70 Questions

Que. 1 **Read the passage given below and answer the questions that follow. Some words may be highlighted. Read carefully.**

Computers can take in and process certain kinds of information much faster than we can. They can swirl that data around in their “brains,” made of processors, and perform calculations to create multiple scenarios at superhuman speeds. For example, the best chess-trained computers can at this point strategize many moves ahead, problem-solving far more deftly than can the best chess-playing humans. Computers learn much more **quickly**, too, narrowing complex choices to the most optimal ones. Yes, humans also learn from mistakes, but when it comes to tackling the kinds of puzzles computers excel at, we’re far more fallible.

Computers enjoy other advantages over people. They have better memories, so they can be fed a large amount of information, and can tap into all of it almost instantaneously. Computers don’t require sleep the way humans do, so they can calculate, analyze and **perform** tasks tirelessly and round the clock.

What can the best chess-trained computers do?

1. Play chess with other computers
2. Teach normal computers how to play chess
3. Strategize many moves ahead and solve problems
4. None of these

Correct Option **- 3**

Que. 2 What are the advantages of computers over humans?

1. They have better memories
2. They don't require sleep to function properly
3. Both 1 and 2
4. None of these

Correct Option **- 3**

Que. 3 What is the meaning of the word 'quickly'?

1. At a slow speed
2. At a fast speed
3. At average speed
4. None of these

Correct Option **- 2**

Que. 4 Give the synonym of the word given below.

Perform

1. Skip
2. Do
3. Push
4. Fall

Correct Option **- 2**

Que. 5 **Select the segment of the sentence that contains an error. If there is no error, mark No error as your answer.**

Unless you don't study (A) you won't (B) perform well in your exams. (C) No Error.

1. A
2. B
3. C
4. No Error

Correct Option **- 1**

Que. 6 **Select the segment of the sentence that contains an error. If there is no error, mark No Error as your answer.**

He was (A) the most excellent swimmer (B) I had ever seen in my life. (C) No Error

1. A
2. B
3. C
4. No Error

Correct Option **- 2**

Que. 7 **Select the segment of the sentence that contains the grammatical error. If there is no error, mark 'No error' as your answer.**

Dhruv is very (A) rich and he gave the (B) beggar a two hundred-rupees note(C) no error (D).

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

Correct Option **- 3**

Que. 8 **Fill in the blank with the appropriate word.**

Ram shouted _____ Vijay for coming late to work.

1. On
2. At
3. To
4. Over

Correct Option **- 2**

Que. 9 **Convert the given sentence into its negative form without changing the meaning.**

Everyone makes mistakes.

1. Someone does not make any mistake.
2. We all make mistakes.
3. There is no one who does not make mistakes.
4. Neither you, nor I make mistakes.

Correct Option **- 3**

Que. 10 **Determine the noun form of the word given below.**

Accurate

1. Accuracy
2. Accurately

3. Accuratively
4. None of these

Correct Option **- 1**

Que. 11 **The given sentence is in Direct/Indirect Speech. Convert it into a sentence in the Indirect/Direct Speech.**

He said to Sita, "Can you give me this pen?"

1. He asked Sita if she can give him this pen
2. He said to Sita whether he could give her that pen
3. He asked Sita if she could give him that pen
4. He asked Sita if he can give her that pen

Correct Option **- 3**

Que. 12 **Change the voice of the given sentence.**

The principal discovered a new lake.

1. A new lake discovered by the principal.
2. A new lake was discovered by the principal.
3. A new lake was being discovered by the principal.
4. The principal made a new discovery of a lake.

Correct Option **- 2**

Que. 13 **What is the synonym of the word given below?**

Revealed

1. Hidden
2. Exposed
3. Concealed
4. Covered

Correct Option **- 2**

Que. 14 **What is the antonym of the word given below?**

Aggravate

1. Annoy
2. Calm
3. Irritate
4. Provoke

Correct Option **- 2**

Que. 15 **Direction: Determine the correct spelling.**

1. Embarrasment
2. Embarasment
3. Embarrassment
4. Embarassment

Correct Option **- 3**

Que. 16 **Determine the correct spelling.**

1. Bulatin
2. Bulletin
3. Bulleton
4. Bulleten

Correct Option **- 2**

Que. 17 **Choose the option which best expresses the meaning of the idiom/phrase.**

Between the devil and the deep blue sea

1. I am on a ship on the sea
2. The devil is coming to fight the sea
3. The sea will drown the devil
4. Have both choices that are equally unpleasant

Correct Option **- 4**

Que. 18 **Directions: Choose the correct word for the following expression:**

One who makes maps or charts.

1. Cartoonist
2. Cartographer
3. Choreographer
4. Choirmaster

Correct Option **- 2**

Que. 19 **In the following question, out of the four given alternatives, select the alternatives which is the best substitute of the phrase.**

A place where clothes are washed and pressed.

1. Foundry
2. Sundry
3. Husbandry
4. Laundry

Correct Option **- 4**

Que. 20 **In the following question, parts of a sentence have been jumbled and labeled as P, Q, R, and S. You are required to rearrange the jumbled parts of the sentence and mark your response accordingly by selecting the correct option.**

P. for which I was slightly above

Q. I was a little fortunate

R. the usual age for entry

S. in finding a vacancy at Oxford

1. QSRP
2. PQRS
3. QSPR
4. PRSQ

Correct Option **- 3**

Que. 21 Choose the unitless quantity-

1. Velocity
2. strain
3. acceleration
4. stress

Correct Option **- 2**

Que. 22 Which of the following is a vector quantity?

1. Work
2. Internal energy
3. Angular momentum
4. Power

Correct Option **- 3**

Que. 23 An external force of 10 N is acting on a body kept on a rough surface and the body started moving with a constant velocity of 10 m/s in the same direction as that of force. Find the friction force acting on the body.

1. 10 N in the direction of external force
2. 10 N in the direction opposite to external force
3. 20 N in the direction of external force
4. 20 N in the direction opposite to external force

Correct Option **- 2**

Que. 24 Choose the correct relation between force F, velocity V, and power P of a body.

1. P = F/V
2. F = P.V
3. V = P.F
4. P = F.V

Correct Option **- 4**

Que. 25 Which of the following depends upon the mass of the earth?

1. Escape velocity on earth
2. Gravitational force due to earth
3. Gravitational potential energy on earth
4. All of the above depends on the mass of the earth

Correct Option **- 4**

Que. 26 The escape speed from the surface of the Earth is equal to?

1. $\sqrt{(2GM_E/R_E)}$
2. $\sqrt{(GM_E/R_E)}$
3. $\sqrt{(2GR_E/M_E)}$
4. $\sqrt{(GR_E/M_E)}$

Correct Option **- 1**

Que. 27 What will be the output of the combination of AND gate and NOT gate if the inputs are A and B?

1. A + B
2. A.B
3. $\overline{A.B}$
4. $\overline{A+B}$

Correct Option **- 3**

Que. 28 Which of the following will be same in its image in a planer mirror?

1. PQR
2. PQO
3. OXT
4. BFC

Correct Option **- 3**

Que. 29 The difference between light wave and sound wave is based on which of the following phenomenon?

1. Interference
2. Polarization
3. Refraction
4. Reflection

Correct Option **- 2**

Que. 30 Find the work done in rotating a magnet of magnetic moment M through 360° in a magnetic field H.

1. M H
2. 2M H
3. -MH
4. Zero

Correct Option **- 4**

Que. 31 An equilateral triangle is made of three wires of equal resistances 4 Ω. Find the equivalent resistance across any one side.

1. 4 Ω
2. 8 Ω
3. 4/3 Ω
4. 8/3 Ω

Correct Option **- 4**

Que. 32 A parallel plate capacitor has a capacitance of 10 μF. If the distance between two plates is doubled then the new capacitance will be-

1. 20 μF
2. 15 μF
3. 10 μF
4. 5 μF

Correct Option **- 4**

Que. 33 A ball is thrown in vertically upward direction with an initial velocity of 10 m/s. Find the time of flight of the ball (Take g = 10 m/s^2).

1. 1 second
2. 2 seconds
3. 3 seconds
4. 4 seconds

Correct Option **- 2**

Que. 34 5 identical cells of internal resistances 1.5 Ω each are connected in parallel combination. Find the equivalent internal resistance of the cells.

1. 7.5 Ω
2. 5 Ω
3. 1.5 Ω
4. 0.3 Ω

Correct Option **- 4**

Que. 35 The center of mass of a body depends on-

1. Velocity
2. Force
3. Radius
4. Temperature

Correct Option **- 3**

Que. 36 The sink temperature of a Carnot heat engine is 50 °C and the efficiency is 50%. Find the temperature of heat source of the engine.

1. 100 °C
2. 673 °C
3. 373 °C
4. 0 °C

Correct Option **- 3**

Que. 37 The change in internal energy of a 2 moles of a gas is -10 J. Find the work done on the gas if the process is adiabatic.

1. 20 J
2. 15 J
3. 10 J
4. 5 J

Correct Option **- 3**

Que. 38 If the threshold frequency of a metal surface is doubled then the work function of the metal will-

1. Remain same
2. Increases
3. Decreases
4. Can't predict

Correct Option - **2**

Que. 39 Choose the correct relation between the electromagnetic wave speed (c), permittivity (ϵ_0) of free space and permeability (μ_0) of free space.

1. $c = \frac{\mu_0}{\sqrt{\epsilon_0}}$
2. $c = \frac{1}{\epsilon_0\ \mu_0}$
3. $c = \frac{\epsilon_0}{\sqrt{\mu_0}}$
4. $c = \frac{1}{\sqrt{\epsilon_0\ \mu_0}}$

Correct Option - **4**

Que. 40 Which of the following has unit but no dimension?

1. Mass
2. Time
3. Angle
4. Velocity

Correct Option - **3**

Que. 41 The internal energy of a gas..... in an isothermal process.

1. Decreases
2. Increases
3. Remains constant
4. None of the above

Correct Option - **3**

Que. 42 A liquid kept in a bucket is stirred for few seconds and then kept at rest. The liquid comes in rest after some time due to-

1. Surface tension
2. Viscosity
3. Density
4. Change in volume

Correct Option - **2**

Que. 43 Phase difference between V and I in purely inductive A.C. circuit:

1. 0°
2. 180°
3. 90°
4. 360°

Correct Option - **3**

Que. 44 When an electron enters a perpendicular magnetic field, the kinetic energy of the electron will-

1. Increase
2. Decrease
3. remain constant

4. Need more data to say

Correct Option - **3**

Que. 45 The correct reason behind the production of eddy current is-

1. Change in electric field
2. Change in magnetic flux
3. Change in torque
4. Change in electric charge

Correct Option - **2**

Que. 46 If $\frac{x^2}{a^2}+\frac{y^2}{b^2}=1$then $\frac{dy}{dx}=$

1. $\frac{b^2x}{a^2y}$
2. $\_\frac{b^2x}{a^2y}$
3. $\_\frac{b^2y}{a^2x}$
4. $\frac{b^2y}{a^2x}$

Correct Option - **2**

Que. 47 $\int_0^{\pi}\sin^6 x\cos^5 x\,dx$ is equal to ?

1. 2π
2. π
3. 0
4. None of the above

Correct Option - **3**

Que. 48 If A ∪ B = A then A ∩ B is equal to ?

1. A
2. B
3. ϕ
4. A'

Correct Option - **2**

Que. 49 Find the value of $\lim_{x\to\infty} x\sin\left(\frac{\pi}{x}\right)$

1. $\frac{1}{\pi}$
2. 0
3. π
4. 1

Correct Option - **3**

Que. 50 $\int \sin 4x\,dx=$

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

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

Correct Option **- 1**

Que. 51 If $y = e^{2x}$ then $\frac{d^2y}{dx^2}$ is equal to ?

1. y
2. 2y
3. 4y
4. 6y

Correct Option **- 3**

Que. 52 The radius of the circle $x^2 + y^2 + 4x + 4y + 4 = 0$ is

1. 6 unit
2. 2 unit
3. 8 unit
4. $2\sqrt{2}$ unit

Correct Option **- 2**

Que. 53 $\int \frac{(\log x)^2}{x} dx$ is equal to ?

1. $\frac{(\log x)^2}{2} + c$
2. $\frac{(\log x)^3}{x} + c$
3. $\frac{(\log x)^3}{3} + c$
4. None of the above

Correct Option **- 3**

Que. 54 What is the equation to the straight line passing through (5, -2) and (-4, 7)?

1. 5x - 2y = 4
2. -4x + 7y = 9
3. x + y = 3
4. x - y = -1

Correct Option **- 3**

Que. 55 In a simultaneous throw of a pair of dice, the probability of getting a total more than 7 is

1. $\frac{7}{12}$
2. $\frac{5}{36}$
3. $\frac{5}{12}$
4. $\frac{7}{36}$

Correct Option - **3**

Que. 56 What is the mean of first n natural numbers ?

1. n
2. $\frac{(n+1)}{2}$
3. $\frac{n(n+1)}{2}$
4. None of the above

Correct Option - **2**

Que. 57 What is the degree of the differential equation $y\left(\frac{dy}{dx}\right)^3 = x\frac{d^2y}{dx^2}$?

1. 3
2. 2
3. 1
4. Not define

Correct Option - **3**

Que. 58 For the parabolas $y^2 = 4ax$ and $x^2 = 4ay$

1. Vertex are same
2. Foci are same
3. Directrix are same
4. None of the above

Correct Option - **1**

Que. 59 Find the value of $1 + \frac{1}{1!} + \frac{1}{2!} + \frac{1}{3!} + \frac{1}{4!} + \ldots\ldots$

1. log 2
2. e^2
3. e
4. None of the above

Correct Option - **3**

Que. 60 $\int_1^4 x\sqrt{x}\,dx =$

1. $\frac{63}{5}$
2. $\frac{61}{5}$
3. $\frac{62}{5}$
4. 62

Correct Option - **3**

Que. 61 If A and B are two independent events then

1. $P(A \cap B) = P(A) \cdot P(B)$
2. $P(A \cap B) = P(A) + P(B)$

3. P (A ∩ B) = P(A) - P(B)
4. P (A ∪ B) = P(A) . P(B)

Correct Option **- 1**

Que. 62 The value of the determinant $\begin{vmatrix} 1 & x & y+z \\ 1 & y & z+x \\ 1 & z & x+y \end{vmatrix}$ is:

1. xyx
2. x + y + z
3. 1
4. 0

Correct Option **- 4**

Que. 63 If the sum of n terms of an AP is 300, first terms is 10 and last term is 50 then n is equal to ?

1. 6
2. 8
3. 9
4. 10

Correct Option **- 4**

Que. 64 Find the value of $\sin^{-1}$ (sin x), x∈ [-π/2, π/2]

1. x
2. -x
3. π + x
4. None of the above

Correct Option **- 1**

Que. 65 Find the principal value of $\sin^{-1}\left(\frac{-\sqrt{3}}{2}\right)$.

1. -45°
2. -60°
3. -30°
4. 120°

Correct Option **- 2**

Que. 66 The value of i^{4n+1}, where $i = \sqrt{-1}$, is

1. 1
2. 0
3. -i
4. i

Correct Option **- 4**

Que. 67 $\frac{d(e^{4x^2}+1)}{dx} =$

1. e^{4x^2}

2. $8xe^{4x^2}$
3. $8x^2e^{4x^2}$
4. xe^{4x^2}

Correct Option - **2**

Que. 68 If $A = \begin{bmatrix} 1 & 6 \\ 0 & 7 \end{bmatrix}$, then trace of matrix A is

1. 1
2. 6
3. 7
4. 8

Correct Option - **4**

Que. 69 Find the value of k for which the line through the points (2, 4, 8) and (1, 2, 4) is parallel to the line through the points (3, 6, k) and (1, 2, 1) ?

1. 10
2. 9
3. 8
4. 0

Correct Option - **2**

Que. 70 What is the length of the latus rectum of the curve $x = \frac{y^2}{21}$?

1. 84 units
2. 21 units
3. $\sqrt{21}$ units
4. 21/4 units

Correct Option - **2**