52 Question Id : 68019113302 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The best known multiple-letter encryption cipher is-

1. Ceaser cipher
2. Hill cipher
3. Playfair cipher
4. Block cipher

Options :

68019152505. 1

68019152506. 2

68019152507. 3

68019152508. 4

Question Number : 53 Question Id : 68019113303 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Packet filtering firewalls are deployed on

1. Routers
2. Switches
3. Hubs
4. Repeaters

Options :

68019152509. 1

68019152510. 2

68019152511. 3

68019152512. 4

Question Number : 54 Question Id : 68019113304 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Computation of the discrete logarithm is the basis of the cryptographic system-

1. Symmetric one cryptography
2. Asymmetric cryptography
3. Diffie- Hellman key exchange
4. Secret key cryptography

Options :

68019152513. 1

68019152514. 2

68019152515. 3

68019152516. 4

Question Number : 55 Question Id : 68019113305 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In which theorem $a^{p-1} \equiv 1 \pmod{p}$ where p is prime and a is positive integer not divisible by p.

1. Euler's theorem
2. Wilson's theorem
3. Chinese Remainder theorem
4. fermat's theorem

Options :

68019152517. 1

68019152518. 2

68019152519. 3

68019152520. 4

Question Number : 56 Question Id : 68019113306 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		LIST II	
A.	Floyd-warshall algorithm for all pair shortest paths	I.	Divide and Conquer
B.	Prim's algorithms	II.	Backtracking
C.	Hamiltonian Circuit	III.	Greedy Paradigm
D.	Merge Sort	IV.	Dynamic Programming paradigm

Choose the correct answer from the options given below:

1. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
2. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
3. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
4. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)

Options :

68019152521. 1

68019152522. 2

68019152523. 3

68019152524. 4

Question Number : 57 Question Id : 68019113307 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A hash function f defined as f(key) = key mod 7, with linear probing, is used to instert the keys 37, 38, 72, 48, 98, 11, 56 into a table indexed from 0 to 6. What will be the location of key 11?

1. 3
2. 4
3. 5
4. 6

Options :

68019152525. 1

68019152526. 2

68019152527. 3

68019152528. 4

Question Number : 58 Question Id : 68019113308 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The worst case time complexity of inserting a node in a doubly linked list is :

1. O(nlogn)
2. O(logn)
3. O(n)
4. O(1)

Options :

68019152529. 1

68019152530. 2

68019152531. 3

68019152532. 4

Question Number : 59 Question Id : 68019113309 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A list of n strings, each of length n, is sorted into lexicographic order using the merge - sort algorithm. The worst case running time of this computation is

1. O(n logn)
2. $O(n^2 \log n)$
3. $O(n^2 + \log n)$
4. $O(n^2)$

Options :

68019152533. 1

68019152534. 2

68019152535. 3

68019152536. 4

Question Number : 60 Question Id : 68019113310 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following statement(s) is/are not true?
(A). Optimal binary search tree construction can be performed efficiently using dynamic programming.
(B). BFS cannot be used to find connected components of a graph.
(C). Given the prefix and postfix walks over the binary tree, the binary tree cannot be uniquely constructed.
(D). DFS can be used to find connected components of a graph.

Choose the ***correct*** answer from the options given below:

1. (A) and (C) only.
2. (B) and (D) only.
3. (D) only.
4. (B) only.

Options :

68019152537. 1

68019152538. 2

68019152539. 3

68019152540. 4

Question Number : 61 Question Id : 68019113311 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the quicksort algorithm. Suppose there is a procedure for finding a pivot element which splits the list into two sub-lists. one of which contains one fifth of the elements and the remaining elements are contained in the other sub-list. Let T(n) be the number of comparisons required to sort n elements. Then

1. $T(n) \leq 2T(\frac{n}{5}) + n$
2. $T(n) \leq T(\frac{n}{5}) + T(\frac{4n}{5}) + n$
3. $T(n) \leq 2T(\frac{4n}{5}) + n$
4. $T(n) \leq 2T(\frac{n}{2}) + n$

Options :

68019152541. 1

68019152542. 2

68019152543. 3

68019152544. 4

Question Number : 62 Question Id : 68019113312 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let A be the problem of finding a Hamiltonian cycle in a graph G = (V, E) with |V| divisible by 3 and B the problem of determining if Hamiltonian cycle exists in such graphs. Which one of the following is true?

1. Both A and B are NP-hard.
2. A is NP-hard but B is not.
3. B is NP-hard but A is not.
4. Neither A nor B is NP-hard.

Options :

68019152545. 1

68019152546. 2

68019152547. 3

68019152548. 4

Question Number : 63 Question Id : 68019113313 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the given two statements:
S1: Kruskal's Algorithm might produce a non minimal spanning tree.
S2: Kruskal's algorithm can be efficiently implemented using the disjoint set data structure.
Choose the **correct** option from given below.

1. S1 is true but S2 is false
2. Both S1 and S2 are false
3. Both S1 and S2 are true
4. S2 is true but S1 is false

Options :

68019152549. 1

68019152550. 2

68019152551. 3

68019152552. 4

Question Number : 64 Question Id : 68019113314 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

List-I (Data Structure)		**List-II (Application)**	
A.	Circular Linked list	I.	Recursive Function Calls.
B.	Doubly Linked List	II.	Round Robin Queue in CPU.
C.	Stack	III.	hash tables.
D.	Singly Linked List	IV.	Undo and Redo Functionality.

Choose the ***correct*** answer from the options given below:

1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
3. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
4. (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

Options :

68019152553. 1

68019152554. 2

68019152555. 3

68019152556. 4

Question Number : 65 Question Id : 68019113315 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Rank the following functions by order of growth (Highest running time to lowest running time)

(A). $n \times 3^n$

(B). $2^{\lg n}$

(C). $n^{2/3}$

(D). 4^n

(E). $4^{\lg n}$

Choose the ***correct*** answer from the options given below:

1. (E), (A), (D), (C), (B).
2. (D), (A), (E), (B), (C).
3. (D), (E), (A), (B), (C).
4. (E), (D), (A), (B), (C).

Options :

68019152557. 1

68019152558. 2

68019152559. 3

68019152560. 4

Question Number : 66 Question Id : 68019113316 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match **List I** with **List II**

LIST I		**LIST II**	
A.	Bucket sort	I.	$O(n^2)$
B.	Matrix chain multiplication	II.	$O(n^3)$
C.	Huffman codes	III.	O(n lg n)
D.	Dijkstra's Algorithm	IV.	O(n)

Choose the ***correct*** answer from the options given below:

1. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
2. (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
3. (A) - (IV), (B) - (II), (C) - (III), (D) - (I)
4. (A) - (III), (B) - (II), (C) - (I), (D) - (IV)

Options :

68019152561. 1

68019152562. 2

68019152563. 3

68019152564. 4

Question Number : 67 Question Id : 68019113317 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ten signals, each requiring 4000 Hz are multiplexed on to a single channel using FDM. How much minimum bandwidh is required for the multiplexed channel? Assume that the guard bands are 400 Hz wide.

1. 43800 Hz
2. 46300 Hz
3. 43600 Hz
4. 43700 Hz

Options :

68019152565. 1

68019152566. 2

68019152567. 3

68019152568. 4

Question Number : 68 Question Id : 68019113318 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In an HTTP request message the first line is called _____.

1. Header Line
2. Request Line
3. Tail Line
4. Status Line

Options :

68019152569. 1

68019152570. 2

68019152571. 3

68019152572. 4

Question Number : 69 Question Id : 68019113319 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider a scenario in which DHCP client and servers are on the same subnet. Here the communication between DHCP clients and servers will take place via _____

1. TCP Broadcast
2. UDP Broadcast
3. TCP Unicast
4. UDP Unicast

Options :

68019152573. 1

68019152574. 2

68019152575. 3

68019152576. 4

Question Number : 70 Question Id : 68019113320 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Consider the following statement(s) and choose the correct one.
(A). PoP3 does not allow the user to organize his mail on the server.
(B). In IMAP4 user can search the contents of the email for a specific string of characters prior to downloading.
(C). MIME is a supplementary protocol that allow ASCII data to be sent through email.

Choose the ***correct*** answer from the options given below:

1. (A) and (B) only.
2. (B) and (C) only.
3. (A) and (C) only.
4. (A) only.

Options :

68019152577. 1

68019152578. 2

68019152579. 3

68019152580. 4

Question Number : 71 Question Id : 68019113321 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following data fragment occurs in the middle of the data stream for which the byte stuffing algorithm described in the text is used:
A B ESC C ESC FLAG FLAG D. What is the output after stuffing?

1. A B ESC ESC C ESC ESC ESC FLAG ESC FLAG D
2. A B ESC C ESC ESC ESC ESC FLAG ESC FLAG D
3. A B ESC ESC ESC C ESC ESC FLAG ESC FLAG D
4. A B ESC ESC ESC ESC C ESC FLAG ESC FLAG D

Options :

68019152581. 1

68019152582. 2

68019152583. 3

68019152584. 4

Question Number : 72 Question Id : 68019113322 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A

Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Typically, e-mail systems support five basic funtions. Arrange them in sequence.
(A). Displaying
(B). Transfer
(C). Composition
(D). Disposition
(E). Reporting

Choose the ***correct*** answer from the options given below:

1. (A), (B), (C), (D), (E).
2. (A), (C), (D), (B), (E).
3. (C), (D), (B), (E), (A).
4. (C), (B), (E), (A), (D).

Options :

68019152585. 1

68019152586. 2

68019152587. 3

68019152588. 4

Question Number : 73 Question Id : 68019113323 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sequence of events that happen during a typical fetch operation is
(A). MAR
(B). IR
(C). MDR
(D). Memory
(E). PC

Choose the ***correct*** answer from the options given below:

1. (E), (A), (C), (B), (D).
2. (E), (A), (D), (C), (B).
3. (A), (E), (C), (B), (D).
4. (E), (A), (C), (D), (B).

Options :

68019152589. 1

68019152590. 2

68019152591. 3

68019152592. 4

Question Number : 74 Question Id : 68019113324 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following permutations can be obtained in the output (in the same order) using a stack assuming that the input is the sequence 1,2,3,4,5 in that order?
(A). 2
(B). 3
(C). 1
(D). 4
(E). 5

Choose the *correct* answer from the options given below:

1. (B), (D), (E), (A), (C).
2. (B), (D), (A), (E), (C).
3. (A), (D), (B), (C), (E).
4. (E), (D), (C), (A), (B).

Options :

68019152593. 1

68019152594. 2

68019152595. 3

68019152596. 4

Question Number : 75 Question Id : 68019113325 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Let G be a directed graph whose vertex set is the set of number from 1 to 100. There is an edge from a vertex i to vertex j if and only if either j = i+1 or j = 3i. The minimum number of edges in a path in G from vertex 1 to vertex 100 is

1. 4
2. 7
3. 23
4. 99

Options :

68019152597. 1

68019152598. 2

68019152599. 3

68019152600. 4