Solutions of Mock CAT – 18 2017

Scorecard (procreview.jsp?qsetId=I59LjVUkVeQ=&qsetName=Mock CAT – 18 2017)	Accuracy (AccSelectGraph.jsp?qsetId=I59LjVUkVeQ=&qsetName=Mock CAT – 18 2017)	Time Analysis (TimeAnalysis.jsp?qsetId=I59LjVUkVeQ=&qsetName=Mock CAT – 18 2017)	Qs Analysis (QsAnalysis.jsp qsetId=I59LjVUkVeQ=&qsetName CAT – 18 2017)

VRC	DILR	QA

Sec 1

Q.1

In the following question, a word is used in 4 different ways. Choose the option in which the usage of the word is INCORRECT or INAPPROPRIATE. Type in the number of the choice which contains inappropriate or incorrect usage of the word. In case all the choices are appropriate, type in 0.

CUT

1) Many parents dread the days when their baby begins cutting its first teeth.
2) Although their company has faced financial difficulties, they do not intend to cut and run.
3) A workman was reportedly set alight after cutting across a power cable at a building site.
4) After a long struggle, he eventually cut his own album.

Solution:
Correct Answer : 3
Option 1 : Cut teeth = to have the teeth emerging through gums. The usage is appropriate.
Option 2 : cut and run = to avoid dealing with a difficult situation. The usage is appropriate
Option 3: cut across = go beyond, to use a shortcut etc. The correct word would be cutting through (to slice). Hence this is the correct option.
Option 4: cut album = to make a recording. The usage is appropriate.

Bookmark
Answer key/Solution

FeedBack

Q.2

In the following question, a word is used in 4 different ways. Choose the option in which the usage of the word is INCORRECT or INAPPROPRIATE. Type in the number of the choice which contains inappropriate or incorrect usage of the word. In case all the choices are appropriate, type in 0.

PULL

1) China and India have agreed to pull back troops in a bid to ease border tensions.
2) The new temple will pull in millions of foreign visitors.
3) He took a long, thoughtful pull on his pipe.
4) A few minutes later the driver pulled off the road to pray.

Solution:
Correct Answer : 0
Option 1: pull back = to withdraw. The usage is correct
Option 2: pull in = to attract people. This usage is correct
Option 3: pull on = inhale. The usage is correct
Option 4. Pulled off = if a vehicle pulls of a road, they stop by the side of it. The usage is correct.
Hence answer is 0

Bookmark
Answer key/Solution

FeedBack

Directions for questions 3 and 4: The following questions consist of a set of five sentences each. These sentences need to be arranged in a coherent manner to create a meaningful paragraph. Type in the correct order of the sentences in the space provided below the question.

Q.3

1) Tactical interaction refers to the way organizations affect each other by acting within the bounds set by their business models.
2) But there is more to tactics than the effect that they have on value creation and value capture to the firm employing them.
3) We answered the question "why are tactics important?" by arguing that, at the end of the day, tactical choices determine how much value is created and captured by the firm.
4) In reality, tactical choices also affect value creation and value capture of other firms with which the focal firm interacts.

5) Using the imagery of business model representations, tactical interactions occur when one firm's business model is in contact with that of another firm.

Solution:
Correct Answer : 32415
32 is connected. 3 talks about answering the question about why tactics is important. Then 2 says, there is more to tactics. This is further explained in 4 – and it talks about how firms interact. This tactical interaction is then clarified in 1 and then further explained in 5.

Bookmark
Answer key/Solution

FeedBack

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Q.4

1) And science, as a system of knowledge, is "a whole of cognition ordered according to principles", and the principles on which proper science is grounded are a priori.
2) Nature is precisely our experience of the world under the universal laws that include some such concepts.
3) Kant saw as one of the functions of philosophy to determine the precise unifying scope and value of each science.
4) For Kant, the unity of science is not the reflection of a unity found in nature, or, even less, assumed in a real world behind the apparent phenomena.
5) Rather, it has its foundations in the unifying a priori character or function of concepts, principles and of Reason itself.

Solution:
Correct Answer : 34521
3 introduces what Kant saw as one of the functions of philosophy is to determine the value and scope of science. 4 says 'what unity in science is not' as per Kant – not a unity found in nature. 5 says what it is – foundation of principle. This is then explained in 2 and 1. The order should be 2 then 1 because of the connected 'And' in 1.

Bookmark
Answer key/Solution

FeedBack

Q.5
The statement below has a part missing. Type in the number of the option that makes up the missing part.

_____, they also displayed evidence of more advanced farming methods, such as irrigation and terracing.

1) Though the Maya practiced a primitive type of "slash-and-burn" agriculture
2) Even though the Maya had practiced a primitive type of "slash-and-burn" agriculture
3) Alongside the primitive type of "slash-and-burn" agriculture that they practiced
4) Although the Maya practiced primitive types of "slash-and-burn" agriculture

Solution:
Correct Answer : 1
2 – 'had practiced'....., they also displayed" - Tense inconsistency, parallelism error.
3 – The sentence has a contrast - they practice primitive type.. yet had advanced method. So the word 'alongside' doesn't make sense. Parallelism error - thematic.
4 – primitive types : should not be plural

Bookmark
Answer key/Solution

FeedBack

Direction for questions 6-9: The following passage has a set of four questions. Read the questions and answer by marking the correct option.

Science fiction (SF) cannot be expected to give a realistic image of science and scientists. For the ordinary reader, tedious lab work, nightly calculations, boring committee meetings, the frustrating fight for funding, even problems with inappropriate equipment are of little interest. Readers expect and writer prefer the eccentric researcher, the extraordinary experiment, the spectacular discovery, the shocking application. The image of the scientist in SF is full c misconceptions and stereotypes. Geniuses and mad scientists displace less colourful and characteristic types. Crackpots and eggheads abound, glamorizin and demonizing science, SF also glamorizes and demonizes the scientist.

This image of the scientist reveals a double origin: the savant (searching wisdom in old scriptures) and the sorcerer (commanding magic, white and black). Quite commonly, SF stories are plotted along the lines of Goethe's The Sorcerer's Apprentice who is unable to control the forces he has called forth. Withi SF, this kind of plot goes back to Goethe's contemporary, the young Mary Shelley, whose novel Frankenstein, or The Modern Prometheus (1818) became th inspiration of a whole subgenre of SF/horror movies – and of stories on genetic engineering.

Victor Frankenstein, M. D., personified the aspirations and the hubris of science, challenging the "natural order" of things. The scientist in the role of a demiurge, imitating the act of creation, that image fits well into the conflicts between science and religion in the nineteenth century and it fits well into the strained relation between science and ethics in the late twentieth and early twenty-first century.

Frankenstein, perhaps the paradigm of the mad scientist, was copied many times, e. g. in Fritz Lang's movie Metropolis (1926), where a scientist with the looks of a cliché alchemist creates a robot in the likeness of a beautiful woman. But never, not even during the pulp era of the early twentieth century, did

vicious crackpot scientists outnumber their sane colleagues. The "professor" in SF, savant and wizard in one person, was to explain the intricate wonders c science to the laymen heroes and readers. He was the man of fundamental science, the theoretician and researcher, as well as the man of applied science, the inventor. He always had a useful new gadget at hand; or he quickly invented it during a crisis. Dr. Zarkov from the Flash Gordon comics (from 1934 onwards) is a case in point.

Contradicting the sociology of real science, fictional conventions helped the isolated scientific hero to survive the beginnings of Big Science, even the Manhattan project. Only rarely did writers mould their protagonists after the thousands of scientists involved in the construction of the atomic bomb. Albert Einstein, the outstanding visionary mind (at that time already rather secluded from the scientific community), remained their model; and he embodied the social responsibility of science. Perhaps the best example for this high regard of a scientist's social role and integrity is given in the movie The Day the Earth Stood Still (1951). Here, an extraterrestrial emissary tries to contact the leading figures of the world to warn them about the cosmic law of peace or destruction. Unsurprisingly there is no politician to receive the message – only a physicist, working alone on his home blackboard, summons hi fellow scientists from all over the world to listen to the messenger.

Since the late fifties scientists have been less commonly represented in SF. This may be due to a decline of the professional status and the social significanc of scientists. In a study of scientists in SF, Patrick Parrinder argues that a change in writers' careers may be an additional reason. Whereas in the "golden age" SF writers were characteristically science graduates, the more recent generation has (with exceptions) received little or no scientific education. One could debate whether this was affected by the growing reputation of SF as literature.

Today scientists are frequently represented as a faceless force, as anonymous as scientific-technological progress by itself. Parrinder concludes, that the heroes of cyberpunk SF in the eighties and nineties – starting with William Gibson's paradigmatic novel Neuromancer (1984) – are not researchers producing knowledge, but persons who control information: computer scientists and hackers who make sure that knowledge remains unregulated and potent.

Q.6
While discussing science fiction since the late fifties, the author leaves open the idea that:

1 ◯ the decline in the professional status of scientists has had an impact in the creation of less number of science fictions.

2 ◯ the growing reputation of science fiction could be the reason for the increase in the number of SF writers with little or no scientific education.

3 ◯ the SF has created an image that the scientists are no longer creators of knowledge but they are controllers of information.

4 ◯ there is a lack of interest among those who have had scientific education to partake in creating science fiction stories.

Bookmark

Answer key/Solution

Solution:
Correct Answer : 2
Genre - Science and Technology / Ethics and Fiction
The last sentence of the penultimate paragraph says - "One could debate whether this was affected by the growing reputation of SF as literature." The author leaves open the possibility that the growing reputation of SF could be the reason as to why there were more SF writers who had little or no scientific education. Hence 2 is correct.

Option 1 - The passage says "Since the late fifties scientists have been less commonly represented in SF." The option incorrectly mentions that there is a decline in science fictions whereas the passage mentions about the decline in scientists depicted in science fictions.

Option 3 – This is specific to the novel Neuromancer and not a general phenomenon.

Option 4 – The passage does not mention any specific reason as to why there were less number of writers with scientific education. To suggest that it is du to lack of interest would not be based on the passage.

FeedBack

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This image of the scientist reveals a double origin: the savant (searching wisdom in old scriptures) and the sorcerer (commanding magic, white and black). Quite commonly, SF stories are plotted along the lines of Goethe's The Sorcerer's Apprentice who is unable to control the forces he has called forth. Withi SF, this kind of plot goes back to Goethe's contemporary, the young Mary Shelley, whose novel Frankenstein, or The Modern Prometheus (1818) became th inspiration of a whole subgenre of SF/horror movies – and of stories on genetic engineering.

Victor Frankenstein, M. D., personified the aspirations and the hubris of science, challenging the "natural order" of things. The scientist in the role of a demiurge, imitating the act of creation, that image fits well into the conflicts between science and religion in the nineteenth century and it fits well into the strained relation between science and ethics in the late twentieth and early twenty-first century.

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the inventor. He always had a useful new gadget at hand; or he quickly invented it during a crisis. Dr. Zarkov from the Flash Gordon comics (from 1934 onwards) is a case in point.

Contradicting the sociology of real science, fictional conventions helped the isolated scientific hero to survive the beginnings of Big Science, even the Manhattan project. Only rarely did writers mould their protagonists after the thousands of scientists involved in the construction of the atomic bomb. Albert Einstein, the outstanding visionary mind (at that time already rather secluded from the scientific community), remained their model; and he embodied the social responsibility of science. Perhaps the best example for this high regard of a scientist's social role and integrity is given in the movie The Day the Earth Stood Still (1951). Here, an extraterrestrial emissary tries to contact the leading figures of the world to warn them about the cosmic law of peace or destruction. Unsurprisingly there is no politician to receive the message – only a physicist, working alone on his home blackboard, summons hi fellow scientists from all over the world to listen to the messenger.

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Today scientists are frequently represented as a faceless force, as anonymous as scientific-technological progress by itself. Parrinder concludes, that the heroes of cyberpunk SF in the eighties and nineties – starting with William Gibson's paradigmatic novel Neuromancer (1984) – are not researchers producing knowledge, but persons who control information: computer scientists and hackers who make sure that knowledge remains unregulated and potent.

Q.7

It can be inferred from the passage that the scientists in a science fiction:

1 ◯ **is less likely to be malicious.**

2 ◯ **is more likely to be socially irresponsible.**

3 ◯ **is less likely to be eccentric.**

4 ◯ **is almost always demonizes science.**

Solution:
Correct Answer : 1
Genre - Science and Technology / Ethics and Fiction
In para 4: "But never, not even during the pulp era of the early twentieth century, did vicious crackpot scientists outnumber their sane colleagues."

Bookmark

Answer key/Solution

From the above, one can clearly interpret that one is likely to see more of sane scientists than vicious scientists in SF. This makes option 1 correct.

Option 2 – Para 6: "Only rarely did writers mould their protagonists after the thousands of scientists involved in the construction of the atomic bomb..... Perhaps the best example for this high regard of a scientist's social role and integrity is given in the movie." This clearly makes option B incorrect.

Option 3 – Para 1: "Geniuses and mad scientists displace less colourful and characteristic types. Crackpots and eggheads abound." So, it is more likely that they are eccentric and not less likely.

Option 4 – 'almost always' makes it incorrect.

FeedBack

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Q.8
Which of the following is the most apt title for the passage?

1 Science and Science Fiction: An Symbiotic Relationship

2 The Scientist in The Science Fiction

3 The Evolution of Science Fiction

4 Where Science Stops, Science Fiction Starts

Solution:
Correct Answer : 2
Genre - Science and Technology / Ethics and Fiction
The passage discusses how scientists are depicted in science fiction.

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Answer key/Solution

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Q.9

There is evidence in the passage to support each one of the following EXCEPT:

1 conflicts between theology and science fit well with the characterization of at least one of the scientist in SF.

2 "The Day that the Earth Stood Still" exemplifies the Science's social responsibility.

3 the sub-genre of horror movies has had its inspiration from a science fiction novel.

4 in the novel Neuromancer, the computer scientists are originators of potent knowledge.

Solution:
Correct Answer : 4
Genre - Science and Technology / Ethics and Fiction
Last para says :" novel Neuromancer (1984) – are not researchers producing knowledge". They don't produce knowledge. So they cannot be originators of knowledge.

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Answer key/Solution

Q.10

The statement below has a part missing. Type in the number of the option that make up the missing part.

The grace of Raphael's Madonna paintings — _____— came into harmony with their subtle constructed meaning.

1) her flawless beauty and youthful sentiment
2) its romanticized aesthetics and fond sentiment
3) his depiction of aesthetics and sentiment
4) their idealized beauty and tender sentiment

Solution:
Correct Answer : 4
Option 1- The statement talks about Raphael's paintings. The grace of his painting and not the grace of Madonna. Hence 1 is not correct.
Option 2- *'its'* is incorrect. The statement talks about paintings.
Option 3 – the subject is Raphael's paintings and not Raphael – hence *'his'* is inappropriate.

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Answer key/Solution

Q.11

In the following question, five sentences are given. Of these, four sentences can be logically sequenced to make a coherent paragraph. One of the sentence does not belong to the paragraph. Type in the sentence number that doesn't fit into the paragraph.

1) One tattoo artist I spoke to told me that as recently as 15 years ago, he believed so strongly that "the customer is always right" that he wouldn't even sa no to swastikas or Nazi lightning bolts even though he himself is Jewish.
2) A good tattoo artist ought to steer her customers away from a poor choice, even if that means dissuading them from spending their money.
3) An experienced tattoo artist knows all kinds of stuff that her customers won't know: which kind of ink looks bad on which kind of skin, whether certain designs are doomed to quickly deteriorate, even how likely it is that someone will regret a given decision.
4) In the case of a customer service provider whose product will be on your body for the rest of your life, this part of the job would seem to be all the more important.
5) In that light, the money one pays a tattoo artist should be buying, among other things, her honest and informed advice.

Solution:
Correct Answer : 1
The context of the paragraph is that the customer should make good choice and ask for the tattoo artist's advice. 1 is out of context which describes a tattoo artist who doesn't care about the choices of the customer.

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Answer key/Solution

Q.12

In the following question, five sentences are given. Of these, four sentences can be logically sequenced to make a coherent paragraph. One of the sentence does not belong to the paragraph. Type in the sentence number that doesn't fit into the paragraph.

1) Their native keenness, their instinctive elegance, their flexibility of mind, are their only hierarchy; and these make the daughters of the people the equa of the most lofty dames.
2) She was one of those pretty and charming girls, born by a blunder of destiny in a family of employees.
3) She had no dowry, no expectations, no means of being known, understood, loved, married by a man rich and distinguished; and she let them make a matc for her with a little clerk in the Department of Education.
4) She was simple since she could not be adorned; but she was unhappy as though kept out of her own class; for women have no caste and no descent, thei beauty, their grace, and their charm serving them instead of birth and fortune.
5) She had a rich friend, a comrade of her convent days, whom she did not want to go and see any more, so much did she suffer as she came away.

Solution:
Correct Answer : 5
1,2 3, and 4 (in some order) describe a woman. These sentences answer the question 'who is she'. 5 gives very specific information about her rich friend whom she does not want to see.

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Answer key/Solution

Q.13
Four alternative summaries are given below the text. Type the number of the option that best captures the essence of the text.

The first thing you must do is admit to yourself that you need to change, that you really want to do something about the way you presently talk. This is tough but your commitment must be total; not even a small part of you must hold back. Don't dwell longingly on your fluency in the magical belief that someday your speech blocks will disappear. There is no magic potion, no pink pill that will cure stuttering. Don't sit around waiting for the right time, for a inspiration to come to you—you must go to "it." You must see that the old solutions, the things you have done to help yourself over the years (and those cover-up suggestions from well-meaning amateur therapists, "Think what you want to say," "Slow down," etc.) simply do not work. Ruts wear deep, though, and you will find it difficult to change; even though the way you presently talk is not particularly pleasant, it is familiar. It is the unknown from which we shrink.

1) There is no automatic solution to stuttering because the old solutions simply do not work. You must admit to yourself that change is needed and commit yourself totally to it.
2) You should avoid procrastination; shun the fear of change; acknowledge the fact that old solutions don't work and commit totally towards addressing stuttering.
3) The starting point of curing stuttering is to acknowledge that you need change and this can come about by understanding that there is no magic potion for curing stuttering.
4) No matter what you try there is no quick solution to curing stuttering. You must endure temporary discomfort for long range improvement.

Solution:
Correct Answer : 2
The paragraph says this about curing stuttering.
You need to change... stop waiting for the right time...there is no automatic solution... need to be committed.. forget the old methods... change is tough... but you go to do it.
The above is best explained in option 2.
Option 1 – has a wrong causal connection.
Option 3 – gets the second part wrong. The passage doesn't say the reason for change is best explained by the fact that there is no magic potion.
Option 4 – irrelevant as it talks about things that are not mentioned in the paragraph.

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Answer key/Solution

Q.14
Four alternative summaries are given below the text. Type the number of the option that best captures the essence of the text.

The rock art of Palaeolithic Europe is essentially an art of caves: paintings and engravings made on the walls of caves, mostly in their deepest and most difficult to reach recesses. This art is constituted for the most part by animal representations: there are very few human figures, and most of them are hybrids showing both animal and human features. However, what could be the general signification of all this? What relationship could be envisaged between the caves and the animals? We can start from an observation made by Leroi-Gourhan, according to which it is suggested that the entire cave had female symbolic meaning for the prehistoric peoples; he thinks that they have left some evidence of this, marking or thoroughly anointing with red paint narrow and oval passages, fissures, holes and cavities. In this way, the cave became a mysterious place peopled by feminine shapes. This is interpreted as a kind of "fertility cult" of Palaeolithic hunters, based on an opposition between male and female symbols: the animals themselves could be regarded as forming groups of "males" and "females", not according to the explicit sex of the individual, which is rarely evidenced, but by associating the entire species with either male or female symbols.

1) The significance of the rock art of Palaeolithic Europe is best explained by Leroi-Gourhan — a kind of fertility cult of Palaeolithic hunters wherein the drawings of an entire species is associated with either male or female symbols.
2) The significance of the rock art of Palaeolithic Europe is that the entire cave had a symbolic meaning for the prehistoric people, which is based on an opposition between male and female symbols.
3) The significance of the rock art of Palaeolithic Europe, according to Leroi Gourhan, is that the paintings of the animals are symbolic and this can be

interpreted as a kind of fertility cult of Palaeolithic hunters.
4) The significance of the rock art of Palaeolithic Europe is that it has very few human figures, however, Leroi-Gourhan's suggestion that these have symbolic meaning clarifies the otherwise intriguing nature of these art.

Solution:
Correct Answer : 3
The para says this:
Rock art of Palaeolithic Europe has lot of painting of animals... why?.... Start with Leroi's observation... has some meaning... animals are depicted as an individual sex... symbolises fertility cult..
The above is summarised in option 3.
Option 1 – 'best explained' by Leroi : author does not say that the explanation is the 'best'.
Option 2 – Leroi is missing.
Option 4 – gives credit to Leroi – something that the author has not done in the paragraph.

Bookmark
Answer key/Solution

FeedBack

Directions for questions 15-17: The following passage has a set of three questions. Read the questions and answer by marking the correct option.

My racial stock caused my grandparents few problems, and they quickly adopted the scornful attitude local residents took toward visitors who expressed such hang-ups. Sometimes when Gramps saw tourists watching me play in the sand, he would come up beside them and whisper, with appropriate reverence, that I was the great-grandson of King Kamehameha, Hawaii's first monarch. "I'm sure that your picture's in a thousand scrapbooks, Bar," he liked to tell me with a grin, "from Idaho to Maine." That particular story is ambiguous, I think; I see in it a strategy to avoid hard issues. And yet Gramps would just as readily tell another story, the one about the tourist who saw me swimming one day and, not knowing who she was talking to, commented that "swimming must just come naturally to these Hawaiians." To which he responded that that would be hard to figure, since "that boy happens to be my grandson, his mother is from Kansas, his father is from the interior of Kenya, and there isn't an ocean for miles in either damn place." For my grandfather, race wasn't something you really needed to worry about anymore; if ignorance still held fast in certain locales, it was safe to assume that the rest of the world would be catching up soon.

In the end I suppose that's what all the stories of my father were really about. They said less about the man himself than about the changes that had taken place in the people around him, the halting process by which my grandparents' racial attitudes had changed. The stories gave voice to a spirit that would grip the nation for that fleeting period between Kennedy's election and the passage of the Voting Rights Act: the seeming triumph of universalism over parochialism and narrowmindedness, a bright new world where differences of race or culture would instruct and amuse and perhaps even ennoble. A useful fiction, one that haunts me no less than it haunted my family, evoking as it does some lost Eden that extends beyond mere childhood.

There was only one problem: my father was missing. He had left paradise, and nothing that my mother or grandparents told me could obviate that single, unassailable fact. Their stories didn't tell me why he had left. They couldn't describe what it might have been like had he stayed. Like the janitor, Mr. Reed, or the black girl who churned up dust as she raced down a Texas road, my father became a prop in someone else's narrative. An attractive prop—the alien figure with the heart of gold, the mysterious stranger who saves the town and wins the girl—but a prop nonetheless.

I don't really blame my mother or grandparents for this. My father may have preferred the image they created for him—indeed, he may have been complicit in its creation. In an article published in the Honolulu Star-Bulletin upon his graduation, he appears guarded and responsible, the model student, ambassador for his continent. He mildly scolds the university for herding visiting students into dormitories and forcing them to attend programs designed to promote cultural understanding—a distraction, he says, from the practical training he seeks. Although he hasn't experienced any problems himself, he detects self-segregation and overt discrimination taking place between the various ethnic groups and expresses wry amusement at the fact that "Caucasians" in Hawaii are occasionally at the receiving end of prejudice. But if his assessment is relatively clear-eyed, he is careful to end on a happy note. One thing other nations can learn from Hawaii, he says, is the willingness of races to work together toward common development, something he has found whites elsewhere too often unwilling to do.

I discovered this article, folded away among my birth certificate and old vaccination forms, when I was in high school. It's a short piece, with a photograph of him. No mention is made of my mother or me, and I'm left to wonder whether the omission was intentional on my father's part, in anticipation of his long departure. Perhaps the reporter failed to ask personal questions, intimidated by my father's imperious manner; or perhaps it was an editorial decision, not part of the simple story that they were looking for. I wonder, too, whether the omission caused a fight between my parents.

I would not have known at the time, for I was too young to realize that I was supposed to have a live-in father, just as I was too young to know that I needed a race. For an improbably short span it seems that my father fell under the same spell as my mother and her parents; and for the first six years of my life, even as that spell was broken and the worlds that they thought they'd left behind reclaimed each of them, I occupied the place where their dreams had been.

Q.15
Which of the following would be the most accurate about the stories about author's father told by his mother and grandparents?

1 ◯ They formed an image of his absent father.

2 ◯ The author dismissed the stories as fiction.

3 ◯ The stories told more about the impact the changing socio-political milieu had on people around his father.

4 ◯ The stories haunted the author more than it haunted his family.

Solution:
Correct Answer : 3
Genre - Autobiography / Biography

Bookmark
Answer key/Solution

"They said less about the man himself than about the changes that had taken place in the people around him"

FeedBack

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Q.16

Based on the passage, which of the following is true about Hawaii?

1 **Caucasians are more likely to prejudiced in Hawaii than others.**

2 **Hawaii is considered as a paradise by visitors.**

3 **King Kamehameha was the first ruler of Hawaii.**

4 **None of the above.**

Solution:
Correct Answer : 3
Genre - Autobiography / Biography
"King Kamehameha, Hawaii's first monarch."

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Bookmark

Answer key/Solution

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Q.17

The author's tone in the third paragraph can be best described as:

1 ◯ **mildly indignant**

2 ◯ **overtly mournful**

3 ◯ **visibly morose**

4 ◯ **covertly helpless**

Solution:
Correct Answer : 1
Genre - Autobiography / Biography
He is mildly angry. It is the best option. 2 - Too extreme. The author doesn't employ an overtly sad tone anywhere in the passage, especially in the third paragraph.
3 - Too extreme. The author is not pessimistic. His overall attitude is optimistic.
4 - Irrelevant. The author doesn't play the victim card anywhere.

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Answer key/Solution

Q.18

The following question consists of a paragraph from which the last sentence has been deleted. From the given options, choose the one which completes th paragraph in a logical and coherent manner. Type the number of that option in the space provided below the question.

Unlike most novels that delve closely into the life of a main protagonist, McGregor distances the reader in a more omniscient fashion, picking and choosing whom to look in on and when. Sharing only fleeting glimpses of their lives like an unattached observer, McGregor darts in and out of the lives of his characters in seemingly random fashion. Chapters are divided into years, years into quick flashes of months or days—moments in time all indelibly etched into the fabric of the community, into the souls of the people therein, and into the hearts and minds of readers. Despite the unusual style—no direct dialogue and no paragraph breaks here—McGregor's lyrical prose and sense of detail totally immerse the reader.

1) Reaching the end of a chapter is like fast-forwarding to the present day without knowing what the future holds.
2) Reaching the end of a chapter one understands the complexities of the characters and the intensity of their pain.
3) Reaching the end of a chapter is like coming up for a brief gulp of air before diving in to see what happens next.
4) Reaching the end of a chapter is like a story that is already closed, ended, and tossed into the seas; but a new story has just begun.

Solution:

Correct Answer : 3
The para says:

Hatke **book... chapters in the book is the 'usual types'.. it total immerse the reader.**
Reaching the end of a chapter_____

The next sentence should talk about they wanting to move to the next since they are immersed. This is best captured in 3.
Option 1 – something irrelevant to the context
Option 2 –'intensities of their pain' – whole para does not discuss any pain
Option 4 – says that once one chapter is done, there is a new story. Seems to suggest that every chapter is one story. This is not the case.

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Answer key/Solution

Q.19
The following question consists of a paragraph from which the last sentence has been deleted. From the given options, choose the one which completes th paragraph in a logical and coherent manner. Type the number of that option in the space provided below the question.

So long as an educated minority, living off all previous generations, hardly guessed why life was so easy to live, so long as the majority, working day and night, did not quite realize why they received none of the fruits of their labour, both parties believed this to be the natural order of things, and the world c cannibalism could survive. People often take prejudice or habit for truth and in that case feel no discomfort: but if they once realize that their truth is nonsense, the game is up.

1) From then onwards neither the educated minority nor the hardworking majority will be willing to change what they perceive as their reality.
2) From then onwards it is only by force that a man can be compelled to do what he considered to be absurd.
3) From then onwards as the human species moves into a new millennium, it will face daunting and unknown challenges.
4) From then onwards, what will help humanity survive this predicament is that each one understands their place in the society.

Solution:
Correct Answer : 2
Para says the following:
Minority – life is easy... Majority- life is hard. Both believe that is the 'truth'. Once they realise the actual truth... game is over.
From then onwards.....
What should come next is to talk about the consequence of being aware of the truth.
This is best captured in 2.
Option 1 – says that the people will not change. contradicts the fact that game is up.
Option 3 – talks about new millennium. No context for the same from the para
Option 4 – talks about something out of context – how humanity will survive.

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Answer key/Solution

Q.20
Four sentences are given below with a word or a phrase missing. From among the options choose the word that can fit in maximum number of the sentence Type in the number of the correct option.

A. We need to recognize that without the theistic framework, this world will _____ under the weight of our own addictions, principally to ourselves.
B. Something had to be made of all that energy and fury - if not, Helen thought, the girl would _____.
C. In his speech, the president stated that our country will not _____ to fear and terror.
D. Everyone was shocked to see the loving couple's relationship_____ and end in divorce.

1) implode
2) fail
3) succumb
4) perish

Solution:
Correct Answer : 1
Option 1 – implode fits in A, B and D
Option 2 – fail fits in D
Option 3 – succumb fits in C
Option 4 – perish fits in A

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Answer key/Solution

Directions for questions 21-24: The following passage has a set of four questions. Read the questions and answer by marking the correct option.

The following formula sums up the basic idea of virtue ethics:
1. An action is right if, and only if, it is what a virtuous agent would do in the circumstances

2. A virtuous agent is one who exercises the virtues
3. A virtue is a character trait that human beings need to flourish

There have been a few major objections to virtue ethics:

ONE: Some suggest that morality is about interaction and how we treat others but virtue ethics is about the self, developing personal character and flourishing. Such a focus is seen as self-regarding and self-centred, and contrary to morality itself. We are supposed to act kindly, bravely and honestly in order to achieve happiness/well-being for ourselves, and this fails to look at others as ends in themselves. However, this criticism does not take account of the true nature of the virtues. The virtues themselves are other-regarding, that is to say they are concerned with behaviour towards others. It is meaningless to always think virtuously, one must act in a virtuous manner towards others.

TWO: Some critics question whether or not well-being/flourishing can in fact be viewed as an absolute (or supreme) value. An absolute value is something at which all other acts should aim. In virtue ethics, acting always in a virtuous way leads to us achieving a sense of well-being. The critics often suggest that personal flourishing/well-being is simply self-interest, not a value at all. But it is argued by the virtue ethicists that the good of the moral agent and others are combined in virtue ethics as in order for the moral agent to flourish they must behave virtuously to others.

THREE: It has been suggested that virtue ethics is too reliant on contingencies (the variable circumstances of situations) and so fails to give concrete guidance as to how one should behave when faced with practical problems. This means that virtue ethics fails to be action-guiding. Virtue ethics is defended on the basis that practical problems are so variable that a theory which is flexible and situation sensitive is superior to one which provides rigid uncompromising rules. Virtue ethics emphasises the development of ethical judgment over time so that an individual agent does not need to blindly follow rule but can decide on the right action by themselves.

FOUR: The problem of moral luck is not taken into account in virtue ethics. There are many things beyond the agent's control, and this can affect their actions negatively. While encouraging positive natural tendencies will lead to the development of virtue, it is equally possible that certain external influences can lead to development of negative natural tendencies into vice. The lucky agent will have good role models to follow, reinforcement of virtuous behaviour. Why should such an agent be praised for their virtuous behaviour and others blamed for their vice (non-virtuous behaviour) when it is the result of external forces? Virtue ethics recognises just how easily one can be unlucky and develop vices and that is why they value the virtues and flourishing so highly.

Q.21
In addressing the fourth criticism to virtue ethics, the author uses which one of the following principles?

1 **If a virtue turns into a vice due to external forces, then the virtue comes under scrutiny.**

2 **The rightness or wrongness of an action depend on their consequences and not on whether the action was intended to be virtuous.**

3 **Disregarding the outcomes of virtues may lead the agent to overlook external forces that can impact the virtuous action.**

4 **Acknowledging the possibility that virtues are not immune to external forces amplifies the value of virtues.**

Solution:
Correct Answer : 4
Genre -Philosophy
The last sentence : Virtue ethics recognises just how easily one can be unlucky and develop vices and that is why they value the virtues and flourishing so highly.

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Bookmark

Answer key/Solution

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Q.22

The first and the second criticism to virtue ethics are similar in which regard?

1 Both the criticisms base its premise on the notion that narcissism is not a moralistic value.

2 Both the criticisms make a claim that there is no such thing as supreme value.

3 Both the criticisms are based on the notion that the primary objective of morality is to help others.

4 Both the criticisms are premised on the fact that morality is subjective.

Bookmark

Answer key/Solution

Solution:
Correct Answer : 1
Genre -Philosophy
ONE: "Such a focus is seen as self-regarding and self-centred, and contrary to morality itself"

TWO: The critics often suggest that personal flourishing/well-being is simply self-interest, not a value at all.

FeedBack

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Q.23

The response by the author to the third criticism suggests that, according to the author, morality is NOT:

1 **pragmatic.**

2 **realistic.**

3 **dogmatic.**

4 **optimistic.**

Solution:
Correct Answer : 3
Genre -Philosophy
Virtue ethics emphasises the development of ethical judgment over time so that an individual agent does not need to blindly follow a rule but can decide on the right action by themselves.

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Q.24
From the formula that sums up the basic idea of virtue ethics, it can be logically deduced that:

1 **human beings should not have any vice.**

2 **if human beings are virtuous, then human beings will flourish.**

3 **Both A and B can be logically deduced.**

4 **Neither A nor B can be logically deduced.**

Solution:
Correct Answer : 4
Genre -Philosophy
"A virtue is a character trait that human beings need to flourish".
From the above one cannot deduce that human beings should not have any vice. The statement merely states that virtue is a character trait that human beings should develop. Hence A is incorrect
The statement does not say that if someone is virtuous they will flourish. The option twists the context of how 'flourish' is used in the sentence.

Bookmark

Answer key/Solution

FeedBack

Directions for questions 25-28: The following passage has a set of four questions. Read the questions and answer by marking the correct option.

Underpinning successful operation in emerging markets must be an in-depth understanding of the market and operational landscape of these economies. Businesses need to understand the fluctuations in emerging market dynamics and should adopt flexible strategies accordingly, tailoring existing businesses models and organisation structures to realise competitive advantage in these new markets. This will support them in utilising the many opportunities arising in emerging markets, which include the existence of large infrastructure gaps, expected shifts in demographics and consumer demands, and the emergence of new technologies and operating models.

To succeed, companies cannot withhold investments and adopt a 'wait and see' approach or they risk losing out to nimbler domestic and foreign

competitors. Rather, companies should adopt flexible, robust and innovative business models, which in many cases may be fundamentally different to thos used in developed markets.

For sustainable and long-term success in emerging markets, companies need to innovate. This could take the form of: developing agile processes and asset light business models; adapting technological systems to local conditions; designed localised products to appeal to emerging market customer segments; o achieving cost efficiencies in the distribution mechanism. Innovation is often a stepwise process, with companies acquiring new capabilities along the way, such as enhanced customer intelligence, new cross-sector and international business relationships, and intellectual property

Though innovation is key to addressing the unique nature of emerging markets, rapidly changing consumer behaviour and new technologies and sale channels require companies to re-think their go-to market capabilities. Consumers in emerging markets are getting richer, but what distinguishes them from consumer markets in advanced countries is that they remain relatively more price sensitive. This is partially because their relative income levels are still lower, so consumers will spend relatively more time searching for the lowest prices. It is also likely a result of the numerous digital and non-digital sales channels now available to customers, giving them more information on where the lowest prices can be found.

Tailoring go-to-market strategies should be focussed on increasing the channels available to consumers for purchases to create a fully integrated digital and in-store experience. The rapid growth in internet usage in emerging markets over the previous 15 years gives retailers in these markets the ability to reach new consumers in more effective ways to promote and sell their products.

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Q.25

Based on the passage, which of the following is not an appropriate strategy for a cereal company based in USA to enter the emerging market of India?

1 ◯ **Adopt a similar marketing strategy as in the US positioning the cereal as a healthier breakfast option.**

2 ◯ **Lower price and reposition products that cater to the needs of the Indian market**

3 ◯ **Shift all sourcing, including packaging, to India to reduce costs and increase efficiencies**

4 ◯ **None of the above**

Solution:
Correct Answer : 1
Genre- Business and Management / Business Strategy
(1) is using the same strategy – this is not what the article is recommending.
(2) – Article suggests - "designed localised products to appeal to emerging market customer segments". Option (2) does that.
(3) Article suggests – "or achieving cost efficiencies in the distribution mechanism". Option (3) does that.

FeedBack

Bookmark

Answer key/Solution

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Q.26

Which of the following can be presented as a relevant example to support the arguments made in paragraph 2?

1 **Several analysts predicted that because of the Apple stores' diminutive size and non-aggressive sales team, Apple failed in making a significant numbe of sales. However, the Apple retail program reached $1 billion in annual sales.**

2 **Walmart invested $120m in its first year in Brazil, seeking to make the most of its buying power, efficient store management and the effective use of technology in supply chain management. However, despite high demand for its low-price products, the company registered a loss of $16.5m in its first yea**

3 **Nokia failed to respond to the shifting consumer demand that came with it. Samsung, on the other hand, moved quickly into the smartphone market an surpassed Nokia in cell phone sales, effectively ending Nokia's 14-year run as the world's top handset maker.**

4 **All of the above**

Solution:
Correct Answer : 3
Genre- Business and Management / Business Strategy
Para 2 talks about the importance of investments and responding to the changes. (3) is an apt example.
(1) does not mention anything about investment or responding to the changes. It just mentions that some thought Apple stores will fail, but it did not.
(2) talks about loss after huge investment which will not be a good example to elucidate what the author is trying to explain.

Bookmark

Answer key/Solution

FeedBack

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Q.27
Which of the following cannot be inferred from the fourth paragraph?

1 **The more the number of sales channels, the more the opportunities for the consumers to compare product prices.**

2 **Consumers from advanced countries are more likely to be less price conscious than consumers from emerging markets.**

3 **Understanding the go-to-market capabilities is more important than innovation.**

4 **All of the above**

Solution:
Correct Answer : 3
Genre- Business and Management / Business Strategy
1. "It is also likely a result of the numerous digital and non-digital sales channels now available to customers, giving them more information on where the lowest prices can be found."
From the above it can be clearly seen that the article suggests that the sales channels gives opportunity to find the lowest process. Hence, it can be inferred that the sales channels will give opportunities to compare those prices.
2. . "Consumers in emerging markets are getting richer, but what distinguishes them from consumer markets in advanced countries is that they remain relatively more price sensitive." 2 can be clearly inferred.

Bookmark

Answer key/Solution

3. The passage says that innovation is important. Also, understanding go-to-market capabilities is important. It does not say that one is more important than the other.

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Q.28
Which of the following words can describe the tone of the passage?

1 **Prescribing**

2 **Informative**

3 **Pedantic**

4 **Pragmatic**

Bookmark

Answer key/Solution

Solution:
Correct Answer : 2
Genre- Business and Management / Business Strategy
Informative: providing useful or interesting information. The article provides useful information for organization who are planning to enter emerging markets. This is a tone of the passage.
Prescribing: state authoritatively or as a rule that (an action or procedure) should be carried out. Though the passage suggests things that should be done, it does not say it as an authoritative manner.
Pedantic: excessively concerned with minor details or rules. The article is not pedantic.
Pragmatic: Giving practical suggestions and keeping a realistic approach. This passage doesn't give any particular suggestion throughout.

FeedBack

Directions for questions 29-34: The following passage has a set of six questions. Read the questions and answer by marking the correct option.

The next summer the truce for a year ended, after lasting until the Pythian Games. During the armistice the Athenians expelled the Delians from Delos, concluding that they must have been polluted by some old offence at the time of their consecration, and that this had been the omission in the previous purification of the island, which, as I have related, had been thought to have been duly accomplished by the removal of the graves of the dead. The Delians had Atramyttium in Asia given them by Pharnaces, and settled there as they removed from Delos.

Meanwhile Cleon prevailed on the Athenians to let him set sail at the expiration of the armistice for the towns in the direction of Thrace with twelve hundred heavy infantry and three hundred horses from Athens, a large force of the allies, and thirty ships. First touching at the still besieged Scione, and taking some heavy infantry from the army there, he next sailed into Cophos, a harbour in the territory of Torone, which is not far from the town. From thence, having learnt from deserters that Brasidas was not in Torone, and that its garrison was not strong enough to give him battle, he advanced with his army against the town, sending ten ships to sail round into the harbour. He first came to the fortification lately thrown up in front of the town by Brasidas i order to take in the suburb, to do which he had pulled down part of the original wall and made it all one city. To this point Pasitelidas, the Lacedaemonian

commander, with such garrison as there was in the place, hurried to repel the Athenian assault; but finding himself hard pressed, and seeing the ships that had been sent round sailing into the harbour, Pasitelidas began to be afraid that they might get up to the city before its defenders were there and, the fortification being also carried, he might be taken prisoner, and so abandoned the outwork and ran into the town. But the Athenians from the ships had already taken Torone, and their land forces following at his heels burst in with him with a rush over the part of the old wall that had been pulled down, killing some of the Peloponnesians and Toronaeans in the melee, and making prisoners of the rest, and Pasitelidas their commander amongst them. Brasida meanwhile had advanced to relieve Torone, and had only about four miles more to go when he heard of its fall on the road, and turned back again. Cleon ar the Athenians set up two trophies, one by the harbour, the other by the fortification and, making slaves of the wives and children of the Toronaeans, sent the men with the Peloponnesians and any Chalcidians that were there, to the number of seven hundred, to Athens; whence, however, they all came home afterwards, the Peloponnesians on the conclusion of peace, and the rest by being exchanged against other prisoners with the Olynthians. About the same time Panactum, a fortress on the Athenian border, was taken by treachery by the Boeotians. Meanwhile Cleon, after placing a garrison in Torone, weighed anchor and sailed around Athos on his way to Amphipolis.

About the same time Phaeax, son of Erasistratus, set sail with two colleagues as ambassador from Athens to Italy and Sicily. The Leontines, upon the departure of the Athenians from Sicily after the pacification, had placed a number of new citizens upon the roll, and the commons had a design for redividing the land; but the upper classes, aware of their intention, called in the Syracusans and expelled the commons. These last were scattered in variou directions; but the upper classes came to an agreement with the Syracusans, abandoned and laid waste their city, and went and lived at Syracuse, where they were made citizens. Afterwards some of them were dissatisfied, and leaving Syracuse occupied Phocaeae, a quarter of the town of Leontini, and Bricinniae, a strong place in the Leontine country, and being there joined by most of the exiled commons carried on war from the fortifications.

The Athenians hearing this, sent Phaeax to see if they could not by some means so convince their allies there and the rest of the Sicilians of the ambitious designs of Syracuse as to induce them to form a general coalition against her, and thus save the commons of Leontini. Arrived in Sicily, Phaeax succeeded a Camarina and Agrigentum, but meeting with a repulse at Gela did not go on to the rest, as he saw that he should not succeed with them, but returned through the country of the Sicels to Catana, and after visiting Bricinniae as he passed, and encouraging its inhabitants, sailed back to Athens.

Q.29

During the armistice, according to the author, why the Athenians expelled the Delians from Delos?

1 ◯ They have been charged for polluting the warfare.

2 ◯ According to the author, this must have been because of some old offence.

3 ◯ Offence of removing the graves made the Athenians expell the Delians.

4 ◯ None of the above.

Solution:
Correct Answer : 3
Genre - History / Historical Narrative
Options 1,2,3 may seem correct . But option 3 is more appropriate an answer as it actually gives a reason. Option 1 is incomplete. Option 2 is also partially correct. Refer to the line: *"...had been thought to have been duly accomplished by the removal of the graves of the dead."*

FeedBack

Bookmark

Answer key/Solution

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Q.30

All of the following sentences are true except:

1 ◯ **the upper class negotiated with the Syracusans regarding the expelling of commoners from the state.**

2 ◯ **Phaeax was sent to save the commons of Leotini by raging a war with Gela.**

3 ◯ **a fortress on the Athenian border was taken by the Boeotians via perfidy.**

4 ◯ **the truce of the war lasted till the Pythian Games.**

Solution:
Correct Answer : 2
Genre - History / Historical Narrative
All the options are correct except 2. Phaeax was sent to talk with the other Peloponnesian states to form a coalition where he was repulsed by Gale. Other options all exist in the passage.

Bookmark

Answer key/Solution

FeedBack

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Q.31

According to the 1st paragraph of the given passage, which of the following defines 'consecration'?

1 ◯ **The action of commanding someone**

2 ◯ **The action of ordaining someone**

3 ◯ **The action of seducing someone**

4 The action of following someone

Solution:
Correct Answer : 2
Genre - History / Historical Narrative
The correct definition of the word would be ordaining someone and not commanding someone although both are quite similar to each other. Since a war was about to begin and the orders given by the Athenians to the Delians were official orders. Hence option 2 is the best answer. Option 3 and 4 are incorrect.

Bookmark

Answer key/Solution

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The Athenians hearing this, sent Phaeax to see if they could not by some means so convince their allies there and the rest of the Sicilians of the ambitious designs of Syracuse as to induce them to form a general coalition against her, and thus save the commons of Leontini. Arrived in Sicily, Phaeax succeeded a Camarina and Agrigentum, but meeting with a repulse at Gela did not go on to the rest, as he saw that he should not succeed with them, but returned through the country of the Sicels to Catana, and after visiting Bricinniae as he passed, and encouraging its inhabitants, sailed back to Athens.

Q.32
What can be derived from the said journey of Phaeax, keeping in mind the last sentence of the passage?

1 It was an unsuccessful one because he was nauseated back at Gela.

2 It was a successful one because he was successful in spreading the word of the Athenians in almost all the states.

3 He sailed back to Athens after deciphering the words to all the states to form a coalition against Syracuse.

4 All of the above.

Solution:
Correct Answer : 3
Genre - History / Historical Narrative
Option 1 - "nauseated back" is not something that can be concretely derived.
Option 2 - "almost all the states" can't be inferred.
Option 3 - It's very specific. Refer to the line *"The Athenians hearing this, sent Phaeax to see if they could not by some means so convince their allies there and the rest of the Sicilians of the ambitious designs of Syracuse as to induce them to form a general coalition against her..." an the last line of the passage also states "...as he passed, and encouraging its inhabitants, sailed back to Athens."*
Hence, option 3 is the correct answer.

Bookmark

Answer key/Solution

FeedBack

Directions for questions 29-34: The following passage has a set of six questions. Read the questions and answer by marking the correct option.

The next summer the truce for a year ended, after lasting until the Pythian Games. During the armistice the Athenians expelled the Delians from Delos, concluding that they must have been polluted by some old offence at the time of their consecration, and that this had been the omission in the previous purification of the island, which, as I have related, had been thought to have been duly accomplished by the removal of the graves of the dead. The Delians had Atramyttium in Asia given them by Pharnaces, and settled there as they removed from Delos.

Meanwhile Cleon prevailed on the Athenians to let him set sail at the expiration of the armistice for the towns in the direction of Thrace with twelve hundred heavy infantry and three hundred horses from Athens, a large force of the allies, and thirty ships. First touching at the still besieged Scione, and taking some heavy infantry from the army there, he next sailed into Cophos, a harbour in the territory of Torone, which is not far from the town. From thence, having learnt from deserters that Brasidas was not in Torone, and that its garrison was not strong enough to give him battle, he advanced with his army against the town, sending ten ships to sail round into the harbour. He first came to the fortification lately thrown up in front of the town by Brasidas i order to take in the suburb, to do which he had pulled down part of the original wall and made it all one city. To this point Pasitelidas, the Lacedaemonian commander, with such garrison as there was in the place, hurried to repel the Athenian assault; but finding himself hard pressed, and seeing the ships that had been sent round sailing into the harbour, Pasitelidas began to be afraid that they might get up to the city before its defenders were there and, the fortification being also carried, he might be taken prisoner, and so abandoned the outwork and ran into the town. But the Athenians from the ships had already taken Torone, and their land forces following at his heels burst in with him with a rush over the part of the old wall that had been pulled down, killing some of the Peloponnesians and Toronaeans in the melee, and making prisoners of the rest, and Pasitelidas their commander amongst them. Brasida meanwhile had advanced to relieve Torone, and had only about four miles more to go when he heard of its fall on the road, and turned back again. Cleon ar the Athenians set up two trophies, one by the harbour, the other by the fortification and, making slaves of the wives and children of the Toronaeans, sent the men with the Peloponnesians and any Chalcidians that were there, to the number of seven hundred, to Athens; whence, however, they all came home afterwards, the Peloponnesians on the conclusion of peace, and the rest by being exchanged against other prisoners with the Olynthians. About the same time Panactum, a fortress on the Athenian border, was taken by treachery by the Boeotians. Meanwhile Cleon, after placing a garrison in Torone, weighed anchor and sailed around Athos on his way to Amphipolis.

About the same time Phaeax, son of Erasistratus, set sail with two colleagues as ambassador from Athens to Italy and Sicily. The Leontines, upon the departure of the Athenians from Sicily after the pacification, had placed a number of new citizens upon the roll, and the commons had a design for redividing the land; but the upper classes, aware of their intention, called in the Syracusans and expelled the commons. These last were scattered in variou directions; but the upper classes came to an agreement with the Syracusans, abandoned and laid waste their city, and went and lived at Syracuse, where they were made citizens. Afterwards some of them were dissatisfied, and leaving Syracuse occupied Phocaeae, a quarter of the town of Leontini, and Bricinniae, a strong place in the Leontine country, and being there joined by most of the exiled commons carried on war from the fortifications.

The Athenians hearing this, sent Phaeax to see if they could not by some means so convince their allies there and the rest of the Sicilians of the ambitious designs of Syracuse as to induce them to form a general coalition against her, and thus save the commons of Leontini. Arrived in Sicily, Phaeax succeeded a Camarina and Agrigentum, but meeting with a repulse at Gela did not go on to the rest, as he saw that he should not succeed with them, but returned through the country of the Sicels to Catana, and after visiting Bricinniae as he passed, and encouraging its inhabitants, sailed back to Athens.

Q.33
In this passage based on history and on the tactics taken by the Athenians, which of the following can be inferred?

1 **War can come to an end via negotiation and violence can be avoided.**

2 **War beyond its impact, there is a way via which negotiation can happen.**

3 **Negotiation in the early warfare was a rare phenomenon.**

4 **Coalition and not negation was the basic approach of the Athenians.**

Solution:
Correct Answer : 4
Genre - History / Historical Narrative
Option 1 - far fetched - Passage is silent on negotiation.
Option 2- far fetched - It's an extreme conclusion.
Option 3 - "rare" can't be determined
The last paragraph talks about Athenian's attempts to form a coalition against Syracuse. Therefore 4 is the correct option.

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Bookmark

Answer key/Solution

Directions for questions 29-34: The following passage has a set of six questions. Read the questions and answer by marking the correct option.

The next summer the truce for a year ended, after lasting until the Pythian Games. During the armistice the Athenians expelled the Delians from Delos, concluding that they must have been polluted by some old offence at the time of their consecration, and that this had been the omission in the previous purification of the island, which, as I have related, had been thought to have been duly accomplished by the removal of the graves of the dead. The Delians had Atramyttium in Asia given them by Pharnaces, and settled there as they removed from Delos.

Meanwhile Cleon prevailed on the Athenians to let him set sail at the expiration of the armistice for the towns in the direction of Thrace with twelve hundred heavy infantry and three hundred horses from Athens, a large force of the allies, and thirty ships. First touching at the still besieged Scione, and taking some heavy infantry from the army there, he next sailed into Cophos, a harbour in the territory of Torone, which is not far from the town. From thence, having learnt from deserters that Brasidas was not in Torone, and that its garrison was not strong enough to give him battle, he advanced with his army against the town, sending ten ships to sail round into the harbour. He first came to the fortification lately thrown up in front of the town by Brasidas i order to take in the suburb, to do which he had pulled down part of the original wall and made it all one city. To this point Pasitelidas, the Lacedaemonian commander, with such garrison as there was in the place, hurried to repel the Athenian assault; but finding himself hard pressed, and seeing the ships that

had been sent round sailing into the harbour, Pasitelidas began to be afraid that they might get up to the city before its defenders were there and, the fortification being also carried, he might be taken prisoner, and so abandoned the outwork and ran into the town. But the Athenians from the ships had already taken Torone, and their land forces following at his heels burst in with him with a rush over the part of the old wall that had been pulled down, killing some of the Peloponnesians and Toronaeans in the melee, and making prisoners of the rest, and Pasitelidas their commander amongst them. Brasida meanwhile had advanced to relieve Torone, and had only about four miles more to go when he heard of its fall on the road, and turned back again. Cleon ar the Athenians set up two trophies, one by the harbour, the other by the fortification and, making slaves of the wives and children of the Toronaeans, sent the men with the Peloponnesians and any Chalcidians that were there, to the number of seven hundred, to Athens; whence, however, they all came home afterwards, the Peloponnesians on the conclusion of peace, and the rest by being exchanged against other prisoners with the Olynthians. About the same time Panactum, a fortress on the Athenian border, was taken by treachery by the Boeotians. Meanwhile Cleon, after placing a garrison in Torone, weighed anchor and sailed around Athos on his way to Amphipolis.

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Q.34
What is the narrative structure of the given passage?

1 The structure is based on the description of a war, so the point of approach is from the third person point of view.

2 Since the author also uses this sentence "...which, as I have related, had been thought to have been duly accomplished by the removal of the graves of the dead", we can call it a commentary on war where there is an involvement of the author.

3 It is basically a biography of a war, so the narrative structure is therefore biographical.

4 All of the above.

Solution:
Correct Answer : 3
Genre - History / Historical Narrative
As the question asks about the narrative structure of the passage we should look into the technical aspect of it. Option 1 - It talks about the narrator and not the overall narrative pattern. It is also distorted as it creates a wrong causal relationship between war narrative and its pattern.
Option 2 - One line can't determine the narrative pattern of the passage.
Option 3 - It is the best option as the passage talks about the biography of a particular era.

Bookmark
Answer key/Solution

FeedBack

Sec 2

Directions for questions 35 to 38 : Answer the questions on the basis of the information given below.

There are four persons A, B, C and D. Each of them has a distinct number of coins of denominations Re. 1, Rs. 2, Rs. 5 and Rs. 10. A person can have maximum 20 coins of any denomination and minimum 5 coins of any denomination. The number of coins of any particular denomination with a person is different from the number of coins with other person having coins of same or different denomination. For example if A has 20 coins of Rs. 5, then among th other three, no one can have 20 coins of any of the four denomination. The amount with C and D is Rs. 276 and Rs. 348 respectively. The number of coins o denomination Rs.10 with A is more than that of denomination Rs. 5 with him, which, in turn was more than that of denomination Rs. 2 with him. The numbe of Re1 coin with A is the least among all the other denominations of coins with him.

Q.35
If the total amount with B is Rs. 204, then what is the total amount (in Rs.) with A?

Solution:
Correct Answer : 132

Bookmark
Answer key/Solution

Maximum number of coins of any denomination = 20
Minimum number of coins of any denomination = 5
Since, there are 16 distinct numbers these numbers will be from 5 to 20.
Now, upon observation only possibility for C and D is,
348 = 17 × 1 + 18 × 2 + 19 × 5 + 20 × 10
and
276 = 13 × 1 + 14 × 2 + 15 × 5 + 16 × 10

Total amount with B = Rs. 204.
It can be observed that 204 = 9 × 1 + 10 × 2 + 11 × 5 + 12 × 10
So, only numbers left for A are 5, 6, 7, 8.
∴ Amount with A = 5 × 1 + 6 × 2 + 7 × 5 + 8 × 10
= Rs. 132.

FeedBack

Directions for questions 35 to 38 : Answer the questions on the basis of the information given below.

There are four persons A, B, C and D. Each of them has a distinct number of coins of denominations Re. 1, Rs. 2, Rs. 5 and Rs. 10. A person can have maximum 20 coins of any denomination and minimum 5 coins of any denomination. The number of coins of any particular denomination with a person is different from the number of coins with other person having coins of same or different denomination. For example if A has 20 coins of Rs. 5, then among th other three, no one can have 20 coins of any of the four denomination. The amount with C and D is Rs. 276 and Rs. 348 respectively. The number of coins o denomination Rs.10 with A is more than that of denomination Rs. 5 with him, which, in turn was more than that of denomination Rs. 2 with him. The numbe of Re1 coin with A is the least among all the other denominations of coins with him.

Q.36
What can be the maximum possible number of Rs. 10 coins with all the four persons put together?

Solution:
Correct Answer : 59

Bookmark

Answer key/Solution

Maximum number of coins of any denomination = 20
Minimum number of coins of any denomination = 5
Since, there are 16 distinct numbers these numbers will be from 5 to 20.
Now, upon observation only possibility for C and D is,
348 = 17 × 1 + 18 × 2 + 19 × 5 + 20 × 10
and
276 = 13 × 1 + 14 × 2 + 15 × 5 + 16 × 10

For maximum possible number of Rs. 10 coins:
A or B can have maximum of 11 or 12 coins
C → 16
D → 20
∴ Required sum = 59.

FeedBack

Directions for questions 35 to 38 : Answer the questions on the basis of the information given below.

There are four persons A, B, C and D. Each of them has a distinct number of coins of denominations Re. 1, Rs. 2, Rs. 5 and Rs. 10. A person can have maximum 20 coins of any denomination and minimum 5 coins of any denomination. The number of coins of any particular denomination with a person is different from the number of coins with other person having coins of same or different denomination. For example if A has 20 coins of Rs. 5, then among th other three, no one can have 20 coins of any of the four denomination. The amount with C and D is Rs. 276 and Rs. 348 respectively. The number of coins o denomination Rs.10 with A is more than that of denomination Rs. 5 with him, which, in turn was more than that of denomination Rs. 2 with him. The numbe of Re1 coin with A is the least among all the other denominations of coins with him.

Q.37
What can be the maximum possible number of Re. 1 coins with all the four persons put together?

Solution:
Correct Answer : 50

Bookmark

Answer key/Solution

Maximum number of coins of any denomination = 20
Minimum number of coins of any denomination = 5
Since, there are 16 distinct numbers these numbers will be from 5 to 20.
Now, upon observation only possibility for C and D is,
348 = 17 × 1 + 18 × 2 + 19 × 5 + 20 × 10
and
276 = 13 × 1 + 14 × 2 + 15 × 5 + 16 × 10

For maximum possible number of Rs. 1 coins:
A → 8
B → 12
C → 13
D → 17
∴ Required sum = 50.

FeedBack

Directions for questions 35 to 38 : Answer the questions on the basis of the information given below.

There are four persons A, B, C and D. Each of them has a distinct number of coins of denominations Re. 1, Rs. 2, Rs. 5 and Rs. 10. A person can have maximum 20 coins of any denomination and minimum 5 coins of any denomination. The number of coins of any particular denomination with a person is different from the number of coins with other person having coins of same or different denomination. For example if A has 20 coins of Rs. 5, then among th other three, no one can have 20 coins of any of the four denomination. The amount with C and D is Rs. 276 and Rs. 348 respectively. The number of coins o denomination Rs.10 with A is more than that of denomination Rs. 5 with him, which, in turn was more than that of denomination Rs. 2 with him. The numbe of Re1 coin with A is the least among all the other denominations of coins with him.

Q.38

Had A had a minimum 1 coin of any denomination, what would have been the maximum value of the absolute difference between the total amount with A and the total amount with a person who had the maximum 16 coins of any particular denomination?

Solution:
Correct Answer : 216

Bookmark

Answer key/Solution

Maximum number of coins of any denomination = 20
Minimum number of coins of any denomination = 5
Since, there are 16 distinct numbers these numbers will be from 5 to 20.
Now, upon observation only possibility for C and D is,
$348 = 17 \times 1 + 18 \times 2 + 19 \times 5 + 20 \times 10$
and
$276 = 13 \times 1 + 14 \times 2 + 15 \times 5 + 16 \times 10$

If maximum number of coins of same denomination = 16 and min. number = 1 for A
So, as per conditions of the question.
Maximum possible sum is 16 coins of Rs. 10, 15 coins of Rs. 5, 14 coins of Rs. 2 and 13 coins of Rs. 1.
i.e., $16 \times 10 + 15 \times 5 + 14 \times 2 + 13 \times 1 = 276$.
Similarly, min. possible sum is 4 coins of Rs. 10, 3 coins of Rs. 5, 2 coins of Rs. 2, 1 coin of Rs. 1.
i.e., $4 \times 10 + 3 \times 5 + 2 \times 2 + 1 \times 1 = \text{Rs. } 60$.
∴ Required difference = 276 – 60 = Rs. 216

FeedBack

Directions for questions 39 to 42 : Answer the questions on the basis of the information given below.

The following table gives the marks scored by 4 students – Ravi, Gautam, Prakash and Sukhvinder – in 3 subjects – Science, Social Studies (SST) and Mathematics. The 4 students are disguised as P, Q, R and S in any order in the table below.

Student / Subject	P	Q	R	S
Science	144	161	160	146
SST	154	156	155	152
Mathematics	156	151	156	153

- **The marks scored by Prakash in Mathematics are more than or equal to the marks scored by the others in the same subject.**
- **The absolute difference between the total score of Gautam and that of Ravi is 3.**

Q.39

If Sukhvinder had his lowest score in 'Science', then which of the following is true?

1 **The lowest score in Mathematics is scored by Prakash.**

2 **Prakash had lowest score in Science.**

3 **Prakash had lowest score in SST.**

4 **No definite conclusion.**

Solution:
Correct Answer : 2
Your Answer : 2

Bookmark

Answer key/Solution

From the given information, Prakash scored more than or equal to the other in the subject Mathematics and difference between the total score of Gautam and Ravi is 3. Hence, Prakash is either 'P' or 'R', Gautam and Ravi are either 'P and 'S' or 'Q' and 'R' in any order.

Sukhvinder had his lowest score in Science, then he is either 'P' or 'S'.
If sukhvinder is 'P', then Prakash must be 'R' which is not possible, since Gautam and Ravi cannot be 'Q' and 'S' together.

Hence, in this case Sukhvinder is 'S' and Prakash is 'P'.
So, Prakash had the lowest score in Science.

FeedBack

Directions for questions 39 to 42 : Answer the questions on the basis of the information given below.

The following table gives the marks scored by 4 students – Ravi, Gautam, Prakash and Sukhvinder – in 3 subjects – Science, Social Studies (SST) and Mathematics. The 4 students are disguised as P, Q, R and S in any order in the table below.

Student / Subject	P	Q	R	S
Science	144	161	160	146
SST	154	156	155	152
Mathematics	156	151	156	153

- **The marks scored by Prakash in Mathematics are more than or equal to the marks scored by the others in the same subject.**
- **The absolute difference between the total score of Gautam and that of Ravi is 3.**

Q.40
Statement I: Gautam had his lowest score in Mathematics.
Statement II: Ravi had his lowest score in SST.

1 **If statement II is true, statement I is necessarily false.**

2 **If statement I is false, statement II is necessarily true.**

3 **If statement I is true, then statement II is necessarily true.**

4 **None of these.**

✔

Solution:
Correct Answer : 3
Your Answer : 3
From the given information, Prakash scored more than or equal to the other in the subject Mathematics and difference between the total score of Gautam and Ravi is 3. Hence, Prakash is either 'P' or 'R', Gautam and Ravi are either 'P and 'S' or 'Q' and 'R' in any order.

Bookmark
Answer key/Solution

If Gautam had his lowest score in Mathematics, then he is 'Q' and hence Ravi is 'R'.
So, if statement I is true, then statement II is necessarily true, i.e., Ravi has the lowest score in SST if Gautam had his lowest score in Mathematics.

FeedBack

Directions for questions 39 to 42 : Answer the questions on the basis of the information given below.

The following table gives the marks scored by 4 students – Ravi, Gautam, Prakash and Sukhvinder – in 3 subjects – Science, Social Studies (SST) and Mathematics. The 4 students are disguised as P, Q, R and S in any order in the table below.

Student / Subject	P	Q	R	S
Science	144	161	160	146
SST	154	156	155	152
Mathematics	156	151	156	153

- **The marks scored by Prakash in Mathematics are more than or equal to the marks scored by the others in the same subject.**
- **The absolute difference between the total score of Gautam and that of Ravi is 3.**

Q.41
Statement I: Sukhvinder scored the lowest marks in Mathematics.
Statement II: Ravi's total score in all three subjects is more than that of Sukhvinder.

1 **If statement I is true, statement II is necessarily true.**

2 **If statement I is true, statement II is necessarily false.**

3 **Both statements I and II are true.**

4 **None of these**

✔

Bookmark

Answer key/Solution

Solution:
Correct Answer : 2
Your Answer : 2
From the given information, Prakash scored more than or equal to the other in the subject Mathematics and difference between the total score of Gautam and Ravi is 3. Hence, Prakash is either 'P' or 'R', Gautam and Ravi are either 'P and 'S' or 'Q' and 'R' in any order.

Sukhvinder is 'Q' if she had scored the lowest marks in Mathematics with a total score of 468.
In this case, Gautam and Ravi will be 'P' and 'S' in any order.
If Ravi is 'P', then his total score will be 454 which is less than the total score of 'Q'.
If Ravi is 'S', then his total score will be 451, which is less than the total score of 'Q'.
Hence, if statement I is true, then statement II is false.

FeedBack

Directions for questions 39 to 42 : Answer the questions on the basis of the information given below.

The following table gives the marks scored by 4 students – Ravi, Gautam, Prakash and Sukhvinder – in 3 subjects – Science, Social Studies (SST) and Mathematics. The 4 students are disguised as P, Q, R and S in any order in the table below.

Student / Subject	P	Q	R	S
Science	144	161	160	146
SST	154	156	155	152
Mathematics	156	151	156	153

- **The marks scored by Prakash in Mathematics are more than or equal to the marks scored by the others in the same subject.**
- **The absolute difference between the total score of Gautam and that of Ravi is 3.**

Q.42
Statement I: Ravi had the highest score in Science.
Statement II: Gautam had the highest score in SST.

1 **Both the statements could be true simultaneously**

2 **At least one of the statements must be true.**

3 **Not more than one statement can be true.**

4 **None of the above.**

✖

Bookmark

Answer key/Solution

Solution:
Correct Answer : 3
Your Answer : 4

From the given information, Prakash scored more than or equal to the other in the subject Mathematics and difference between the total score of Gautam and Ravi is 3. Hence, Prakash is either 'P' or 'R', Gautam and Ravi are either 'P and 'S' or 'Q' and 'R' in any order.

If Ravi got the highest score in Science, he is 'Q' and hence Gautam is 'R'.
If Gautam had the highest score in SST, he is 'Q' and then Ravi will be 'R'.
∴ Both statements cannot be simultaneously true.
Hence, not more than one of the statements can be true.

FeedBack

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

Two teams– India and Australia – played a special warm up cricket match of five overs. Each of the teams bat for 5 overs and each over consists of 6 balls. A it was a special match so it has some special rules too. Every six that a batsman hits, gets him one extra ball just after he hits a six in the same over, while every four gets him one extra run. But the fours and sixes hit on the extra balls don't get him any extra balls or runs. No run in the match was scored in the form of extras - wides, no balls etc. The scorecard of the two teams containing partial information of runs scored on each ball is given in the table below. For example in over 3 India scored 2 runs on first ball , 0 runs on second, hits four on third, 3 runs on fourth, 1 run on fifth and the number of runs scored o sixth ball or after sixth ball (in case of batsman hit six on sixth ball) is not known. The cumulative score refers to the total number of runs scored till that

over, including the runs made in that over. For example, score of India at the end of the third over was 27.
(On any ball the possible number of runs that can be scored are a single (1 run), a double (2 runs), a triple (3 runs), a boundary (4 runs) and a sixer (6 runs). There are no over throw in the entire match. Blanks have been left intentionally)

Team	Over 1	Over 2	Over 3	Over 4	Over 5
India	1/0/3/0/1/_	0/3/1/1/2/2	2/0/4/3/1/_	4/0/6/_ /3/2/1	3/2/1/1/2/_
Cumulative Score	-	-	27	-	-
Australia	-	-	-	-	-
Cumulative Score	6	-	60	-	-

Q.43
What can be the maximum runs made by Australia in over 2?

1 **54**

2 **46**

3 **48**

4 **72**

✔

Solution:
Correct Answer : 1
Your Answer : 1
The runs made by Australia in the over 2 will be maximum if minimum runs are made in over 3 such that their sum is (60 – 6) = 54. Minimum runs that can be made in an over are 0, so the runs made in over 2 would be 54, if that is possible. We find that it is indeed possible, by many combinations of runs, one of them being 6(+6)/6(+6)/6(+6)/6(+6)/6(+6)/6(+0)/0.

Bookmark

Answer key/Solution

FeedBack

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

Two teams– India and Australia – played a special warm up cricket match of five overs. Each of the teams bat for 5 overs and each over consists of 6 balls. A it was a special match so it has some special rules too. Every six that a batsman hits, gets him one extra ball just after he hits a six in the same over, while every four gets him one extra run. But the fours and sixes hit on the extra balls don't get him any extra balls or runs. No run in the match was scored in the form of extras - wides, no balls etc. The scorecard of the two teams containing partial information of runs scored on each ball is given in the table below. For example in over 3 India scored 2 runs on first ball , 0 runs on second, hits four on third, 3 runs on fourth, 1 run on fifth and the number of runs scored o sixth ball or after sixth ball (in case of batsman hit six on sixth ball) is not known. The cumulative score refers to the total number of runs scored till that over, including the runs made in that over. For example, score of India at the end of the third over was 27.
(On any ball the possible number of runs that can be scored are a single (1 run), a double (2 runs), a triple (3 runs), a boundary (4 runs) and a sixer (6 runs). There are no over throw in the entire match. Blanks have been left intentionally)

Team	Over 1	Over 2	Over 3	Over 4	Over 5
India	1/0/3/0/1/_	0/3/1/1/2/2	2/0/4/3/1/_	4/0/6/_ /3/2/1	3/2/1/1/2/_
Cumulative Score	-	-	27	-	-
Australia	-	-	-	-	-
Cumulative Score	6	-	60	-	-

Q.44
What is the maximum possible runs that India could have scored in the match?

1 **67**

2 **71**

3 **65**

4 **None of these**

✖

Solution:
Correct Answer : 2
Your Answer : 4
As we have the cumulative score of India after over 3, to maximize the total runs we have to maximize the number of runs in 4th and fifth over. In fourth over it has one blank which is extra ball so the batsman can score maximum 6 runs on it and total score in this over will be 4(+1) + 0 + 6 + 6 + 3 + 2 + 1 = 23. For the last ball of fifth over , the maximum possible runs can be 6 (+ 6) and total score in this over will be 21. Hence, maximum possible score will be 27 + 23 + 21 = 71.

Bookmark

Answer key/Solution

FeedBack

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

Two teams– India and Australia – played a special warm up cricket match of five overs. Each of the teams bat for 5 overs and each over consists of 6 balls. A it was a special match so it has some special rules too. Every six that a batsman hits, gets him one extra ball just after he hits a six in the same over, while every four gets him one extra run. But the fours and sixes hit on the extra balls don't get him any extra balls or runs. No run in the match was scored in the form of extras - wides, no balls etc. The scorecard of the two teams containing partial information of runs scored on each ball is given in the table below. For example in over 3 India scored 2 runs on first ball , 0 runs on second, hits four on third, 3 runs on fourth, 1 run on fifth and the number of runs scored o sixth ball or after sixth ball (in case of batsman hit six on sixth ball) is not known. The cumulative score refers to the total number of runs scored till that over, including the runs made in that over. For example, score of India at the end of the third over was 27.
(On any ball the possible number of runs that can be scored are a single (1 run), a double (2 runs), a triple (3 runs), a boundary (4 runs) and a sixer (6 runs). There are no over throw in the entire match. Blanks have been left intentionally)

Team	Over 1	Over 2	Over 3	Over 4	Over 5
India	1/0/3/0/1/_	0/3/1/1/2/2	2/0/4/3/1/_	4/0/6/_ /3/2/1	3/2/1/1/2/_
Cumulative Score	-	-	27	-	-
Australia	-	-	-	-	-
Cumulative Score	6	-	60	-	-

Q.45
If Australia made the maximum possible runs in the over 2, then what is the minimum number of sixes hit by Australia in the same over?

1 **8**

2 **4**

3 **6**

4 **5**

Solution:
Correct Answer : 4
We know that the maximum possible runs made in over 2 by Australia are 54.
To make 54 runs, Australia can hit minimum 5 sixes as follows:
5 sixes i.e. 6(+ 4) / 6(+ 4) / 6(+ 4) / 6(+ 4) / 6(+ 3) / 4(+1)

Bookmark

Answer key/Solution

FeedBack

Directions for questions 43 to 46: Answer the questions on the basis of the information given below.

Two teams– India and Australia – played a special warm up cricket match of five overs. Each of the teams bat for 5 overs and each over consists of 6 balls. A it was a special match so it has some special rules too. Every six that a batsman hits, gets him one extra ball just after he hits a six in the same over, while every four gets him one extra run. But the fours and sixes hit on the extra balls don't get him any extra balls or runs. No run in the match was scored in the form of extras - wides, no balls etc. The scorecard of the two teams containing partial information of runs scored on each ball is given in the table below. For example in over 3 India scored 2 runs on first ball , 0 runs on second, hits four on third, 3 runs on fourth, 1 run on fifth and the number of runs scored o sixth ball or after sixth ball (in case of batsman hit six on sixth ball) is not known. The cumulative score refers to the total number of runs scored till that over, including the runs made in that over. For example, score of India at the end of the third over was 27.
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Team	Over 1	Over 2	Over 3	Over 4	Over 5
India	1/0/3/0/1/_	0/3/1/1/2/2	2/0/4/3/1/_	4/0/6/_ /3/2/1	3/2/1/1/2/_
Cumulative Score	-	-	27	-	-
Australia	-	-	-	-	-
Cumulative Score	6	-	60	-	-

Q.46
If the rules of the game were changed after over 3 during the innings of each team, and as per the new rule, no more extra balls for sixes, but the batsman gets 3 extra runs for each four instead of 1 and it was found that Australia made a total of 75 runs in the last two over, then what was the minimum possibl number of fours hit by Australia in the last two overs?

1 **0**

2 **1**

3 **3**

4 **4**

Bookmark

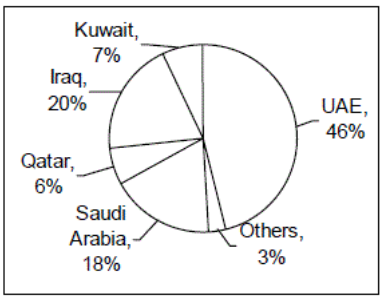
Answer key/Solution

Solution:
Correct Answer : 3
Your Answer : 3
To score 75 runs, and using the least number of fours, we try to hit sixes on all the 12 balls, giving us a total of 72 runs, but Australia has to make 75 runs.
Hence they we will need at least 3 fours such that:
6 × 9 + 4(+3) ×3 = 54 + 21 = 75.

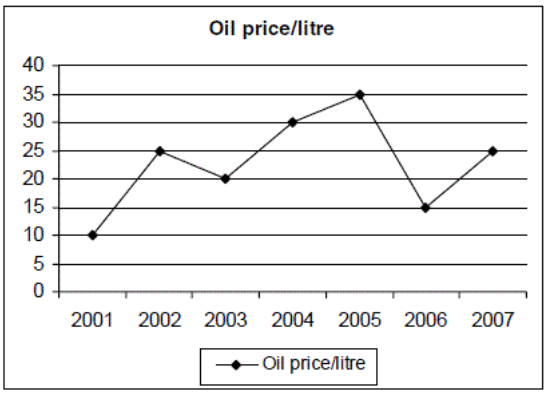
FeedBack

Direction for questions 47 to 50: Answer the questions on the basis of the information given below.

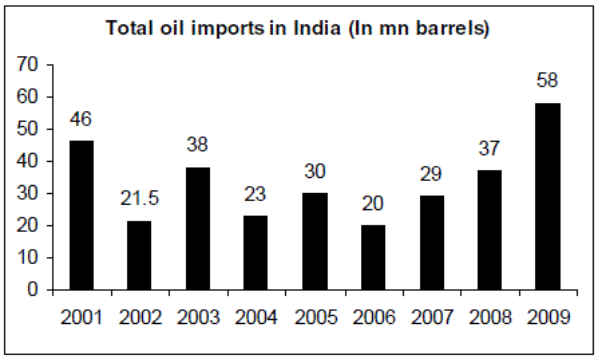
The pie chart shows the break-up of oil import in India from different countries in the year 2007. In 2007, India imported oil at the same price from each o the given countries/regions



The line graph shows the price (in Rs. per litres) at which oil was imported in India during the given years. Also given that 1 barrel = 60 litres.



The bar graph shows the total import of oil in India (in million barrels) during the years 2001 to 2009.



Q.47
The import amount (in million Rs.) of India from UAE in 2007 was

1 **20,010**

2 **33,350**

3 **20,700**

4 **28,000**

Solution:
Correct Answer : 1
Your Answer : 1

Bookmark

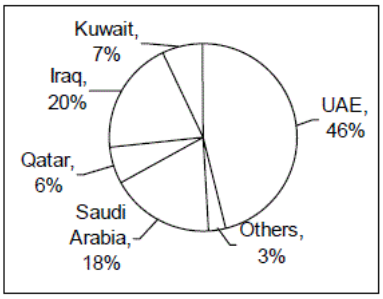
Answer key/Solution

India's total oil import in 2007 = 29 million barrels.
U.A.E.'s share = 46%, i.e. 13.34 million barrels.
∴ Value of oil import from U.A.E.
= 13.34 million × 60 litres × 25 = 20,010 million.

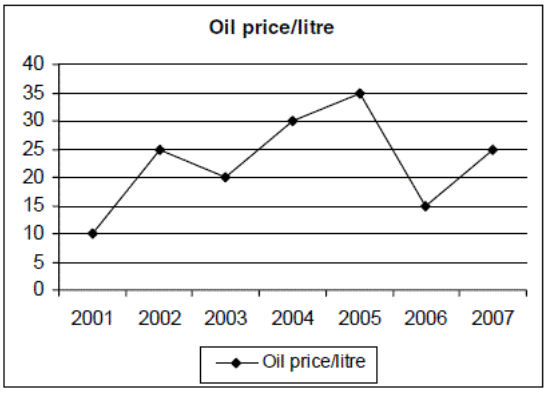
FeedBack

Direction for questions 47 to 50: Answer the questions on the basis of the information given below.

The pie chart shows the break-up of oil import in India from different countries in the year 2007. In 2007, India imported oil at the same price from each o the given countries/regions



The line graph shows the price (in Rs. per litres) at which oil was imported in India during the given years. Also given that 1 barrel = 60 litres.



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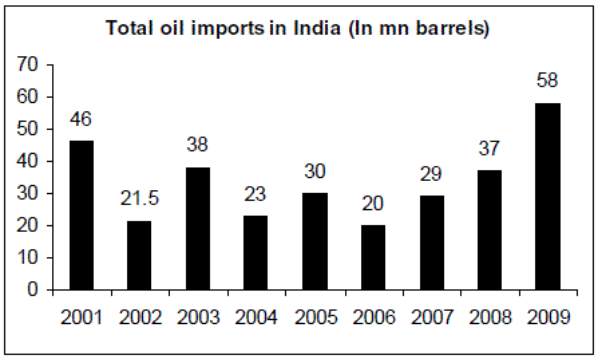


Q.48
In which of the following year the total import amount for oil was the highest during the period of 2001 to 2007?

1 **2001**

2 **2002**

3 **2003**

4 **2005**

Solution:

Bookmark

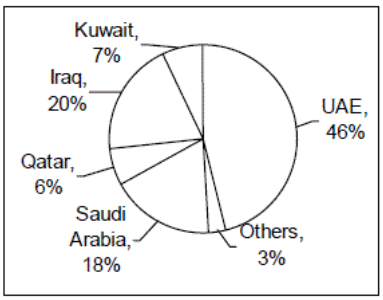
Correct Answer : 4
Your Answer : 3
In 2005, it was 30 million × 60 litres × 35
= 63,000 million.

FeedBack

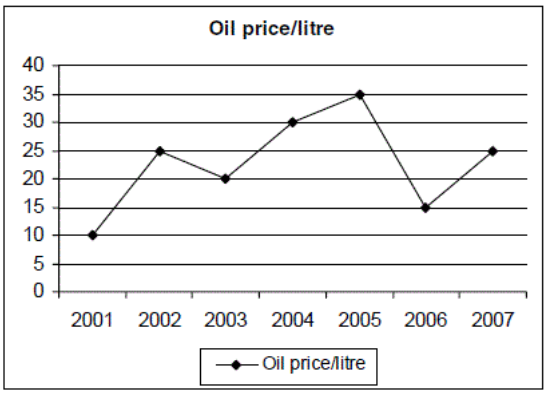
Answer key/Solution

Direction for questions 47 to 50: Answer the questions on the basis of the information given below.

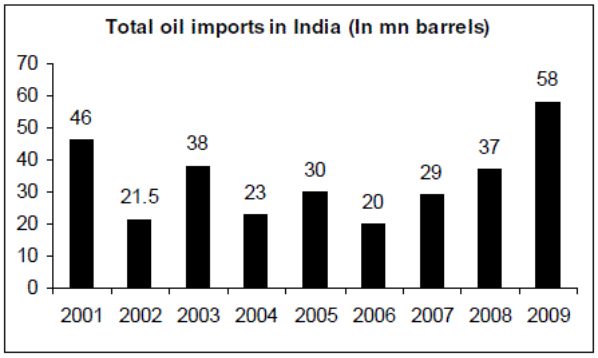
The pie chart shows the break-up of oil import in India from different countries in the year 2007. In 2007, India imported oil at the same price from each o the given countries/regions



The line graph shows the price (in Rs. per litres) at which oil was imported in India during the given years. Also given that 1 barrel = 60 litres.



The bar graph shows the total import of oil in India (in million barrels) during the years 2001 to 2009.



Q.49
If in 2008, Iraq did not supply oil to India, and countries from amongst Saudi Arabia, Qatar, Kuwait and UAE supply the same amount (in litre) as they did ir 2007, then approximately what would be the percentage share of Others in 2008 in India's total imports of oil in terms of volume?

1 **35%**

2 **23%**

3 **30%**

4 **40%**

Solution:
Correct Answer : 4
Your Answer : 4

Bookmark

Answer key/Solution

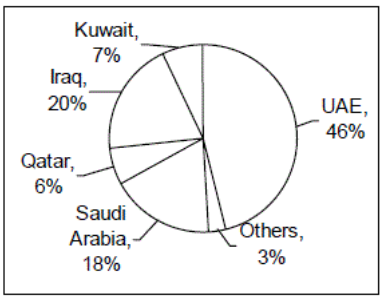
For the 4 countries in 2007, share is 77% of 29 which is 22.33 million. So, the share supplied by these four country in 2008 is also 22.33 million. Hence, share of others in 2008 is 37 – 22.33 = 14.67 million.
Hence percentage share of others is

$\frac{14.67}{37} \times 100 = 40\%$ (approx)

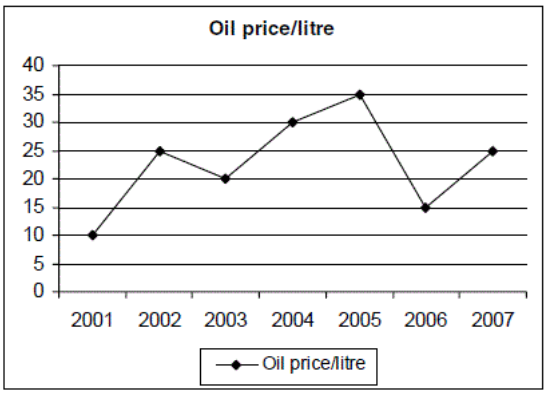
FeedBack

Direction for questions 47 to 50: Answer the questions on the basis of the information given below.

The pie chart shows the break-up of oil import in India from different countries in the year 2007. In 2007, India imported oil at the same price from each o the given countries/regions



The line graph shows the price (in Rs. per litres) at which oil was imported in India during the given years. Also given that 1 barrel = 60 litres.



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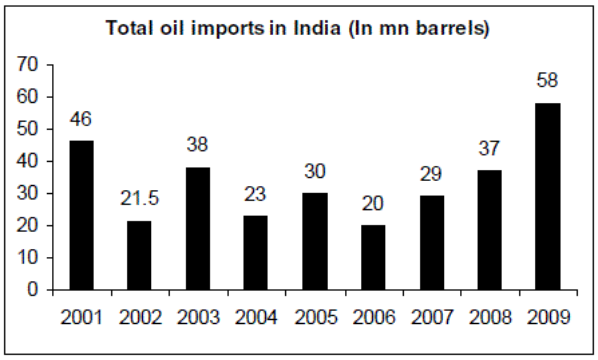

Q.50
What was the approximate compounded annual growth rate in the imports of oil between the years 2006 to 2009?

1 **57%**

2 **48%**

3 **43%**

4 **37%**

Solution:
Correct Answer : 3
Your Answer : 3

Bookmark

Answer key/Solution

Using the formula $A = P(1 + i)^n$, we get
$58 = 20(1 + i)^3$
$\Rightarrow (1 + i)^3 = 2.9$
$\Rightarrow 1 + i = 1.426.$
$\Rightarrow i \approx 43\%.$

FeedBack

Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

In recently concluded Indian Premiere League(IPL), a lot of gambling were going on. In Gambling, mostly fractional odds were used. If a bookie is offering a odd of 20/3 on winning of a particular team, it means that for every Rs. 3 that a gambler puts at stake, he earn Rs. 20 in case the team wins, in addition to the original stake being returned to him; if the team loses, gambler does not win anything and loses his stake. On a particular day, 4 Cricket Matches were played, the teams involved in those matches are given below:
Match I: RCB vs SRH
Match II: KKR vs MI
Match III: KXIP vs DD
Match IV: RPS vs GL

An "upset" happens when a team beats an opposition team which had a better chance of winning. The bookie does not offers good odds on teams that are expected to win. Like, a team with odds 3/8 has a better chance of winning than the team with odds 8/3.

The bookies has offered the following odds on different teams:

Match	Odds of team	Odds of team
I	RCB = $\frac{2}{5}$	SRH = $\frac{15}{2}$
II	KKR = $\frac{20}{4}$	MI = $\frac{3}{8}$
III	KXIP = $\frac{1}{5}$	DD = $\frac{15}{1}$
IV.	RPS = $\frac{13}{4}$	GL = $\frac{1}{4}$

Q.51
If a person put Rs. 400 at stake on one team in each of the 4 matches, what is the maximum possible amount that he could have won, given that only one of the 4 matches resulted in an upset?

1 **7010**

2 **8010**

3 **7510**

4 **6810**

Solution:
Correct Answer : 2

Bookmark

Answer key/Solution

If there is only 1 upset, in order to maximize his earning, he will put stakes on 4 winning teams – 3 that were expected to win and one that caused one upset. Among SRH, KKR, DD and RPS, DD has the best odds on upset i.e. on every Rs. 1 he gets Rs. 15.

$\therefore$ His total earning = $(400 + \frac{2}{5} \times 400) + (400 + \frac{3}{8} \times 400) + (400 + \frac{15}{1} \times 400) + (400 + \frac{1}{4} \times 400)$
$= 560 + 550 + 6400 + 500 = 8010.$

FeedBack

Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

In recently concluded Indian Premiere League(IPL), a lot of gambling were going on. In Gambling, mostly fractional odds were used. If a bookie is offering a odd of 20/3 on winning of a particular team, it means that for every Rs. 3 that a gambler puts at stake, he earn Rs. 20 in case the team wins, in addition to the original stake being returned to him; if the team loses, gambler does not win anything and loses his stake. On a particular day, 4 Cricket Matches were played, the teams involved in those matches are given below:
Match I: RCB vs SRH
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An "upset" happens when a team beats an opposition team which had a better chance of winning. The bookie does not offers good odds on teams that are expected to win. Like, a team with odds 3/8 has a better chance of winning than the team with odds 8/3.

The bookies has offered the following odds on different teams:

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II	KKR = $\frac{20}{4}$	MI = $\frac{3}{8}$
III	KXIP = $\frac{1}{5}$	DD = $\frac{15}{1}$
IV.	RPS = $\frac{13}{4}$	GL = $\frac{1}{4}$

Q.52
If there was no upset in any of the 4 matches, and person X puts Rs. 400, Rs. 800, Rs. 1000, Rs. 1200 in each match (one team per match) in any order, and last he earned the maximum possible amount, then what is his total earning?

1 **Rs. 4865**

2 **Rs. 4515**

3 **Rs. 4535**

4 **Rs. 4065**

Solution:
Correct Answer : 3

Bookmark

Answer key/Solution

Since, there are no upsets, so in order to maximize his earnings, he will put a stake on the team with better odds (among the expected winners only). Among RCB, MI, KXIP & GL, the person X has the best odds on RCB, followed by MI, followed by GL, followed by KXIP.

$\therefore$ His earnings = ($\frac{2}{5}$ of 1200 + 1200) + ($\frac{3}{8}$ of 1000 + 1000) + ($\frac{1}{4}$ of 800 + 800) + ($\frac{1}{5}$ of 400 + 400)

= 1680 + 1375 + 1000 + 480 = 4535.

FeedBack

Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

In recently concluded Indian Premiere League(IPL), a lot of gambling were going on. In Gambling, mostly fractional odds were used. If a bookie is offering a odd of 20/3 on winning of a particular team, it means that for every Rs. 3 that a gambler puts at stake, he earn Rs. 20 in case the team wins, in addition to the original stake being returned to him; if the team loses, gambler does not win anything and loses his stake. On a particular day, 4 Cricket Matches were played, the teams involved in those matches are given below:
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IV.	RPS = $\frac{13}{4}$	GL = $\frac{1}{4}$

Q.53

A person Y had a strong feeling that MI would win and thus he put Rs. 1500 at stake for MI. Also he put Rs. 1500 at stake for one of the teams playing matc IV. What is the difference between his maximum and minimum possible earnings?

1 **Rs.7540**

2 **Rs.7938.50**

3 **Rs.8437.50**

4 **Rs. 8617.50**

Solution:
Correct Answer : 3

Person Y's minimum possible earnings are zero, if both his teams lose. In match II, best possible outcome for this person is MI's winning, which gives him earning of (1500 + $\frac{3}{8}$ of 1500) = Rs. 2062.50

In Match IV, an upset would maximize his earning, that means if he puts his money on RPS and RPS wins, then his earnings would be (1500 + $\frac{13}{4}$ of 1500) = (1500 + 4875) = 6375.

∴ His max earnings = difference between maximum and minimum possible earnings
= 6375 + 2062.50 – 0 = 8437.50 – 0 = 8437.50.

FeedBack

Bookmark

Answer key/Solution

Directions for questions 51 to 54: Answer the questions on the basis of the information given below.

In recently concluded Indian Premiere League(IPL), a lot of gambling were going on. In Gambling, mostly fractional odds were used. If a bookie is offering a odd of 20/3 on winning of a particular team, it means that for every Rs. 3 that a gambler puts at stake, he earn Rs. 20 in case the team wins, in addition to the original stake being returned to him; if the team loses, gambler does not win anything and loses his stake. On a particular day, 4 Cricket Matches were played, the teams involved in those matches are given below:
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An "upset" happens when a team beats an opposition team which had a better chance of winning. The bookie does not offers good odds on teams that are expected to win. Like, a team with odds 3/8 has a better chance of winning than the team with odds 8/3.

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III	KXIP = $\frac{1}{5}$	DD = $\frac{15}{1}$
IV.	RPS = $\frac{13}{4}$	GL = $\frac{1}{4}$

Q.54

If one puts an equal amount on each of the 8 teams, which results are most favourable to him if there are 2 upsets? [Pick the option with the winning

teams].

1 **RCB, KKR, DD, GL**

2 **SRH, KKR, KXI P, GL**

3 **SRH, MI, DD, GL**

4 **RPS, SRH, MI, KXIP**

Solution:
Correct Answer : 3
Among the teams which are expected to lose SRH, KKR, DD & RPS, if there are 2 upsets, he will make more money with upsets in match I & III i.e. DD and SRH winning there respective matches, and other matches going the expected way. So, winning of SRH, MI, DD and GL is most favourable to him.

Bookmark

Answer key/Solution

FeedBack

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

Five women namely Ritu, Sunita, Tina, Uma and Varsha work at the same multi-brand retail store in a shopping mall. Each one of them sells exactly one iter from among Clothing, Household Appliances, Stationery, Gadgets and Furniture, not necessarily in the given order. Each of them has a different sales valu (that is the total value of goods sold by them in a day, averaged over the last month). Two out of the five women are real sisters.

The following information is also known:
(i) The women with the least sales value does not sell household appliances.
(ii) The women with the highest sales value does not sell gadgets.
(iii) Ritu sells gadgets and her sales value is more than at least 3 of the given women.
(iv) Sunita, who is not one of the real sisters, does not sell clothing items and her sales value is greater than exactly one of the two sisters.
(v) Tina sells furniture and has sales greater than exactly one person.
(vi) The two sisters do not have the maximum or the least sales value.

Q.55
What do the two sisters sell?

1 **Gadgets and Furniture**

2 **Appliances and Furniture**

3 **Gadgets and Clothing**

4 **Cannot be determined**

Solution:
Correct Answer : 1
Your Answer : 1

Bookmark

Answer key/Solution

Let's make a table with the initial representation of data (this table fills in the information given from (i) to (vi)):

In this table, 1 stands for the person with the highest sales value and 5 stands for the person with the lowest sales value.
Using conditions (ii) and (iii), we can determine that Ritu has to take position 2 and she sells gadgets.
Tina has to be 4 as she has sales value greater than one person only (using (v)).
Thus, our table looks like:

Sales value	Name	Household Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3			no	no		
4	Tina	no	no	Yes	no	no
5		no	no	no		

Now the sisters can be placed at either 2, 3 and 4 (using (vi))
Sunita has greater sales value than exactly one of the sisters, and we only have slots 1, 3 and 5.
If Sunita takes 1, then she has sales greater than two sisters, thus Sunita cannot take position 1.
If Sunita takes 5, then she has the least sales, which is again not possible. Thus, she takes position 3.
Thus, our final data and things we know for sure are as follows:

		Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3	Sunita		no	no	no	
4	Tina	no	no	Yes	no	no
5		no	no	no		

Since the sisters can take place at 2, 3 or 4 position in the table, we know that Ritu and Tina are the sisters, and they sell gadgets and furniture.

FeedBack

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

Five women namely Ritu, Sunita, Tina, Uma and Varsha work at the same multi-brand retail store in a shopping mall. Each one of them sells exactly one iter from among Clothing, Household Appliances, Stationery, Gadgets and Furniture, not necessarily in the given order. Each of them has a different sales valu (that is the total value of goods sold by them in a day, averaged over the last month). Two out of the five women are real sisters.

The following information is also known:
(i) The women with the least sales value does not sell household appliances.
(ii) The women with the highest sales value does not sell gadgets.
(iii) Ritu sells gadgets and her sales value is more than at least 3 of the given women.
(iv) Sunita, who is not one of the real sisters, does not sell clothing items and her sales value is greater than exactly one of the two sisters.
(v) Tina sells furniture and has sales greater than exactly one person.
(vi) The two sisters do not have the maximum or the least sales value.

Q.56
How many of the following can be uniquely identified from the given information?
I. The items being sold by each of the women.
II. The positions (in terms of sales) of the two sisters.
III. The names of the two sisters
IV. The relative positions of Ritu, Sunita and Tina

1 ◯ **1**

2 ◯ **2**

3 ◯ **3**

4 ◯ **4**

✔

Solution:
Correct Answer : 3
Your Answer : 3

Bookmark

Answer key/Solution

Let's make a table with the initial representation of data (this table fills in the information given from (i) to (vi)):

In this table, 1 stands for the person with the highest sales value and 5 stands for the person with the lowest sales value.
Using conditions (ii) and (iii), we can determine that Ritu has to take position 2 and she sells gadgets.
Tina has to be 4 as she has sales value greater than one person only (using (v)).
Thus, our table looks like:

Sales value	Name	Household Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3			no	no		
4	Tina	no	no	Yes	no	no
5		no	no	no		

Now the sisters can be placed at either 2, 3 and 4 (using (vi))
Sunita has greater sales value than exactly one of the sisters, and we only have slots 1, 3 and 5.
If Sunita takes 1, then she has sales greater than two sisters, thus Sunita cannot take position 1.
If Sunita takes 5, then she has the least sales, which is again not possible. Thus, she takes position 3.
Thus, our final data and things we know for sure are as follows:

		Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3	Sunita		no	no	no	
4	Tina	no	no	Yes	no	no
5		no	no	no		

Since the sisters take places 2, 3 and 4, we know that Ritu and Tina are the sisters.
I cannot be answered
II can be answered as we know the sisters.
III is also know.
IV is also known from the table above.

FeedBack

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

Five women namely Ritu, Sunita, Tina, Uma and Varsha work at the same multi-brand retail store in a shopping mall. Each one of them sells exactly one ite from among Clothing, Household Appliances, Stationery, Gadgets and Furniture, not necessarily in the given order. Each of them has a different sales valu (that is the total value of goods sold by them in a day, averaged over the last month). Two out of the five women are real sisters.

The following information is also known:
(i) The women with the least sales value does not sell household appliances.
(ii) The women with the highest sales value does not sell gadgets.
(iii) Ritu sells gadgets and her sales value is more than at least 3 of the given women.
(iv) Sunita, who is not one of the real sisters, does not sell clothing items and her sales value is greater than exactly one of the two sisters.
(v) Tina sells furniture and has sales greater than exactly one person.
(vi) The two sisters do not have the maximum or the least sales value.

Q.57
If Sunita sells stationery items, then the woman with the maximum sales sells:

1 **Household Appliances**

2 **Clothing**

3 **Gadgets**

4 **Cannot be determined**

✔

Solution:
Correct Answer : 1
Your Answer : 1

Bookmark

Answer key/Solution

Let's make a table with the initial representation of data (this table fills in the information given from (i) to (vi)):

In this table, 1 stands for the person with the highest sales value and 5 stands for the person with the lowest sales value.
Using conditions (ii) and (iii), we can determine that Ritu has to take position 2 and she sells gadgets.
Tina has to be 4 as she has sales value greater than one person only (using (v)).
Thus, our table looks like:

Sales value	Name	Household Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3			no	no		
4	Tina	no	no	Yes	no	no
5		no	no	no		

Now the sisters can be placed at either 2, 3 and 4 (using (vi))
Sunita has greater sales value than exactly one of the sisters, and we only have slots 1, 3 and 5.
If Sunita takes 1, then she has sales greater than two sisters, thus Sunita cannot take position 1.
If Sunita takes 5, then she has the least sales, which is again not possible. Thus, she takes position 3.
Thus, our final data and things we know for sure are as follows:

		Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3	Sunita		no	no	no	
4	Tina	no	no	Yes	no	no
5		no	no	no		

If Sunita sells Stationary items, then women with least sales figure will sell clothing (as it is given that women with least sales figure does not sell household appliances) and the women with highest sales figure sells household appliances.

FeedBack

Direction for questions 55 to 58: Answer the questions on the basis of the information given below.

Five women namely Ritu, Sunita, Tina, Uma and Varsha work at the same multi-brand retail store in a shopping mall. Each one of them sells exactly one ite from among Clothing, Household Appliances, Stationery, Gadgets and Furniture, not necessarily in the given order. Each of them has a different sales valu (that is the total value of goods sold by them in a day, averaged over the last month). Two out of the five women are real sisters.

The following information is also known:
(i) The women with the least sales value does not sell household appliances.
(ii) The women with the highest sales value does not sell gadgets.
(iii) Ritu sells gadgets and her sales value is more than at least 3 of the given women.
(iv) Sunita, who is not one of the real sisters, does not sell clothing items and her sales value is greater than exactly one of the two sisters.
(v) Tina sells furniture and has sales greater than exactly one person.
(vi) The two sisters do not have the maximum or the least sales value.

Q.58
If the woman with least sales value sells stationary, then the woman with the maximum sales sells

1 **Clothing**

2 **Household Appliances**

3 **Furniture**

4 **Cannot be determined**

✔

Solution:
Correct Answer : 1
Your Answer : 1

Bookmark

Answer key/Solution

Let's make a table with the initial representation of data (this table fills in the information given from (i) to (vi)):

In this table, 1 stands for the person with the highest sales value and 5 stands for the person with the lowest sales value.
Using conditions (ii) and (iii), we can determine that Ritu has to take position 2 and she sells gadgets.
Tina has to be 4 as she has sales value greater than one person only (using (v)).
Thus, our table looks like:

Sales value	Name	Household Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3			no	no		
4	Tina	no	no	Yes	no	no
5		no	no	no		

Now the sisters can be placed at either 2, 3 and 4 (using (vi))
Sunita has greater sales value than exactly one of the sisters, and we only have slots 1, 3 and 5.
If Sunita takes 1, then she has sales greater than two sisters, thus Sunita cannot take position 1.
If Sunita takes 5, then she has the least sales, which is again not possible. Thus, she takes position 3.
Thus, our final data and things we know for sure are as follows:

		Appliances	Gadgets	Furniture	Clothing	Stationery
1			no	no		
2	Ritu	no	Yes	no	no	no
3	Sunita		no	no	no	
4	Tina	no	no	Yes	no	no
5		no	no	no		

Since women with least sales figure sells stationary and Sunita does not sell clothing, the women with maximum sales figures sells clothing.

FeedBack

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Eight friends Sachin, Shahrukh, Saurabh, Sehwag, Salil, Shami, Shikhar and Suresh are sitting in two concentric circles, with four persons around each circl in such a manner that each member of the inner circle sits exactly opposite to one of the members of the outer circle. The members sitting in the outer circle are Salil, Shami, Shikhar and Suresh and all of them are facing towards the centre while the members of the inner circle are Sachin, Shahrukh, Saurabh, Sehwag and they are facing away from the centre. Each of them likes a different colour from among Red, Yellow, Blue, Green, White, Black, Orang and Purple, but not necessarily in the same order. Sehwag likes neither Yellow nor White and faces Shikhar, who likes neither Black nor Purple. The persor who likes Orange faces the person who likes Red. Sachin, who likes Green, faces the immediate neighbour of the person who likes Blue. Shikhar is sitting second to the left of Suresh. The persons who like White and Red are in separate circles. The person who likes Black is sitting to the immediate left of Suresh. Shami, who does not like Blue, is not facing Sachin. The persons who like Black and Purple are immediate neighbours, and one of them is facing Shahrukh, who likes Yellow. The persons who like Orange and Green are sitting along the same circle but they are not immediate neighbours.

Q.59
Who among the following likes White ?

1 **Saurabh**

2 **Shikhar**

3 **Sachin**

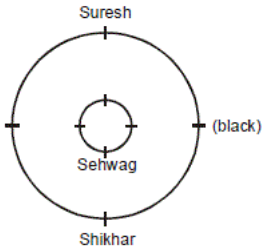
4 **Shahrukh**

Solution:
Correct Answer : 1

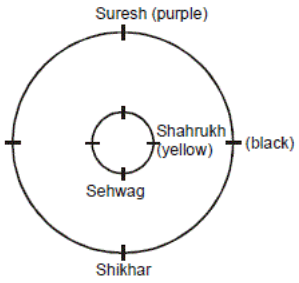
Bookmark

Answer key/Solution

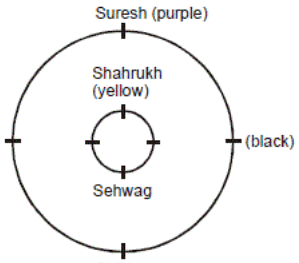
Using the information that Sehwag is facing Shikhar, who is sitting second to the left of Suresh and the person who likes black is sitting to the immediate left of Suresh. We get the following arrangement:



Since the persons who like black and purple are immediate neighbours and Shikhar does not like purple, Suresh likes purple, Also, Shahrukh, who likes yellow, is facing the one out of those who likes black or purple, we have two possible cases:

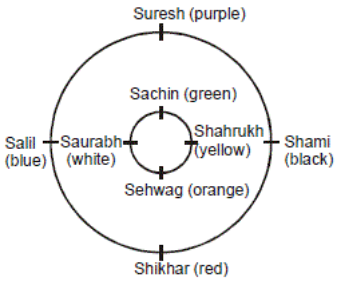


(I)



(II)

As Sehwag likes neither yellow nor white, he must like either green or orange and the persons who like green and orange are sitting along same circle but are not immediate neighbour of each other, makes the case (II) impossible. Now filling as per the other information's given in the questions, we get the final arrangement as shown below:



Saurabh likes white

FeedBack

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Eight friends Sachin, Shahrukh, Saurabh, Sehwag, Salil, Shami, Shikhar and Suresh are sitting in two concentric circles, with four persons around each circl in such a manner that each member of the inner circle sits exactly opposite to one of the members of the outer circle. The members sitting in the outer circle are Salil, Shami, Shikhar and Suresh and all of them are facing towards the centre while the members of the inner circle are Sachin, Shahrukh, Saurabh, Sehwag and they are facing away from the centre. Each of them likes a different colour from among Red, Yellow, Blue, Green, White, Black, Orang and Purple, but not necessarily in the same order. Sehwag likes neither Yellow nor White and faces Shikhar, who likes neither Black nor Purple. The persor who likes Orange faces the person who likes Red. Sachin, who likes Green, faces the immediate neighbour of the person who likes Blue. Shikhar is sitting second to the left of Suresh. The persons who like White and Red are in separate circles. The person who likes Black is sitting to the immediate left of Suresh. Shami, who does not like Blue, is not facing Sachin. The persons who like Black and Purple are immediate neighbours, and one of them is facing Shahrukh, who likes Yellow. The persons who like Orange and Green are sitting along the same circle but they are not immediate neighbours.

Q.60

The person who likes Black is facing who among the following persons?

1 **Sachin**

2 **Shahrukh**

3 **Saurabh**

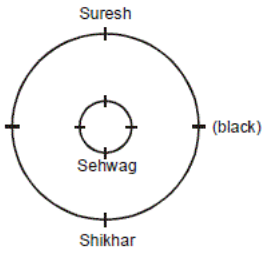
4 **Sehwag**

Solution:
Correct Answer : 2

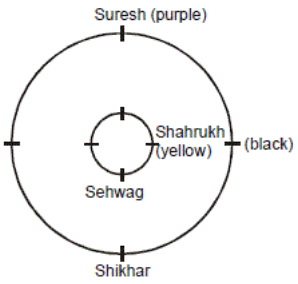
Bookmark

Answer key/Solution

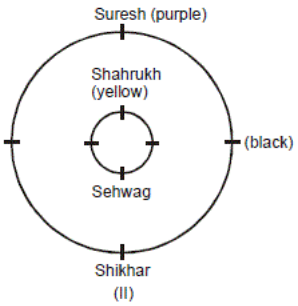
Using the information that Sehwag is facing Shikhar, who is sitting second to the left of Suresh and the person who likes black is sitting to the immediate left of Suresh. We get the following arrangement:



Since the persons who like black and purple are immediate neighbours and Shikhar does not like purple, Suresh likes purple, Also, Shahrukh, who likes yellow, is facing the one out of those who likes black or purple, we have two possible cases:

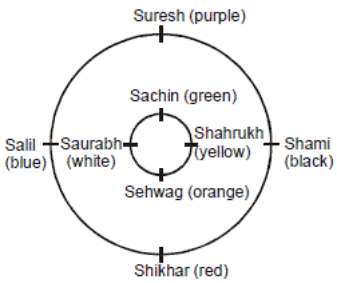


(I)



(II)

As Sehwag likes neither yellow nor white, he must like either green or orange and the persons who like green and orange are sitting along same circle but are not immediate neighbour of each other, makes the case (II) impossible. Now filling as per the other information's given in the questions, we get the final arrangement as shown below:



Person who likes black is Shami and he is facing Shahrukh.

FeedBack

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Eight friends Sachin, Shahrukh, Saurabh, Sehwag, Salil, Shami, Shikhar and Suresh are sitting in two concentric circles, with four persons around each circl in such a manner that each member of the inner circle sits exactly opposite to one of the members of the outer circle. The members sitting in the outer circle are Salil, Shami, Shikhar and Suresh and all of them are facing towards the centre while the members of the inner circle are Sachin, Shahrukh, Saurabh, Sehwag and they are facing away from the centre. Each of them likes a different colour from among Red, Yellow, Blue, Green, White, Black, Orang and Purple, but not necessarily in the same order. Sehwag likes neither Yellow nor White and faces Shikhar, who likes neither Black nor Purple. The persor who likes Orange faces the person who likes Red. Sachin, who likes Green, faces the immediate neighbour of the person who likes Blue. Shikhar is sitting second to the left of Suresh. The persons who like White and Red are in separate circles. The person who likes Black is sitting to the immediate left of Suresh. Shami, who does not like Blue, is not facing Sachin. The persons who like Black and Purple are immediate neighbours, and one of them is facing Shahrukh, who likes Yellow. The persons who like Orange and Green are sitting along the same circle but they are not immediate neighbours.

Q.61
Salil likes which of the following colours ?

1 **Red**

2 **White**

3 **Black**

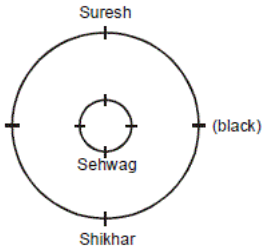
4 **Blue**

Solution:
Correct Answer : 4

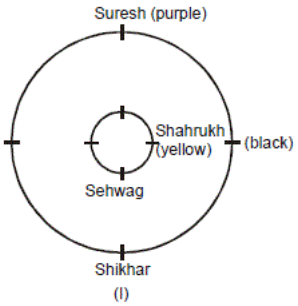
Bookmark

Answer key/Solution

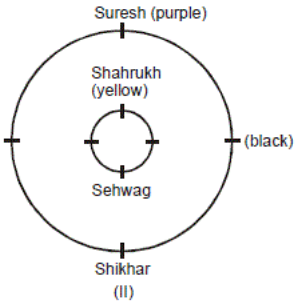
Using the information that Sehwag is facing Shikhar, who is sitting second to the left of Suresh and the person who likes black is sitting to the immediate left of Suresh. We get the following arrangement:



Since the persons who like black and purple are immediate neighbours and Shikhar does not like purple, Suresh likes purple, Also, Shahrukh, who likes yellow, is facing the one out of those who likes black or purple, we have two possible cases:

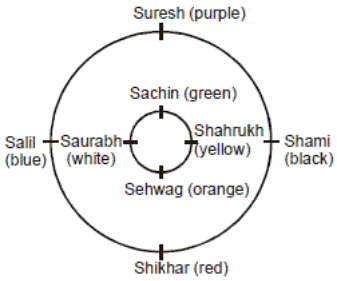


(I)



(II)

As Sehwag likes neither yellow nor white, he must like either green or orange and the persons who like green and orange are sitting along same circle but are not immediate neighbour of each other, makes the case (II) impossible. Now filling as per the other information's given in the questions, we get the final arrangement as shown below:



Salil likes blue colour.

FeedBack

Directions for questions 59 to 62: Answer the questions on the basis of the information given below.

Eight friends Sachin, Shahrukh, Saurabh, Sehwag, Salil, Shami, Shikhar and Suresh are sitting in two concentric circles, with four persons around each circl in such a manner that each member of the inner circle sits exactly opposite to one of the members of the outer circle. The members sitting in the outer circle are Salil, Shami, Shikhar and Suresh and all of them are facing towards the centre while the members of the inner circle are Sachin, Shahrukh, Saurabh, Sehwag and they are facing away from the centre. Each of them likes a different colour from among Red, Yellow, Blue, Green, White, Black, Orang and Purple, but not necessarily in the same order. Sehwag likes neither Yellow nor White and faces Shikhar, who likes neither Black nor Purple. The persor who likes Orange faces the person who likes Red. Sachin, who likes Green, faces the immediate neighbour of the person who likes Blue. Shikhar is sitting second to the left of Suresh. The persons who like White and Red are in separate circles. The person who likes Black is sitting to the immediate left of Suresh. Shami, who does not like Blue, is not facing Sachin. The persons who like Black and Purple are immediate neighbours, and one of them is facing Shahrukh, who likes Yellow. The persons who like Orange and Green are sitting along the same circle but they are not immediate neighbours.

Q.62

Which of the following statements is true about the person who likes 'Purple' ?

1 **He is on the immediate left of the person who likes Green.**

2 **He faces the person who likes Green.**

3 **He is not facing the person who likes Green.**

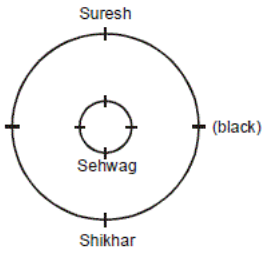
4 **The person sitting opposite him likes Yellow.**

Bookmark

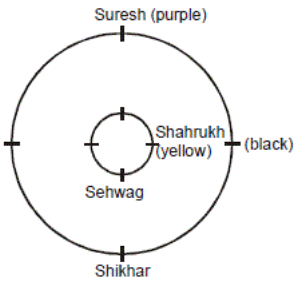
Answer key/Solution

Solution:
Correct Answer : 2

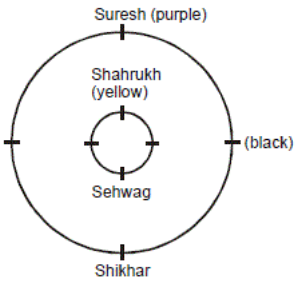
Using the information that Sehwag is facing Shikhar, who is sitting second to the left of Suresh and the person who likes black is sitting to the immediate left of Suresh. We get the following arrangement:



Since the persons who like black and purple are immediate neighbours and Shikhar does not like purple, Suresh likes purple, Also, Shahrukh, who likes yellow, is facing the one out of those who likes black or purple, we have two possible cases:

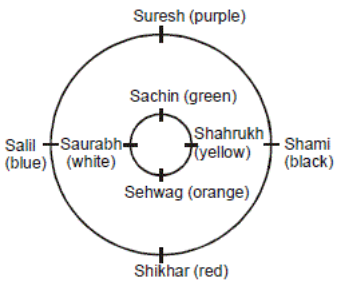


(I)



(II)

As Sehwag likes neither yellow nor white, he must like either green or orange and the persons who like green and orange are sitting along same circle but are not immediate neighbour of each other, makes the case (II) impossible. Now filling as per the other information's given in the questions, we get the final arrangement as shown below:



Only option (2) is correct.

FeedBack

Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

In a particular game called Lucky Guy, as many paper chits are made, as there are players in the game. Some chits have 'Lucky Guy' written on them, the re are blank. The chits are folded, such that what is written is not visible, and then shuffled and distributed, one to each player. All those, who get a chit with 'Lucky Guy' written on them, succeed to the next round and those who get blank chits are eliminated with their chits. Further, the 'Lucky Guy' chits are reduced in each successive round till at last there is just one winner and all the other participants are eliminated. While 'Lucky Guy' chits are removed, more blank chits may be needed so that the number of chits equals the number of players. Thus at least one player is eliminated in each round. About a particular game, we have the following data:
A. The number of 'Lucky Guy' chits removed at the end of each round is a different number. The number of 'Lucky Guy' chits in the round (V) was three less than in the round (IV).
B. The winner was decided in 5 rounds.
C. To start with, i.e. in round (I), there were 12 'Lucky Guy' chits.
D. The ratio of the number of participants in round (III) and round (IV) is 2 : 1.

Q.63
The number of Lucky Guy chits in round (III) was how many less than in round (II)?

Bookmark

Answer key/Solution

Solution:
Correct Answer : 5

To decide the winner, in the 5th round there necessarily needs to be only 1 Lucky Guy chit. Since the game was started with 12 Lucky Guy chits, a total of 11 Lucky Guy chits have to be removed cumulatively at the end of round I, II, III and IV. Since the number of Lucky Guy chits removed is different for each round, they have to be 1, 2, 3 and 5 in any order (no other quartet of 4 different numbers add up to 11).

Round	No. of Lucky Guy chits	No. of chits removed at end	No. of participants
I	12		–
II			12
III			
IV	4	3	
V	1	–	4

Since the number of Lucky Guy chits in Round V was 3 less than that in Round IV, the number of Lucky Guy chits in Round IV is 4 and at end of Round IV, 3 Lucky Guy chits would have been removed.
The number of participants in any round is equal to the number of Lucky Guy chits in the previous round. Since the ratio of number of participant in Round III and Round IV is 2 : 1. Let the number of participants in round III and round IV be 2x and x respectively. As $2x < 12$ and $x > 4$, $x = 5$.
As the number of Lucky Guy chits in any rounds is equal to the number of participants in the next round, we get the following table:

Round	No. of Lucky Guy chits	No. of chits removed at end	No. of participants
I	12	2	–
II	10	5	12
III	5	1	10
IV	4	3	5
V	1	–	4

The number of Lucky Guy chits in round (III) is 5 which is 5 less than 10. i.e., the number of Lucky Guy chits in round (II)

FeedBack

Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

In a particular game called Lucky Guy, as many paper chits are made, as there are players in the game. Some chits have 'Lucky Guy' written on them, the re are blank. The chits are folded, such that what is written is not visible, and then shuffled and distributed, one to each player. All those, who get a chit with 'Lucky Guy' written on them, succeed to the next round and those who get blank chits are eliminated with their chits. Further, the 'Lucky Guy' chits are reduced in each successive round till at last there is just one winner and all the other participants are eliminated. While 'Lucky Guy' chits are removed, more blank chits may be needed so that the number of chits equals the number of players. Thus at least one player is eliminated in each round. About a particular game, we have the following data:
A. The number of 'Lucky Guy' chits removed at the end of each round is a different number. The number of 'Lucky Guy' chits in the round (V) was three less than in the round (IV).
B. The winner was decided in 5 rounds.
C. To start with, i.e. in round (I), there were 12 'Lucky Guy' chits.
D. The ratio of the number of participants in round (III) and round (IV) is 2 : 1.

Q.64
How many participants were eliminated in the last round?

✔

Solution:
Correct Answer : 3
Your Answer : 3

Bookmark

Answer key/Solution

To decide the winner, in the 5th round there necessarily needs to be only 1 Lucky Guy chit. Since the game was started with 12 Lucky Guy chits, a total of 11 Lucky Guy chits have to be removed cumulatively at the end of round I, II, III and IV. Since the number of Lucky Guy chits removed is different for each round, they have to be 1, 2, 3 and 5 in any order (no other quartet of 4 different numbers add up to 11).

Round	No. of Lucky Guy chits	No. of chits removed at end	No. of participants
I	12		–
II			12
III			
IV	4	3	
V	1	–	4

Since the number of Lucky Guy chits in Round V was 3 less than that in Round IV, the number of Lucky Guy chits in Round IV is 4 and at end of Round IV, 3 Lucky Guy chits would have been removed.
The number of participants in any round is equal to the number of Lucky Guy chits in the previous round. Since the ratio of number of participant in Round III and Round IV is 2 : 1. Let the number of participants in round III and round IV be 2x and x respectively. As $2x < 12$ and $x > 4$, $x = 5$.
As the number of Lucky Guy chits in any rounds is equal to the number of participants in the next round, we get the following table:

Round	No. of Lucky Guy chits	No. of chits removed at end	No. of participants
I	12	2	–
II	10	5	12
III	5	1	10
IV	4	3	5
V	1	–	4

As total participants in last round is 4 and number of lucky guy chits in this round is 1, so 3 participants were eliminated.

FeedBack

Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

In a particular game called Lucky Guy, as many paper chits are made, as there are players in the game. Some chits have 'Lucky Guy' written on them, the re are blank. The chits are folded, such that what is written is not visible, and then shuffled and distributed, one to each player. All those, who get a chit with 'Lucky Guy' written on them, succeed to the next round and those who get blank chits are eliminated with their chits. Further, the 'Lucky Guy' chits are reduced in each successive round till at last there is just one winner and all the other participants are eliminated. While 'Lucky Guy' chits are removed, more blank chits may be needed so that the number of chits equals the number of players. Thus at least one player is eliminated in each round. About a particular game, we have the following data:
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B. The winner was decided in 5 rounds.
C. To start with, i.e. in round (I), there were 12 'Lucky Guy' chits.
D. The ratio of the number of participants in round (III) and round (IV) is 2 : 1.

Q.65
Find the number of participants in round (IV).

Solution:
Correct Answer : 5

Bookmark

Answer key/Solution

To decide the winner, in the 5th round there necessarily needs to be only 1 Lucky Guy chit. Since the game was started with 12 Lucky Guy chits, a total of 11 Lucky Guy chits have to be removed cumulatively at the end of round I, II, III and IV. Since the number of Lucky Guy chits removed is different for each round, they have to be 1, 2, 3 and 5 in any order (no other quartet of 4 different numbers add up to 11).

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II			12
III			
IV	4	3	
V	1	–	4

Since the number of Lucky Guy chits in Round V was 3 less than that in Round IV, the number of Lucky Guy chits in Round IV is 4 and at end of Round IV, 3 Lucky Guy chits would have been removed.
The number of participants in any round is equal to the number of Lucky Guy chits in the previous round. Since the ratio of number of participant in Round III and Round IV is 2 : 1. Let the number of participants in round III and round IV be 2x and x respectively. As $2x < 12$ and $x > 4$, $x = 5$.
As the number of Lucky Guy chits in any rounds is equal to the number of participants in the next round, we get the following table:

Round	No. of Lucky Guy chits	No. of chits removed at end	No. of participants
I	12	2	–
II	10	5	12
III	5	1	10
IV	4	3	5
V	1	–	4

Number of participants in round (IV) is 5.

FeedBack

Directions for questions 63 to 66: Answer the questions on the basis of the information given below.

In a particular game called Lucky Guy, as many paper chits are made, as there are players in the game. Some chits have 'Lucky Guy' written on them, the re are blank. The chits are folded, such that what is written is not visible, and then shuffled and distributed, one to each player. All those, who get a chit with 'Lucky Guy' written on them, succeed to the next round and those who get blank chits are eliminated with their chits. Further, the 'Lucky Guy' chits are reduced in each successive round till at last there is just one winner and all the other participants are eliminated. While 'Lucky Guy' chits are removed, more blank chits may be needed so that the number of chits equals the number of players. Thus at least one player is eliminated in each round. About a particular game, we have the following data:
A. The number of 'Lucky Guy' chits removed at the end of each round is a different number. The number of 'Lucky Guy' chits in the round (V) was three less than in the round (IV).
B. The winner was decided in 5 rounds.
C. To start with, i.e. in round (I), there were 12 'Lucky Guy' chits.
D. The ratio of the number of participants in round (III) and round (IV) is 2 : 1.

Q.66
The sum of the number of 'Lucky Guy' chits removed at the end of round (II) and round (III) is

✖

Solution:
Correct Answer : 6
Your Answer : 8

Bookmark

Answer key/Solution

To decide the winner, in the 5th round there necessarily needs to be only 1 Lucky Guy chit. Since the game was started with 12 Lucky Guy chits, a total of 11 Lucky Guy chits have to be removed cumulatively at the end of round I, II, III and IV. Since the number of Lucky Guy chits removed is different for each round, they have to be 1, 2, 3 and 5 in any order (no other quartet of 4 different numbers add up to 11).

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Since the number of Lucky Guy chits in Round V was 3 less than that in Round IV, the number of Lucky Guy chits in Round IV is 4 and at end of Round IV, 3 Lucky Guy chits would have been removed.
The number of participants in any round is equal to the number of Lucky Guy chits in the previous round. Since the ratio of number of participant in Round III and Round IV is 2 : 1. Let the number of participants in round III and round IV be 2x and x respectively. As $2x < 12$ and $x > 4$, $x = 5$.
As the number of Lucky Guy chits in any rounds is equal to the number of participants in the next round, we get the following table:

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IV	4	3	5
V	1	–	4

Number of Lucky Guy chits removed at the end of round (II) and round (III) is 5 and 1 respectively. So required sum = 5 + 1 = 6.

FeedBack

Sec 3

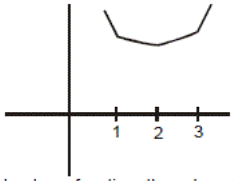
Q.67
Let f(x) = |x – 5| + |x – 6| + |x – 7| such that the minimum value of f(x + 4) occur at x = k. Find the value of k.

Solution:
Correct Answer : 2

Bookmark

Answer key/Solution

The graph of the function f(x + 4) = |x – 1| + |x – 2| + |x – 3| is given below:



In above function, the value will be minimum when
|x – 2| = 0
Hence, k = 2.

FeedBack

Q.68
N is a positive natural number less than 1350 and has 28 factors. If N is a multiple of 336, then find the value of N/28.

1 **48**

2 **36**

3 **24**

4 **42**

Solution:
Correct Answer : 1
$336 = 16 \times 3 \times 7 = 2^4 \times 3 \times 7$
The only possible value of N satisfying all the conditions is $2^5 \times 3 \times 7$

$\frac{N}{28} = \frac{2^5 \times 3 \times 7}{28} = 48$

FeedBack

Bookmark
Answer key/Solution

Q.69
Three single distinct digit numbers which are in Arithmetic Progression are selected. All possible 3- digit numbers are formed without repetition using these three digits, the sum of the numbers thus formed is calculated. This process is repeated for all different combination of three single digit numbers in AP. Let the sum of numbers be represented by S_i for the i^{th} combination, then S_i must be divisible by

1 **444**

2 **666**

3 **999**

4 **1332,**

Solution:
Correct Answer : 2
Sum of all numbers = sum of digits × 2!×(111)
3 × 2 sum of digits
Sum of digits will be 3a as these three terms are in an AP
Hence sum is divisible by 666.

FeedBack

Bookmark
Answer key/Solution

Q.70
Aditi invested a certain amount at 10% rate of interest compounded annually for 15 years. If the compound interest earned in the 14th year was Rs.14641 find the compound interest (in Rs.) earned in the 10th year.

Solution:
Correct Answer : 10000
Let CI be x in the 10th year
∴ 11th year = x + 0.1x = 1.1x
12th year = 1.1x + 0.11x = 1.21x
13th year = 1.331x
14th year = 1.4641x = 14641
∴ x = 10,000

FeedBack

Bookmark
Answer key/Solution

Q.71
The area (in sq. unit) bounded by the graphs of the equations |x + y| = 1, |x| = 1, and |y| = 1, is equal to

1 **4**

2 **3**

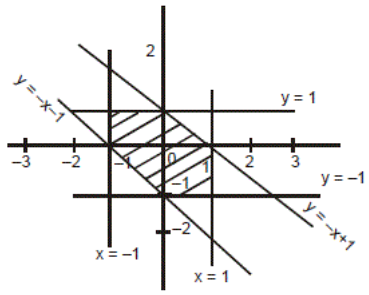
3 **2**

4 **1**

Solution:
Correct Answer : 2

Bookmark
Answer key/Solution

The graph of the given equations are given below:



| x + y | = 1 ⇒ x + y = 1 or – (x + y) = 1
| x | = 1 ⇒ x = + 1 or x = –1
| y | = 1 ⇒ y = + 1 or y = – 1
∴ Area = Area of 3 squares of side 1 unit each = $3(1)^2$ = 3.

FeedBack

Q.72

Once Anil gave Rs.878787878787 to Mukesh and Rs.787878787878 to Nita without any interest. Mukesh and Nita decided to return the due amount of money with a monthly installment equal to the greatest common divisor of the two sums. How many more months does Mukesh require than Nita to return the money?

1 **3**

2 **9**

3 **27**

4 **1**

Solution:
Correct Answer : 1

878787878787 = 10101010101 × 3 × 29
787878787878 = 10101010101 × 3 × 26
Thus HCF is 30303030303.
The number of months Nita and Mukesh requires to return the money is 26 and 29 respectively.
Therefore, Mukesh requires 3 more months.

FeedBack

Bookmark

Answer key/Solution

Q.73

Square A of side 2 cm is formed and then square B is formed by using one of the sides of square A and then square C is formed by using the side which is equal to sum of sides of square A and B and then square D is formed by using the side which is equal to sum of sides of square B and C and then and then square E is formed by using the side which is equal to sum of sides of square C and D so on till square J (10th square) is formed. What is the area (in sq. cm of square J?

Solution:
Correct Answer : 12100

Side of square A is 2, thus side of square B is 2, thus side of square C is 4 and that of square D is 6 and that of square E is 10.
Thus, side of square will be 2, 2, 4, 6, 10... Thus, starting from the third term each term will be the sum of two preceding terms. Thus series till 10th term would be 2, 2, 4, 6, 10, 16, 26, 42, 68, 110.
Thus, area of square J having side 110 is 12100 cm^2.

FeedBack

Bookmark

Answer key/Solution

Q.74

A company evaluates yearly performance of its employees on 7 parameters, each of the parameters has top 2 performers who are awarded different prizes The performance of 15 employees of a team is considered and each employee is eligible for at most one prize on each parameter. In how many different ways can the prize be awarded?

1 **7! (210)**

2 **210**

3 ◯ **$2!(210)^7$**

4 ◯ **$(210)^7$**

Solution:
Correct Answer : 4

Let us consider the total number of different ways in which the 2 prizes on a single parameter can be given. The 1st prize on a parameter can be given in 15 ways and the 2nd prize on the same parameter can be given in 14 ways.
So the two prizes on a particular parameter can be given in 15 × 14 = 210 ways
Since an employee is eligible for prizes on each of the 7 parameters, the prizes for the 7 parameters can be given in $(210)^7$ ways.

FeedBack

Bookmark

Answer key/Solution

Q.75
There are two baskets. First basket contains 4 red and 1 green balls and second basket contains 5 red and 1 green balls. One ball is drawn at random from one of the two baskets, find the probability that the drawn ball is red coloured.

1 ◯ **3/4**

2 ◯ **49/60**

3 ◯ **2/3**

4 ◯ **1/3**

Solution:
Correct Answer : 2

First basket:
1 red ball can be selected in $^4C_1$ ways.
Total number of ways of selecting 1 ball = $^5C_1$
Second basket:
1 red ball can be selected in $^5C_1$ ways.
Total number of ways of selecting a ball = $^6C_1$
Probability that a ball selected at random from one of the two bags is a red ball = 1/2(4/5 + 5/6) = 49/60.

FeedBack

Bookmark

Answer key/Solution

Q.76
A solid metal cylinder of height equal to double the diameter of the base is melted and recast into three identical spheres. What is the percentage change the total surface area?

1 ◯ **20%**

2 ◯ **100%**

3 ◯ **50%**

4 ◯ **30%**

Solution:
Correct Answer : 1

Let d be the diameter of the cylinder & r the radius of the sphere. Since the cylinder is being used to form 3 spheres, we can equate the volume of the two.

$$\therefore \pi\left(\frac{d}{2}\right)^2 \times 2d = \frac{4}{3}\pi r^3 \times 3$$

$$\Rightarrow \frac{d^3}{2} = 4r^3$$

$\Rightarrow d^3 = 8r^3$
$\Rightarrow d = 2r$
Total surface area of cylinder $2\pi r(r + 4r) = 10\pi r^2$
Surface area of sphere = 3 × $4\pi(r^2) = 12\pi r^2$
∴ Change in surface area = 20%.

FeedBack

Bookmark

Answer key/Solution

Q.77

The following functions are defined for three real numbers, x, y, and z.
F(x, y, z) = (|x + y + z| + |x| + |y| + |z|)
G(x, y, z) = |x + y| + |y + z| + |z + x|
Given that x > 0, y < 0 and z > 0, which of the following is necessarily true?

1 ○ **F(x, y, z) < G(x, y, z)**

2 ○ **F(x, y, z) < G(x, y, z) if |x| > |y| > |z|**

3 ○ **F(x, y, z) = G(x, y, z) if |x| > |y| > |z|**

4 ○ **F(x, y, z) > G(x, y, z) if |x| > |y| > |z|**

Bookmark

Answer key/Solution

Solution:
Correct Answer : 4

Let y = –k, where k is positive number

Case I

|x|, |z| > |y|
|x + y + z| + |x| + |y| + |z|
= 2(x + z)
and |x + y| + |y + z| + |z + x|
= 2x + 2z – 2k
F(x, y, z) cannot be less than G(x, y, z)

Case II

|x|, |z| < |y|
F(x, y, z) = |x + y + z| + |x| + |y| + |z|
= |x + z – k| + x + y + z
= 2(x + z) (when x + z > k)
or k – x – z + x + k + z (when x + z > k)
= 2k
G(x, y, z) = |x + z| + |y + z| + |x + y|
= |x + z| + |–k + z| + |x – k|
2k
F(x, y, z) cannot be less than G(x, y, z)

Case III

|x| > |y| > |z|
x > k > z
F(x, y, z) = x + z – k + x + z + k
= 2x + 2z
G(x, y, z) = x – k + k – z + z + x
= 2x which is less than 2x + 2z
F(x, y, z) > G(x, y, z)

Case IV

|x| < |y| < |z|
x < k < z
F(x, y, z) = x + z – k + x + k + z
= 2x + 2z
G(x, y, z) = –x + k – k + z + z + x
= 2x which is less than 2x + 2z
Hence, option (4) is correct.

Alternative Method :

Take three different values for x, y and z such that the given condition is satisfied.
Let x, y, z be 1, –2, 3
Then F(x, y, z) = 8 and G(x, y, z) = 6.
So option (1) is ruled out.
So let us now consider x, y, z as 3, –2, 1 negating option (2) and (3).
F(x, y, z) = 8 and G(x, y, z) = 6.
So, F(x, y, z) > G(x, y, z) when |x| > |y| > |z|.

FeedBack

Q.78

A convex polygon is defined as a polygon that does not have any internal angle greater than or equal to 180°. If the quadrilateral formed by vertices at (3, 4), (3a, 4), (5, 6) and (5,6b) is convex, then which of the following statements are true?

I. if b > 1 then a < 5/3

II. If a > 5/3 then b < 2/3

1 **Only statement I**

2 **Only statement II**

3 **Neither of the two**

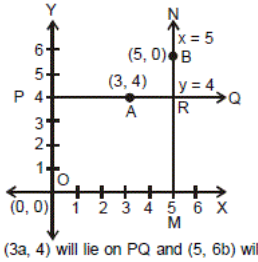
4 **Both statements I and II**

Solution:
Correct Answer : 4

Bookmark

Answer key/Solution

Consider the graph.



(3a, 4) will lie on PQ and (5, 6b) will lie on MN.

Consider statement I.
If b > 1 then (5, 6b) lies beyond point B on the line MN.
∴ (3a, 4) must lie to the left of the line MN on line PQ for the quadrilateral joining the four points to be a convex quadrilateral.
∴ 3a < 5
⇒ a < 5/3
∴ Statement I is true.
Consider statement II.
If a > 5/3, (3a, 4) lies to the right of the line MN.
∴ (5, 6b) must lie below the line PQ on the line MN.
⇒ 6b < 4
⇒ b < 4/6
⇒ b < 2/3
∴ Statement II is also true.

FeedBack

Q.79
For Robomate Analytics, the professor decided to find the average weight of all students in a particular batch but he wanted to do it differently. He did thi by taking the average of the average weights of all possible sets of 4 students that could be formed in the batch. He found that the average calculated in this manner was 'n' times the correct average. What is the value of 'n'?

1 **12**

2 **1**

3 **14**

4 **None of these**

Solution:
Correct Answer : 2

Bookmark

Answer key/Solution

Suppose there are 5 students in batch with weights a, b, c, d, and e.
Possible of the average weights ={(a + b + c + d)/4 + (a + b + c + e)/4 + (a + b + d + e)/4 + (a + c + d + e)/4 + (b + c + d + e)/4}/5
= (a + b + c + d + e)/5
Hence n = 1.

FeedBack

Q.80
Five students with efficiencies in the ratio 1 : 2 : 3 : 4 : 5 are working on their final year project. They work in such a way that exactly three of them work together. Three-fifths of the project is completed when each of the possible group of three students has worked for exactly one day. How many more days are required, if the remaining project is completed by all of them working together?

1 **6**

2 **3**

3 ◯ **5**

4 ◯ **4**

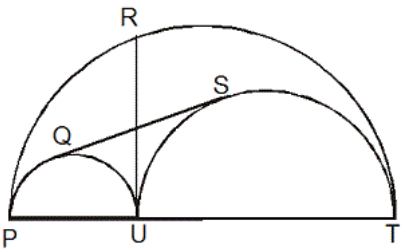
Solution:
Correct Answer : 4
The number of groups having 3 students each that can be made out of students = $^5C_3$ = 10.
The number of group of which each student is a part of = $^4C_2$ = 6
Since when each student works for 6 days the part of work completed is 3/5, to complete the remaining part i.e. 2/5 of the work the 5 students need to work for $6 \times \frac{2}{3} = 4$ days.

FeedBack

Bookmark

Answer key/Solution

Q.81
In the figure given below there are three semi-circles. PU is a diameter of the smallest semicircle, PT is the diameter of the biggest semicircle and UT is the diameter of the third semicircle. QS is a tangent to the two of the semicircles as shown in the figure. If RU, which is perpendicular to PT, is 12 cm, find the length (in cm) of QS.



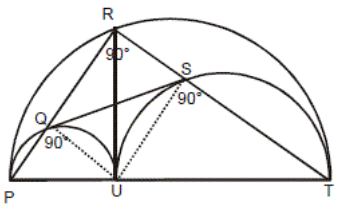
1 ◯ **2√10**

2 ◯ **12**

3 ◯ **3√10**

4 ◯ **15**

Solution:
Correct Answer : 2
Join PR, RT, US, UQ and US.



Angle PRT = Angle PQU = Angle UST = 90° (angles in semicircle). QUSR is a rectangle and RU and QS are diagonals.
QS = RU = 12

FeedBack

Bookmark

Answer key/Solution

Q.82
How many 5-digit numbers can be formed such that the left most digit is 2 and have exactly two identical digits?

Solution:
Correct Answer : 5040
Case 1: The identical digit is 2. First digit has to be '2'
Second 2 can be placed at four different places and the remaining 3 digits can be filled in 9 × 8 × 7 ways.
Thus, the number of ways = 9 × 8 × 7 × 4
Case 2: When identical digit is a digit other than 2.
The identical digit can be selected in 9 ways.
This digit can be placed at two places in $^4C_2$ = 6 ways.
The remaining two places can be filled in 8 × 7 ways.
The number of numbers is 6 × 9 × 8 × 7
Hence, the total number of ways
= 9 × 8 × 7 × 10 = 5040.

Bookmark

Answer key/Solution

FeedBack

Q.83

In a circle chord CD is perpendicular to the diameter AB and meets it at E. The length (in cm) of AB and CD are integral values. The length (in cm) of AB is a 2-digit number and the length (in cm) of CD is obtained by reversing the digits of AB. The length (in cm) of OE, where O is the centre of the circle, is a rational number. Find the length of AB.

1 **56 cm**

2 **65 cm**

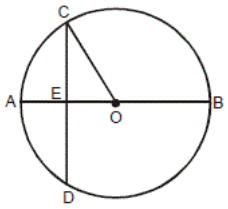
3 **32 cm**

4 **23 cm**

Solution:
Correct Answer : 2

Bookmark

Answer key/Solution



Let AB = 10a + b then CD = 10b + a

$OE = \frac{1}{2}\sqrt{(10a+b)^2-(10b+a)^2}$

$OE = \frac{1}{2}\sqrt{99(a+b)(a-b)}$

$OE = \frac{3}{2}\sqrt{11(a^2-b^2)}$

Since OE is a rational number, $11(a^2 - b^2)$ has to be the square of a natural number.

$(a^2-b^2) = 11k^2$, where k is a natural number

$(a + b)(a - b) = 11k^2$

Since a and b are single digit natural number, a + b has to be less or equal to 18, a – b less or equal to 8. The only possible value for a + b = 11 and a – b = 1.

Solving these two equations, we get

a = 6, b = 5

∴ AB = 10 × 6 + 5 = 65.

FeedBack

Q.84

If $\log_8 x + \log_4 y^2 = 5$ and $\log_8 y + \log_4 x^2 = 7$, where x and y are positive real number, what is the product of x and y?

1 **512**

2 **128**

3 **64**

4 **1024**

Solution:
Correct Answer : 1

Bookmark

Answer key/Solution

$\log_8 x + \log_4 [y]^2 = 5 \Rightarrow \frac{1}{3}\log_2 x + \log_2 y = 5$ ...(i)

$\log_8 y + \log_4 [x]^2 = 7 \Rightarrow \frac{1}{3}\log_2 y + \log_2 x = 7$ .....(ii)

Adding (i) & (ii), we get ,

$\frac{4}{3}(\log_2 x + \log_2 y) = 12$

$\Rightarrow (\log_2 x\ y) = 9$

$\Rightarrow xy = 2^9 = 512.$

FeedBack

Q.85

The first 131 natural numbers are written side by side to form a number N = 12345678910.....130131. If N is divided by 5625 and remainder so obtained is R, then find value of R.

Solution:

Correct Answer : 4506

5625 = 625 × 9

The remainder obtained when N is divided by 9 is the remainder when the sum of 131 numbers used to make N is divided by N i.e., 1 + 2 + 3 + 4 +...131

$= \frac{131}{2} \times (131 + 1) = 8646$. When 8646 is divided by 9 the remainder will be 6.

The remainder when N is divided by 625 is equal to the remainder when the last 4 digits of N is divided by 625,

So it will be 0131 i.e. 131

So, remainder will be of the form 9m + 6 or 625n + 131

Thus, 9m + 6 = 625n + 131

m = (625n + 125)/9

Smallest integral value of m is 4 when n = 7.

So remainder is 4506.

FeedBack

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Answer key/Solution

Q.86

Three distinct red counters, four distinct green counters and five distinct blue counters are placed in a row in random order. What is the probability that n two blue counters are adjacent to each other?

1 $\frac{{}^{8}C_5 \times {}^{7}C_4}{12!}$

2 $\frac{7}{99}$

3 $\frac{{}^{6}C_5 \times {}^{7}C_4}{12!}$

4 $\frac{{}^{6}C_5 \times {}^{12}C_4}{12!}$

Solution:

Correct Answer : 2

– 1 – 2 – 3 – 4 – 5 – 6 – 7 –

If red and green counters occupy places numbered 1 to 7, and if the 5 blue counters occupy the places marked – - – the requirement is met.

5 blue counters in the places marked – - – can be filled in 8 × 7 × 6 × 5 × 4 ways. 3 red counters and 4 green counters in the places marked 1 to 7 can be filled in 7! ways.

Hence, the required probability

$= \frac{8 \times 7 \times 6 \times 5 \times 4 \times 7!}{12!} = \frac{8 \times 7 \times 6 \times 5 \times 4}{8 \times 9 \times 10 \times 11 \times 12} = \frac{7}{99}$.

FeedBack

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Answer key/Solution

Q.87

Vikramaditya and Betal were born and died in the 18^{th} century. In the same century, at the end of the year x^3, Vikramaditya was 'x' years old and at the en of the year y^2 Betal was 'y' years old. What was the difference between their ages (when they were alive)?

1 **4 years**

2 **12 years**

3 **6 years**

4 **8 years**

Solution:

Correct Answer : 3

Bookmark

Answer key/Solution

18th century means between 1700 and 1800.

$\sqrt[3]{1728} = 12 \Rightarrow$ Vikramaditya was born in 1716 and is 12 years old in 1728 (1728 is the only perfect cube between 1700 and 1800).

$\sqrt{(1764)} = 42 \Rightarrow$ Betal was born in 1764 – 42 = 1722 (1764 is the only perfect square between 1700 and 1800).

Therefore, the required age difference = 6.

FeedBack

Q.88

The equation $x^4 = px^3 + qx^2 + rx + 909$ has exactly three distinct integral roots. If p, q and r are real numbers, find the largest value of 'q'.

Solution:

Correct Answer : 1508

$x^4 - px^3 - qx^2 - rx - 909 = 0$

Let the roots of the equation be a, a, b and c

$q = -(aa + ab + ac + ab + ac + bc)$.

Product of the roots = –909

q will be maximum when (aa + ab + ac + ab + ac + bc) is minimum. For this to be minimum a = 1, b = 3, c = –303.

$\Rightarrow q = (1 + 3 - 303 + 3 - 303 - 909) = 1508$.

FeedBack

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Answer key/Solution

Q.89

In an isosceles triangle, length of equal sides is 3 cm. What length (in cm) of the unequal side will maximise the area of the triangle?

1 ◯ **$2\sqrt{3}$**

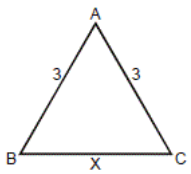
2 ◯ **$3\sqrt{2}$**

3 ◯ **3**

4 ◯ **$2\sqrt{2}$**

Solution:

Correct Answer : 2



Area of $\Delta ABC = \frac{1}{2}(3 \times 3 \times \sin A)$

Area of ΔABC will be maximum if Sin A is maximum.

Sin A = 1 if A is 90°.

A = 90° means $BC = 3\sqrt{2}$.

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Answer key/Solution

Q.90

Find the product of roots the equation $x^2 + 19x + 99 = 2\sqrt{x^2 + 19x + 102}$

1 ◯ **60**

2 ◯ **120**

3 ◯ **93**

4 ◯ **180**

Solution:

Correct Answer : 3

Bookmark

Answer key/Solution

Let $u^2 = x^2 + 19x + 102$
$u^2 - 3 = 2u$
$(u - 3)(u + 1) = 0$
$u = 3$ and by definition $u \neq -1$
$x^2 + 19x + 102 = 9 \Rightarrow x^2 + 19x + 93 = 0$
Product of real roots = 93.

FeedBack

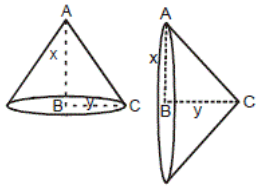
Q.91

In triangle ABC, angle B = 90°. When this triangle rotated about AB it creates a cone of volume 100π cubic cm and when it is rotated about BC it creates a cone of volume 240π cubic cm. What is the length (in cm) of side AC?

Solution:
Correct Answer : 13

Bookmark

Answer key/Solution



$\frac{1}{3}[\pi xy^2] = 100\pi$ ..... (1)

$\frac{1}{3}[\pi yx^2] = 240\pi$ ..... (2)

Dividing (2) by (1), we get

$\frac{x}{y} = \frac{12}{5}$

BC = 5k, AB = 12k and AC = 13k

From (1), $\frac{1}{3}[\pi(5k)^2 12k] = 100\pi$

$100k^3 = 100 \Rightarrow k = 1$.

FeedBack

Q.92

What is the sum of digits of the smallest positive integer 'n' such that every digit of the number '15n' is 0 or 8?

1 ◯ **16**

2 ◯ **25**

3 ◯ **24**

4 ◯ **9**

Solution:
Correct Answer : 1

Bookmark

Answer key/Solution

The number '15n' should be a multiple of 3 and 5.
As the number consists of 0 or 8, the number should be a multiple of 10.
Sum of digits should be a series of 8, sum of which is a multiple of 3.
As we require a minimum number we need a minimum of 3 8's.
Let us consider 8880.
8880 is a multiple of 15
but this is = 15n. So, n = 592. Number of digits is 3 and sum is 16.

FeedBack

Q.93

On a rectangular cloth having dimensions 100 cm × 80 cm, two identical semi circles are to be drawn with the greatest possible radius to print a design. Th two semicircles are tangential to each other. What is the diameter (in cm) of the semi-circle?

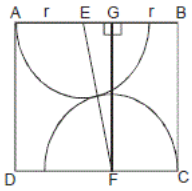
1 ◯ **50**

2 ◯ **60**

3 **80**

4 **82**

Solution:
Correct Answer : 4



Let E and F be the centre of the semicircles. Join EF.
Let FG be the perpendicular from F to AB
EF = 2r and EG = 100 – 2r. As FG = 80,
from triangle FGE, $(2r)^2 = 80^2 + (100 - 2r)^2$
$\Rightarrow$ r = 41 and 2r = 82.

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Answer key/Solution

Q.94
An examination paper contains 120 questions. For each correct answer a student earns 4 marks and loses 1 mark for an incorrect answer and zero marks is given for unanswered question. If a student has scored 200 marks in the examination, find the range of the number of questions attempted correctly by the student. (Range is the difference between minimum number of questions attempted correctly and maximum number of questions attempted correctly)?

Solution:
Correct Answer : 14

The student could have answered a minimum of 50 questions correctly.
Remaining questions = 70.
If the student attempts further 5 questions with one correct and 4 wrong, his net score will be 0.
If the student attempts further 70 questions with 14 correct and 56 wrong his next score will be 0.
Therefore, he could have attempted a minimum of 50 questions correctly or a maximum of 64 questions correctly.
$\therefore$ Range = 14.

FeedBack

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Answer key/Solution

Q.95
The average of marks obtained by n students is 50. One student scored 60 marks and if this score is removed, the average of remaining students is 49. If th maximum mark that can be scored is 100 and the minimum mark that can be scored is 45. If it is known that no student scored the maximum mark, what is the maximum mark scored by a student?

1 **85**

2 **94**

3 **95**

4 **96**

Solution:
Correct Answer : 1

50n – 60 = 49(n – 1)
n = 11
Total of marks = 11 × 50 = 550
Marks of 10 students = 490, as one student scored 60 marks.
Now, out of remaining 10 students if each of 9 students have scored minimum 45 marks, they have total of 45 × 9 = 405.
$\Rightarrow$ Maximum possible marks scored by that remaining student = 490 – 405 = 85.

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Answer key/Solution

Q.96
There are two alloys-Brass and Bronze. Brass is made using only Copper and Zinc in a certain ratio. Bronze contains 70% Copper, 14% Zinc and 16% Tin. These two alloys are mixed in the ratio x : y. The resultant mixture contains Copper, Zinc and Tin in the ratio 73 : 17 : 10. The percentage of zinc in Brass is

1 **24%**

2 **78%**

3 **22%**

4 **Cannot be determined**

Solution:
Correct Answer : 3

As Brass does not contain tin,

$\frac{16y}{x+y} = 10 \Rightarrow x : y = 3 : 5$

Let the percentage of zinc in Brass be z

$\frac{z \times 3 + 14 \times 5}{8} = 17$

$3z = 66 \Rightarrow z = 22\%$

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Answer key/Solution

Q.97
If $X^3 \times Y^2 = 2^6 \times 3^3 \times 5^3 \times 7^{10}$, find the minimum value of 4X + 5Y.

1 **5000**

2 **4900**

3 **6400**

4 **None of these**

Solution:
Correct Answer : 2

Since x and y are positive real numbers, AM ≥ GM

$\frac{\frac{4x}{3}+\frac{4x}{3}+\frac{4x}{3}+\frac{5y}{2}+\frac{5y}{2}}{5} \geq \sqrt[5]{\frac{4x}{3} \times \frac{4x}{3} \times \frac{4x}{3} \times \frac{5y}{2} \times \frac{5y}{2}}$

$4x + 5y \geq 5 \times 4 \times 5 \times 49$

$4x + 5y \geq 4900$

Hence, the minimum value of $4x + 5y = 4900$

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Answer key/Solution

Q.98
A sum of money is lent at a certain rate of interest compounded anually. If instead the same amount was lent at simple interest the interest for the first tw years reduces by Rs. 200 and that for the first three years reduces by Rs. 610. What is the sum (in Rs.) lent?

Solution:
Correct Answer : 80000

Bookmark

Answer key/Solution

Compound interest for 2 years $= P\left[1+\frac{r}{100}\right]^2 - P$

Simple interest for 2 years $= \frac{2Pr}{100}$

Difference between compound interest for 2 years and simple interest for 2 years

$= P\left[1+\frac{r}{100}\right]^2 - P - \frac{2Pr}{100} = P\left[\frac{r}{100}\right]^2 = 200$ ... (1)

Compound interest for 3 years $= P\left[1+\frac{r}{100}\right]^3 - P$

Simple interest for 3 years $= \frac{3Pr}{100}$

Difference between compound interest for 3 years and simple interest for 3 years

$= P\left[1+\frac{r}{100}\right]^3 - P - \frac{3Pr}{100} = 3P\left[\frac{r}{100}\right]^2 + P\left[\frac{r}{100}\right]^3$

$= P\left[\frac{r}{100}\right]^2\left[3+\frac{r}{100}\right] = 610$ ... (2)

Substituting $P\left[\frac{r}{100}\right]^2 = 200$,

$\left[3+\frac{r}{100}\right] = \frac{610}{200} = 3+\frac{10}{200}$

$\frac{r}{100} = \frac{1}{20}$

$P\left[\frac{r}{100}\right]^2 = 200 \Rightarrow P = 80000.$

FeedBack

Q.99

On completion of graduation, Nirav and Advait started a fast food chain on 1st June 2016, wherein they invested Rs. 50000 and Rs. 40000 respectively. Fo the first month, both of them work every day. Starting from July, they started working in alternate month starting with Nirav. At the end of financial year i. March 31, 2017, they distributed 50% of the profit in the ratio of their investment and remaining profit in the ratio of number of days they worked. If Nirav's total share was Rs. 31100 more than that of Advait's share, then find total profit at the end of March 2017.

1 ◯ **3,00,000**

2 ◯ **3,00,600**

3 ◯ **3,00,500**

4 ◯ **3,00,900**

Solution:

Correct Answer : 2

Number of days for which Nirav works is 30 (June) + 31 (July) + 30 (September) + 30 (November) + 31 (January) + 31 (march) = 183

Number of days for which Advait works is 30 (June) + 31 (August) + 31 (October) + 31 (December) + 28 (February, not a leap year) = 151

Thus, Nirav's share out of total profit of 2X is

$\frac{5}{9}X + \frac{183}{334}X$. Thus, Advait's share out of total profit of

2X is $\frac{4}{9}X + \frac{151}{334}X$.

Thus, difference in their share is

$\frac{1}{9}X + \frac{32}{334}X = \frac{311}{1503}X = 31100.$

X = 150300

Thus, 2X = 300600.

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Answer key/Solution

Q.100

The area of a rectangle is twice that of a square. The length of the rectangle is 28 cm and the breadth of the rectangle is 4/7 times that of the side of the square. The breadth of the rectangle is

1 $\frac{32}{7}$ cm

2 $\frac{20}{3}$ cm

3 **25 cm**

4 **14 cm**

Solution:
Correct Answer : 1

Let the side of the square be 'a' cm.
Given area of rectangle = 2 × area of square

$\Rightarrow 28 \times \frac{4}{7}a = 2a^2 \Rightarrow a = 8$

Hence, breadth of the rectangle $= \frac{4}{7} \times 8 = \frac{32}{7}$ cm.

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Answer key/Solution