XAT 2018
Question Paper

No.	Questions
1	**Please read the passage below and answer the questions that follow:**

If history doesn't follow any stable rules, and if we cannot predict its future course, why study it? It often seems that the chief aim of science is to predict the future – meteorologists are expected to forecast whether tomorrow will bring rain or sunshine; economists should know whether devaluing the currency will avert or precipitate an economic crisis; good doctors foresee whether chemotherapy or radiation therapy will be more successful in curing lung cancer. Similarly, historians are asked to examine the actions of our ancestors so that we can repeat their wise decisions and avoid their mistakes. But it never works like that because the present is just too different from the past. It is a waste of time to study Hannibal's tactics in the Second Punic War so as to copy them in the Third World War. What worked well in cavalry battles will not necessarily be of much benefit in cyber warfare. Science is not just about predicting the future, though. Scholars in all fields often seek to broaden our horizons, thereby opening before us new and unknown futures. This is especially true of history. Though historians occasionally try their hand at prophecy (without notable success), the study of history aims above all to make us aware of possibilities we don't normally consider. Historians study the past not in order to repeat it, but in order to be liberated from it. Each and every one of us has been born into a given historical reality, ruled by particular norms and values, and managed by a unique economic and political system. We take this reality for granted, thinking it is natural, inevitable and immutable. We forget that our world was created by an accidental chain of events, and that history shaped not only our technology, politics and society, but also our thoughts, fears and dreams. The cold hand of the past emerges from the grave of our ancestors, grips us by the neck and directs our gaze towards a single future. We have felt that grip from the moment we were born, so we assume that it is a natural and inescapable part of who we are. Therefore we seldom try to shake ourselves free, and envision alternative futures. Studying history aims to loosen the grip of the past. It enables us to turn our head this way and that, and begin to notice possibilities that our ancestors could not imagine, or didn't want us to imagine. By observing the accidental chain of events that led us here, we realise how our very thoughts and dreams took shape – and we can begin to think and dream differently. Studying history will not tell us what to choose, but at least it gives us more options.

Based on the passage, which of the following options would be the **most appropriate** for citizens to learn history?

(A) British names of streets in India should not be changed.

(B) Every street in India should display a plaque that lists all its previous names.

(C) British names of streets in India should be changed to Indian names along with an explanation of their history.

(D) Names of Indian streets should be based on suggestions generated through an opinion poll.

(E) Names of Indian streets should be periodically changed.

2 **Please read the passage below and answer the questions that follow:**

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Which of the following options is the **closest** to the **essence** of the passage?

(A) History, unlike Physics, does not help predict future.

(B) History deals with long time periods.

(C) History documents the past events related to specific people.

(D) There is no strict cause and effect relationship in history.

(E) History has the potential to make us eclectic.

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Read the following sentences:

1. A historian successfully predicted a political crisis based on similar events of the last century.
2. Using the latest technology, doctors could decipher the microbe causing the disease.
3. Students who prepared for an examination by perusing past 10 years' question papers did not do well in the examination.
4. A tribe in Andaman learns to predict epidemic outbreaks by listening to the stories of how their ancestors predicted the past outbreaks.

Which of the statement(s) above, **if true** would **contradict** the view of the author?

(A) 1 and 2 only

(B) 3 and 4 only

(C) 2 and 3 only

(D) 1 and 4 only

(E) 1, 2 and 4 only

4 **Please read the passage below and answer the questions that follow:**

Rene Descartes' assertion that ideas may be held true with certainty if they are "clear and distinct" provides the context for Peirce's title, "How to Make Our Ideas Clear." Peirce argued that an idea may seem clear if it is familiar. Distinctness depends on having good definitions, and while definitions are desirable they do not yield any new knowledge or certainty of the truth of empirical propositions. Peirce argues that thought needs more than a sense of clarity; it also needs a method for making ideas clear. Once we have made an idea clear, then we can begin the task of determining its truth. The method that Peirce offers came to be known as the pragmatic method and the epistemology on which it depends is pragmatism. Peirce rejected Descartes' method of doubt. We cannot doubt something, for the sake of method, that we do not doubt in fact. In a later essay, he would state as his rule "Dismiss make-believes." This refers to Descartes' method of doubting things, in the safety of his study, such things as the existence of the material world, which he did not doubt when he went out on the street. Peirce proposed that a philosophical investigation can begin from only one state of mind, namely, the state of mind in which we find ourselves when we begin. If any of us examines our state of mind, we find two kinds of thoughts: beliefs and doubts. Peirce had presented the interaction of doubt and belief in an earlier essay "The Fixation of Belief".

Beliefs and doubts are distinct. Beliefs consist of states of mind in which we would make a statement; doubts are states in which we would ask a question. We experience a doubt as a sense of uneasiness and hesitation. Doubt serves as an irritant that causes us to appease it by answering a question and thereby fixing a belief and putting the mind to rest on that issue. A common example of a doubt would be arriving in an unfamiliar city and not being sure of the location of our destination address in relation to our present location. We overcome this doubt and fix a belief by getting the directions. Once we achieve a belief, we can take the necessary action to reach our destination. Peirce defines a belief subjectively as something of which we are aware and which appeases the doubt. Objectively, a belief is a rule of action. The whole purpose of thought consists in overcoming a doubt and attaining a belief. Peirce acknowledges that some people like to think about things or argue about them without caring to find a true belief, but he asserts that such dilettantism does not constitute thought. The beliefs that we hold determine how we will act. If we believe, rightly or wrongly, that the building that we are trying to reach sits one block to our north, we will walk in that direction. We have beliefs about matters of fact, near and far. For example, we believe in the real objects in front of us and we believe generally accepted historical statements. We also believe in relations of ideas such as that seven and five equal twelve. In addition to these we have many beliefs about science, politics, economics, religion and so on. Some of our beliefs may be false since we are capable of error. To believe something means to think that it is true.

According to Peirce, for a particular thought, which of the following statements will be correct?

(A) A belief always leads to a doubt.

(B) A doubt always leads to a belief.

(C) A doubt and a belief may co-exist.

(D) A belief and a doubt are not related.

(E) A doubt may lead to a belief.

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"A candidate has applied for XAT". According to Peirce, it indicates that:

(A) The candidate has a belief in the XAT application process.

(B) The candidate has a belief that XAT is a good test of ability.

(C) The candidate is doubtful about her/his performance in XAT.

(D) The candidate believes that s/he will perform well in XAT.

(E) The candidate has a doubt about her/his performance in other MBA entrance examinations.

6 **Please read the passage below and answer the questions that follow:**

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Which of the following words is the **closest** in meaning to "dilettantism"?

(A) Belief

(B) Doubt

(C) Guess

(D) Surety

(E) Unlikelihood

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A person thinks that s/he has to keep awake for twenty hours in a day to score well in an examination, but is awake for only fifteen hours. For the above statement, which of the following options will be right, according to Peirce?

(A) This person believes in a minimum sleep of 10 hours.

(B) This person does not have a true belief.

(C) It is a counter-argument of Pierce theory.

(D) It is only a thought, a pure thought, nothing to do with action.

(E) The person does not have a doubt.

8 **Please read the passage below and answer the questions that follow:**

It is sometimes said that consciousness is a mystery in the sense that we have no idea what it is. This is clearly not true. What could be better known to us than our own feelings and experiences? The mystery of consciousness is not what consciousness is, but why it is.

Modern brain imaging techniques have provided us with a rich body of correlations between physical processes in the brain and the experiences had by the person whose brain it is. We know, for example, that a person undergoing stimulation in her or his ventromedial hypothalamus feels hunger. The problem is that no one knows why these correlations hold. It seems perfectly conceivable that ventromedial hypothalamus stimulation could do its job in the brain without giving rise to any kind of feeling at all. No one has even the beginnings of an explanation of why some physical systems, such as the human brain, have experiences. This is the difficulty David Chalmers famously called ‘the hard problem of consciousness’.

Materialists hope that we will one day be able to explain consciousness in purely physical terms. But this project now has a long history of failure. The problem with materialist approaches to the hard problem is that they always end up avoiding the issue by redefining what we mean by ‘consciousness’. They start off by declaring that they are going to solve the hard problem, to explain experience; but somewhere along the way they start using the word ‘consciousness’ to refer not to experience but to some complex behavioural functioning associated with experience, such as the ability of a person to monitor their internal states or to process information about the environment. Explaining complex behaviours is an important scientific endeavour. But the hard problem of consciousness cannot be solved by changing the subject.

In spite of these difficulties, many scientists and philosophers maintain optimism that materialism will prevail. At every point in this glorious history, it is claimed, philosophers have declared that certain phenomena are too special to be explained by physical science – light, chemistry, life – only to be subsequently proven wrong by the relentless march of scientific progress.

Before Galileo it was generally assumed that matter had sensory qualities: tomatoes were red, paprika was spicy, flowers were sweet-

smelling. How could an equation capture the taste of spicy paprika? And if sensory qualities can't be captured in a mathematical vocabulary, it seemed to follow that a mathematical vocabulary could never capture the complete nature of matter. Galileo's solution was to strip matter of its sensory qualities and put them in the soul (as we might put it, in the mind). The sweet smell isn't really in the flowers, but in the soul (mind) of the person smelling them … Even colours for Galileo aren't on the surfaces of the objects themselves, but in the soul of the person observing them. And if matter in itself has no sensory qualities, then it's possible in principle to describe the material world in the purely quantitative vocabulary of mathematics. This was the birth of mathematical physics.

But of course Galileo didn't deny the existence of the sensory qualities. If Galileo were to time travel to the present day and be told that scientific materialists are having a problem explaining consciousness in purely physical terms, he would no doubt reply, "Of course they do, I created physical science by taking consciousness out of the physical world!"

Which of the following statements captures the **essence** of the passage?

(A) Materialists redefine the hard problem by changing the issues.

(B) The hard problem cannot be solved by materialists.

(C) Materialists can explain the reasons humans see a particular colour.

(D) Materialists and philosophers agree on the concept of consciousness.

(E) The hard problem can best be solved by segregation.

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Which of the following options would **most likely** be an example of the hard problem?

(A) Feeling the heat while holding a glass of hot water

(B) Experiencing joy after doing well in an examination

(C) What makes us tired after walking for 20 kilometres?

(D) Why we prostrate in front of a deity?

(E) Why do humans take birth?

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Which of the following statements can be **inferred** from the passage?

(A) The passage argues that science could uncover all mysteries of the world.

(B) The passage argues that science could uncover all mysteries of the world by giving alternative explanations.

(C) The passage argues that science could never uncover all the mysteries of nature.

(D) The passage argues that science and consciousness are two different domains.

(E) The passage argues that nature is so mysterious that humans are not even aware of the phenomena that can be researched.

11 **Please read the passage below and answer the questions that follow:**

Labor and capital are the opposite poles of capitalist society. This polarity begins in each enterprise and is realized on a national and even international scale as a giant duality of classes which dominates the social structure. And yet this polarity is incorporated in a necessary identity between the two. Whatever its form, whether as money or commodities or means of production, capital is labor: it is labor that has been performed in the past, the objectified product of preceding phases of the cycle of production which becomes capital only through appropriation by the capitalist and its use in the accumulation of more capital. At the same time, as living labor which is purchased by the capitalist to set the production process into motion, labor is capital. That portion of money capital which is set aside for the payment of labor, the portion which in each cycle is converted into living labor power, is the portion of capital which stands for and corresponds to the working population, and upon which the latter subsists. Before it is anything else, therefore, the working class is the animate part of capital, the part which will set in motion the process that yields to the total capital its increment of surplus value. As such, the working class is first of all, raw material for exploitation. This working class lives a social and political existence of its own, outside the direct grip of capital. It protests and submits, rebels or is integrated into bourgeois society, sees itself as a class or loses sight of its own existence, in accordance with the forces that act upon it and the moods, conjunctures, and conflicts of social and political life. But since, in its permanent existence, it is the living part of capital, its occupational structure, modes of work, and distribution through the industries of society are determined by the ongoing processes of the accumulation of capital. It is seized, released, flung into various parts of the social machinery and expelled by others, not in accord with its own will or self-activity, but in accord with the movement of capital.

While labor is capital, it is poles apart from each other because:

(A) Labor does not have a will of its own.

(B) The will of capital overpowers the will of labor.

(C) Capital is labor performed in the past.

(D) Labor exists outside the direct grip of capital.

(E) Labor is the animate part of capital.

12 **Please read the passage below and answer the questions that follow:**

Labor and capital are the opposite poles of capitalist society. This polarity begins in each enterprise and is realized on a national and even international scale as a giant duality of classes which dominates the social structure. And yet this polarity is incorporated in a necessary identity between the two. Whatever its form, whether as money or commodities or means of production, capital is labor: it is labor that has been performed in the past, the objectified product of preceding phases of the cycle of production which becomes capital only through appropriation by the capitalist and its use in the accumulation of more capital. At the same time, as living labor which is purchased by the capitalist to set the production process into motion, labor is capital. That portion of money capital which is set aside for the payment of labor, the portion which in each cycle is converted into living labor power, is the portion of capital which stands for and corresponds to the working population, and upon which the latter subsists. Before it is anything else, therefore, the working class is the animate part of capital, the part which will set in motion the process that yields to the total capital its increment of surplus value. As such, the working class is first of all, raw material for exploitation. This working class lives a social and political existence of its own, outside the direct grip of capital. It protests and submits, rebels or is integrated into bourgeois society, sees itself as a class or loses sight of its own existence, in accordance with the forces that act upon it and the moods, conjunctures, and conflicts of social and political life. But since, in its permanent existence, it is the living part of capital, its occupational structure, modes of work, and distribution through the industries of society are determined by the ongoing processes of the accumulation of capital. It is seized, released, flung into various parts of the social machinery and expelled by others, not in accord with its own will or self-activity, but in accord with the movement of capital.

According to the passage, what does the working class subsists on?

(A) The benevolence of the bourgeois society

(B) The living labor

(C) Capital which is same as labor

(D) The labor that is performed in the past

(E) Living labor purchased by the capitalist

13 **Please read the passage below and answer the questions that follow:**

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labor, the portion which in each cycle is converted into living labor power, is the portion of capital which stands for and corresponds to the working population, and upon which the latter subsists. Before it is anything else, therefore, the working class is the animate part of capital, the part which will set in motion the process that yields to the total capital its increment of surplus value. As such, the working class is first of all, raw material for exploitation. This working class lives a social and political existence of its own, outside the direct grip of capital. It protests and submits, rebels or is integrated into bourgeois society, sees itself as a class or loses sight of its own existence, in accordance with the forces that act upon it and the moods, conjunctures, and conflicts of social and political life. But since, in its permanent existence, it is the living part of capital, its occupational structure, modes of work, and distribution through the industries of society are determined by the ongoing processes of the accumulation of capital. It is seized, released, flung into various parts of the social machinery and expelled by others, not in accord with its own will or self-activity, but in accord with the movement of capital.

Which of the following statements will be true, according to the passage?

(A) Capital exploits the working class.

(B) Working class when converted into capital is exploited by the bourgeois.

(C) Working class is exploited by the conflicts of social and political life.

(D) The pursuit of capital accumulation results in exploitation of the working class.

(E) Working class is the raw material for capital.

14 **Read the Following statements and answer the question that follows:**

1. But its most advanced formulation is called superstring theory, which even predicts the precise number of dimensions: ten.
2. However, the theory has already swept across the major physics research laboratories of the world and has irrevocably altered the scientific landscape of modern physics, generating a staggering number of research papers in the scientific literature (over 5,000 by one count).
3. Scientifically, the hyperspace theory goes by the names of Kaluza-Klein theory and supergravity.
4. The usual three dimensions of space (length, width, and breadth) and one of time are now extended by six more spatial dimensions.
5. We caution that the theory of hyperspace has not yet been experimentally confirmed and would, in fact, be exceedingly difficult to prove in the laboratory.

Rank the above five statements so as to make it a logical sequence:

(A) 3, 1, 4, 5, 2

(B) 3, 4, 1, 5, 2

(C) 5, 1, 4, 3, 2

(D) 3, 1, 4, 2, 5

(E) 2, 5, 3, 1, 4

15 **Read the Following statements and answer the question that follows:**

1. It is less appealing, but morally more urgent, to understand the actions of the perpetrators.
2. It is easy to sanctify policies or identities by the deaths of the victims.
3. The victims were people; a true identification with them would involve grasping their lives rather than grasping at their deaths.
4. The moral danger, after all, is never that one might become a victim but that one might be a perpetrator or a bystander.
5. By definition the victims are dead, and unable to defend themselves from the use that others make of their deaths.

Rank the above five statements so as to make it a logical sequence:

(A) 1, 2, 3, 5, 4

(B) 5, 3, 2, 4, 1

(C) 3, 5, 2, 1, 4

(D) 3, 1, 2, 4, 5

(E) 5, 3, 1, 2, 4

16 **Read the following paragraph and answer the question that follows:**

Arti is planning for higher studies and her future goals include working as a manager of a non-profit organization designed to provide assistance to under-represented populations. Arti researched the mission statements of various colleges and discovered that college X, a small private college with a fee of Rs. 8 lakhs per year, was dedicated to producing compassionate and curious leaders. College Y, a large institute with a fee of Rs. 9 lakh per year, promoted itself as a leading research facility. Based on her research, she decided to apply to college X rather than College Y.

Which of the following options is the most likely explanation of Arti's decision?

(A) A direct relationship exists between a college's cost and the quality of the education it provides.

(B) Students apply to smaller colleges that offer more personalized attention from professors.

(C) A large research university cannot prepare students for a career as a non-profit executive.

(D) Students apply to colleges with mission statements that align with their goals.

(E) The best colleges have the best mission statements. Hence, students select a college with the best mission statement.

17 **Carefully read the following statement:**

The payoff from _____ in education is so _____ and _____ that it is almost _____ as a predictor of economic change over a five to ten year period.

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

(A) Expenditure, small, insignificant, irrelevant

(B) Productivity, small, erratic, useless

(C) Expenditure, fast, significant, powerful

(D) Investment, slow, erratic, useless

(E) Investment, slow, predictable, irrelevant

18 **Carefully read the following paragraphs:**

The Lannisters had _____ gold than the Tyrells until the Lannister army sacked Highgarden and took the Tyrell fortune to pay back the Iron Bank. On the other hand, the Northern army has _____ than 10,000 men and therefore, Jon needs to bend the knee to Daenerys. What happens in the story next is dependent on George R. Martin, the writer of the series. For _____, he has not written anything further and we hope George R. Martin will get around to finishing the book _____. But as it happens, _____, book releases are delayed.

Fill in the blanks meaningfully, in the above paragraph, from the following options.

(A) less, fewer, some time, sometime, sometimes

(B) fewer, less, sometime, some time, sometimes

(C) less, fewer, sometime, some time, sometimes

(D) fewer, less, sometimes, sometime, some time

(E) fewer, less, some time, sometime, sometimes

19 Which of the following sentences contains correct and meaningful usage of the underlined words?

(A) Vikram's approach to the problem was unique from Harpreet's, and he hadn't expected no criticism from her.

(B) Vikram's approach to the problem was different from Harpreet's, but he hadn't expected no criticism from her.

(C) Vikram's approach to the problem was different from Harpreet's, but he had expected no criticism from her.

(D) Vikram's approach to the problem was unique from Harpreet's, further he hadn't expected no criticism from her.

(E) Vikram's approach to the problem was different from Harpreet's, and he had expected no criticism from her.

20 **Read the following poem and answer the questions that follow:**

A spirit that lives in this world and does not wear the shirt of love, such an existence in a deep disgrace.
Be foolish in love, because love is all there is.
There is no way into presence except through love exchange.
If someone asks, But what is love? Answer, dissolving the will.
True freedom comes to those who have escaped the question of freewill and fate.
Love is an emperor. The two worlds play across him. He barely notices their tumbling game.
Love and lover live in eternity. Other desires are substitute for that way of being.
How long do you lay embracing a corpse? Love rather the soul, which cannot be held.
Anything born in spring dies in the fall, but love is not seasonal.
With wine pressed from grapes, expect a hangover.
But this love path has no expectations. You are uneasy riding the body?
Dismount, travel lighter. Wings will be given.
Be clear like mirror holding nothing.
Be clean of pictures and the worry that comes with images.
Gaze into what is not ashamed or afraid of any truth.
Contain all human faces in your own without any judgment of them.

Be pure emptiness. What is inside of that? You ask. Silence is all I can say.
Lovers have some secrets they keep.

How are the words "freewill", "fate" and "will" used in the poem above?

(A) All the three words are opposites of love.

(B) These words are used as a hallmark of an intelligent person.

(C) Freewill and will connote self-determination while fate connotes loss of control.

(D) These are used as something that corpses do not possess.

(E) Freewill and will are synonymous while fate is an antonym to both.

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Be pure emptiness. What is inside of that? You ask. Silence is all I can say.
Lovers have some secrets they keep.

Which of the following is the **closest** interpretation of "lovers have some secrets that they keep"?

(A) The secret refers to profundity of knowledge.

(B) The secret is not to have any secret.

(C) The secret refers to freedom from emptiness.

(D) The secret refers to being a fine judge of human quality.

(E) The secret is about loving someone as much as you love yourself.

22 **Read the following paragraph and answer the question that follows:**

The size of oceanic waves is a function of the velocity of the wind and of fetch, the length of the surface of the water subject to those winds. The average impact of waves against a coastline is a function of the size of the waves and the shape of the sea bottom. The degree of erosion on coastline is a function of the average impact of waves and the geologic composition of the coastline.

According to the above paragraph, which of the following options will be true?

(A) The fetch of wind is related to the shape of the sea bottom.

(B) The size of oceanic waves will not fluctuate far from average.

(C) The size of oceanic wave is correlated with the shape of the sea bottom.

(D) Degree of erosion on coastline is not related with the velocity of wind.

(E) Degree of erosion on coastline is related to shape of the sea-bottom.

23 **Read the following paragraph and answer the question that follows:**

Indian religious and ethical space is different from that of the western countries. The Vedas, the Upanishads, the Bhagavad Gita, the Ramayana, and the Mahabharata etc. enrich Indian religious and social space. Details of the treatment of human values and Dharmas have a long tradition. They are often compared, contrasted and debated by the characters in the Ramayana and the Mahabharata. In the process, it has given birth to a tradition of dharma, which has been transferred from generation to generation. Ethical discourse was not a one-time affair. From time to time, religious leaders from various regions of India nourished and strengthened the Indian ethical arena. Tiruvalluvar (second century B.C.), Kabir from Uttar Pradesh (fifteenth century A.D.), Nanak from Punjab (fifteenth century A.D), Alvars and

Nayanmars of Tamil Nadu (eighth century A.D.), Basaveswara of Karnataka (Twelfth century A.D.), Sri Chaitanya (Sixteenth century) were prominent.

Which of the following assumptions will make the above paragraph **redundant**?

(A) All religious leaders, mentioned in the paragraph, preach the same message and it is transferred from one generation to the next.

(B) Western religious spaces do not have details of treatment of principle of Dharma.

(C) Ramayana and Mahabharata have made it possible for religious leaders to build the tradition.

(D) Western civilizations have been traversed by a different kind of religious leaders.

(E) Western ethical and religious space has a long tradition of treatment of human values and Dharma.

24 **Read the following statement:**

A manager seeks approval for conducting a training programme on 'openness'. He puts forward the following arguments in favour of the program to his CEO.

Which of the following arguments is the **least likely** to have a logical fallacy?

(A) We did a pilot training program with a group of employees. Post the program, one of the participants was open to new ideas.

(B) This program should be good for our organization since it is designed by a leading consultant.

(C) Internal studies conducted across groups and locations showed that 'openness' increases innovation.

(D) We have only two options; we can either train our employees on 'openness' or suffer the consequences.

(E) If you really care about the organization, you should approve this training program.

25 **Read the following paragraph:**

"Music probably does something interesting," explains neuropsychologist Catherine Loveday of the University of Westminster. "It stimulates the brain in a very powerful way, because of our emotional connection with it." Unlike brain-games, playing an instrument is a rich and complex experience. This is because it's integrating information from senses like vision, hearing, and touch, along with fine movements. This can result in long-lasting changes in the brain. This can also be applicable in the business world.

Go through the following statements:

1. Playing a musical instrument is a unique experience involving vision, hearing and touch.
2. Instrumental musicians are far more creative than vocalists.
3. Playing brain games does not integrate various senses and movements as much as playing a musical instrument.
4. Integrating the five senses is critical in the business world.

Which of the above statements can **definitely** be interpreted based on the passage above?

(A) Statement 1 only

(B) Statement 1 and 2

(C) Statement 3 only

(D) Statement 1 and 3

(E) Statement 3 and 4

26 **Carefully read the following statement:**

Though he thought of himself as a/an _____ person, his boss's abusive behaviour made him talk back. However, as he engaged in a/an _____ with his boss, all he got in response was a/an _____, which only filled him with _____

Fill in the blanks meaningfully, in the above statement, from the following options:

(A) nonchalant, remonstration, philippic, ennui

(B) insouciant, philippic, remonstration, ennui

(C) philippic, remonstration, ennui, insouciance

(D) ennui, philippic, insouciance, remonstration

(E) nonchalant, ennui, philippic, remonstration

27 **Answer questions 27-29 on the basis of information given in the following situation.**

Satyender heads a branch of a Micro-Finance company. The company provides small-size loans catering to rural households. As the head of the branch, he supervises three collection officers - Palani, Sayed, and Godwin. Palani was recently transferred by the company from another branch.

Sayed feared Palani's transfer may pull down the performance of the branch, as he felt Palani was transferred due to his poor performance in the previous branch.

Which of the following information will **most likely** assuage Sayed's fear?

(A) In the past 12 years as the head of branch, Satyender has exceeded targets every time.

(B) Palani has been a top performer in the organization; his performance has deteriorated only in the last three years.

(C) The branch's performance has been good for the past 10 years; Sayed has joined the organization 3 years back.

(D) When Sayed joined as a fresher in this branch, others in the branch had feared that he might bring down the performance of the branch.

(E) While calculating the branch's performance, the branch head has the choice to exclude new joinee's performance.

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Three months later, Palani submitted local travel bills to Satyender for reimbursement. Satyender realized that the bill amount was 30% higher than expected.

Which of the following options, **if true**, will enable Satyender take a decision that shall set a precedent, which is **least likely** to be misused in the future?

(A) Palani being new to the area uses autorickshaws which are more expensive than personal motorcycles used by other collection officers.

(B) Unlike his colleagues, Palani's house has very poor public transport connectivity.

(C) Unlike his colleagues, Palani's sales territory has a powerful competitor.

(D) Unlike his colleagues, Palani's customers can meet him only during weekends.

(E) Unlike his colleagues, Palani has to visit customers repeatedly as they require additional persuasion.

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Satyender is allocating territories to his subordinates for the coming financial year. So far, Palani's performance has been poor and this allocation will decide his future in the organization.

Which of the following information will be the **least useful** to Satyender in taking a fair allocation decision?

(A) Sayed's territory has shown consistently good performance in the past three years.

(B) Sayed's territory faces stiff competition from a well-known brand.

(C) A new territory that faces competition from two relatively unknown brands.

(D) Godwin's territory has shown consistent results in the past three years.

(E) Godwin's territory performance has been flat for the past two years.

30 **Answer questions 30-32 on the basis of information given in the following situation.**

Lal & Sons, a family business, comprises three different companies in three different industries. Sudarshan Lal was heading this entire business from the inception. Two years ago, he hired three managers, one for each company and Chhaganlal Jha as Chief Executive Officer (CEO) to look after the entire business. These three managers are reporting to the CEO. However, Sudarshan Lal and his family still own the entire business, though they are not involved in day to day operations.

Two years after the handing over, Sudarshan was concerned that none of the companies, except one, is profitable.

Which of the following information, **if true**, will **most likely reduce** Sudarshan's concerns?

(A) A leading financial institution recently advised its investors to purchase the shares of the two loss making companies with a long term

outlook.

(B) The Corporation's performance was stagnant for three years, before Sudarshan handed it over to professionals.

(C) The best performing division belongs to an industry, which is growing in double digits.

(D) People holding senior positions have been replaced two years ago by fresh and young talent.

(E) The rate at which employees are leaving the best performing division is higher than the industry average.

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Some of the senior employees who left Lal & Sons in recent past have complained to Sudarshan that the long cherished values of the organization such as respect for elders, job security etc. are being compromised.

Which of the following options, **if true**, will indicate to Sudarshan that the employees are misleading him?

(A) The replaced employees have been average performers for many years.

(B) When senior employees were assigned to lead challenging but critical positions in the organization, they resigned.

(C) The senior employees were replaced by people below them and not from outside the organization.

(D) The replaced senior employees had only 4 more years of service and were not compensated for the pre-mature termination.

(E) The number of senior employees voluntarily leaving this organization is lower than the industry average.

32 **Answer questions 30-32 on the basis of information given in the following situation.**

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Chhaganlal Jha, the CEO, was certain that someone in his leadership team was leaking information to Sudarshan Lal, well before Chhaganlal communicated.

Given the following options, how **best** should Chagganlal Jha respond to this situation?

(A) Chhaganlal should request Sudarshan to kindly wait for him to communicate as informal sources may lead to misinformation.

(B) Chhaganlal should complain about this to Sudarshan and threaten to resign.

(C) Chhaganlal should request his team to continue passing information, since it brings down the communication barrier.

(D) Chhaganlal should understand that this is bound to happen and should not bother.

(E) Chhaganlal should threaten his team that one of them will be fired by the weekend if this practice of passing information doesn't stop immediately.

33 **Answer questions 33-35 on the basis of information given in the following situation.**

Rose is the Queen of Kingdom A and Emily is the Queen of Kingdom B; both share a common border. They also share a border with Kingdom C, a much larger kingdom, ruled by King Jonathan who has expansive ambitions. Though individually their armies were no match to his might, together their armies were more powerful than King Jonathan’s army.

Jonathan’s kingdom also bordered Kingdom K on the opposite side, making Kingdom C a buffer state between Kingdoms A, B and K. Kingdom K is ruled by King Summer Sault, who united a group of warring and belligerent tribes under his aegis. Kingdom K and Kingdom C had continuous skirmishes with each other.

Jonathan realized that he has limited arms and ammunition to fight on all the three fronts simultaneously. Therefore, he planned to double the arms and ammunition which will take a few years. When this news reached Emily and Rose they held a secret meeting to discuss the situation.

Which of the following actions, by Emily and Rose, will be the best suited to **delay** Jonathan's plan?

(A) Emily and Rose should send arms and ammunition to Summer Sault for the next few years.

(B) The two queens should meet Jonathan and attempt to sign a peace pact.

(C) Emily and Rose should also double their armies.

(D) Emily and Rose should attack Jonathan immediately.

(E) The two queens should ignore the news.

34 **Answer questions 33-35 on the basis of information given in the following situation.**

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Jonathan aims to invade and annex Kingdom K once and for all.

Which of the following options will **best** enable him to accomplish the ambition?

(A) He should request the cooperation of Queen Rose and Queen Emily.

(B) He should sign a peace pact with Queen Rose and Queen Emily.

(C) He should try and create a rift between the two Queens.

(D) He should secretly invest in doubling his army, by reducing all other expenditure.

(E) He should attack all three kingdoms simultaneously, giving them no time to cooperate.

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Kingdom K is ruled by King Summer Sault, who united a group of warring and belligerent tribes under his aegis. Kingdom K and Kingdom C had continuous skirmishes with each other.

King Summer Sault was growing tired of the warring tribes, who slowed down the overall economic development of Kingdom K.

Which of the following is the **best** option for King Summer Sault to focus on economic development?

(A) Align with Jonathan to eliminate one or two of the tribes and instil fear in others.

(B) Align with the two Queens to eliminate a few tribes and unify the rest.

(C) Design annual economic plans, with each plan named after a different tribe.

(D) Create a rift among the tribes and instigate a civil war.

(E) Request Jonathan to send teachers, doctors and artists to improve economic development of Kingdom K.

36 **Answer questions 36-38 on the basis of information given in the following situation.**

Ava is the CEO of Ratan Brothers, a bicycle manufacturing company. The organization is doing well financially, with a steadily increasing share price. Recently, Ava promoted Bhushan, her nephew, to the position of head of procurement after he completed five years in the organization. After the promotion, he was automatically inducted into the quality council headed by Ava.

Dev and Sons is a supplier to Ratan Brothers. It supplies “ball bearings”, an important part of any bicycle. After Bhushan took over, he switched to a new supplier citing quality deficiencies in Dev and Sons’ product. Dev and Sons responded by publicly declaring that quality was not compromised. Further, it alleged that its competitor bribed Bhushan to get the contract.

Post this public allegation, the share price of Ratan Brothers started falling.

Which of the following is the **best** option for Ava to immediately **stem the falling stock prices**?

(A) Fire Bhushan, blacklist Dev and Sons and inform the press.

(B) Issue a press statement that a committee has been formed to look into the matter.

(C) Issue a press statement that the company's quality standards have increased and that anyone is welcome to scrutinize the relevant documents.

(D) Cancel the remaining order and call for a fresh tender.

(E) Do nothing, as Bhushan, as the head of procurement, has the right to decide on the supplier.

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Under pressure from media and suppliers, Ava constituted a cross-functional committee of senior executives to investigate Dev and Sons' allegation against Bhushan. The committee exonerated Bhushan. However, rumors within the organization began to spread that the decision was influenced by nepotism.

Which of the following should be the **best** response from Ava?

(A) Do nothing, as the committee has exonerated Bhushan.

(B) Force Bhushan to resign temporarily. Make an independent enquiry, if found innocent, reinstate Bhushan.

(C) Communicate to all shareholders that these kinds of practices are very common in organizations.

(D) Sack all those employees who questioned the authority of Ava.

(E) Explain in a town hall meeting, open to all the employees, how the decision to exonerate Bhushan was taken.

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switched to a new supplier citing quality deficiencies in Dev and Sons' product. Dev and Sons responded by publicly declaring that quality was not compromised. Further, it alleged that its competitor bribed Bhushan to get the contract.

A few months after the issue of Dev and Sons, a vigilance committee discovered some financial irregularities attributable to Bhushan in his earlier stint as a senior manager in marketing. The board of directors was concerned about this and demanded a response from the CEO.

Ava contemplated following responses:
1. Offer to resign from the post of CEO, since as the CEO she is ultimately responsible for everything in the organization.
2. Sack Bhushan immediately and make the reason public.
3. Have a town hall meeting with all the employees and deny any financial irregularities in the organization.
4. Communicate to the board that as the CEO, the organization's financial health is her top priority, on which she has delivered stellar performance in the last five years.
5. Inform the board that Bhushan was promoted because his initiatives helped the company immensely.

Which of the following sequence of actions is the **most appropriate** for Ava?

(A) 5,2,1

(B) 5,4,3

(C) 1,2,3

(D) 2,1,4

(E) 3,4,1

39

Answer questions 39-41 on the basis of information given in the following situation.

A courier service has offices at three locations: Jamshedpur, Kharagpur and Howrah. Its employees travel by trains from one location to another for pick-up and delivery. It takes 40 minutes for an employee to travel from any railway station to the nearest office (and another 40 minutes for coming back); the paperwork to deliver the parcel at the respective office takes an additional 10 minutes. Assume employees do not waste any time.

Employees have the option to choose from any of the trains, whose timetable is given in the table below. Assume all trains travel on time and there is no time gap between arrival and departure of a train. Further, assume that the employee boards the train as soon as it arrives at the station.

Train Numbers →	T101	T102	T103	T104	T105
Jamshedpur Station	06:00	07:30	10:15	15:00	17:00
Kharagpur Station	07:30	09:05	12:05	16:50	18:25
Howrah Station	09:05	11:10	14:30	19:00	20:30
Train Numbers →	T201	T202	T203	T204	T205
Howrah Station	06:30	08:30	10:30	14:30	16:00
Kharagpur Station	08:15	10:40	12:15	16:15	17:55
Jamshedpur Station	10:20	12:35	14:00	17:45	20:00

What will be the minimum time required to deliver a parcel at Kharagpur office from Jamshedpur station and come back to Jamshedpur station?

(A) 4 hours 25 minutes

(B) 5 hours 5 minutes

(C) 6 hours 35 minutes

(D) 7 hours 30 minutes

(E) None of the above

40

Answer questions 39-41 on the basis of information given in the following situation.

A courier service has offices at three locations: Jamshedpur, Kharagpur and Howrah. Its employees travel by trains from one location to another for pick-up and delivery. It takes 40 minutes for an employee to travel from any railway station to the nearest office (and another 40 minutes for coming back); the paperwork to deliver the parcel at the respective office takes an additional 10 minutes. Assume employees do not waste any time.

Employees have the option to choose from any of the trains, whose timetable is given in the table below. Assume all trains travel on time and there is no time gap between arrival and departure of a train. Further, assume that the employee boards the train as soon as it arrives at the station.

Train Numbers →	T101	T102	T103	T104	T105
Jamshedpur Station	06:00	07:30	10:15	15:00	17:00
Kharagpur Station	07:30	09:05	12:05	16:50	18:25
Howrah Station	09:05	11:10	14:30	19:00	20:30
Train Numbers →	T201	T202	T203	T204	T205
Howrah Station	06:30	08:30	10:30	14:30	16:00
Kharagpur Station	08:15	10:40	12:15	16:15	17:55
Jamshedpur Station	10:20	12:35	14:00	17:45	20:00

An employee, starting from Howrah station, has to deliver one parcel at Kharagpur office and another parcel at Jamshedpur office. His task starts the moment he boards the train at Howrah station, and gets completed immediately after delivering the second parcel.

Which of the following trains should he board at Howrah station to **minimize** the time required to complete his task?

(A) T201

(B) T202

(C) T204

(D) Both Option A and Option B

(E) Both Option B and Option C

41

Answer questions 39-41 on the basis of information given in the following situation.

A courier service has offices at three locations: Jamshedpur, Kharagpur and Howrah. Its employees travel by trains from one location to another for pick-up and delivery. It takes 40 minutes for an employee to travel from any railway station to the nearest office (and another 40 minutes for coming back); the paperwork to deliver the parcel at the respective office takes an additional 10 minutes. Assume employees do not waste any time.

Employees have the option to choose from any of the trains, whose timetable is given in the table below. Assume all trains travel on time and there is no time gap between arrival and departure of a train. Further, assume that the employee boards the train as soon as it arrives at the station.

Train Numbers →	T101	T102	T103	T104	T105
Jamshedpur Station	06:00	07:30	10:15	15:00	17:00
Kharagpur Station	07:30	09:05	12:05	16:50	18:25
Howrah Station	09:05	11:10	14:30	19:00	20:30
Train Numbers →	T201	T202	T203	T204	T205
Howrah Station	06:30	08:30	10:30	14:30	16:00
Kharagpur Station	08:15	10:40	12:15	16:15	17:55
Jamshedpur Station	10:20	12:35	14:00	17:45	20:00

An employee, starting from Kharagpur station, has to deliver one parcel at Howrah office and another parcel at Jamshedpur office. His task starts the moment he boards the train at Kharagpur station, and gets completed immediately after delivering the second parcel.

Which of the following trains should he board at Kharagpur station to **minimize** the time required to complete the task?

(A) T102

(B) T103

(C) T202

(D) T203

(E) Both Option B and Option D

42 **Answer questions 42-43 on the basis of information given in the following situation.**

Three persons, A, B and C, lived on an island hill. A lived on the top of the island hill, B occupied the middle portion of the hill and C occupied the bottom of the hill. The top of the hill received good rainfall, the main source of water in the hill, though this portion of the hill had few trees. The middle of the hill however was lush with trees offering timber. The bottom of the hill had a good amount of stones and sand. A, B and C assessed their wealth in terms of ownership of timber, water, stones and sand available in the island hill only. During heavy rains, stones and sand from the top and middle portion of the hill rolled over to the bottom. When the rains stopped, both A and B claimed that some stones rolled down from their lands to the land occupied by C. They wanted the stones back. But C argued that rolling down of stones is a natural process.

All three approached a wise man for the settlement of the ownership dispute.

Which of the following is the **best** option available for the wise man?

(A) Award ownership of stones to A.

(B) Permit A to build a dam so that B and C are deprived of water.

(C) Award ownership of stones to C, as stones rolled down naturally.

(D) Award equal rights to all three over all the resources.

(E) Award A, ownership of water and C, ownership of stones.

43 **Answer questions 42-43 on the basis of information given in the following situation.**

Three persons, A, B and C, lived on an island hill. A lived on the top of the island hill, B occupied the middle portion of the hill and C occupied the bottom of the hill. The top of the hill received good rainfall, the main source of water in the hill, though this portion of the hill had few trees. The middle of the hill however was lush with trees offering timber. The bottom of the hill had a good amount of stones and sand. A, B and C assessed their wealth in terms of ownership of timber, water, stones and sand available in the island hill only. During heavy rains, stones and sand from the top and middle portion of the hill rolled over to the bottom. When the rains stopped, both A and B claimed that some stones rolled down from their lands to the land occupied by C. They wanted the stones back. But C argued that rolling down of stones is a natural process.

Six months later, the three realized that the solution offered by the wise man in the previous question wasn't working to the satisfaction of all, because it did not help them find the appropriate value of resources. Therefore, they reverted to status quo ante. After one year, all three of them wanted to construct a house each, on their respective property. Three types of resources-1.Timber, 2.water and 3.stone & sand- were required to build a house. While each had one resource in abundance none of them had all the three in sufficient quantity. They still could not come to an agreement on how to fairly value and use each other's resources to construct the house. They again approached the wise man

for advice.

The wise man studied the situation carefully and proposed the following actions:

1. The governing body of the United Federation of Islands, of which the island hill is a part, should take ownership of all the three properties and construct houses for the three.
2. Each person should own one third of each of the resources.
3. The three persons should arrive at the value of resources by trading the resources among them.

Which of the following is the **most appropriate** in the **best interests** of A, B and C?

(A) 1 only

(B) 2 only

(C) 3 only

(D) 1 and 2 only

(E) All of 1, 2 and 3

44 **Answer questions 44-45 on the basis of information given in the following situation.**

Ramesh, the owner of an auto-component manufacturing company in Sanand, had just returned after attending the funeral of his employee, Pankaj Kumar, who had died of cancer at the age of 35. Pankaj was a hardworking and sincere employee with impeccable performance record. Pankaj was the sole bread earner for his family with negligible savings and was survived by his wife and two school going children. His wife will get around 8 lakh rupees accrued to Pankaj as social security benefit.

A large number of employees wanted the organization to employ Pankaj's wife on compassionate grounds so that she could support her family. Though Ramesh was sympathetic to the demand, he realized that this could set a precedence, where the organization will have to provide jobs for everyone with similar conditions in the future. In fact, only recently, Ramesh had refused a request for a job to the daughter of an employee, who had died a few months before he was to retire.

Ramesh formed a committee to look into this matter and the committee came up with the following suggestions:

1. Create a fund to take care of immediate family expenses.
2. Finance the school and college education of his children.
3. Sponsor the vocational education of his wife and subsequently help her find a job.

4. Purchase insurance for all the family members.
5. Request all employees of the organization to contribute towards the welfare of the family.

Which of the following options, from the above suggestions, will be the **most sustainable** for Pankaj's family?

(A) 1 and 2

(B) 2 and 3

(C) 3 and 4

(D) 4 and 5

(E) 3 and 5

45 **Answer questions 44-45 on the basis of information given in the following situation.**

Ramesh, the owner of an auto-component manufacturing company in Sanand, had just returned after attending the funeral of his employee, Pankaj Kumar, who had died of cancer at the age of 35. Pankaj was a hardworking and sincere employee with impeccable performance record. Pankaj was the sole bread earner for his family with negligible savings and was survived by his wife and two school going children. His wife will get around 8 lakh rupees accrued to Pankaj as social security benefit.

A large number of employees wanted the organization to employ Pankaj’s wife on compassionate grounds so that she could support her family. Though Ramesh was sympathetic to the demand, he realized that this could set a precedence, where the organization will have to provide jobs for everyone with similar conditions in the future. In fact, only recently, Ramesh had refused a request for a job to the daughter of an employee, who had died a few months before he was to retire.

Ramesh, along with senior managers, was in the process of designing a **policy** to deal with such issues in the future.

Which of the following policy statements will be the **least amenable** to **misuse** in the future?

(A) The firm should provide one job to any of direct dependents of the deceased employee.

(B) The firm should provide one job to any dependent, if employee dies during the service.

(C) The firm should provide one job to any dependent, if the family does not have any other support and employee dies during service.

(D) The firm should provide help to the dependent family members in pursuing good education and employment.

(E) The firm shall constitute a committee, with fair representation from all stakeholders, to decide on the course of action based on specifics of the case.

46 **Answer questions 46-47 on the basis of information given in the following situation.**

Madhuri Apte, a busy professional, rents out her studio apartment located in South Mumbai. Since she stays three hours away from the studio apartment, she uses a networked digital lock to monitor the property remotely. Each customer gets a temporary and unique access code for the digital lock that enables them to enter the studio apartment for the duration of stay. The apartment's entrance door can also be opened with physical keys and Madhuri Apte has two such keys in her possession.

Madhuri Apte has employed a cleaner who has a permanent access code to enter the apartment for cleaning every day. She is available only between 15:00 hrs and 17:00 hrs.

Madhuri Apte's apartment caters largely to international customers. A customer typically stays for 3 days, paying an average rent of $125 per day.

While Madhuri Apte's studio apartment gets good feedback on other aspects, many seem unhappy as they found the operation of the digital lock complicated.

Which of the following options is the **best** for Madhuri Apte in this context?

(A) Madhuri should switch to a physical lock.

(B) Madhuri, on request, should send one of the physical keys five days ahead of customer's arrival at an extra charge of $75.

(C) Madhuri should request the cleaner to explain the working of the digital access code to customers for an extra charge.

(D) Madhuri should do nothing as digital locks shall be the norm in the future.

(E) Madhuri should create a video manual on "how to use the digital access code" and e-mail it to the customers before their arrival.

47 **Answer questions 46-47 on the basis of information given in the following situation.**

Madhuri Apte, a busy professional, rents out her studio apartment located in South Mumbai. Since she stays three hours away from the studio apartment, she uses a networked digital lock to monitor the property remotely. Each customer gets a temporary and unique access

code for the digital lock that enables them to enter the studio apartment for the duration of stay. The apartment's entrance door can also be opened with physical keys and Madhuri Apte has two such keys in her possession.

Madhuri Apte has employed a cleaner who has a permanent access code to enter the apartment for cleaning every day. She is available only between 15:00 hrs and 17:00 hrs.

Madhuri Apte's apartment caters largely to international customers. A customer typically stays for 3 days, paying an average rent of $125 per day.

Madhuri's apartment received good feedback from the guests, except with respect to the operation of the digital lock. She decided to leave a spare physical key in the house for her guests. Recently some of the guests had forgotten to leave the key behind during checkout. Making a spare key will cost $500 and will take about 10 days to arrive. She was confused if she should continue leaving the spare key and was looking for a way out.

Which of the following would be the **best** way out for her?

(A) Keep Digital lock as the only option and communicate to customers.

(B) Be present during checkout to ensure the key is returned.

(C) Request the cleaner to be present during checkout.

(D) Send polite reminders to guests before checkout date and on the day of checkout to leave the key behind.

(E) Charge security deposit of $100 which will be forfeited if the keys are not left behind.

48 Find the value of the expression: $10 + 10^3 + 10^6 + 10^9$

(A) 1010101010

(B) 1001000010

(C) 1001000110

(D) 1001001010

(E) 100010001010

49 Abdul, Bimal, Charlie and Dilbar can finish a task in 10, 12, 15 and 18 days respectively. They can either choose to work or remain absent on a particular day. If 50 percent of the total work gets completed after 3 days, then, which of the following options is possible?

(A) Each of them worked for exactly 2 days.

(B) Bimal and Dilbar worked for 1 day each, Charlie worked for 2 days and Abdul worked for all 3 days.

(C) Abdul and Charlie worked for 2 days each, Dilbar worked for 1 day and Bimal worked for all 3 days.

(D) Abdul and Dilbar worked for 2 days each, Charlie worked for 1 day and Bimal worked for all 3 days.

(E) Abdul and Charlie worked for 1 day each, Bimal worked for 2 days and Dilbar worked for all 3 days.

50 If the diagonals of a rhombus of side 15 cm are in the ratio 3:4, find the area of the rhombus.

(A) 54 sq. cm.

(B) 108 sq. cm.

(C) 144 sq. cm.

(D) 200 sq. cm.

(E) None of the above

51 The price of a product is P. A shopkeeper raises its price by X% and then offers a discount of Y% on the raised price. The discounted price again becomes P. If Y is the difference between X and Y, then find X.

(A) 20

(B) 25

(C) 50

(D) 100

(E) None of the above

52 A mixture comprises water and liquids A and B. The volume of water is $1/3^{rd}$ of the total mixture and the volume of liquids A and B are in the ratio 5:3. To remove the water, the mixture is passed through a porous medium which completely absorbs the water and partially absorbs liquid A. Altogether this porous medium absorbs 200 ml of the initial mixture. If the ratio of volume of liquids A and B in the residual concentrated mixture becomes 7:9 then find the volume of water absorbed by the porous medium.

(A) 60 ml

(B) 200/3 ml

(C) 80 ml

(D) 100 ml

(E) 120 ml

53 A coin of radius 3 cm is randomly dropped on a square floor full of square shaped tiles of side 10 cm each. What is the probability that the coin will land completely within a tile? In other words, the coin should not cross the edge of any tile.

(A) 0.91

(B) 0.5

(C) 0.49

(D) 0.36

(E) 0.16

54 It takes 2 liters to paint the surface of a solid sphere. If this solid sphere is sliced into 4 identical pieces, how many liters will be required to paint all the surfaces of these 4 pieces.

(A) 2.2 liters

(B) 2.5 liters

(C) 3.0 liters

(D) 4.0 liters

(E) None of the above

55 Every day a person walks at a constant speed, V_1 for 30 minutes. On a particular day, after walking for 10 minutes at V_1, he rested for 5 minutes. He finished the remaining distance of his regular walk at a constant speed, V_2, in another 30 minutes. On that day, find the ratio of V_2 and his average speed (i.e., total distance covered /total time taken including resting time).

(A) 1:1

(B) 1:2

(C) 2:3

(D) 2:1

(E) None of the above

56 A boat, stationed at the North of a lighthouse, is making an angle of 30° with the top of the lighthouse. Simultaneously, another boat, stationed at the East of the same lighthouse, is making an angle of 45° with the top of the lighthouse. What will be the shortest distance between these two boats? The height of the lighthouse is 300 feet. Assume both the boats are of negligible dimensions.

(A) 300 feet

(B) $600/\sqrt{3}$ feet

(C) $300\sqrt{3}$ feet

(D) 600 feet

(E) None of the above

57 Two different quadratic equations have a common root. Let the three unique roots of the two equations be A, B and C - all of them are positive integers. If (A + B + C) = 41 and the product of the roots of one of the equations is 35, which of the following options is **definitely** correct?

(A) The common root is 29.

(B) The smallest among the roots is 1.

(C) One of the roots is 5.

(D) Product of the roots of the other equation is 5.

(E) All of the above are possible, but none are definitely correct.

58 An antique store has a collection of eight clocks. At a particular moment, the displayed times on seven of the eight clocks were as follows: 1:55 pm, 2:03 pm, 2:11 pm, 2:24 pm, 2:45 pm, 3:19 pm and 4:14 pm. If the displayed times of all eight clocks form a mathematical series, then what was the displayed time on the remaining clock?

(A) 1:53 pm

(B) 1:58 pm

(C) 2:18 pm

(D) 3:08 pm

(E) 5:08 pm

59 The number of boys in a school was 30 more than the number of girls. Subsequently, a few more girls joined the same school. Consequently, the ratio of boys and girls became 3:5. Find the minimum number of girls, who joined subsequently.

(A) 31

(B) 51

(C) 52

(D) 55

(E) Solution not possible

60 A girl travels along a straight line, from point A to B at a constant speed, V_1 meters/sec for T seconds. Next, she travels from point B to C along a straight line, at a constant speed of V_2 meters/sec for another T seconds. BC makes an angle 105° with AB. If CA makes an angle

30° with BC, how much time will she take to travel back from point C to A at a constant speed of V_2 meters/sec, if she travels along a straight line from C to A?

(A) $0.5(\sqrt{3} - 1)T$

(B) T

(C) $0.5(\sqrt{3} + 1)T$

(D) $\sqrt{3}T$

(E) None of the above

61 In the final semester, an engineering college offers three elective courses and one mandatory course. A student has to register for exactly three courses: two electives and the mandatory course. The registration in three of the four courses is: 45, 55 and 70. What will be the number of students in the elective with the lowest registration?

(A) 35

(B) 40

(C) 42

(D) 45

(E) Either B or D

62 X and Y are the digits at the unit's place of the numbers (408X) and (789Y) where $X \neq Y$. However, the digits at the unit's place of the numbers $(408X)^{63}$ and $(789Y)^{85}$ are the same. What will be the possible value(s) of (X + Y)?

(A) 9

(B) 10

(C) 11

(D) 12

(E) None of the above

63 If $2 \leq |x - 1| \times |y + 3| \leq 5$ and both x and y are negative integers, find the number of possible combinations of x and y.

(A) 4

(B) 5

(C) 6

(D) 8

(E) 10

64 David has an interesting habit of spending money. He spends exactly £X on the Xth day of a month. For example, he spends exactly £5 on the 5th of any month. On a few days in a year, David noticed that his cumulative spending during the last 'four consecutive days' can be expressed as 2^N where N is a natural number. What can be the possible value(s) of N?

(A) 5

(B) 6

(C) 7

(D) 8

(E) N can have more than one value

65 A cone of radius 4 cm with a slant height of 12 cm was sliced horizontally, resulting into a smaller cone (upper portion) and a frustum (lower portion). If the ratio of the curved surface area of the upper smaller cone and the lower frustum is 1:2, what will be the slant height of the frustum?

(A) $12 - \sqrt{3}$

(B) $12 - 2\sqrt{3}$

(C) $12 - 3\sqrt{3}$

(D) $12 - 4\sqrt{3}$

(E) None of the above

66 Two circles with radius 2R and $\sqrt{2}$R intersect each other at points A and B. The centers of both the circles are on the same side of AB. O is the center of the bigger circle and $\angle AOB$ is 60°. Find the area of the common region between two circles.

(A) $(\sqrt{3} - \pi - 1)R^2$

(B) $(\sqrt{3} - \pi)R^2$

(C) $(13\pi/6 + 1 - \sqrt{3})R^2$

(D) $(13\pi/6 + \sqrt{3})R^2$

(E) None of the above

67 **Questions 67 & 68 are followed by two statements each.** These statements provide data that may help answer the respective questions. Read the questions and the statements and determine if the data provided by the statements is sufficient or insufficient, on their own or together, to answer the questions. Accordingly, choose the appropriate option given below the questions.

A group of six friends noticed that the sum of their ages is the square of a prime number. What is the average age of the group?

Statement I: All members are between 50 and 85 years of age.
Statement II: The standard deviation of their ages is 4.6.

(A) Statement I alone is sufficient to answer.

(B) Statement II alone is sufficient to answer.

(C) Either of the statement is sufficient to answer.

(D) Both statements are required to answer.

(E) Additional information is required.

68 **Questions 67 & 68 are followed by two statements each.** These statements provide data that may help answer the respective questions. Read the questions and the statements and determine if the data provided by the statements is sufficient or insufficient, on their own or together, to answer the questions. Accordingly, choose the appropriate option given below the questions.

Harry and Sunny have randomly picked 5 cards each from a pack of 10 cards, numbered from 1 to 10. Who has randomly picked the card with number 2 written on it?

Statement I: Sum of the numbers on the cards picked by Harry is 5 more than that of Sunny.
Statement II: One has exactly four even numbered cards while the other has exactly four odd numbered cards.

(A) Statement I alone is sufficient to answer.

(B) Statement II alone is sufficient to answer.

(C) Either of the statement is sufficient to answer.

(D) Both statements are required to answer.

(E) Additional information is required.

69

Six teams are playing in a hockey tournament where each team is playing against every other team **exactly once**. At an intermediate stage, the status is as follows:

Teams	No. of Matches Played	No. of Matches won	No. of Matches Lost	No. of Matches Drawn	Goals scored by the team	Goals conceded by the team
Team A	2	2	0	0	5	1
Team B	2	1	0	1	5	1
Team C	2	1	0	1	2	0
Team D	2	0	0	2	1	1
Team E	2	0	2	0	1	4
Team F	2	0	2	0	0	7

Notes:

- The team that scores more goals than it concedes wins the match, while if both the teams score the same no. of goals, the match is declared drawn.
- In a match played between Team X and Team Y, if team X scores 1 and concedes none, then the score line would read: Team X – Team Y (1-0).

Which of the following matches are yet to be played?

(A) Team A – Team B and Team C – Team D

(B) Team C – Team D and Team E – Team F

(C) Team E – Team F and Team B – Team D

(D) Team C – Team D and Team A – Team E

(E) Team A – Team B and Team E – Team F

70 Six teams are playing in a hockey tournament where each team is playing against every other team **exactly once**. At an intermediate stage, the status is as follows:

Teams	No. of Matches Played	No. of Matches won	No. of Matches Lost	No. of Matches Drawn	Goals scored by the team	Goals conceded by the team
Team A	2	2	0	0	5	1
Team B	2	1	0	1	5	1
Team C	2	1	0	1	2	0
Team D	2	0	0	2	1	1
Team E	2	0	2	0	1	4
Team F	2	0	2	0	0	7

Notes:

- The team that scores more goals than it concedes wins the match, while if both the teams score the same no. of goals, the match is declared drawn.
- In a match played between Team X and Team Y, if team X scores 1 and concedes none, then the score line would read: Team X – Team Y (1-0).

Which of the following score line is a possible outcome in the tournament?

(A) Team A – Team D (1-0)

(B) Team A – Team E (2-1)

(C) Team B – Team D (1-0)

(D) Team C – Team F (2-0)

(E) None of the above

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Teams	No. of Matches Played	No. of Matches won	No. of Matches Lost	No. of Matches Drawn	Goals scored by the team	Goals conceded by the team
Team A	2	2	0	0	5	1
Team B	2	1	0	1	5	1
Team C	2	1	0	1	2	0
Team D	2	0	0	2	1	1
Team E	2	0	2	0	1	4
Team F	2	0	2	0	0	7

Notes:

- The team that scores more goals than it concedes wins the match, while if both the teams score the same no. of goals, the match is declared drawn.
- In a match played between Team X and Team Y, if team X scores 1 and concedes none, then the score line would read: Team X – Team Y (1-0).

Which of the following score line is **not** a possible outcome in the tournament?

(A) Team A – Team F (4-0)

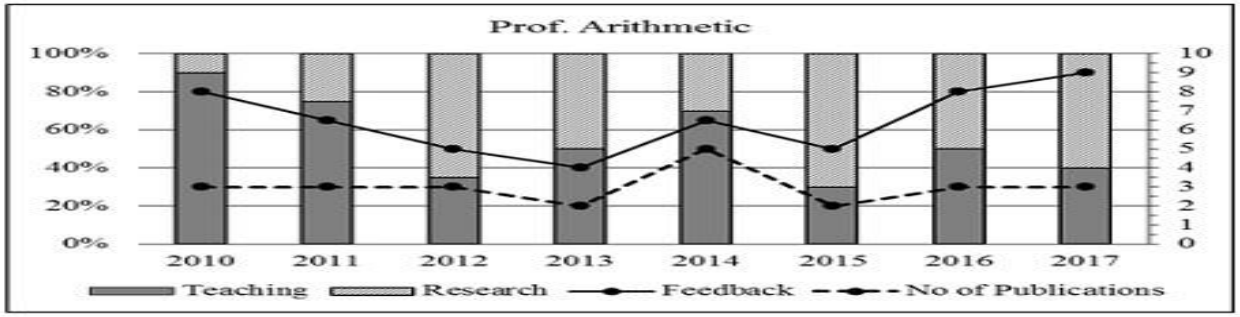
(B) Team B – Team F (4-0)

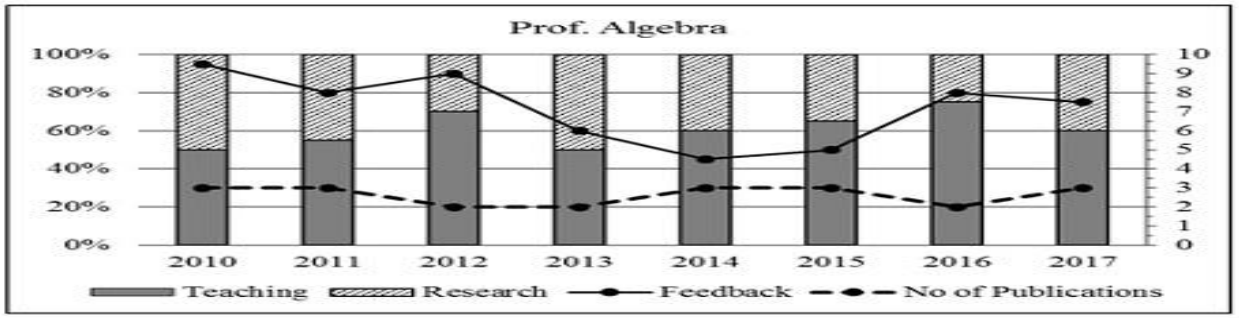
(C) Team C – Team D (0-0)

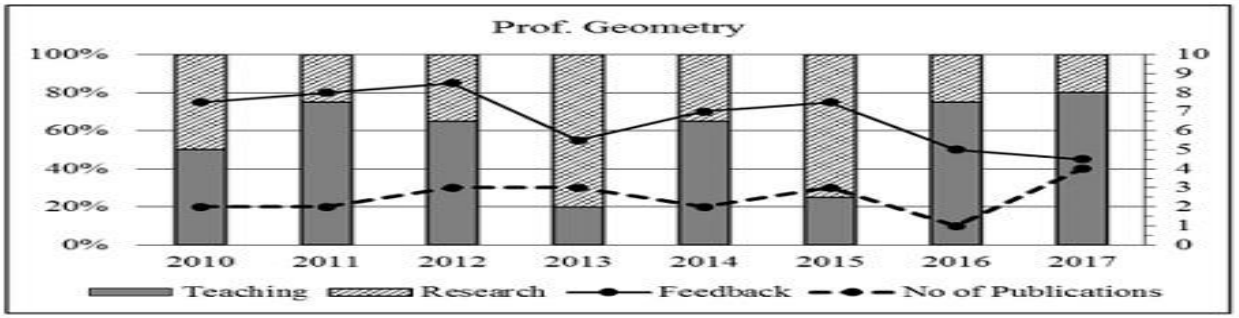
(D) Team C – Team E (2-0)

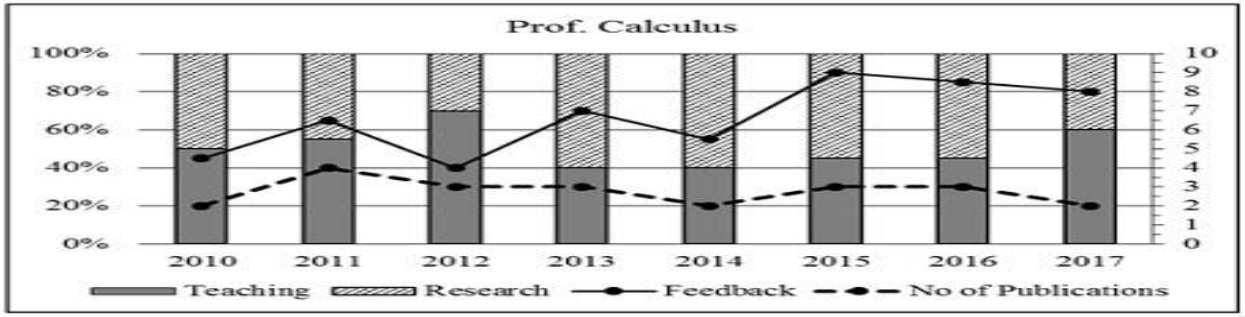
(E) All of the above options are possible

72 The graphs below represent the performance of four professors, across years, measured on four variables: Percentage of time spent on teaching, percentage of time spent on research, feedback (on a scale of 10, right-hand side) and number of publications (right-hand side). Assume that the cumulative time spent per year on research and teaching activities are same for all four professors and each of them taught only one course of 90 classroom hours.









Which of the following, shows the **maximum** year to year percentage growth in feedback?

(A) Professor Artihmetic during 2013-2014

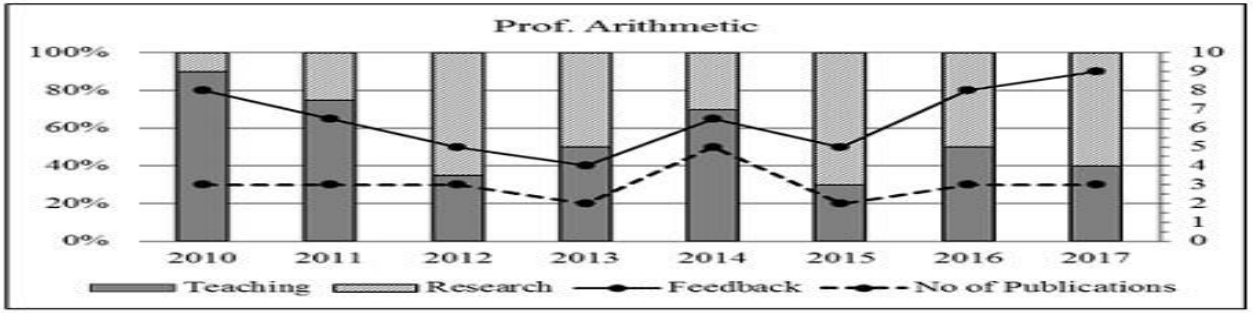
(B) Professor Algebra during 2015-2016

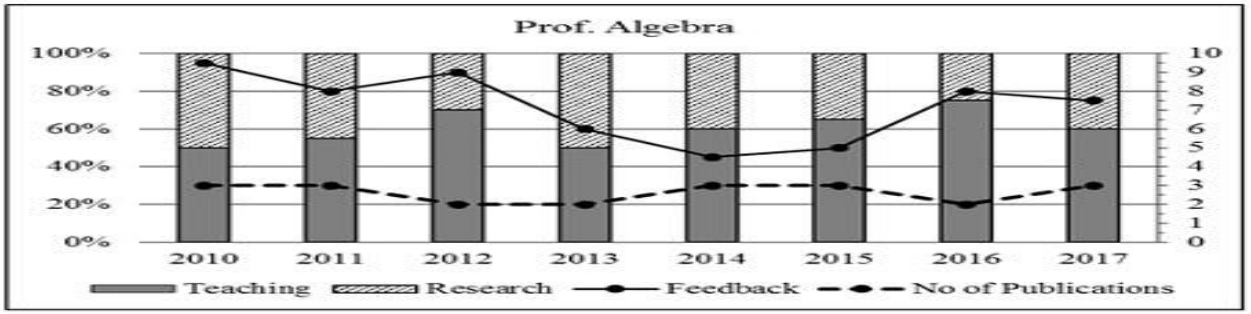
(C) Professor Calculus during 2012-2013

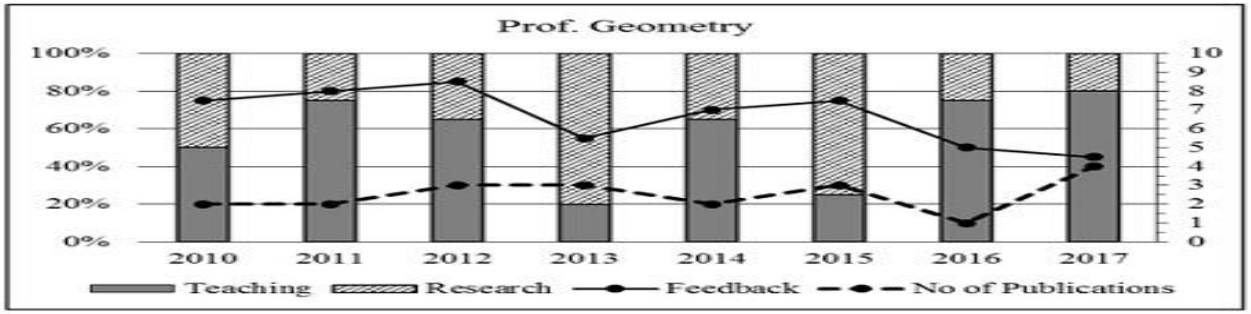
(D) Professor Calculus during 2014-2015

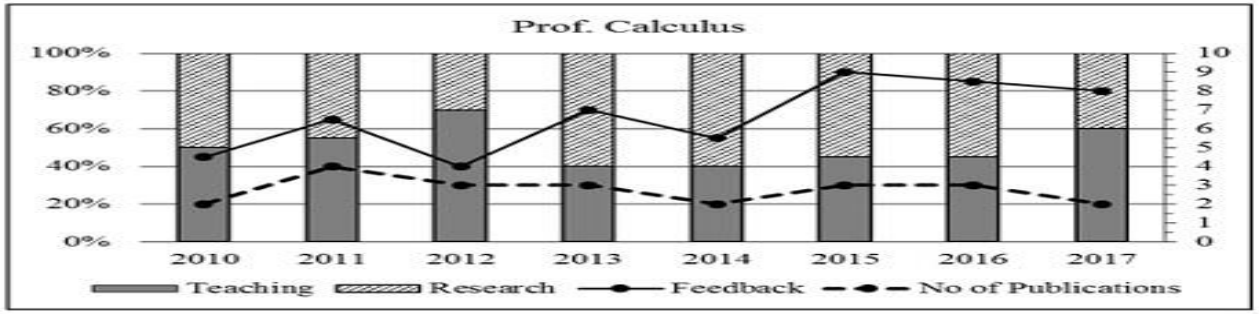
(E) None of the above

73 The graphs below represent the performance of four professors, across years, measured on four variables: Percentage of time spent on teaching, percentage of time spent on research, feedback (on a scale of 10, right-hand side) and number of publications (right-hand side). Assume that the cumulative time spent per year on research and teaching activities are same for all four professors and each of them taught only one course of 90 classroom hours.









Count the number of instances in which "annual decreasing efforts in research" is accompanied with "annual increase in feedback"?

(A) 5

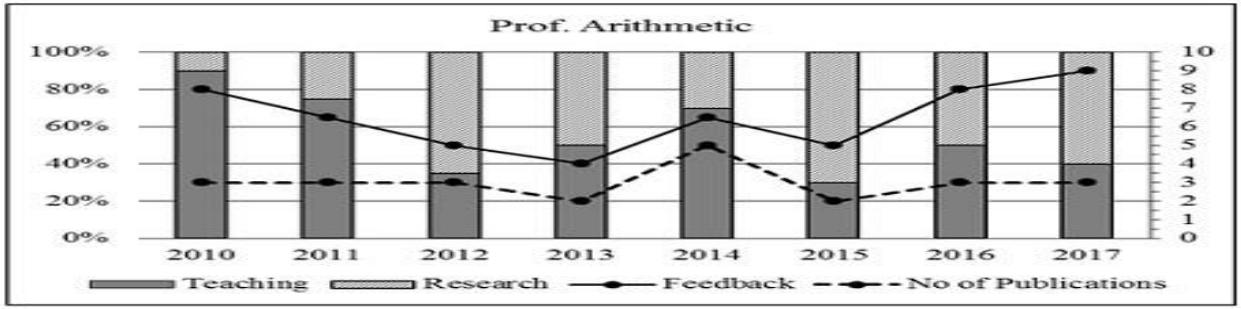
(B) 7

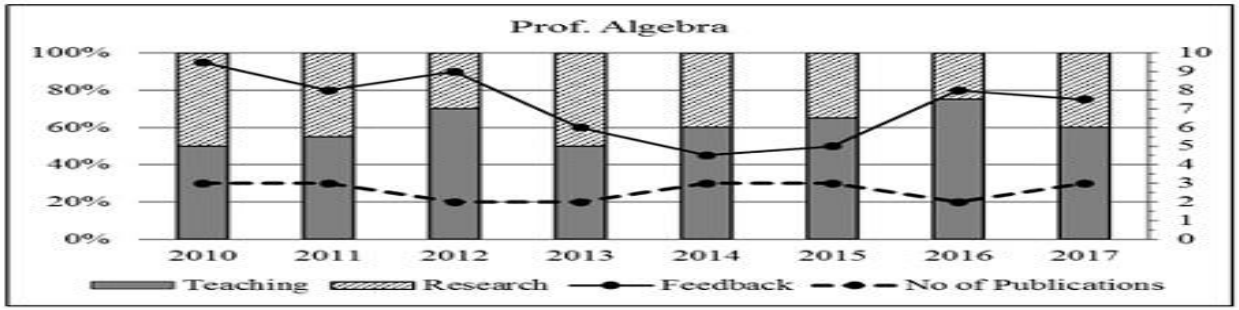
(C) 9

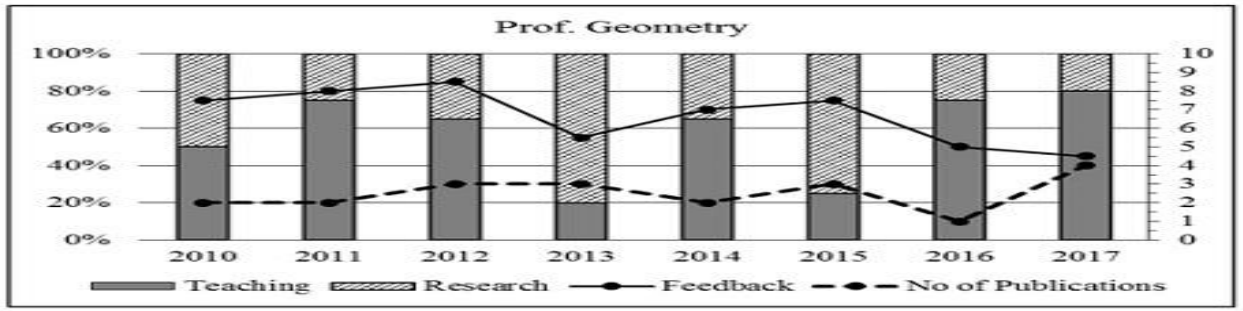
(D) 11

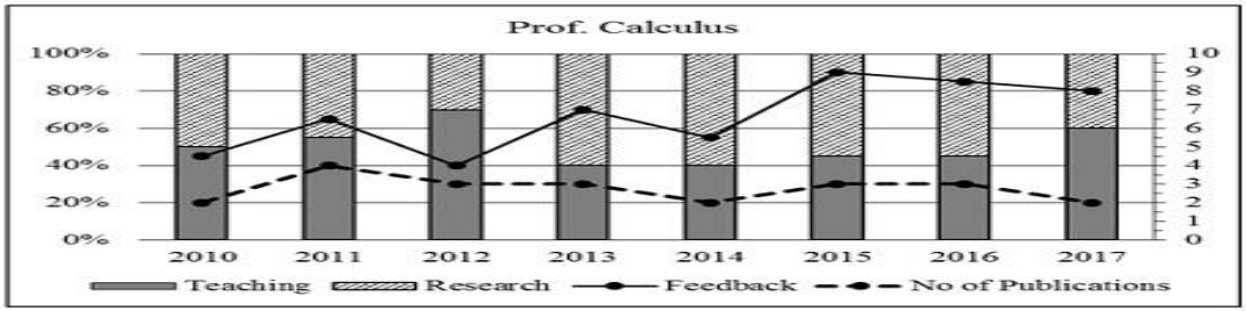
(E) None of the above

74 The graphs below represent the performance of four professors, across years, measured on four variables: Percentage of time spent on teaching, percentage of time spent on research, feedback (on a scale of 10, right-hand side) and number of publications (right-hand side). Assume that the cumulative time spent per year on research and teaching activities are same for all four professors and each of them taught only one course of 90 classroom hours.









Research efficiency is the ratio of cumulative number of publication for a period of 3 years to the cumulative number of hours spent on research activity in those 3 years. Which of the following professors is the **least efficient** researcher for the period 2015 to 2017?

(A) Professor Artihmetic

(B) Professor Algebra

(C) Professor Geometry

(D) Professor Calculus

(E) Cannot be determined as research is expressed in percentage

No.	Questions
75	Which of the following is not a Cryptocurrency? (A) Bitcoin (B) Laxmicoin (C) Etherium (D) Paypal (E) Litecoin
76	Who won the Nobel Prize for Economics in 2017? (A) Richard Thaler (B) Raghuram Rajan (C) Jean Tirole (D) Bengt Holmstrom (E) Oliver Hart
77	What is Showrooming? (A) An individual browses the sites of e-retailers for products and then ends up purchasing the product from some brick and mortar store. (B) An individual visiting a brick and mortar store to have a look and feel of the product and then ordering the same product through some e-retailers. (C) An individual visiting a big box retailer to have a look and feel of the product and then purchasing the same product from nearby kirana (Mom and Pop) store. (D) An e-retailer using the kirana (Mom and Pop) stores to keep its stock of goods and meets the orders in the nearby localities.

(E) None of the above

78 Which of these have not been included in Government of India Act, 1935?

(A) Separation of Burma from India

(B) Detachment of Aden from India to establish it as a crown colony

(C) Splitting of Bihar and Orissa as two separate provinces

(D) Separation of Khyber Pakhtunwala from India

(E) Separation of Sindh from Bombay presidency

79 What is Article 35 (A) of Indian Constitution?

(A) An article empowering Jammu and Kashmir state's legislature to define permanent residents

(B) An article empowering Arunachal Pradesh state's legislature to define permanent residents

(C) An article providing autonomous status to Jammu and Kashmir

(D) An article providing autonomous status to Arunachal Pradesh

(E) An article providing autonomous status to Manipur

80 Which of the following is not a landlocked country?

(A) Kenya

(B) Niger

(C) Swaziland

(D) Chad

(E) Mali

81 Which of the following options is the correct list of core industries as defined by IIP?

(A) Shipping, Coal, Natural Gas, Pharmaceuticals

(B) Coal, Natural Gas, Crude Oil, Fertilizers

(C) Coal, Steel, Cement, Information Technology

(D) Refinery, Fertilizers, Crude Oil, Telecommunication

(E) Coal, Steel, Crude Oil, Banking

82

Match the surnames of head of states (former or current) to the countries:

Surname of the leader	Country of the leader
a. Kirchner	i. Brazil
b. Lula	ii. Argentina
c. Deng	iii. Venezuela
d. Erdogan	iv. China
e. Chavez	v. Turkey

(A) a-i, b-ii, c-iii, d-iv, e-v

(B) a-ii, b-i, c-iv, d-v, e-iii

(C) a-ii, b-iii, c-i, d-v, e-iv

(D) a-iv, b-i, c-ii, d-v, e-iii

(E) a-iv, b-ii, c-iii, d-i, e-v

83

Match the following Indus valley sites to the states:

Indus Valley Site	State
a. Harappa	i. Haryana
b. Lothal	ii. Gujarat
c. Chanhudaro	iii. Punjab (Pakistan)
d. Banawali	iv. Sindh (Pakistan)

(A) a-iii, b-ii, c-iv, d-i

(B) a-ii, b-i, c-iv, d-iii

(C) a-iii, b-ii, c-i, d-iv

(D) a-iv, b-i, c-ii, d-ii

(E) a-iv, b-ii, c-iii, d-i

84 Which of the following Indian business houses (conglomerate) started its operation with companies like Philips Carbon Black, Asian Cables, Agarpara Jute and Murphy(India)?

(A) Aditya Birla

(B) C.K. Birla

(C) RPG Enterprises

(D) K.K.Birla

(E) Essar

85 Which of the following spacecrafts, in 2017, plunged into the planet it was exploring?

(A) Apollo-8

(B) Voyager-2

(C) Voyager-1

(D) Cassini

(E) Pioneer-11

86 The Time magazine's person of the year 2017 is:

(A) Donald Trump

(B) Emmanuel Macron

(C) The Peace Makers

(D) Silence Breakers

(E) Sarah Huckabee Sanders

87 Which of the following is NOT one of the World Heritage Sites?

(A) Mountain Railways of India

(B) Jim Corbett National Park

(C) Khangchendzonga National Park

(D) Historic City of Ahmedabad

(E) Great living Chola temples

88 Match the music festivals to their states:

Music Festival	State
a. Hornbill	i. Arunachal Pradesh
b. Ziro	ii. Nagaland
c. Escape	iii. Maharashtra
d. Enchanted Valley	iv. Rajasthan
e. Magnetic Fields	v. Uttarakhand

(A) a-iii, b-ii, c-iv, d-i,e-v

(B) a-ii, b-i, c-iv, d-iii,e-v

(C) a-ii, b-i, c-v, d-iii,e-iv

(D) a-v, b-i, c-iii, d-ii,e-iv

(E) a-iv, b-ii, c-iii, d-i,e-v

89 If a company encourages its employees to use its own products to understand customers' perception, then the company is engaging in:

(A) Dogfooding

(B) Lionhunting

(C) Moonlighting

(D) Spacetraveling

(E) Bikeriding

90 Which of the following is not a video streaming service?

(A) Netflix

(B) Primevideo

(C) Youtube

(D) Roku

(E) Itunes

91 Which of the following is not a French overseas territory?

(A) New Caledonia

(B) Guadeloupe

(C) Guam

(D) Reunion

(E) Mayotte

92 Match the rockets/missions to their space agencies:

Rocket/Mission	Space Agency
a. Falcon 9	i. ISRO
b. Mars Rover	ii. ESA
c. Exo Mars trace gas Orbiter	iii. NASA
d. Yinghuo	iv. SpaceX
e. Mangalyaan	v. CNSA

(A) a-i, b-ii, c-iii, d-iv, e-v

(B) a-iv, b-iii, c-v, d-ii, e-i

(C) a-iv, b-iii, c-ii, d-v, e-i

(D) a-v, b-iv, c-iii, d-ii, e-i

(E) a-iii, b-iv, c-ii, d-v, e-i

93 Who is the independent athlete to win a gold medal at 2016 Summer Olympics?

(A) Abdullah Al-Rashidi

(B) Fehaid Al-Deehani

(C) Jasna Sekaric

(D) Yulia Stepanova

(E) Darya Klishna

94 Which of the following mobile manufacturing companies DOES NOT have its headquarters in China?

(A) Xolo

(B) Xiaomi

(C) Vivo

(D) Oppo

(E) Lenovo

95 Name the only Indian (or from Indian origin) to win Abel Prize?

(A) Manjul Bhargava

(B) Srinivasa Ramanujam

(C) S. R. Srinivasa Varadhan

(D) Mahan Maharaj (Swami Vidyanathananda)

(E) Harishchandra Mehta

96 What is a Hundi?

(A) It is a financial instrument

(B) It is a utensil used for marriage functions

(C) It is a marriage ritual in Tibetan society

(D) It is Hyundai's earlier name

(E) It is the name of the last Hun that ruled China

97 Windhoek, Suva and Ulaanbaatar are the capital cities of:

(A) Mongolia, Hungary, Romania

(B) Namibia, Fiji and Mongolia

(C) Ghana, Fiji, Uruguay

(D) Guyana, Fiji, Mongolia

(E) Namibia, Guyana, Ghana

98 Which of the following is the most recent club to join ISL?

(A) FC Goa

(B) Chennaiyin FC

(C) North East United FC

(D) Jamshedpur FC

(E) Delhi Dynamos FC

99 Match the brands with the companies:

Brand	Company
a. Gillette	i. Godrej
b. Surf Excel	ii. ITC
c. Saffola	iii. Hindustan Unilever
d. Aashirvaad Atta	iv. P&G
e. Good Knight	v. Marico

(A) a-i, b-ii, c-iii, d-iv, e-v

(B) a-iv, b-iii, c-v, d-ii, e-i

(C) a-iv, b-iii, c-ii, d-v, e-i

(D) a-v, b-iv, c-iii, d-v, e-ii

(E) a-iv, b-i, c-ii, d-v, e-iii

100 **Write an essay on the following topic in approximately 200 words:**

Ethical practices and sustainability: do they co-exist?