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DIRECTIONS *for questions 1 to 6*: The passage given below is followed by a set of six questions. Choose the best answer to each question.

In 1922, in "Tractatus Logico-Philosophicus," the philosopher Ludwig Wittgenstein wrote, "The limits of my language mean the limits of my world." The words that we have at our disposal affect what we see – and the more words there are, the better our perception.

Theoretically, speaking multiple languages may actually confer distinct advantages to the developing brain. Bilinguals do better in qualities like sustained attention and switching between tasks effectively. Because a bilingual child switches between languages, the theory goes, she develops enhanced executive control, or the ability to effectively manage higher cognitive processes, such as problem-solving, memory, and thought. She becomes better able to inhibit some responses, promote others, and generally emerges with a more flexible and agile mind. Adults who speak multiple languages seem to resist the effects of dementia far better than monolinguals do.

In 2012, Angela de Bruin, a bilingual, pursued the link between bilingualism and cognition. Normally, to test for an edge in executive function, you give a version of a task where people have to ignore certain stimuli while selectively focussing on others. For instance, in the Simon task, you are shown pictures (often arrows) on either the left or right side of a screen. If you see a right-pointing arrow, you press the right key. It doesn't matter on which side of the screen the arrow appears but only the direction in which it points. Typically, people have faster reaction times on congruent trials – when the right-pointing arrow actually appears on the right, and vice-versa. Bilinguals are supposed to have an advantage in the incongruent trials: when the left arrow appears on the right, and the right arrow appears on the left.

When de Bruin looked at the data, though, in three of the four tasks testing inhibitory control, including the Simon task, the advantage wasn't there. Monolinguals and bilinguals had performed identically. "We thought, maybe the existing literature is not a full, reliable picture of this field," she said. Hence she decided to test it further. So, she combed through conference abstracts from 169 conferences that dealt with bilingualism and executive control. About half the presented results provided either complete or partial support for the bilingual advantage on certain tasks, while half provided partial or complete refutation.

De Bruin isn't refuting the notion that there are advantages to being bilingual. But the advantage is neither global nor pervasive. To test where the limits of bilingual advantage lie, and what the real advantage may actually look like, they examined three different groups (English monolinguals, active English-Gaelic bilinguals who spoke Gaelic at home, and passive English-Gaelic bilinguals who no longer used Gaelic regularly). They had each group take part in four tasks – the Simon task, a task of everyday attention (you hear different tones and must count the number of low ones while filtering out the high ones), the Tower of London (you solve a problem by moving discs around on a series of sticks to match a picture of what the final tower looks like), and a simple task-switching paradigm (you see circles and squares that are either red or blue, and must pay attention to either one color or one shape, depending on the part of the trial).

In the first three tasks, they found no difference between the groups. On the last, they thought they'd finally detected an advantage: on the switch trials – the trials immediately after a change from shape to color or color to shape – the bilinguals, both active and passive, seemed to be quicker. But when the researchers dug deeper, they found that it wasn't so much a case of switching faster as it was being slower at the non-switch trials, where shape followed shape and color followed color.

So does that mean that there's no such thing as a bilingual advantage? No. It's just one study. But it adds further evidence to the argument that the bilingual advantage is sometimes overstated. "I'm definitely not saying there's no bilingual advantage," de Bruin says. But the advantage may be different from the way many researchers have described it: as a phenomenon that helps children to develop their ability to switch between tasks and, more broadly, enhances their executive-control functions. The true edge, de Bruin believes, may come far later, and in a form that has little to do with task-switching and executive control; it may, she says, be the result of simple learning. The bilingual advantage may not appear in the exact guise researchers think of it today. But, on a fundamental level, bilingualism's real benefits could be far more important.

Q1. What is the main purpose of the author of the passage?

   a) To discuss the advantages of bilingualism.

   b) To discuss the extent of the impact of bilingualism on brain functions.

   c) To prove that bilingualism is more advantageous than monolingualism.

   d) To prove that raising a bilingual child is, in large part, a recipe for raising a successful child.

Q2. What does the author wish to imply when he refers to the philosopher Ludwig Wittgenstein's comment, "The limits of my language mean the limits of my world."?

   a) When we learn to speak a different language, we learn to see aspects of the world differently.

   b) If my language is limited, then it is the end of the world.

   c) A philosopher's language is not limited.

   d) When we learn to speak a different language, there is improvement in executive control and better management of higher cognitive processes.

Q3. Why does De Bruin say, "May be the existing literature is not a full, reliable picture of this field."?

   a) The data from her experiment was not reliable enough.

   b) There should be many more findings related to the advantages of bilingualism presented at conferences than actually become published.

   c) The result of the experiment conducted was not as expected.

   d) The data was insufficient to conclude that bilingualism is advantageous.

Q4. Which of the following would best parallel the perception of the performance of bilinguals and monolinguals in the Simon task (discussed in para 3)?

   a) Monolinguals and bilinguals should have quicker reaction time if the right-pointing arrow appears on the left and the left-pointing arrow appears on the right than in other circumstances. Bilinguals have an advantage in terms of a quicker reaction time when the right-pointing arrow appears on the right and the left-pointing arrow appears on the left than in other circumstances.

b) Monolinguals and bilinguals should have quicker reaction time if the right-pointing arrow appears on the top-left corner of the screen and the left-pointing arrow appears on the top-right corner of the screen than in other circumstances. Bilinguals have a quicker reaction time when the right-pointing arrow appears on the bottom-right corner of the screen and the left-pointing arrow appears on the top-left corner of the screen than in other circumstances.

c) Monolinguals and bilinguals should have quicker reaction time if an upward-pointing arrow appears on the top and a downward-pointing arrow appears at the bottom of the screen than in other circumstances. Bilinguals have a quicker reaction time when the upward-pointing arrow appears at the bottom and a downward-pointing arrow appears on the top of the screen than in other circumstances.

d) Monolinguals and bilinguals should have quicker reaction time if an upward-pointing arrow appears at the bottom and a downward-pointing arrow appears on the top of the screen than in other circumstances. Bilinguals have a quicker reaction time when the upward-pointing arrow appears at the top and a downward-pointing arrow appears at the bottom of the screen than in other circumstances.

Q5. Which of the following, if true, will support the findings of the study mentioned in paras 5 and 6?

a) Part of the brain which deals with colour and shape was as active in bilinguals as in monolinguals.

b) Part of the brain which deals with colour and shape was not as active in bilinguals as compared to monolinguals.

c) Part of the brain which deals with colour and shape was more active in bilinguals as compared to monolinguals.

d) Part of the brain which identifies pattern or visual images was more active in bilinguals than in monolinguals.

Q6. Which of the following can be understood from the passage?

a) A perceived benefit of bilingualism is that bilinguals show sustained attention and can switch between tasks effectively and they have a nimble mind.

b) A perceived benefit of bilingualism is that bilinguals have a greater ability to resist the consequences of mental deterioration and they will become better management executives.

c) The final conclusion of the passage is that bilingualism is far better than monolingualism.

d) The final conclusion of the passage is that bilingualism is not as advantageous as it was thought to be.

DIRECTIONS *for questions 7 to 9*: The passage given below is followed by a set of three questions. Choose the best answer to each question.

The strengthening of the rupee against the US dollar does not augur well for the country's exporters, who have just about started to breathe easy after the global downturn.

The rupee has appreciated by 13 per cent against the dollar and the euro over the past one year, meaning that their receivables will fetch them lower revenue after accounting for the currency exchange.

Industries that import their raw material --- oil marketing companies, for instance --- are smiling as the cost of

raw materials comes down.

"The appreciation is definitely impacting exporters; I expect some more appreciation for the rupee," said Abheek Barua, chief economist, HDFC Bank.

Information Technology as a sector received more than three-fourths of its total revenue from exports in the fiscal 2015 and textiles one-fifth, highlighting their dependence on overseas earnings.

Such companies have been hedging their revenues against currency volatility.

"Companies in the export-oriented industries are hedging their positions against currency volatility as they have been affected," said Jamal Mecklai, CEO, Mecklai Financial.

But this measure does not come free: "There is a cost of hedging and that adds to the overall cost structure of the companies," said Barua.

The exact impact has yet to be quantified. "In the worst-case scenario the revenues of IT companies could get impacted by 15 per cent while the oil marketing companies would benefit," said Alex Mathews, head of research at Geojit BNP Paribas Financial Services.

Exporters have no option but to look at improving volumes. "They will have to increase their volume of exports to counter," said Ashvin Parekh, national head, financial services, Ernst & Young.

Q7. Which of the following is a direct consequence of the strengthening of the rupee?

(1) After accounting for all the currency exchanges, the revenue of IT firms will be reduced.
(2) The exporters are trying to find out new ways to reduce the export deficit.
(3) Information technology sector is badly affected.
(4) There is a strong need for the exporters to regulate new laws.

○ a) Only 4

○ b) Only 1

○ c) 1 and 2

○ d) 1 and 3

Q8. What is the reason for the drop in revenue for the exporters?

○ a) There were major losses in the IT industry in the 2015 fiscal.

○ b) Textile industries started highlighting their independent non-export earnings and profits.

○ c) There was an appreciation of rupee against the dollar leading to decrease in exchange revenues.

○ d) Many companies were trying to increase their sales in the country itself to avoid losses in export exchanges.

Q9. What is the possible solution suggested by the author for the companies that are trying to overcome the problem mentioned?

○ a) The companies should try to increase their sales in the country and avoid external trade.

○ b) The companies in India should try to increase their export trade in order to make up for the losses due to strengthening of rupee.

○ c) The IT Companies should formulate new export policies.

○ d) The companies should establish new businesses to compete with other countries and they should urge the government to introduce changes in the policies in order to devaluate the rupee.

DIRECTIONS *for questions 10 to 12*: The passage given below is followed by a set of three questions. Choose the best answer to each question.

Lord John Roxton and I turned down Vigo Street together and through the dingy portals of the famous aristocratic rookery. At the end of a long drab passage my new acquaintance pushed open a door and turned on an electric switch. Standing in the doorway and glancing round me, I had a general impression of extraordinary comfort and elegance combined with an atmosphere of masculine virility. Everywhere there were mingled the luxury of the wealthy man of taste and the careless untidiness of the bachelor. Rich furs and strange iridescent mats from some Oriental bazaar were scattered upon the floor. Pictures and prints of great price and rarity hung thick upon the walls. Sketches of boxers, of ballet-girls, and of racehorses alternated with a sensuous Fragonard, a martial Girardet, and a dreamy Turner. But amid these varied ornaments there were scattered the trophies which brought back strongly to my recollection the fact that Lord John Roxton was one of the great all-round sportsmen and athletes of his day. A dark-blue oar crossed with a cherry-pink one spoke of the old Oxonian and Leander man, while the boxing-gloves were the tools of a man who had won supremacy with each.

In the center of the rich red carpet was a black and gold Louis Quinze table, a lovely antique, now sacrilegiously desecrated with marks of glasses and the scars of cigar-stumps. On it stood a silver tray of smokables and a burnished spirit-stand, from which and an adjacent siphon my silent host proceeded to charge two high glasses. Having indicated an arm-chair to me and placed my refreshment near it, he handed me a long, smooth Havana. Then, seating himself opposite to me, he looked at me long and fixedly with his strange, twinkling, reckless eyes – eyes of a cold light blue, the color of a glacier lake. His eyebrows were tufted and overhanging, which gave those naturally cold eyes an almost ferocious aspect, an impression which was increased by his strong and furrowed brow.

Through the thin haze of my cigar-smoke I noted the details of a face which was already familiar to me from many photographs--the strongly-curved nose, the hollow, worn cheeks, the dark, ruddy hair, thin at the top, the crisp, virile moustaches, the small, aggressive tuft upon his projecting chin. Something there was of Napoleon III, something of Don Quixote, and yet again something which was the essence of the English country gentleman, the keen, alert, open-air lover of dogs and of horses.

Lord John Roxton has some points in common with Professor Summerlee, and others in which they are the very antithesis to each the same spare, scraggy physique. As to his appearance, I have, as I recollect, described it in that portion of my narrative which I have left behind me in London. He is exceedingly neat and prim in his ways, dresses always with great care in white drill suits and has high brown mosquito-boots and shaves at least once a day. Like most men of action, he is laconic in speech, and sinks readily into his own thoughts, but he is always quick to answer a question or join in a conversation, talking in a queer, jerky, half-humourous fashion. His knowledge of the world, of South America, is surprising, and he has a whole-hearted belief in the possibilities of our journey which is not to be dashed by the sneers of Professor Summerlee.

Q10. All of the following statements about Lord John Roxton are true from the passage EXCEPT?

    ○ a) He was a very wealthy man.

    ○ b) He was well recognized as a sportsperson during the acme of his career and was involved in more than one sport.

    ○ c) He was still a bachelor due to his untidy habits and had a very reticent persona.

    ○ d) His facial features suggest that he was a man who probably liked the outdoors.

Q11. Which of the following statements can be understood from the passage?

Identify all that apply and enter the corresponding numbers in the input box given below. You must enter your answer in increasing order only. For example, if you think (1) and (2) apply, then enter 12 (but not 21) in the input box.

(1) Lord John Roxton was an inveterate cigar smoker and drinker.

(2) Lord John Roxton had blue eyes and his eyebrows accentuated the features of his face.

(3) The author had met Lord John Roxton some years back prior to this meeting.

(4) The tone of the author is assertive.

(5) Lord John Roxton was fond of antiques and collected works of art.

Q12. Why does the author make a mention of Professor Summerlee in the passage?

    ○ a) To draw a comparison between the dressing style of Professor Summerlee and Lord John Roxton.

    ○ b) To indicate that Professor Summerlee is not more aristocratic and worthy a personality and comrade than Lord John Roxton.

    ○ c) To tell us that Professor Summerlee was critical of the author's sojourn.

    ○ d) To show that Professor Summerlee and Lord John Roxton are similar in few aspects but different in other aspects.

DIRECTIONS *for questions 13 to 18*: The passage given below is followed by a set of six questions. Choose the best answer to each question.

Let me begin by stating the obvious, with what in France they call une *vér-ité de la Palice'*: to put it in good old Maoist terms, the principal contradiction of today's cinema studies is the one between the deconstructionist/feminist/post-Marxist/psychoanalytic/sociocritical/cultural studies etc. approach, ironically nicknamed 'Theory' (which, of course, is far from a unified field – the above chain is more a series of Wittgensteinian 'family resemblances') by its opponents, and the so-called 'Post-Theory', the cognitivist and/or historicist reaction to it. Here, however, we immediately encounter a paradox. Although Post-Theorists

acknowledge the inner differences in the field of Theory (say, between the early Screen focus on interpellation, Gaze, suture, and the later more historicist-culturalist feminist orientation), they nonetheless emphasise a common Lacanian element as central. They even acknowledge that the only unity of their own project is negative, that of excluding (Lacanian) psychoanalysis – David Bordwell and Noel Carroll made it clear, in their introduction to the Post-Theory volume, that 'the unifying principle in this book is that all the research included exemplifies the possibility of scholarship that is not reliant upon the psychoanalytic framework that dominates film academia.'

So who are these Lacanians? Post-Theorists like to emphasise that writers of Theory refer to mythical entities like the (capitalised) Gaze, entities to which no empirical, observable facts (like actual cinema viewers and their behaviour) correspond – one of the essays in the Post-Theory volume actually has the Sherlock Holmesian title 'Psychoanalytic Film Theory and the Problem of the Missing Spectator'. In the same vein, I would like to claim that, in the global field designated by Post-Theorists as that of Theory, we are dealing with a no less mysterious 'case of the missing Lacanians': except for Joan Copjec, myself and some of my Slovene colleagues, I know of no cinema theorist who effectively accepts Lacan as his or her ultimate background. The authors usually referred to as Lacanians (from Laura Mulvey to Kaja Silverman) as a rule 'engage with' Lacan: they appropriate some Lacanian concepts as the best description of the universe of patriarchal domination, while emphasising that Lacan remained a phallogocentrist who uncritically accepted this universe as the only imaginable framework of our socio-symbolic existence. So, as a Lacanian, I seem to be caught in an unexpected double-bind: I am, as it were, being deprived of what I never possessed, made responsible for something others generated as Lacanian film theory. My response to this is, of course: what if one should finally give Lacan himself a chance? So, to continue in a Maoist vein, I am tempted to determine the opposition between the ambiguous reference to Lacan that has predominated in cinema studies and those who fully endorse Lacan as the second, non-antagonistic contradiction of cinema studies, to be resolved through discussion and self-criticism.

The second truth is that these struggles point towards a global and much more far-reaching crisis in cultural studies. What looms in the background is a whole set of dilemmas, from the purely epistemological to politico-ideological ones: do cultural studies provide an adequate instrument to counteract global capitalism, or are they simply the ultimate expression of its cultural logic? Will cognitive scientists and other representatives of the so-called "Third Culture" succeed in replacing cultural critics as the new model of 'public intellectuals? That is to say, the antagonism between Theory and Post-Theory is a particular case of the global battle for intellectual hegemony and visibility between the exponents of post-modern/deconstructionist cultural studies and, on the other hand, cognitivists and popularisers of hard sciences, a battle which caught the attention of a wide public first through the so-called de Man affair (where the opponents endeavoured to prove the proto-Fascist irrationalist tendencies of deconstruction) and then through the Sokel-Social Text affair. These are examples of the global crisis surrounding cultural studies.

Q13. Which of the following is a counterpart of the term 'cultural critic' within Film Theory?

○ a) Theorist

○ b) Cognitivist

○ c) Marxist

○ d) Psychoanalyst

Q14. Which of the following best summarizes the 'paradox' mentioned in the passage?

a) Writers of Theory refer to mythical entities like Gaze but they themselves don't have a method to empirically ascertain it.

b) The Post-Theoretical project runs against Theory, but it is highly dependent on it for its own identity.

c) Both the disjoint and a Lacanian centrality to diverse fields are acknowledged simultaneously.

d) The author is being deprived of what he never possessed and made responsible for something others generated as Lacanian Film Theory.

Q15. Which of the following statements can be inferred to be true from the passage?
I. The fight between Theory and Post-Theory is rooted in a general battle of influence between the two kinds of Lacanians.
II. The Lacanian element is what enables the Post-Theorists to identify the collective that is nicknamed 'Theory'.

a) Only I

b) Only II

c) Both I and II

d) Neither I nor II

Q16. Which of the following best describes 'the problem of the missing spectator'?

a) There are viewer-centred entities, which writers of Theory refer to, that discount the empirical quality of the spectator.

b) The entities of viewership, which writers of Theory refer to, do not include the spectator.

c) The entities of viewership, which writers of Theory refer to, correspond only to the behaviour of the self experienced by the viewer, rather than behaviours observable externally.

d) The spectator refers to Lacan, who a lot of cinema theorists, except a few, do not accept as their ultimate background.

Q17. How does the author attempt to deal with the 'double bind' explained in para 2?

a) He wishes to act on the paradox: the acknowledgment of the differences among different fields and simultaneously the establishment of a central element and thereby collecting these fields together as 'theory'.

b) He attempts to find a way to deal with the feeling of being deprived of what he never possessed and made responsible for something others generated as Lacanian film theory.

c) He attempts to deal with a contradiction: Do cultural studies provide an adequate instrument to counteract global capitalism, or are they simply the ultimate expression of its cultural logic?

d) He aims to find the difference between those who approve Lacan as a contradiction to cinema studies and those with a vague reference to Lacan in cinema studies and resolve these differences through discussion and self-criticism.

Q18. The de Man affair, mentioned in para 3, is an example of

○ a) the doubtfulness about cultural studies in providing an adequate instrument to counteract global capitalism.

○ b) the fact that supporters of deconstructionist cultural studies tried to prove the proto-Fascist irrationalist tendencies of deconstruction.

○ c) the general global fight between people involved in cultural studies and hard sciences.

○ d) the spat between "theorists" and "post-theorists" which translated into a general fight between cognitive scientists and the "Third Culture" which includes cultural critics.

DIRECTIONS *for questions 1 to 3*: The sentences given in each of the following questions, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a number (1, 2, 3, 4 or 5). Decide on the proper order for the sentences and key in this sequence of five numbers as your answer.

Q19. (1) A marvellous addition to this would be that when you are absolutely clear about your goal, you do not even have to know how to achieve it.
(2) If you then open the truck cab, take out the box, take off the blanket, and let the homing pigeon out of the cage, the homing pigeon will fly up into the air, circle three times, and then fly unerringly back to its home roost a thousand miles.
(3) By simply deciding exactly what you want, you and your goal will begin to move unerringly toward each other and will meet at exactly the right time and in exactly the right place.
(4) Imagine this exercise: You take a homing pigeon out of its roost, put it in a cage, cover the cage with a blanket, put the cage in a box, then place the box into a closed truck cab, and then drive a thousand miles in any direction.
(5) You have the same incredible, cybernetic, goal-achieving function as the homing pigeon.

Q20. (1) Short of images, supplying the real names of individuals killed has a very different effect than numbers alone.
(2) The most memorable messages are expressed not in terms of abstract concepts but in terms of vivid pictures, analogies, and human actions.
(3) Our brains are hardwired to remember visual or sensory information much better than abstract concepts.
(4) Similarly, footage of icebergs breaking apart in Al Gore's film, *An Inconvenient Truth*, underscored the reality of global warming in a way that charts and graphs cannot.
(5) For example, real images of the ravages of war are far more stirring than dry statistics about the numbers of nameless soldiers or citizens who've been killed or displaced.

Q21. (1) Others began to pick up on it, sharing some of their experiences and insights and even some of their self-doubts and the entire class was transformed due to the synergistic endeavor.
(2) This spirit became fertile soil for a synergistic and creative endeavor.
(3) We were about three weeks into a semester when, in the middle of a presentation, one person started to relate some very powerful personal experiences which were both emotional and insightful.
(4) A spirit of humility and reverence fell upon the class – reverence toward this individual and appreciation for his courage.
(5) I will never forget a university class I taught in leadership philosophy and style.

Q22. When a mistake happens, some of us, instead of accepting it or trying to find out the reasons, try and justify the reasons by saying that it is not our fault or the conditions were beyond our control or that an error was bound to occur. We even justify our actions as the best way the situation could be handled. This kind of justification blocks our thinking on better ways we could have dealt with the situation or how we could be receptive to alternative ideas from others.
_____

○ a) Some of us are prone to believing that we keep making the same mistakes because of a personality flaw.

○ b) Mistakes often occur due to the tendency to rush things and the need to conform to a culture that appreciates speed.

○ c) Hence we must avoid such justifications because every mistake provides a learning opportunity.

○ d) Believing that our action was totally "responsible" prevents any learning from the mistake.

Q23. He has been dubbed a failure in school and college, but he is determined to make his life a success. He wants to become an ace salesman simply because he has the power of persuasion, negotiation and conversation. It doesn't take long before he realizes the corporate world is truly cut-throat, cruel and completely devoid of ethics._____

○ a) But to give it up now would be to be branded a failure twice.

○ b) But an ambitious horse will never return to its old stable.

○ c) But he knows that life is either a daring adventure or nothing.

○ d) Any of choices A, B or C.

DIRECTIONS *for questions 6 and 7*: In each question, there are sentences or fragments of sentences that form a paragraph. Identify the sentence(s) or fragments of sentence(s) that is/ are **correct** in terms of grammar and usage, including spelling, punctuation and logical consistency. Enter the numbers corresponding to the sentence(s) or fragments of sentence(s) in the input box provided below the question. (Note: Enter your answer in increasing order only. For example, if you think that the fragments (3) and (5) are **correct**, then enter 35 (but not 53) in the input box.)

Q24. (1) Alan Turing, in a 1951 paper, proposed a test called "The Imitation Game" that might settle the issue of machine intelligence finally.
(2) The first version of the game he explained involved no computer intelligence whatever. Imagine three rooms, each connected via
(3) computer screen and keyboard to the others. In one room sits a man, in the second a woman, and in the third sits a person who they call the "judge".
(4) The judge's job is to decide which of the two people talking to him through the computer is the man. The man will attempt to help the judge, offering whatever evidence he can.
(5) The woman's job is to trick the judge, so she will counteract her opponent's claims, in hope that the judge will erroneously identify her as the male.

Q25. (1) If someone says to you "I'm a compulsive liar," do you believe them or not? This statement is, in itself, a paradox.
(2) In George Orwell *Animal Farm*, the sentence "All animals are equal, but some are more equal than others" is another example of a paradox.
(3) Clearly, this statement does not make logical sense. And, the point of a paradox is to point out a truth, even if the statements contradict each other.
(4) Orwell is trying to make some sort of political statement here. Perhaps it is that the government claims that everyone be equal when that is clearly false,
(5) or perhaps it is that individuals have skewed perceptions of what it means to be equal. The interpretation is for up to the reader to decide.

DIRECTIONS *for questions 8 to 10*: Each question has a set of five sequentially ordered statements. Classify the statements into Facts (F), Inferences (I) and Judgements (J) based on the following criteria:

- Facts, which deal with pieces of information that one has seen, heard or read; which are known matters of direct observation or existing reality; which are open to discovery or verification (the answer option indicates such a statement with an 'F')

- Inferences, which are logical conclusions or deductions drawn about the unknown, on the basis of the known i.e. based on the knowledge of facts (the answer option indicates such a statement with an 'I')

- Judgments, which are opinions, or estimates or anticipations of common sense or intention that imply approval or disapproval of persons, objects, situations and occurrences in the past, the present or the future (the answer option indicates such a statement with a 'J')

Select the answer option that best describes the set of 5 statements.

Q26. (i) During the 1990s, there was a spurt in demand in areas that were the target of economic reforms and a tendentious turn towards professional employment in the spheres of medical and engineering education, business and hotel management, housing, tourism etc.
(ii) Inevitably, higher education became part of industrial growth – hence an industry in itself.
(iii) The demands began multiplying and government agencies were hard put to respond to such needs.
(iv) The deemed universities became the "ready to respond" tools to such demands and their growth increased.
(v) It was not an organized and wholesome growth, the focus was on quantity and not quality.

    a) FIJII

    b) FJJJJ

    c) JFIJI

    d) JJIJJ

Q27. (i) As cinema screens open every other month in malls across the country, cinema hall owners have to offer more than just movies to set them apart.
(ii) When PVR Cinemas opened its first multiplex in Delhi, it revolutionised the way we watched movies.
(iii) About a decade later, while single-screen theatres in the nation's capital are all but extinct, multiplexes have opened in virtually every major shopping mall.

(iv) Ironically, the future of movie-watching is multiplexes.
(v) With the number of multiplex chains steadily increasing, the age-old question of product differentiation is becoming essential to the business.

    a) JJFJJ

    b) FJIFI

    c) JFJII

    d) IFJFF

Q28. (i) India ranks remarkably high in the "Criminals in Politics" sub-index, a result perhaps of a record number of criminals having been elected to the current Lok Sabha.
(ii) Once upon a time, people in search of data about criminal records of a person had to hire private investigators to navigate byzantine court-houses and rudimentary filing or computer systems, and to deal with grim-faced legal clerks.
(iii) In a way, the obstacles to getting criminal information maintained a valuable, ignorance-fuelled civil peace.
(iv) Convicts could start afresh after serving their time without strangers knowing their pasts.
(v) Criminalsearches.com is a site that lets people search by name through criminal archives which might upset the social balance once preserved by the difficulty of obtaining public documents like criminal records.

    a) JIJFI

   b) FJIIF

    c) JFJII

    d) JJJII

DILR

DIRECTIONS *for questions 1 to 4*: Answer these questions on the basis of the information given below.

A hotel in Premnagar, Heartbreak Hotel, has five floors, numbered 1 to 5, and five different types of rooms – Single, Double, Executive, Royal and Select. In each floor of the hotel, all the rooms are of the same type and, for each type of room, all the rooms are in a single floor. It is also known that the number of Executive rooms is at least double the number of Royal rooms in the hotel.

On a particular day, a certain number of rooms were occupied. The bar graphs given below present the following information:

● Occupancy Percentage for the given day: Calculated as the number of rooms occupied as a percentage of the total number of rooms in each floor.
● The Maximum Total Revenue (in Rs.'000): The Revenue that could have been earned by the hotel for each floor in a day, **had all the rooms in the hotel been occupied**.
● The Rate Per Day (in Rs.) for each type of room in the hotel.
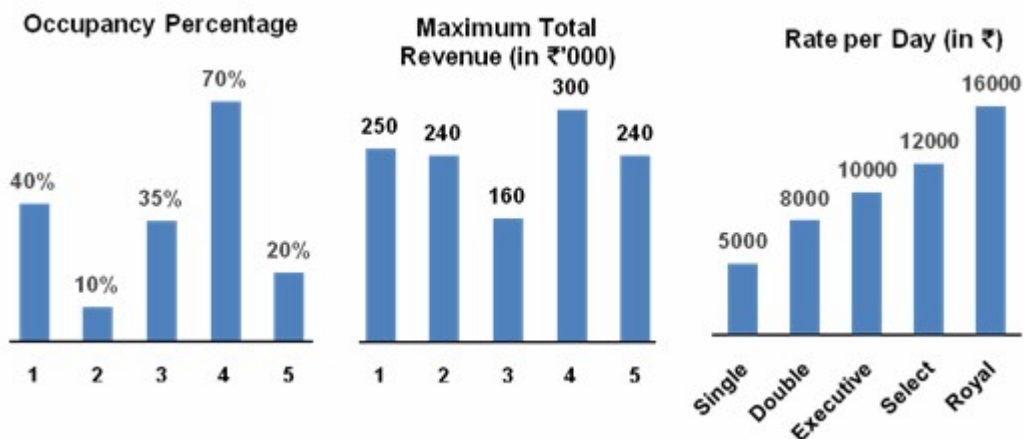
Q1. **DIRECTIONS** *for question 1*: Type in your answer in the input box provided below the question.
On the given day, how many Royal rooms were occupied?

Q2. **DIRECTIONS** *for question 2*: Select the correct alternative from the given choices.

On which floor of the hotel are the Double rooms in?

○ a) 1
○ b) 2
○ c) 3
○ d) 5

Q3. **DIRECTIONS** *for questions 3 and 4*: Type in your answer in the input box provided below the question.

On the given day, how many Executive rooms were unoccupied?

Q4. **DIRECTIONS** *for questions 3 and 4*: Type in your answer in the input box provided below the question.

If 80% of the Double Rooms, 20% of the Single Rooms and 100% of all the other types of rooms were occupied on a particular day, what will be the total revenue (in Rs.) earned by the hotel on that day?

DIRECTIONS *for questions 5 to 9*: Answer these questions on the basis of the information given below.

In a state, exactly eight companies – A through H – manufacture and sell copper brackets. These are the only companies that sell copper brackets in that state. The cost incurred by each company comprises two components – Variable Cost, which depends on the number of units manufactured and Fixed Cost, which is independent of the number of units manufactured. Further, the revenues of each company is only through the sales of the copper brackets and each company sells all the brackets that it manufactures in the same year. The first bar graph below gives total revenues of and total cost incurred by each company in 2015 and the second bar graph gives the Selling Price per unit and the Variable Cost per unit for each of the eight companies.

■ Total Revenue (in ₹ '000)   ■ Total Cost (in ₹ '000)

■ Variable Cost per unit (in ₹)   ■ Selling Price per unit (in ₹)
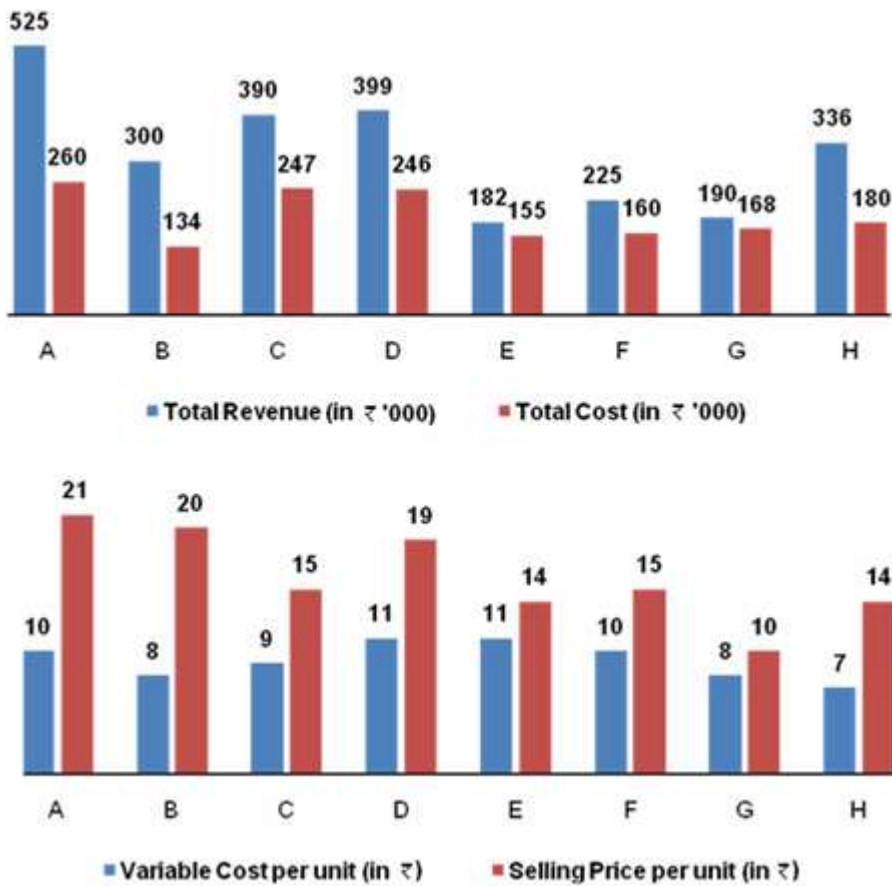
Note:

● *Profit = Total Revenue – Total Cost*

● *Profit Percentage =* $\dfrac{Profit}{Total\ Cost} \times 100$

Q5. **DIRECTIONS** *for questions 5 and 6*: Select the correct alternative from the given choices.

Which company has the highest Fixed Cost during the year?

- a) B
- b) C
- c) D
- d) G

Q6. **DIRECTIONS** *for questions 5 and 6*: Select the correct alternative from the given choices.

What is the maximum ratio of profit to the number of units sold for any company?

- a) 10.6
- b) 11.1
- c) 12.3
- d) 7.3

Q7. **DIRECTIONS** *for question 7*: Type in your answer in the input box provided below the question.

How many companies sold more than 17000 units during the year?

Q8. **DIRECTIONS** *for questions 8 and 9*: Select the correct alternative from the given choices.

For how many companies was the Fixed Cost less than Rs.13000?

- a) 6
- b) 5
- c) 4
- d) 3

Q9. **DIRECTIONS** *for questions 8 and 9*: Select the correct alternative from the given choices.

Which company has the maximum Variable Cost?

- a) A
- b) C
- c) D

○ d) H

DIRECTIONS *for questions 10 to 13*: Answer these questions on the basis of the information given below.

The graph below presents the inflation rate of UK for each year from 1851 to 2015. The Compounded Inflation Rate and the Simple Average Inflation Rate for any period comprising '*n*' years is calculated as follows:

If i_1, i_2, i_3,... i_n are the inflation rates of year 1, year 2, year 3...year *n*,

● the Compounded Inflation Rate for the *n* years is calculated as $[(1 + i_1) ´ (1 + i_2) ´ (1 + i_3) ... ´ (1 + i_n)] -1$ and

● the Simple Average Inflation Rate for the *n* years is calculated as $\dfrac{i_1 + i_2 + i_3 + ...i_n}{n}$
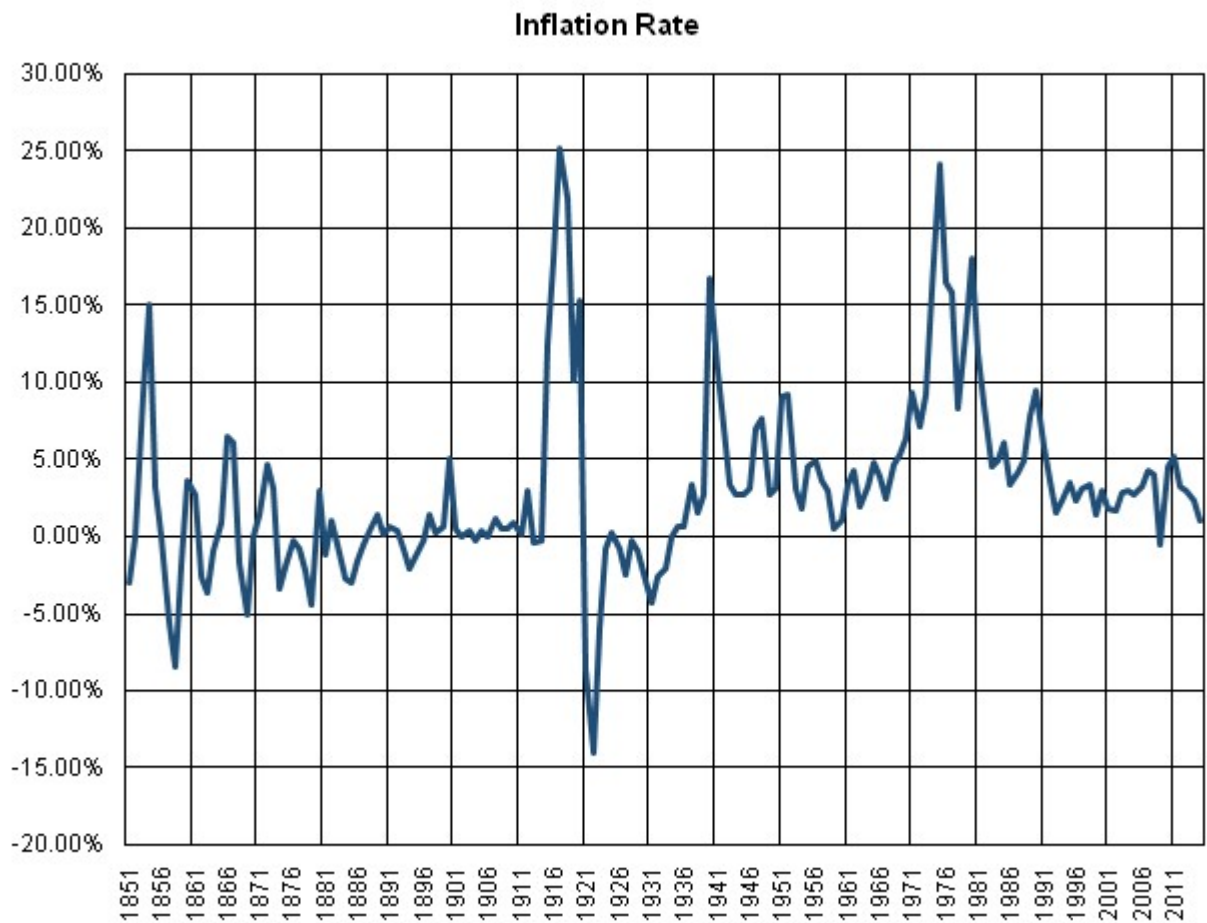
Inflation Rate

Q10. DIRECTIONS *for questions 10 to 13*: Select the correct alternative from the given choices.

For approximately how many years during the given period was the inflation rate negative?

○ a) 20

○ b) 40

○ c) 60

○ d) 80

Q11. DIRECTIONS *for questions 10 to 13*: Select the correct alternative from the given choices.

What is the Compounded Inflation Rate for the period from 1941 to 1945?

○ a) 29.5%

○ b) 62.8%

○ c) 68.9%

○ d) 10.4%

Q12. DIRECTIONS *for questions 10 to 13*: Select the correct alternative from the given choices.

For which of the following period is the Simple Average Inflation Rate during that period the lowest?

○ a) 1971-1981

○ b) 1911-1921

○ c) 1901-1911

○ d) 1951-1961

Q13. DIRECTIONS *for questions 10 to 13*: Select the correct alternative from the given choices.

During which of the following periods was the difference between the highest and the lowest inflation rates the maximum?

○ a) 1861-1871

○ b) 1941-1951

○ c) 1991-2001

○ d) 1891-1901

DIRECTIONS *for questions 1 to 4*: Answer these questions on the basis of the information given below.

On a particular day, eight people – Amarasimha, Dhanvantari, Ghatakarapara, Kalidasa, Kshapanaka, Shanku, Varahamihira and Vararuchi – went to a hospital to consult two doctors, an Orthopaedist and a Nephrologist. Each person wanted to consult exactly one doctor and exactly four people wanted to consult each doctor. Each doctor admits only one patient at a time and the two doctors together can admit two patients (one patient each) at the same time. Further, the eight people arrived at the hospital at different times. The relative order in which the four people who wanted to consult the Orthopaedist arrived at the hospital is the same as the order in which they consulted the Orthopaedist. However, this need not be true in the case of the people who wanted to consult the Nephrologist. It is also known that

(i) Amarasimha was not the first to arrive at the hospital but he and Shanku consulted their respective doctors at the same time.

(ii) Dhanvantari, who was the fourth person to arrive at the hospital, arrived at the hospital immediately after

Shanku.
(iii) Varhamihira was not the last to arrive at the hospital but by the time he arrived, exactly three people had already consulted the two doctors.
(iv) Kalidasa and Kshapanaka consulted different doctors and the person who arrived immediately after Kalidasa consulted a doctor different to that consulted by Kalidasa.
(v) Ghatakarapara consulted the Nephrologist immediately before Vararuchi consulted the same doctor.
(vi) the person who was the third to arrive and the person who was the fifth to arrive consulted the Nephrologist and the person who was the second to arrive was the second person to consult his doctor, among the persons who consulted that doctor.
(vii) Varahamihira arrived at the hospital immediately after Amarasimha and both of them consulted the same doctor.
(viii) Amarasimha consulted the doctor that he wanted to consult immediately after Dhanvantari consulted the Orthopaedist.

Q14. DIRECTIONS *for questions 1 to 4*: Select the correct alternative from the given choices.

Who was the last person to consult the Nephrologist?

O
  a) Kalidasa

O
  b) Kshapanaka

O
  c) Vararuchi

O
  d) Cannot be determined

Q15. DIRECTIONS *for questions 1 to 4*: Select the correct alternative from the given choices.

How many people arrived before Kshapanaka arrived at the hospital?

O
  a) 4

O
  b) 5

O
  c) 6

O
  d) 7

Q16. DIRECTIONS *for questions 1 to 4*: Select the correct alternative from the given choices.

Who was the first person to arrive at the hospital?

O
  a) Ghatakarapara

O
  b) Vararuchi

O
  c) Kalidasa

O
  d) Shanku

Q17. DIRECTIONS *for questions 1 to* 4: Select the correct alternative from the given choices.

Who among the following would have consulted any doctor before Varahamihira?

○ a) Ghatakarapara

○ b) Kshapanaka

○ c) Shanku

○ d) Cannot be determined

DIRECTIONS *for questions 5 to 9*: Answer these questions on the basis of the information given below.

In a park, a group of seven fountains, each of a different colour among, Blue, Green, Indigo, Red, Violet, White and Yellow, are present along a straight line from East to West. There are two approach roads to observe the fountains, one from the North and one from the South, (i.e., perpendicular to the line of fountains). The people visiting the park can approach the fountains from either of the two roads. On a particular day, Ram and Shyam visited the park and walked on different roads. Each of them made an equal number of statements regarding the position of the fountains, all of which are true, and these statements are given below, in no particular order:

(i) The Green fountain is to the immediate left of the Indigo fountain.
(ii) The Blue fountain is to the immediate right of the Violet fountain and to the left of the Yellow fountain.
(iii) The Yellow fountain is adjacent to both the Red fountain and the Green fountain.
(iv) The Red fountain is to the immediate right of the White fountain.

Q18. DIRECTIONS *for questions 5 to 9*: Select the correct alternative from the given choices.

Which fountain is in the middle of the seven fountains?

○ a) Green

○ b) Violet

○ c) Red

○ d) Cannot be determined

Q19. DIRECTIONS *for questions 5 to 9*: Select the correct alternative from the given choices.

How many fountains are present between the Violet fountain and the Yellow fountain?

○ a) 2

○ b) 3

○ c) 4

○ d) Cannot be determined

Q20. DIRECTIONS *for questions 5 to 9*: Select the correct alternative from the given choices.

Which of the following statements is definitely true?

○ a) The Green fountain is adjacent to the Blue fountain.

○ b) The Violet fountain is adjacent to the White fountain.

○ c) The Violet fountain is adjacent to the Green fountain.

○ d) None of the above.

Q21. DIRECTIONS *for questions 5 to 9*: Select the correct alternative from the given choices.

In how many ways could the fountains have been arranged in the park?

○ a) 6

○ b) 3

○ c) 1

○ d) 2

Q22. DIRECTIONS *for questions 5 to 9*: Select the correct alternative from the given choices.

How many fountains are present between the Green fountain and the White fountain?

○ a) 0

○ b) 1

○ c) 2

○ d) Cannot be determined

DIRECTIONS *for questions 10 to 13*: Answer these questions on the basis of the information given below.

Each of five friends – Jivan, Karan, Pavan, Tarun and Varun – went to a shop and each of them has a different amount with him among Rs.100, Rs.300, Rs.400, Rs.500 and Rs.700. Each person checked the price of five items – a Backpack, a Mouse, a Charger, a Pen Stand and a Notebook – and noticed that the price of each item was a distinct multiple of Rs.100. After checking the prices of the five items, the five friends observed the following:

(i) While Karan and Jivan together can afford to buy the Pen Stand, they cannot afford it individually.
(ii) Jivan has Rs.200 more than what Varun has but neither of them individually can afford the Charger.
(iii) Pavan can afford to buy the Notebook but neither Tarun nor Jivan can.
(iv) Except for Karan and Varun, everyone else can individually afford to buy the Mouse.
(v) The price of any item was less than Rs.1000 and the Charger is not the costliest item among the five.

Q23. **DIRECTIONS** *for questions 10 and 11*: Type in your answer in the input box provided below the question.

What is the price (in Rs.) of the Notebook?

Q24. **DIRECTIONS** *for questions 10 and 11*: Type in your answer in the input box provided below the question.

How much (in Rs.) does Tarun have with him?

Q25. **DIRECTIONS** *for question 12*: Select the correct alternative from the given choices.

How many of the following pairs of friends together can afford the Backpack?

I. Pavan and Jivan
II. Varun and Jivan
III. Tarun and Karan
IV. Pavan and Varun
V. Tarun and Jivan

- a) 4
- b) 1
- c) 2
- d) 3

Q26. **DIRECTIONS** *for question 13*: Type in your answer in the input box provided below the question.

What is the sum of the prices (in Rs.) of the five items?

QA

Q1. If N is the smallest four-digit odd number which leaves the same remainder when divided by 3, 4, 5 or 6, then the sum of the digits of N is

Q2. A solution of alcohol and water contains 60% alcohol. What percent of the solution must be taken out and replaced with water, so that the resultant solution contains 40% alcohol?

- a) 50%
- b) $33\frac{1}{3}\%$
- c) $14\frac{2}{7}\%$
- d) $8\frac{1}{3}\%$

Q3. In how many distinguishably different ways can a cube be painted using at most two colours – White and Black – such that each face is coloured with exactly one of the two given colours?

Q4. If $x = 1 + a^2$, $y = 1 + b^2$, $z = 1 + c^2$, and $a + b + c = 0$, then $ab + bc + ca =$

- a) $3 - (x + y + z)$.
- b) $1 - \dfrac{(x+y+z)}{2}$.
- c) $1 + \dfrac{(x+y+z)}{2}$.
- d) $\dfrac{3-(x+y+z)}{2}$.

Q5. Two sellers, A and B, sell the same product but at a profit of 15% and 12% respectively. If the cost price of A is 85% of the cost price of B, then find the ratio of the selling prices charged by A and B.

- a) 25 : 28
- b) 28 : 25
- c) 391 : 448
- d) 447 : 526

Q6. A shopkeeper sells pencils, erasers and sharpeners in three types of packs – Type 1, Type 2 and Type 3. Each pack of Type 1 contains three pencils, four erasers and six sharpeners. Each pack of Type 2 contains five pencils, two erasers and three sharpeners. Each pack of Type 3 contains four pencils, three erasers and five sharpeners. If a person wants to buy exactly 55 pencils, 50 erasers and 75 sharpeners, how many packs of Type 3 must he buy?

Q7. If $p = \dfrac{q}{(r-1)} + \dfrac{q}{(r-1)^2} + \ldots\ldots + \dfrac{q}{(r-1)^s}$, then find the value of $q + q(r-1) + q(r-1)^2 + \ldots q(r-1)^{s-1}$?

  a) $p\,[(r-1) + (r-1)^2 + \ldots (r-1)^{s-1}]$

  b) $p(r-1)^{s+1}$

  c) $p(r-1)^{s-1}$

  d) $p(r-1)^s$

Q8. The two roots of the quadratic equation $ax^2 + bx + c = 0$ are both two-digit integers with the same units digit, but $\dfrac{\Delta}{a^2}$ (where Δ is the discriminant, given as $b^2 - 4ac$) is not a multiple of 100. Which of the following is a possible value of the units digit of $\dfrac{b}{2a}$?

  a) 4

  b) 5

  c) 6

  d) 7

Q9. In a rock garden, there are four narrow tracks, two going East-West and the other two going North–South, forming a square. A huge circular lawn, of radius R feet, lies inside the square, touching all the four tracks. A and B are two points on the south-western arc of the boundary of the lawn. A is at a distance of 2x feet from the track on the South and 9x feet from the track on the West. B is at a distance of *y feet from the track on the West and a distance of 8y feet from the track on the South. If R > 6x and R > 6y, find* $\dfrac{x}{y}$.

  a) $\dfrac{13}{15}$

  b) $\dfrac{13}{17}$

  c) 1

  d) $\dfrac{4}{5}$

Q10. Given $f(x) = \dfrac{1-x}{1+x}$, $(x \neq -1)$ and $f_1(x) = f(f(x))$, $f_2(x) = f(f(f(x)))$, $f_3(x) = f(f(f(f(x))))$…… then find the value of $f_{199}(5)$.

Q11. Three runners, A, B and C, are running in the clockwise direction around a circular track. The track is marked with numbers from 1 to 12, uniformly spaced along the track, in the clockwise direction, like the dial of a clock. A overtakes B once at 5 and then the next time again at 9. A also overtakes C once at 2 and then the next time again at 4. If the speed of neither B nor C is greater than half that of A, what is the ratio of B's speed to C's speed?

- a) 7 : 4
- b) 2 : 1
- c) 3 : 2
- d) 5 : 4

Q12. If A and B are two sets, with $n(A) = 5$ and $n(B) = 3$, the number of functions possible from A to B, which are not surjections is

Q13. Each of Alok, Bhadri and Challam were given a different six-digit number, in each of which the second digit from the left (i.e., the ten thousands digit) was replaced with the symbol x. Each of them was then told that the six-digit number given to him was divisible by a certain divisor d, and was asked to determine the value of x. While each of Alok and Bhadri came up with exactly three possible values for x, Challam came up with exactly four possible values. Which of the following could be a possible value of d?

- a) 16
- b) 30
- c) 27
- d) 20

Q14. Bag A contains four red and three black balls and bag B contains three red and four black balls. One ball is drawn at random from A and placed in B. Then, one ball is drawn at random from B and placed in A. What is the probability that the composition of the balls in the two bags remains unaltered?

- a) $\dfrac{29}{56}$
- b) $\dfrac{15}{28}$
- c) $\dfrac{31}{56}$

Q15.

In the above figure, AB is tangent (at B) to the circle with centre O. Another line drawn through A, intersects the circle at the points C and D such that the chord BC subtends an angle of 90° at the centre. If AB = 20 cm and the area of the quadrilateral ACOB is 48 sq.cm, find the radius (in cm) of the circle.

Q16. A natural number is said to be a *sevian number*, if at least one digit of the number is a '7'. Find the sum of all the *sevian numbers* less than 100.

Q17. If $\left(6-\sqrt{197}\right) x^2 - 48x + 90 - 25\sqrt{197} = 2\sqrt{197}\, x^2 - 24\sqrt{197}\, x + 20\sqrt{197}$, and a and b are the roots of the equation, then which of the following is true of α and β?

a) They are real, irrational and distinct but conjugates of each other.

b) They are real, irrational and equal.

c) They are real, rational and equal.

d) They are real, rational and distinct.

Q18. Prasad writes an exam in which there are 70 questions. If three marks are given for each correct answer and one mark is deducted for every incorrect answer, and Prasad attempted only half the total number of questions and scored a net of 45 marks, how many questions did Prasad answer correctly?

Q19. If x and y are two real numbers satisfying the inequalities $3x + 2y \le 6$, $2x - y + 2 \ge 0$, $x \ge 2$ and $y \ge 0$, then the number of ordered pairs (x, y) satisfying the given condition is

Q20. In an examination, a candidate wrote five papers all having equal maximum possible marks. If the marks he secured in these five papers are in the ratio 4 : 5 : 6 : 7 : 8, and the average of his highest and lowest scores is 48%, find the number of papers in which he scored not less than 60%.

a) 2

b) 3

○ c) 4

○ d) 1

Q21. The number of road incidents is related to the number of vehicles using the roads by a linear equation. When the number of vehicles using the road was 1000, there were 240 incidents and when the number of vehicles using the road was 2000, there were 640 incidents. What is the maximum number of vehicles that can use the roads, if a zero-incident rate is desired?

○ a) 300

○ b) 360

○ c) 400

○ d) 460

Q22. A cylindrical box P, of height 80 cm, placed vertically on its base, contains eight identical balls stacked one on top of the other. Another cylindrical box Q, of height 108 cm, placed vertically on its base, contains 12 identical balls stacked one on top of the other. If the radius of each ball is equal to the radius of the box in which it is placed, and the top most ball in each box just touches the lid of the box, then find the ratio of the volume of each ball in P and that in Q.

○ a) 1000 : 729

○ b) 729 : 512

○ c) 729 : 1000

○ d) 512 : 729

Q23. For how many natural numbers less than 10^5 is the sum of their digits equal to 10?

Q24. Ram and Laxman were paid Rs.6,000 for completing a piece of work together. If Laxman received Rs.2000 as his share, and he can complete the work in twelve days when working alone, find the number of days in which Ram alone can complete the work.

○ a) 5 days

○ b) 10 days

○ c) 8 days

○ d) 6 days

Q25. Let S_n denote the sum of the first n terms of an arithmetic progression. If $\dfrac{S_3}{S_9} = \dfrac{1}{6}$, find the ratio of the third term of the progression to the tenth term.

a) $\dfrac{3}{11}$

b) $\dfrac{2}{11}$

c) $\dfrac{3}{10}$

d) $\dfrac{4}{11}$

Q26. If a sum lent at simple interest amounts to Rs.3240 in 4 years and to Rs.3780 in 6 years, in how many years will the sum become twice of itself?

a) 4

b) 6

c) 12

d) 8