

# XLRI Xavier School of Management

**Question Paper Name :**

XAT 2021 03rd Jan 2021

**Subject Name :**

**Question Number : 1 Read the following statement:**

While start-ups have \_\_\_\_\_ reach, \_\_\_\_\_ they introduce \_\_\_\_\_ products, they open-up \_\_\_\_\_ markets.

**Fill in the blanks meaningfully, in the above statement, from the following options.**

**Options :**

1. Limited, when, innovative, new
2. Limited, since, new, innovative
3. Restricted, while, innovative, new
4. Restricted, when, new, innovative
5. Limited, if, new, innovative

**Question Number : 2 Read the following statements and answer the question that follows.**

1. Behavioral models in finance most often critique the efficient market hypothesis, which states that if investors behave rationally then prices should reflect all available information about the financial asset in consideration.
2. A number of behavioral models, including feedback models where investors bid up the price, have been used to explain this phenomenon.
3. But asset price bubbles and crashes belie this conclusion.
4. Finance is one of the fields where behavioral models have been used extensively, enough for behavioral finance.
5. This idea of "irrational exuberance" is now widely accepted and used in financial analysis, especially while analyzing asset price bubbles.

**Arrange the above five statements in a logical sequence.**

**Options :**

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

**Question Number : 3 Read the following statements and answer the question that follows.**

1. Some countries are, at least, trying to curb emissions.
2. Morocco is building a colossal solar-power plant in the desert.
3. States in the Middle East and North Africa can do little on their own to mitigate climate change.
4. Saudi Arabia is not going to stop exporting oil, but it plans to build a solar plant that will be about 200 times the size of the biggest such facility operating today.
5. Politics often gets in the way of problem solving.

**Arrange the above five statements in a logical sequence.**

**Options :**

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

**Question Number : 4 Which of the following sentences uses a WRONG tag-question?**

**Options :**

1. You like to play, don't you?
2. Nobody has called for you, have they?

3. He has few reasons for saying no to the match, has he?
4. Moreover, he plays well, isn't it?
5. There's little point in doing anything about the match, is there?

**Question Number : 5 Read the following sentences and answer the question that follows.**

1. In my opinion, Tom Jones is a picaresque novel.
2. According to me, Tom Jones is a bildungsroman.
3. The books were distributed between Jessica, Neha and Swati.
4. The books were distributed among Jessica and Neha.
5. Life teaches us important lessons.
6. The life moves forward, teaches backward.

**Which of the above sentences are grammatically CORRECT?**

**Options :**

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

**Question Number : 6 Read the following sentences and answer the question that follows.**

1. We are going to a restaurant but we haven't decided which one.
2. We went to the toilet behind a tree.
3. It was the November after we went to Indonesia.
4. My friend is travelling to UK.
5. She drinks medicine by a litre.
6. Would you rather go out or watch a TV.

**Which of the above sentences have INCORRECT usages of articles?**

**Options :**

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

**Question Number : 7 Read the following passage and answer the question that follows.**

Twitter is not on the masthead of a newspaper. But Twitter has become its ultimate editor. As the ethics and mores of that platform have become those of the paper, the paper itself has increasingly become a kind of performance space. Stories are chosen and told in a way to satisfy the narrowest of audiences, rather than to allow a curious public to read about the world and then draw their own conclusions.

**Based on the passage, the writer's disappointment can be BEST summarised as:**

**Options :**

1. Newspapers cave into the narratives shared on social-media platforms.
2. Newspapers create their own narratives to control the audience.
3. Newspapers get influenced by the followers on social-media platforms.
4. Newspapers are ready to compromise with their ethics.
5. Newspapers fear to speak outside the narrow confines of social media.

**Question Number : 8 Read the following passage and answer the question that follows.**

The painting, which is in poor condition, suggests that a highly advanced artistic culture existed some 44,000 years ago, punctuated by folklore, religious myths and spiritual belief. The scene may be regarded not only as the earliest dated figurative art in the world but also as the oldest evidence for the communication of a narrative in Palaeolithic art.

"This is noteworthy, given that the ability to invent fictional stories may have been the last and most crucial stage in the evolutionary history of human language and the development of modern-like patterns of cognition" researchers said.

**Which of the following can be BEST concluded from the passage?**

**Options :**

1. Palaeolithic people possessed advanced artistic culture, evidenced through paintings.

2. Advanced cognitive abilities of Palaeolithic people is substantiated by the painting.
3. The painting timestamps the beginning of the evolution of modern-like cognitive abilities.
4. Evolution of modern-day languages started with Palaeolithic era, evidenced through the painting.
5. The painting puts chronological context to the evolution of modern-like cognitive abilities.

**Question Number : 9 Read the following passage and answer the question that follows.**

We can think of the history of life on earth as a vast, long-term experiment in pure competition. Every living organism is competing with all other living organisms for resources (nutrients, sunlight, water, territory, etc.). Nature, or the natural world, is a laboratory of unfettered competition. It's a dog-eat-dog, no-holds-barred, day-in and day-out struggle.

There are no governmental regulators to protect the weak or favor the strong. All organisms are given a chance, but not necessarily an equal chance. As the climate and the environment change (and change they do), some organisms are favored over others at times, but these advantages are fleeting. What nature gives, nature can take away.

**Which of the following can be BEST concluded from the passage?**

**Options :**

1. Competition is critical to ensure the survival of the fittest.
2. Without unforgiving competition, the planet will be inundated with the weak.
3. Nature gives a fair opportunity to every organism to survive.
4. Forgiveness is alien to the natural world.
5. Brutal competition is the only constant in the natural world.

**Question Numbers : (10 to 11)**

**Read the following excerpt and answer the two questions that follow.**

Para 1: We plan to right-size our manufacturing operations to align to the new strategy and take advantage of integration opportunities. We expect to focus phone production mainly in Hanoi, with some production to continue in Beijing and Dongguan. We plan to shift other Microsoft manufacturing and repair operations to Manaus and Reynosa respectively, and start a phased exit from Komaron, Hungary.

Para 2: In short, we will focus on driving Lumia volume in the areas where we are already successful today in order to make the market for Windows Phone. With more speed, we will build on our success in the affordable smart phone space with new products offering more differentiation. We'll focus on acquiring new customers in the markets where Microsoft's services and products are most concentrated. And, we will continue building momentum around applications.

Para 3: We plan that this would result in an estimated reduction of 12500 factory direct and professional employees over the next year. These decisions are difficult for the team, and we plan to support departing team members with severance benefits.

**Sub questions**

**Question Number : 10 Which of the following can be BEST described as the core message of the excerpt?**

**Options :**

1. Microsoft is shifting its base of production for Lumia along with the places it is interested in selling them.
2. Microsoft is reducing cost of operations and the number of staff involved in operations.
3. Microsoft is reducing its cost of operations and downsizing staff while staying optimistic about the future.
4. Microsoft is closing poorly performing factories and personnel though it thinks Lumia has a future.
5. Microsoft is reducing its cost of operations, marketing and human resources while staying the course on Lumia.

**Question Number : 11 In conveying the core message, the Para 2:**

**Options :**

1. Digresses from the line of thought
2. Elaborates the core message
3. Reassures a promising future
4. Assuages panic
5. Predicts a rosy picture

**Question Numbers : (12 to 13)**

**Read the following poem and answer the two questions that follow.**

Sit, drink your coffee here; your work can wait awhile.  
 You're twenty-six, and still have some of life ahead.  
 No need for wit; just talk vacuities, and I'll  
 Reciprocate in kind, or laugh at you instead.

The world is too opaque, distressing and profound.  
 This twenty minutes' rendezvous will make my day:  
 To sit here in the sun, with grackles all around,  
 Staring with beady eyes, and you two feet away.

**Sub questions**

**Question Number : 12 Which of the following BEST captures the essence of the poem?**

**Options :**

1. Let's eat, drink and be merry in the lap of nature.
2. Let's be gibberish, not rational about life.
3. Let's create our own meaning in life, no matter what.
4. Let's enjoy a moment of peace in this busy life.
5. Let's celebrate our existence, not our work.

**Question Number : 13**

**What does the poet BEST convey by mentioning grackles in these lines, "...with grackles all around, /Staring with beady eyes, and you two feet away."?**

**Options :**

1. Grackles, like humans, love to bask in the Sun.
2. We should not care about grackles, but us.
3. Grackles love to stare at us; however, they maintain a two-foot distance.
4. Over witty discussions, grackles are the pleasant birds to look at.
5. A small bird like grackle can give us lots of happiness.

**Question Numbers : (14 to 15)**

**Read the following passage and answer the two questions that follow.**

We stand before this great world. *The truth of our life* depends upon our *attitude of mind* towards it - an attitude which is formed by our habit of dealing with it according to the special circumstance of our surroundings and our temperaments. It guides our attempts to establish relations with the universe either by conquest or by union, either through the cultivation of power or through that of sympathy. And thus, in our realization of the truth of existence, we put our emphasis either upon the principle of dualism or upon the principle of unity.

**Sub questions**

**Question Number : 14 Which of the following statements can be BEST inferred from the passage?**

**Options :**

1. War and conquest are a part of *the truth of our life*.
2. Conquest and union are two ways of realising *the truth of our life*.
3. Our habits and surroundings determine *the truth of our life*.
4. Principle of dualism is inferior to the principle of unity.
5. *The truth of our life* co-evolved with our quest for sympathetic supremacy.

**Question Number : 15 According to the passage, our emphasis on dualism or on unity is BEST guided by:**

**Options :**

1. Our attitude of mind, formed by our habits
2. Our deals with the universe, based on special circumstances
3. How powerful or sympathetic our surroundings and temperament are
4. Our desire to achieve versus our focus on contentment
5. How we deal with our surroundings and our temperaments

**Question Numbers : (16 to 17)**

**Read the following passage and answer the two questions that follow.**

And that has to do with the question of uncertainty and doubt. A scientist is never certain. We all know that. We know that all our statements are approximate statements with different degrees of certainty; that when a statement is made, the question is not whether it is true or false but rather how likely it is to be true or false. We must discuss each question within the uncertainties that are allowed. And as evidence grows it increases the probability perhaps that some idea is right or decreases it. But it never makes absolutely certain one way or the other. Now, we have found that this is of paramount importance in order to progress. We absolutely must leave room for doubt or there is no progress and there is no learning. There is no learning without having to pose a question. And a question requires doubt. People search for certainty. But there is no certainty. People are terrified- how can you live and not know? It is not odd at all. You only think you know as a matter of fact. And most of your actions are based on incomplete knowledge and you really don't know what it is all about or what the purpose of the world is or know a great deal of other things. It is possible to live and not know.

**Sub questions****Question Number : 16**

**What does the author BEST mean when he says, “We must discuss each question within the uncertainties that are allowed?”**

**Options :**

1. The question decides the amount of uncertainties that are allowed.
2. There is a finite set of uncertainties for any question.
3. The uncertainties should be relevant to the question.
4. The uncertainties are limited by the nature of the answers sought.
5. We must be prepared to accept errors in the answers we seek.

**Question Number : 17 Which of the following BEST describes the essence of the passage?****Options :**

1. Reasonable discomfort with certainty is the path for progress.
2. Science can never give a conclusive answer to a question.
3. Doubting the established world order is the purpose of science.
4. Progress involves questioning accepted truths.
5. Reasonable scepticism is the characteristic of a scientific mind.

**Question Numbers : (18 to 20)**

**Read the following passage and answer the three questions that follow.**

Considering the multitude of situations in which we humans use numerical information, life without numbers is inconceivable. But what was the benefit of numerical competence for our ancestors, before they became *Homo sapiens*? Why would animals crunch numbers in the first place? It turns out that processing numbers offers a significant benefit for survival, which is why this behavioural trait is present in many animal populations.

Several studies examining animals in their ecological environments suggest that representing number enhances an animal’s ability to exploit food sources, hunt prey, avoid predation, navigate in its habitat, and persist in social interactions. Before numerically competent animals evolved on the planet, single-celled microscopic bacteria — the oldest living organisms on earth — already exploited quantitative information. The way bacteria make a living is through their consumption of nutrients from their environment. Mostly, they grow and divide themselves to multiply. However, in recent years, microbiologists have discovered they also have a social life and are able to sense the presence or absence of other bacteria; in other words, they can sense the number of bacteria. Take, for example, the marine bacterium *Vibrio fischeri*. It has a special property that allows it to produce light through a process called bioluminescence, similar to how fireflies give off light. If these bacteria are in dilute water solutions (where they are alone), they make no light. But when they grow to a certain cell number of bacteria, all of them produce light simultaneously. Therefore, *Vibrio fischeri* can distinguish when they are alone and when they are together.

Somehow they have to communicate cell number, and it turns out they do this using a chemical language. They secrete communication molecules, and the concentration of these molecules in the water increases in proportion to the cell number. And when this molecule hits a certain amount, called a quorum, it tells the other bacteria how many neighbours there are, and all bacteria glow. This behaviour is called “quorum sensing”: The bacteria vote with signalling molecules, the vote gets counted, and if a certain threshold (the quorum) is reached, every bacterium responds. This behavior is not just an anomaly of *Vibrio fischeri*; all bacteria use this sort of quorum sensing to communicate their cell number in an indirect way via signalling molecules.

**Sub questions****Question Number : 18 Which of the following statements CANNOT be inferred from the passage?****Options :**

1. Ancestors of *Homo sapiens* used numerical competence.
2. Ancestors of *Homo sapiens* hunted in groups.
3. Ancestors of *Homo sapiens* interacted solely using numbers.
4. Ancestors of *Homo sapiens* exploited resources in groups.
5. Ancestors of *Homo sapiens* sensed numbers.

**Question Number : 19 Based on the passage, which of the following statements BEST defines “quorum sensing” in bacteria?****Options :**

1. Bacteria chat only when they are in groups.
2. Bacteria respond when they discern enough numbers around them.
3. Bacteria communicate only in numerical terms with others.
4. Bacteria do not communicate beyond certain numbers.
5. Bacteria multiply only till they reach their required numbers.

**Question Number : 20 Which of the following statements is NOT based on the premises of the passage?****Options :**

1. No one can whistle a symphony; it takes a whole orchestra to play it.
2. To de-escalate a border tension, countries carry out mirror deployment.
3. Teams fear a red card as it would present an advantage for the opponents.
4. Politicians rally with numbers to woo their undecided voters.
5. People protest in large numbers because it helps them get their voices heard.

**Question Numbers : (21 to 23)**

**Read the following passage and answer the three questions that follow.**

Multitasking has been found to increase the production of the stress hormone cortisol as well as the fight-or-flight hormone adrenaline, which can overstimulate your brain and cause mental fog or scrambled thinking. Multitasking creates a dopamine addiction feedback loop, effectively rewarding the brain for losing focus and for constantly searching for external stimulation. To make matters worse, the prefrontal cortex has a novelty bias, meaning that its attention can be easily hijacked by something new—the proverbial shiny objects we use to entice infants, puppies, and kittens. The irony here for those of us who are trying to focus amid competing activities is clear: The very brain region we need to rely on for staying on task is easily distracted. We answer the phone, look up something on the Internet, check our email, send an SMS, and each of these things tweaks the novelty-seeking, reward-seeking centers of the brain, causing a burst of endogenous opioids (no wonder it feels so good!), all to the detriment of our staying on task. It is the ultimate empty-calorie brain candy. Instead of reaping the big rewards that come from sustained, focused effort, we instead reap empty rewards from completing a thousand little sugarcoated tasks.

In the old days, if the phone rang and we were busy, we either didn't answer or we turned the ringer off. When all phones were wired to a wall, there was no expectation of being able to reach us at all times—one might have gone out for a walk or be between places, and so if someone couldn't reach you (or you didn't feel like being reached), that was considered normal. Now more people have cell phones than have toilets. This has created an implicit expectation that you should be able to reach someone when it is convenient for you, regardless of whether it is convenient for them. This expectation is so ingrained that people in meetings routinely answer their cell phones to say, "I'm sorry, I can't talk now, I'm in a meeting." Just a decade or two ago, those same people would have let a landline on their desk go unanswered during a meeting, so different were the expectations for reachability.

**Sub questions**

**Question Number : 21**

**According to the passage, why do people in meetings routinely answer their cell phones to say, "I'm sorry, I can't talk now, I'm in a meeting."?**

**Options :**

1. Because, people don't mind if somebody takes a brief phone call.
2. Because, in meetings, cell phones allow people to multitask.
3. Because, it is convenient for people to send a message.
4. Because, if you carry a cell phone, you have to reply.
5. Because, it conveys that the receiver is a busy person.

**Question Number : 22**

**What does the author BEST intend to convey when he says, "Now more people have cell phones than have toilets?"**

**Options :**

1. The usage of toilets is limited, while cell phones are used all the time.
2. The number of cell phone users has increased over time.
3. Everybody wants to stay connected, using cell phones.
4. Cell phones have become a bigger necessity.
5. The need to be connected is more pronounced now.

**Question Number : 23 Which of the following can be BEST inferred from the passage?**

**Options :**

1. Multitasking takes you all over, single-tasking helps you achieve some goals.
2. Multitasking helps you complete thousands of tasks, single-tasking makes you do one.
3. Multitasking gives you happiness, single-tasking gives you satisfaction.
4. Multitasking helps you move towards different goals, single-tasking helps you achieve the one.
5. Multitasking gives you a feeling of achieving many things, single-tasking enables actually achieving something.

**Question Numbers : (24 to 26)**

**Read the following passage and answer the three questions that follow.**

Most of recorded human history is one big data gap. Starting with the theory of Man the Hunter, the chroniclers of the past have left little space for women's role in the evolution of humanity, whether cultural or biological. Instead, the lives of men have been taken to represent those of humans overall. When it comes to the lives of the other half of humanity, there is often nothing but silence.

And these silences are everywhere. Our entire culture is riddled with them. Films, news, literature, science, city planning, economics. The stories we tell ourselves about our past, present and future. They are all marked—disfigured—by a female-shaped 'absent presence'. This is the gender data gap.

The gender data gap isn't just about silence. These silences, these gaps, have consequences. They impact on women's lives every day. The impact can be

relatively minor. Shivering in offices set to a male temperature norm, for example, or struggling to reach a top shelf set at a male height norm. Irritating, certainly. Unjust, undoubtedly.

But not life-threatening. Not like crashing in a car whose safety measures don't account for women's measurements. Not like having your heart attack go undiagnosed because your symptoms are deemed 'atypical'. For these women, the consequences of living in a world built around male data can be deadly.

One of the most important things to say about the gender data gap is that it is not generally malicious, or even deliberate. Quite the opposite. It is simply the product of a way of thinking that has been around for millennia and is therefore a kind of not thinking. A double not thinking, even: men go without saying, and women don't get said at all. Because when we say human, on the whole, we mean man.

This is not a new observation. Simone de Beauvoir made it most famously when in 1949 she wrote, 'humanity is male and man defines woman not in herself, but as relative to him; she is not regarded as an autonomous being. [...] He is the Subject, he is the Absolute—she is the Other.' What is new is the context in which women continue to be 'the Other'. And that context is a world increasingly reliant on and in thrall to data. Big Data. Which in turn is panned for Big Truths by Big Algorithms, using Big Computers. But when your big data is corrupted by big silences, the truths you get are half-truths, at best. And often, for women, they aren't true at all. As computer scientists themselves say: 'Garbage in, garbage out.'

#### Sub questions

**Question Number : 24 Based on the passage, which of the following statements BEST explains “absent presence”?**

#### Options :

1. By its sheer absence, it is present.
2. The absence is female-shaped, making it present.
3. The absence makes the case for the need for presence.
4. The presence is felt due to the specificity of the absence.
5. Because of the absence, one can recognise its presence.

**Question Number : 25 Based on the passage, which of the following options BEST describes “double not thinking”?**

#### Options :

1. Over millennia, men and women have been conditioned to treat women as unequal.
2. Men's rejection of women as humans and women's acceptance of it is the double not thinking.
3. Men not thinking and women not being allowed to think is due to double not thinking.
4. Men, over millennia, always confused human with being only male.
5. Whenever humans are mentioned, it is men; further, women are not mentioned.

**Question Number : 26 Which of the following statements can be BEST concluded from the passage?**

#### Options :

1. Women have never been treated as distinct identities which causes the gender data gap.
2. The gender data gap is amplified by data-based decision making.
3. Emphasis on data-based decision making, can be devastating to women, given the gender data gap.
4. The need of the hour is to revisit the past, and reduce the gender data gap at the earliest.
5. Over millennia, men ignored women, which resulted in the gender data gap and deadly consequences.

**Question Numbers : (27 to 29)**

**Read the following scenario and answer the three questions that follow.**

Ashraf has been working at a cybersecurity company called NuTech Pvt. Ltd. for seven years. Having missed a promotion in the previous appraisal cycle, Ashraf is anxious about it in the upcoming cycle. Ashraf is aware that the HR head is meeting the top management to discuss promotions sometime soon. (At NuTech, the HR head recommends names for promotions to the top management based on inputs from the functional teams.)

On a Friday afternoon, Ashraf receives an email from Sridevi, the HR head. It reads, “Hi, I need an urgent favour from you; please respond if you are free.” It was the first time that Sridevi ever contacted him. Surprised, Ashraf immediately replies back saying, “Sure! How can I help you, Sridevi? Regards, Ashraf.” In a couple of minutes, he receives a reply: “Ashraf, I am in the middle of an important meeting, but have to urgently send gift vouchers worth ₹50,000 to one of our important clients. If you could, please purchase and send the gift vouchers to the email address given below, at the earliest.” Ashraf, without any delay, sends gift vouchers worth ₹50,000 to the given email address.

#### Sub questions

**Question Number : 27**

Ashraf feels happy after this brief email interaction with Sridevi.

**Which of the following statements, if true, will BEST make Ashraf strongly hopeful about his imminent promotion?**

#### Options :

1. Ashraf has heard from his industry friends that HR heads accept favours for recommending employees' promotions.
2. Ashraf's immediate junior, Shamsheer, who worked closely with Sridevi, was promoted last year.
3. Sridevi is known for her elite social circle and extravagant life style.
4. It is for the first time ever that Sridevi directly approached Ashraf to contact a client.
5. Sridevi chose Ashraf over others for help, while in the midst of a meeting with the top management.

**Question Number : 28**

Ashraf does not hear anything from Sridevi in the next few days. Anxious, he meets up with Sridevi and enquires if the gift vouchers were appreciated by the client. This surprises Sridevi who closely scrutinises Ashraf's emails and discovers that they originated from sridevi@nutich.com, instead of sridevi@nutech.com, her official email ID.

Taken aback, Ashraf requests Sridevi's help in getting compensated by the company for his ₹50,000 loss. Sridevi asks Ashraf to justify his compensation demand. Ashraf gives the following reasons:

1. I erred; however, my financial rectitude is on record.
2. I acted in the greater interest of the company.
3. The spam mail reached my inbox due to the failure of the company's email filter.
4. A NuTech employee, who was robbed of ₹20,000 of company's cash, was not punished.
5. In the past, some of my acquaintances had been similarly duped.

**Which of the abovementioned reasons, in a combination, will BEST help Sridevi take up the issue with the top management?**

**Options :**

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

**Question Number : 29**

Sridevi begins to doubt Ashraf's competencies, given the way he handled the phishing emails. Thus, she convenes a meeting with the senior leadership to discuss Ashraf's role in the company.

In the meeting, she shares the following observations:

1. Ashraf is poor at verbal communication, which is critical at subsequent levels.
2. Ashraf should have been perceptive, even though the company's email filter failed him.
3. Ashraf joined the email filter team one month prior to his receiving the phishing emails.
4. Ashraf rushed to act on Sridevi's request despite his busy schedule.
5. Ashraf appears to be highly anxious to get promoted.

**Which of the above observations, in a combination, if true, shall BEST go against Ashraf's chances of getting promoted?**

**Options :**

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

**Question Numbers : (30 to 32)**

**Read the following scenario and answer the three questions that follow.**

Saradeep was the proprietor of Saradeep & Sons Pvt. Ltd., an auto parts manufacturing company. He had three children--Taapsi, Kesar and Sandeep. His wife passed away when Sandeep, the youngest kid of the family, was only eight years old. Taapsi, being the eldest sibling, was more of a mother to Kesar and Sandeep.

Taapsi and Kesar joined Saradeep's business right after college because Saradeep trusted them immensely. He once told Kesar, "I want key positions to be held by the people I trust."

Saradeep wanted Sandeep also to join his business like Kesar and Taapsi. Saradeep felt that Sandeep had a strong business sense, probably the best among his three children. Hence, Saradeep wanted Sandeep to take his higher education in business studies. However, Sandeep had other aspirations; he wanted to become a lawyer. Of late, he was offered admission to the prestigious National Law School, Bengaluru. As soon as he received the admission offer, he rushed to share this news with his family members.

**Sub questions**

**Question Number : 30**

Sandeep shared the news of the admission offer first with Kesar, who exhibited mixed feelings. He was happy for Sandeep's admission to the National Law School; nevertheless, he was concerned about their father's reaction. Moreover, Saradeep had an anxiety attack a few months back and was working from their family mansion in Shimla. Kesar advised Sandeep to delay sharing his selection news with their father.

**Which of the following, if true, will BEST enable Sandeep share the news with Saradeep without delay?**



**Options :**

1. Saradeep regarded Law as a respectable profession.
2. Saradeep did not talk to Sandeep for weeks, because he did not get the news of Sandeep's bike accident immediately from him.
3. Kesar had always been paranoid about his family ever since the untimely demise of his mother.
4. Even after the anxiety attack, Saradeep walked four kilometres daily.
5. Since childhood, Sandeep, before going to bed, usually shared all happenings of the day with Saradeep.

**Question Number : 31**

Saradeep requested Kesar to decide on the head of a new manufacturing plant. The plant and its culture had to be moulded in the same way as their other plants. Kesar wanted to identify a candidate, acceptable to Saradeep.

**Which of the following candidates is the BEST choice for the position?****Options :**

1. Suhasini, an MBA graduate and Kesar's wife, who had been a homemaker for fifteen years.
2. Surendra, the deputy head of their largest plant, who had been with them for thirty years, and would retire in seven years.
3. Sandeep who had about ten months left to join the National Law School.
4. Taapsi, who headed another plant which was two hours away from the new plant, could be requested to take the additional charge.
5. Dhanush, the most technically qualified employee, who joined the organisation three years back, straight from college.

**Question Number : 32**

Kesar was also concerned about Taapsi's reaction to Sandeep joining the National Law School. She wanted to be a fashion designer; however, Saradeep dissuaded her from doing anything other than production engineering. She was very upset with her father's decision back then; nevertheless, over time, she became a staunch supporter of her father's values and beliefs. Currently, she headed one of the plants, which also happened to be the best run company plant. Kesar felt that she would not take Sandeep's decision well; she might try to prevent Sandeep from pursuing higher studies in Law.

**Which of the following, if true, will BEST assuage Kesar's fear regarding Taapsi?****Options :**

1. Taapsi, in a marked departure from family tradition, was fully supported by her family when she decided to marry her batchmate, soon after college.
2. When Sandeep was eight, he supported Taapsi's desire to pursue fashion designing.
3. Taapsi, in a fashion school convocation speech, said that she still harboured a dream of quitting the family business for becoming a fashion designer.
4. Taapsi gifted Sandeep a sports bike on his 19th birthday even when Saradeep was completely against it.
5. Taapsi mentored an online start-up, dedicated to women's fashion, in her free time.

**Question Numbers : (33 to 35)****Read the following scenario and answer the three questions that follow.**

Rohini is one of the most popular faculty members in the finance department, known for her in-class engagement with students. Every year, she offers an elective *Financial Risk and Derivatives Management* in the fourth term which gets subscribed by about hundred students. This year, owing to Covid-19, she is forced to teach the course online, that too, in the fifth term. The fifth term is notorious for its non-negotiable teaching slots. To enable her teaching, Rohini uses her favourite laptop, Maplebook Lite, sold by Maple.

Rohini converts her family bedroom into a "working room" because of the strong wifi signals. The room is mostly used by Rohini for taking her classes; however, Rinku, her husband, also uses it for running his meetings. Rohini has two children, aged 5 and 8, who use the living room as their playground. During meetings and classes, the working room is shut to save it from unwanted disturbance and noises from the living room.

It is 3:10 p.m. and Rohini's penultimate session of the course is going to end in twenty minutes. As usual, Rinku enters the room with a cup of Darjeeling tea. Just before entering, he asks his kids to stop playing for some time. He quietly places the teacup on Rohini's study table and exits the room, leaving the door ajar. As soon as he leaves, a tennis ball comes thundering inside, crashing into her Maplebook monitor. The monitor breaks and Rohini's class ends abruptly, much before the scheduled time.

**Sub questions****Question Number : 33 What should be BEST held responsible for the accident?****Options :**

1. Covid-19 imprisoning Rohini and her children in a closeted space
2. Rinku Singh leaving the door ajar
3. Rinku Singh not waiting for the class to get over before serving tea
4. The kids not checking the door before resuming play
5. Rohini not locking the door from inside during class hours

**Question Number : 34**

Rohini has her concluding session scheduled the very next day.

**Which of the following is the BEST course of action for Rohini regarding the final session?****Options :**

1. She should request Swarna, her colleague, to take her session the next day.

2. She should take her last session on her mobile phone and request students to tolerate the inferior experience.
3. She should defer the session until she finds a suitable slot.
4. She should inform the students that the course is deemed concluded with 19 sessions.
5. She should cancel the session and ask students to mail video presentations on the topic she intended to teach.

**Question Number : 35**

With the sixth term round the corner, Rohini goes to the Maple service centre only to find that the replacement for her crashed monitor may take several weeks. However, Dhanraj, the service centre head, offers to replace the damaged monitor with a monitor from a used laptop. He assures Rohini that the used monitor is as good as a new one.

**Which of the following options, if true, will give Rohini the BEST reason to accept the offer?**

**Options :**

1. Rohini is a long-time customer of the Maple store which runs the service centre.
2. Dhanraj is a friend of Rohini's colleague Swarna.
3. Dhanraj offers a three-month personal assurance on the used monitor.
4. Rohini has to start her sixth term course in a month.
5. Her husband's meetings will be few and far between in the next few weeks.

**Question Numbers : (36 to 38)**

**Read the following scenario and answer the three questions that follow.**

Churna is a peaceful village, surrounded by thickly forested high hills that isolate it from the rest of the world. Agriculture is the main occupation of the Churna villagers. Moreover, the forests provide seasonal fruits, tubers, medicinal herbs, and other forest produce in abundance. For all material needs not produced locally, the Churna villagers depend on Tendua, a faraway town.

Once a month, the Churna women would arduously trek with the surplus produce to Tendua. In the Tendua market, they convey the virtues of their produce through a beautiful song and dance routine. Reputed for their hard-bargaining skills, they always manage to extract a premium barter from the traders, more than fulfilling all their other material needs.

**Sub questions****Question Number : 36**

Damdu, an ambitious trader of Tendua, wants to have exclusive access to all the surplus produce from Churna.

**Which of the following offers to the Churna village will BEST help Damdu achieve her objective?**

**Options :**

1. Damdu should offer to transport the villagers' monthly material purchases from Tendua to Churna for free.
2. Damdu should offer novel products, unseen by the Churna villagers.
3. Damdu should offer to educate the Churna villagers about cash transactions.
4. Damdu should offer to provide colourful sarees that the women of Churna fancy.
5. Damdu should offer to set up a shop in Churna, which will barter all the material requirements of the village.

**Question Number : 37**

The head woman of Churna grants exclusive access to the surplus produce to Damdu. However, Damdu's euphoria dies down when she finds fewer takers for Churna's produce in Tendua. This trend continues for the next few months.

**Which of the following could be the MOST possible reason for Damdu finding fewer takers for Churna's produce at Tendua?**

**Options :**

1. The traders in the Tendua market miss the aesthetics of the beautiful song and dance by Churna women.
2. Hard bargaining experience offered by Churna's women is missed by the traders of Tendua.
3. Churna's produce is one of the many items in Damdu's inventory.
4. Damdu cannot sing and dance simultaneously.
5. The Churna women offered the authenticity that Damdu could not match.

**Question Number : 38**

A few months after granting exclusive access to Damdu, the village council of Churna meets to discuss the progress. After much debate and heated discussions, the village council decides to terminate the contract with Damdu. The village council feels that if the contract continues, then:

1. Over time, Churna's produce will lose its association with Churna.
2. Churna's people will be ignorant of new developments in the market.
3. Churna's dance and song will lose their identity.
4. Churna's people will lose social interaction with the outer world.
5. Churna's people will lose their hard bargaining skills.

**Which of the above concerns, when arranged in descending order of significance, will BEST support the decision to terminate the contract with Damdu?**

**Options :**

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

**Question Numbers : (39 to 41)**

**Read the following scenario and answer the three questions that follow.**

Amish is the marketing head of an e-commerce firm named FillInCart (FICT). Recently, FICT signed a contract with a top celebrity to endorse their firm. A few months later, the celebrity was signed as the ambassador to promote tourism in a small country, Wadiya, ruled by a dictator. The dictator, in his zeal to bring peace to the region, brutally suppressed an armed uprising in Wadiya. He is currently facing sanctions, imposed by a few countries. When the news of the celebrity's association with Wadiya becomes public, calls for boycott of FICT start trending on social media.

**Sub questions**

**Question Number : 39**

Amish is concerned with the trending boycott calls and its probable impact on FICT's brand image.

**Given the social media backlash, which of the following courses of action will help Amish BEST defend FICT's continued association with the celebrity?**

**Options :**

1. Ignore social media backlash, assuming that in a few days a new issue will start trending.
2. Publicise on social media that the celebrity's endorsement of Wadiya Tourism will help improve the livelihoods of Wadiya's poor.
3. Withdraw all advertisements, involving the celebrity, from all the media platforms till the social media moves to another issue.
4. Publicise on social media that FICT has nothing to do with the celebrity's association with other brands.
5. Declare on social media that FICT chose the celebrity for his philanthropic works.

**Question Number : 40**

FICT's closest competitor, ShopAtUs (SAU), wants to grab this opportunity. They have come up with a slogan, "Never at the cost of human rights!" which has started trending in the social media. Amish is unsure if he should respond to the social media campaign of the competitor.

**Which of the following options, if true, will BEST assure Amish that SAU's slogan is not affecting FICT's business negatively?**

**Options :**

1. Number of visitors to FICT's home page has increased by 15% since the SAU slogan launch.
2. FICT's average monthly sales volume has increased by 5% since the SAU slogan launch, driven by the sales to repeat customers.
3. FICT's average monthly sales revenue has increased by 1% overall since last month.
4. FICT's average monthly sales revenue has decreased by 3% overall when compared with the same month previous year.
5. More people are looking for Cash on Delivery for the high-end products since the SAU slogan launch, which is against company's policies.

**Question Number : 41**

TRACT, a major travel and hospitality conglomerate, operates globally with a significant presence in Wadiya. Ever since the celebrity has signed the contract with Wadiya Tourism, the number of international tourists in Wadiya has increased manyfold. Companies like TRACT have a great hope towards the future of tourism in Wadiya. Consequently, TRACT is looking forward to increase its investments in Wadiya. However, TRACT is concerned about the social media backlash against the celebrity. TRACT fears that the celebrity may terminate his contract with Wadiya Tourism.

**Which of the following data, available in the public domain, will BEST assure TRACT that the celebrity will continue his association with the tourism sector of Wadiya?**

**Options :**

1. Last week, the celebrity announced that any backlash against him is a support for terrorism.
2. Recently, the celebrity pledged 5% of his annual income towards global poverty alleviation.
3. A week back, the celebrity released videos of the interiors of Wadiya where the poor need help.
4. A week back, the celebrity signed on as the goodwill ambassador of the kingdom of Dubiya, where, recently, the king ferociously crushed insurgency.
5. Last fortnight, the celebrity declared in the social media that upliftment of the poor is his biggest goal in the coming decade.

**Question Numbers : (42 to 44)**

**Read the following scenario and answer the three questions that follow.**

The occasion was a hyper publicised switch-on ceremony of solar power facilities on an island, with many villages, in the Bay of Bengal. PK was the brand ambassador of a Multinational Company (MNC) that was banking heavily on this CSR initiative to strengthen its presence in India. For the millions of fans, enamoured by the aging super star's Robinhood like onscreen exploits, the pre-event speech of PK was their first glimpse into his off-screen persona. After an emotional speech that extolled the virtues of electricity as a driver of wellbeing & need for inclusive growth, PK with a flourish of his hand hit the button to remotely switch on the solar power facilities. Tens of media cameras stationed in all the island villages, started beaming live feed across the world. Quickly, the event turned from one of joy to something of shock and horror, as all the thatched households on the island caught fire. A few villagers were seriously injured in the fire. Watching the coverage, PK slapped the MNC representative standing next to him, on live camera, and collapsed on a couch with his head in his hands.

**Sub questions**

**Question Number : 42**

Soon after, the MNC filed a case against PK for criminal assault and tarnishing its brand image.

**Which of the following is the MOST appropriate reason for the MNC to file a case against PK?**

**Options :**

1. It is a message to the MNC's stakeholders that it will not tolerate such inappropriate behaviour.
2. The MNC intends to arrest its dropping sales, post the incident, through affirmative action.
3. The MNC's mission statement includes "employee first, customer second."
4. The highly brand conscious MNC is using PK to divert public attention.
5. The MNC is forced to respond, given the public slapping of its representative.

**Question Number : 43**

Post the slapping incident, there was a strong social media backlash against PK. His PR team suggested the following social media releases that he could use not only to defend himself but also to garner positive reactions.

**Which of the following social media releases will BEST help PK achieve the purpose?**

**Options :**

1. The plight of the islanders deserved an immediate delivery of justice.
2. He reacted as the sight of the villages ablaze was unbearable.
3. He strongly believes in an eye for an eye.
4. His onscreen Robinhood image influences his off-screen behaviour.
5. The MNC deserved more than just a slap for its irresponsible actions.

**Question Number : 44**

A few months passed and the slapping incident still garnered a good number of views on social media. PK's publicist was aware that PK harboured a desire to join politics. She wanted PK to make the most of the publicity around the incident before it faded away from public memory in the next few months.

**Which of the following options will BEST help PK take just advantage of the situation?**

**Options :**

1. He should meet the MNC representative he slapped and apologise to him in a public meeting.
2. He should visit the island and publicly promise to rebuild the island villages, and publicise it in the social media.
3. In his upcoming movie, in the opening scene, he should slap and shame a treacherous corporate official who swindles poor villagers.
4. He should announce that he is entering politics with a slogan "One Tight Slap."
5. He should launch the "Slap the Greedy" campaign, and urge his fans to slap greedy officials.

**Question Numbers : (45 to 47)**

**Read the following scenario and answer the three questions that follow.**

Himaja was among the top ten students of her Business Management batch. She got placed in a reputed strategy consulting firm during campus placements. She was delighted to work under Nirmal, her superior, who was known for grooming many stars in the organisation. Nevertheless, he was also regarded as a hard taskmaster. Though she was a fresh recruit, she longed to be in a client-facing role.

**Sub questions**

**Question Number : 45**

During an informal office gathering, Himaja mustered up courage to ask Nirmal for a client-facing role.

**Which of the following reasons, if true, will BEST justify Nirmal saying "no" to Himaja?**

**Options :**

1. Himaja's teammates are not happy with her communication skills.
2. Himaja needs to improve her presentation skills.
3. Himaja leaves early and client meetings go late into the night.
4. Clients do not appreciate strategic discussions with fresh recruits.
5. Clients do not take young women seriously during discussions.

**Question Number : 46**

Due to her constant pleading, Nirmal assigned Himaja a client-facing role in his project. Nirmal instructed her that he would do all the talking during meetings, and she would diligently listen and take notes. However, in the first meeting, Himaja made a comment which contradicted Nirmal. In the next, she interrupted the client while he was making a point. This offended the client, resulting in Nirmal apologising to the client to save the project.

**Which of the following is the MOST appropriate action that Nirmal should take against Himaja's behaviour?**

**Options :**

1. Recommend Himaja for a five-day listening-skills workshop.
2. Caution Himaja that she would lose client-facing roles if she does not appreciate the rationale behind his instructions.

3. Have a chat with Himaja later in the evening, explain the delicate situation she had put him in during the meetings, and request her not to repeat it.
4. Ask Himaja's project teammates to have a chat with her on how to behave in client meetings.
5. Await the half-yearly performance review, due in two months, and submit a strong report against Himaja.

**Question Number : 47**

Another month passed, and Himaja was working under Shreya in a different team. Shreya was impressed by Himaja's enthusiasm and sincerity. She asked Himaja to accompany her to a meeting with a new client. During the meeting, Himaja made a statement that offended the client. Shreya tried to diffuse the situation by asking Himaja to apologise. Though Himaja apologised, she defended her statement.

This infuriated the client further, who categorically told that the statement of Himaja was against his organisation's core values. He specifically told Shreya that unless concrete steps were taken against Himaja, he would not get into any business with the firm.

**Which of the following is the MOST appropriate action that Shreya should take in the interest of all parties?**

**Options :**

1. Should defend Himaja, knowing fully that most probably Shreya will lose the client.
2. Should assure the client that Himaja will be transferred, but send Himaja for a two-week vacation to rejuvenate instead.
3. Should castigate Himaja using strong words in front of the client, and later in the evening, share how much Shreya loved Himaja's comment.
4. Should advise Himaja to look for a role outside the consulting industry since her competencies are not appreciated by clients.
5. Should move Himaja to a non-client facing role in the current project, and explore client facing roles in other projects.

**Question Number : 48**

If  $\log_4 m + \log_4 n = \log_2(m+n)$ , where  $m$  and  $n$  are positive real numbers, then which of the following must be true?

**Options :**

1. No values of  $m$  and  $n$  can satisfy the given equation
2.  $m = n$
3.  $\frac{1}{m} + \frac{1}{n} = 1$
4.  $\frac{1}{m} + \frac{1}{n} = 2$
5.  $m^2 + n^2 = 1$

**Question Number : 49**

Mohan has some money (₹M) that he divides in the ratio of 1:2. He then deposits the smaller amount in a savings scheme that offers a certain rate of interest, and the larger amount in another savings scheme that offers half of that rate of interest. Both interests compound yearly. At the end of two years, the total interest earned from the two savings schemes is ₹830. It is known that one of the interest rates is 10% and that Mohan deposited more than ₹1000 in each saving scheme at the start. **What is the value of M?**

**Options :**

1. 6000
2. 4500
3. 7500
4. 12000
5. To solve this, the other interest rate must also be given.

**Question Number : 50**

One third of the buses from City A to City B stop at City C, while the rest go non-stop to City B. One third of the passengers, in the buses stopping at City C, continue to City B, while the rest alight at City C. All the buses have equal capacity and always start full from City A. **What proportion of the passengers going to City B from City A travel by a bus stopping at City C?**

**Options :**

1. 1/7
2. 1/9
3. 1/3
4. 4/9
5. 7/9

**Question Number : 51**

A small store has five units of a new phone model in stock: two white, two black, and one red. Three customers arrive at the shop to buy a unit each. Each one has a pre-determined choice of the colour and will not buy a unit of any other colour. All the three customers are equally likely to have chosen any of the three colours. **What is the probability that the store will be able to satisfy all the three customers?**

**Options :**

1.  $\frac{2}{3}$
2.  $\frac{1}{3}$
3.  $\frac{4}{5}$
4.  $\frac{7}{9}$
5.  $\frac{8}{9}$

**Question Number : 52**

At any point of time, let  $x$  be the smaller of the two angles made by the hour hand with the minute hand on an analogue clock (in degrees). During the time interval from 2:30 p.m. to 3:00 p.m., **what is the minimum possible value of  $x$ ?**

**Options :**

1. 90
2. 0
3. 45
4. 75
5. 105

**Question Number : 53**

Mr. Jose buys some eggs. After bringing the eggs home, he finds two to be rotten and throws them away. Of the remaining eggs, he puts five-ninth in his fridge, and brings the rest to his mother's house. She cooks two eggs and puts the rest in her fridge. If her fridge cannot hold more than five eggs, **what is the maximum possible number of eggs bought by Mr. Jose?**

**Options :**

1. 11
2. 9
3. 17
4. 20
5. 29

**Question Number : 54**

Rahul has just made a  $3 \times 3$  magic square, in which, the sum of the cells along any row, column or diagonal, is the same number  $N$ . The entries in the cells are given as expressions in  $x$ ,  $y$  and  $z$ . Find  $N$ .

$3x + 4y$	$2x$	$2x + y + z$
$2x^2$	$4y$	$y^2 + z$
$y + z$	$3x + 2z$	$z - 1$

**Options :**

1. 36
2. 12
3. 21
4. 24
5. 40

**Question Number : 55**

Zahir and Raman are at the entrance of a dark cave. To enter this cave, they need to open a number lock. Raman sees a note on a rock: "... chest of pure diamonds kept for the smart one ... number has six digits ... second last digit is 2, third last is 4 ... divisible by all prime numbers less than 15 ...". Excited, Zahir and Raman seek your help: **which of these can be the first digit of the six-digit number that will help them open the lock?**

**Options :**

1. 4
2. 1
3. 3
4. 5
5. 9

**Question Number : 56**

Let  $f(x) = \frac{x^2+1}{x^2-1}$  if  $x \neq 1, -1$ , and 1 if  $x = 1, -1$ . Let  $g(x) = \frac{x+1}{x-1}$  if  $x \neq 1$ , and 3 if  $x=1$ .

What is the minimum possible value of  $\frac{f(x)}{g(x)}$ ?

Options :

1.  $1/3$
2.  $-1$
3.  $1/4$
4.  $1/2$
5. 1

Question Number : 57

Find  $z$ , if it is known that:

- a.  $-y^2 + x^2 = 20$ ,
- b.  $y^3 - 2x^2 - 4z \geq -12$  and
- c.  $x, y$  and  $z$  are all positive integers

Options :

1. 1
2. 6
3. 24
4. Any integer greater than 0 and less than 24
5. We need one more equation to find  $z$

Question Number : 58

Four friends, Ashish, Brian, Chaitra, and Dorothy, decide to jog for 30 minutes inside a stadium with a circular running track that is 200 metres long. The friends run at different speeds. Ashish completes a lap exactly every 60 seconds. Likewise, Brian, Chaitra and Dorothy complete a lap exactly every 1 minute 30 seconds, 40 seconds and 1 minute 20 seconds respectively. The friends begin together at the start line exactly at 4 p.m. **What is the total of the numbers of laps the friends would have completed when they next cross the start line together?**

Options :

1. 47
2. 28
3. 36
4. 43
5. They will never be at the start line together again before 4:30 p.m.

Question Number : 59

Two circles P and Q, each of radius 2 cm, pass through each other's centres. They intersect at points A and B. A circle R is drawn with diameter AB. **What is the area of overlap (in square cm) between the circles R and P?**

Options :

1.  $17\pi/6 - \sqrt{3}$
2.  $8\pi/3$
3.  $8\pi/3 - 2\sqrt{3}$
4.  $13\pi/3 - \sqrt{3}$
5.  $17\pi/6 - 2\sqrt{3}$

Question Number : 60

Rajesh, a courier delivery agent, starts at point A and makes a delivery each at points B, C and D, in that order. He travels in a straight line between any two consecutive points. The following are known: (i) AB and CD intersect at a right angle at E, and (ii) BC, CE and ED are respectively 1.3 km, 0.5 km and 2.5 km long. If AD is parallel to BC, then **what is the total distance (in km) that Rajesh covers in travelling from A to D?**

Options :

1. 11.5
2. 5.5
3. 10.2
4. 12
5. 18

**Question Number : 61**

The six faces of a wooden cube of side 6 cm are labelled A, B, C, D, E and F respectively. Three of these faces A, B, and C are each adjacent to the other two, and are painted red. The other three faces are not painted. Then, the wooden cube is neatly cut into 216 little cubes of equal size. **How many of the little cubes have no sides painted?**

**Options :**

1. 125
2. 91
3. 100
4. 108
5. 135

**Question Number : 62**

The topmost point of a perfectly vertical pole is marked A. The pole stands on a flat ground at point D. The points B and C are somewhere between A and D on the pole. From a point E, located on the ground at a certain distance from D, the points A, B and C are at angles of 60, 45 and 30 degrees respectively.

**What is AB : BC : CD?**

**Options :**

1.  $(3 - \sqrt{3}) : (\sqrt{3} - 1) : 1$
2.  $(3 + \sqrt{3}) : (1 + \sqrt{3}) : 1$
3.  $(3 - \sqrt{3}) : 1 : (\sqrt{3} - 1)$
4.  $(\sqrt{3} - 1) : 1 : (3 - \sqrt{3})$
5.  $1 : 1 : 1$

**Question Number : 63**

ABC is a triangle with integer-valued sides  $AB = 1$ ,  $BC > 1$ , and  $CA > 1$ . If D is the mid-point of AB, then, **which of the following options is the closest to the maximum possible value of the angle ACD (in degrees)?**

**Options :**

1. 15
2. 30
3. 45
4. 60
5. 75

**Question Number : 64**

Swati can row a boat on still water at a speed of 5 km/hr. However, on a given river, it takes her 1 hour more to row the boat 12 km upstream than downstream. One day, Swati rows the boat on this river from X to Y, which is N km upstream from X. Then she rows back to X immediately. If she takes at least 2 hours to complete this round trip, **what is the minimum possible value of N?**

**Options :**

1. 4.8
2. 2
3. 2.1
4. 3
5. 3.6

**Question Number : 65**

An encryption system operates as follows:

Step 1. Fix a number  $k$  ( $k \leq 26$ ).

Step 2. For each word, swap the first  $k$  letters from the front with the last  $k$  letters from the end in reverse order. If a word contains less than  $2k$  letters, write the entire word in reverse order.

Step 3. Replace each letter by a letter  $k$  spaces ahead in the alphabet. If you cross Z in the process to move  $k$  steps ahead, start again from A.

Example:  $k = 2$ : zebra --> arbez --> ctdgb.

**If the word "flight" becomes "znmorl" after encryption, then the value of  $k$ :**



**Options :**

1. 6
2. 4
3. 5
4. 7
5. Cannot be determined uniquely from the given information

**Question Number : 66**

On the bank of the pristine Tunga river, a deer and a tiger are joyfully playing with each other. The deer notices that it is 40 steps away from the tiger and starts running towards it. At the same time, the tiger starts running away from the deer. Both run on the same straight line. For every five steps the deer takes, the tiger takes six. However, the deer takes only two steps to cover the distance that the tiger covers in three. **In how many steps can the deer catch the tiger?**

**Options :**

1. 200
2. 120
3. 320
4. 360
5. To solve this, the length of a deer's step must also be given.

**Question Numbers : (67 to 69)**

**Read the following scenario and answer the three questions that follow.**

A company awards incentives to its employees for successful project performances. It rates successful project performance in categories A\*, A, B, and C. Employees, in solo projects rated A\*, A, B, and C, are awarded incentives ₹6 lakh, ₹5 lakh, ₹3 lakh, and ₹1 lakh respectively. When a project has multiple team members, the following scheme is used to award the incentives:

No. of team-members	Team lead gets	Other members get
1	100%	
2	90%	70%
3	80%	50% each
4	70%	40% each
More than 4	Every member gets $(200/n)\%$ , where $n$ = number of team members.	

For example, for a project rated A, with three members, the team lead gets ₹4 lakh, and the other team members get ₹2.5 lakh each. A project always has a single team lead.

Six employees: Altaf, Bose, Chakrabarthy, Dipa, Ernie, and Fatima receive a total of ₹45 lakh in incentives by participating in a total of eight different projects that does not involve any other person. Not all six employees are involved in all eight projects.

The following are additionally known about these eight projects:

1. One project involves all six employees. Four projects involve three each, and the rest, two each.
2. Exactly three projects are rated C, for which a total of ₹4.8 lakh is paid.
3. Only one project is rated A\*.

**Sub questions**

**Question Number : 67 What BEST is known about the team compositions for the projects rated C?**

**Options :**

1. All are two-member teams.
2. All are either two-member or three-member teams.
3. All are three-member teams.
4. One is the six-member team, the rest are two-member teams.
5. The three teams have two, three and six members respectively.

**Question Number : 68 What BEST is known about the team composition for the project rated A\*?**

**Options :**

1. A three-member team
2. The six-member team
3. A two-member team
4. Either a two-member team or a three-member team

5. Either a three-member team or the six-member team

**Question Number : 69 Total amount of money paid for projects rated A (in lakhs of Rupees) is:**

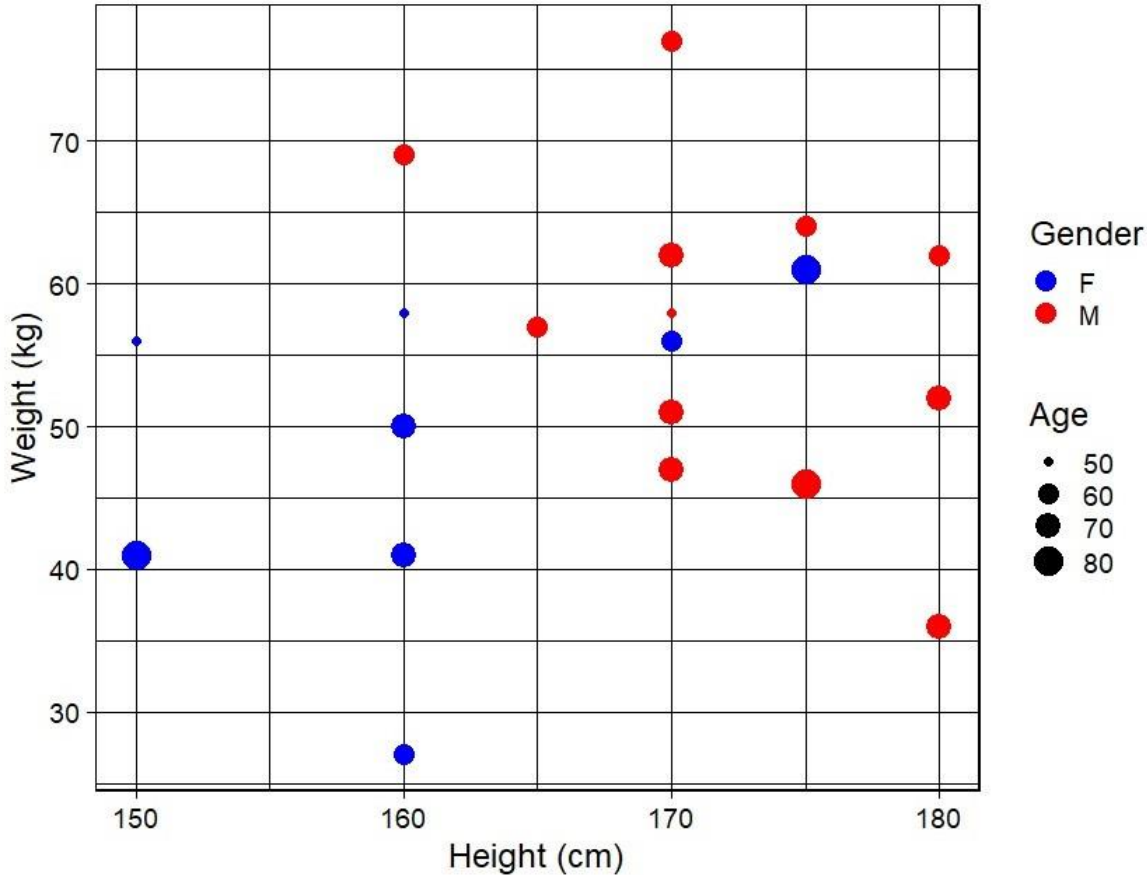
**Options :**

1. 18
2. 15
3. 16
4. 17
5. 19

**Question Numbers : (70 to 72)**

**Read the following scenario and answer the three questions that follow.**

The following plot describes the height (in cm), weight (in kg), age (in years) and gender (F for female, M for male) of 20 patients visiting a hospital.



A person's body mass index (BMI) is calculated as weight (in kg) divided by squared height (measured in square metres). For example, a person weighing 100 kg and of height 100 cm (1m) will have a BMI of 100. A person with BMI less than or equal to 18.5 is considered as underweight, above 18.5 but less than or equal to 25 as normal weight, above 25 but less than or equal to 30 as overweight, and above 30 as obese.

**Sub questions**

**Question Number : 70 The average age of the female patients who weigh 50 kg or above is approximately**

**Options :**

1. 62
2. 65
3. 68
4. 70
5. Cannot be determined from the given data

**Question Number : 71 The highest BMI among all patients is approximately**

**Options :**

1. 27
2. 20
3. 23
4. 30
5. 33

**Question Number : 72 The BMI of the oldest person considered as normal weight is approximately**

**Options :**

1. 20
2. 19
3. 22
4. 24
5. 25

**Question Numbers : (73 to 75)**

**Read the following scenario and answer the three questions that follow.**

A quick survey at the end of a purchase at buyagain.com asks the following three questions to each shopper:

1. Are you shopping at the website for the first time? (YES or NO)
2. Specify your gender: (MALE or FEMALE)
3. How satisfied are you? (HAPPY, NEUTRAL or UNHAPPY)

240 shoppers answer the survey, among whom 65 are first time shoppers. Furthermore:

- i. The ratio of the numbers of male to female shoppers is 1 : 2 while the ratio of the numbers of unhappy, happy and neutral shoppers is 3 : 4 : 5
- ii. The ratio of the numbers of happy first-time male shoppers, happy returning male shoppers, unhappy female shoppers, neutral male shoppers, neutral female shoppers and happy female shoppers is 1 : 1 : 4 : 4 : 6 : 6
- iii. Among the first-time shoppers, the ratio of the numbers of happy male, neutral male, unhappy female and the remaining female shoppers is 1 : 1 : 1 : 2, while the number of happy first-time female shoppers is equal to the number of unhappy first-time male shoppers

**Sub questions**

**Question Number : 73 What is the number of happy male shoppers?**

**Options :**

1. 20
2. 5
3. 10
4. 15
5. 40

**Question Number : 74 Which among the following is the lowest?**

**Options :**

1. Number of neutral first-time female shoppers
2. Number of happy returning male shoppers
3. Number of neutral first-time male shoppers
4. Number of unhappy first-time male shoppers
5. Number of unhappy first-time female shoppers

**Question Number : 75 Which among the following cannot be determined uniquely?**

**Options :**

1. All the numbers can be determined uniquely
2. The number of returning male shoppers
3. The number of returning unhappy female shoppers
4. The number of first-time happy male shoppers
5. The number of first-time neutral male shoppers

**Is this Group for Examiner? :**

No

**Question Number : 76 Which of the following is not an online learning application?**

**Options :**

1. Udemy
2. Duolingo
3. Coursera
4. Khan Academy
5. Patreon

**Question Number : 77 Tedros Adhanom has been in the news for the last one year for being:**

**Options :**

1. The Director General of the World Health Organization
2. The Director General of the International Labour Organization
3. The 46th President of the United States of America
4. The Time's Person of the Year 2019
5. The winner of the Nobel Peace Prize in 2020

**Question Number : 78**

**Dries Mertens, recently became the highest goal-scorer for the football club Napoli by surpassing the tally of 115 goals across all competitions. Whose goal scoring record did he surpass?**

**Options :**

1. Roberto Baggio
2. Diego Maradona
3. Pele
4. Cristiano Ronaldo
5. Messi

**Question Number : 79 What is the Nagorno-Karabakh conflict?**

**Options :**

1. A territorial conflict primarily between Russia and Ukraine
2. A territorial conflict primarily between Armenia and Azerbaijan
3. A territorial conflict primarily between Turkey and Greece
4. A territorial conflict primarily between Turkey and Iran
5. A territorial conflict primarily between Russia and Uzbekistan

**Question Number : 80 15-year old Gitanjali Rao was recently in the news. Which of the following best describes her?**

**Options :**

1. She is an actress who recently signed for the upcoming Harry Potter movie.
2. She is an environment activist, who won the Time's person of the year in 2019.
3. She is a scientist and an inventor who won the Time's Kid of the Year in 2020.
4. She is the youngest Indian to have awarded the title of Chess Grandmaster in 2020.
5. She is a novelist and the youngest one to have been shortlisted for the Pulitzer prize.

**Question Number : 81 What is Hayabusa2?**

**Options :**

1. It is a Japanese adaptation of Star Wars.
2. It is the name given to the new mutated form of Coronavirus.
3. It is a cartoon series to take on the popular Naruto series.
4. It is an asteroid-sample-return mission by JAXA.
5. It is the name of a new smartphone based on Linux.

**Question Number : 82**

**Arecibo telescope, known for its stellar contributions in the field of astronomy, collapsed recently. Where was it located?**

**Options :**

1. Bahamas

2. Papua New Guinea
3. Jamaica
4. Puerto Rico
5. Guam

**Question Number : 83 Which of the following is a Danish dependency?**

**Options :**

1. Gibraltar
2. Greenland
3. Andorra
4. Monaco
5. San Marino

**Question Number : 84 Which of the following mountain ranges houses the famous pilgrimage Amarkantak?**

**Options :**

1. Aravali
2. Dundwa
3. Satpura
4. Balaghat
5. Kudremukh

**Question Number : 85**

The table below lists countries and capital cities

<b>Countries</b>	<b>Capital Cities</b>
P. Jamaica	1. Port of Spain
Q. Cuba	2. Havana
R. Guyana	3. Kingston
S. Trinidad and Tobago	4. Georgetown

**Which of the following options has the correct match of the countries with their respective capital cities?**

**Options :**

1. P-1, Q-2, R-3, S-4
2. P-3, Q-2, R-4, S-1
3. P-3, Q-2, R-1, S-4
4. P-4, Q-2, R-1, S-3
5. P-4, Q-2, R-3, S-1

**Question Number : 86 Which of the following is not an OECD (Organization for Economic Cooperation and Development) member? Options :**

1. Japan
2. Taiwan
3. Chile
4. Israel
5. Turkey

**Question Number : 87 Who was recently appointed as the CEO of Cafe Coffee Day?**

**Options :**

1. V. G. Siddhartha
2. Malavika Hegde
3. Venu Madhav Krishna
4. Gopal Gouda
5. Kamini Utappa

**Question Number : 88**

**Which Wildlife Sanctuary/National Park is identified and prepared to translocate Asiatic Lions from Gir National Park, Gujarat?**

**Options :**

1. Satpura National Park
2. Pench National Park
3. Kheoni Wildlife Sanctuary
4. Kuno National Park
5. Achanakmar Wildlife Sanctuary

**Question Number : 89** Who authored the famous book *Economy of Permanence*?

**Options :**

1. Vinayak Narahari "Vinoba" Bhave
2. Murlidhar Devidas "Baba" Amte
3. "Lokamanya" Bal Gangadhar Tilak
4. Joseph Chelladurai Cornelius "JC" Kumarappa
5. "Diwan Bahadur" Rettamalai Srinivasan

**Question Number : 90**

Match the following wild animal species with the national parks/wildlife sanctuaries where they naturally occur in India:

P. Sangai ( <i>Rucervus eldii eldii</i> )	1. Sri Lankamalleswara Wildlife Sanctuary
Q. Tiger ( <i>Panthera tigris tigris</i> )	2. Gir National Park
R. Jerdons Courser ( <i>Rhinoptilus bitorquatus</i> )	3. Karera Wildlife Sanctuary
S. Great Indian Bustard ( <i>Ardeotis nigriceps</i> )	4. Keibul Lamjao National Park
T. Asiatic Lion ( <i>Panthera leo persica</i> )	5. Kanha National Park

**Options :**

1. P-4, Q-5, R-1, S-3, T-2
2. P-5, Q-3, R-4, S-1, T-2
3. P-1, Q-5, R-3, S-4, T-2
4. P-4, Q-5, R-2, S-3, T-1
5. P-3, Q-5, R-2, S-1, T-2

**Question Number : 91**

Which Indian business group built the British Royal Navy ship, HMS Minden, on which the lyrics of the national anthem of the United States of America was supposedly written?

**Options :**

1. Tata
2. Wadia
3. Birla
4. Godrej
5. Bajaj

**Question Number : 92** In India, where did Mahatma Gandhi stage his first major Satyagraha in 1917?

**Options :**

1. Wankaner
2. Bikaner
3. Champaran
4. Dandi
5. Sabarmati

**Question Number : 93** Who was the first Indian to win the Global Teacher Prize?

**Options :**

1. Ranjitsinh Disale

2. Ramnath Desai
3. Chamundeswari Nath
4. Ajay Desai
5. Vijayalaxmi Pandey

**Question Number : 94 Who was the first woman chief minister in Independent India?**

**Options :**

1. Nandini Satpathy
2. Shashikala Kakodkar
3. Sucheta Kripalani
4. Sarojini Naidu
5. Anwara Taimur

**Question Number : 95 From which organisation was Timnit Gebru terminated recently?**

**Options :**

1. Google
2. Apple
3. Microsoft
4. Facebook
5. Samsung

**Question Number : 96**

**Vijay Prashad's discussion event at the online Tata Literature Live!,2020, was cancelled. Who was to feature in the discussion with Vijay Prashad?**

**Options :**

1. Noam Chomsky
2. Ramchandra Guha
3. Arnab Goswami
4. Khaled Hosseini
5. Douglas Stuart

**Question Number : 97 Which is the first GI tagged product in India?**

**Options :**

1. Darjeeling Tea
2. Madhubani Painting
3. Kashmiri Apple
4. Odisha Rasagulla
5. Mysore Silk

**Question Number : 98 Which of the following will be a debut event in the Summer Olympics of 2024?**

**Options :**

1. Breakdancing
2. Kabaddi
3. Cricket
4. Greco-Roman wrestling
5. Ballet

**Question Number : 99 Who is the chief minister of Jharkhand as of 31st December 2020?**

**Options :**

1. Hemant Soren
2. Shibu Soren
3. Raghubar Das
4. Saryu Rai
5. Draupadi Murmu

**Question Number : 100 The first woman to lead a listed Indian Information Technology (IT) company is:**

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**Options :**

1. Roshni Nadar Malhotra
2. Kiran Mazumdar Shaw
3. Arundhati Bhattacharya
4. Chanda Kochhar
5. Gita Gopinath