Question of the Day

Book 3

Test Funda.com
complete mba test prep

TABLE OF CONTENTS

Question of the Day #01: (25-Sep-08) 2
Question of the Day #02: (26-Sep-08) 3
Question of the Day #03: (27-Sep-08) 4
Question of the Day #04: (28-Sep-08) 5
Question of the Day #05: (29-Sep-08) 5
Question of the Day #06 (30-Sep-08) 6
Question of the Day #07: (01-Oct-08) 7
Question of the Day #08: (02-Oct-08) 8
Question of the Day #09: (03-Oct-08) 9
Question of the Day #10: (04-Oct-08) 9
Question of the Day #11: (05-Oct-08) 10
Question of the Day #12: (06-Oct-08) 10
Question of the Day #13: (07-Oct-08) 11
Question of the Day #14: (08-Oct-08) 11
Question of the Day #15: (09-Oct-08) 12
Question of the Day #16: (10-Oct-08) 13
Question of the Day #17: (11-Oct-08) 14
Question of the Day #18: (12-Oct-08) 15
Question of the Day #19: (13-Oct-08) 15
Question of the Day #20: (14-Oct-08) 16
Question of the Day #21: (15-Oct-08) 17
Question of the Day #22: (16-Oct-08) 18
Question of the Day #23: (17-Oct-08) 19
Question of the Day #24: (18-Oct-08) 20
Question of the Day #25: (19-Oct-08) 21
Question of the Day #26: (20-Oct-08) 22
Question of the Day #27: (21-Oct-08) 22
Question of the Day #28: (22-Oct-08) 23
Question of the Day #29: (23-Oct-08) 24
Question of the Day #30: (24-Oct-08) 25
Question of the Day #31: (25-Oct-08) 26
Question of the Day #32: (26-Oct-08) 26
Question of the Day #33: (27-Oct-08) 27

Question of the Day #34: (28-Oct-08) 28
Question of the Day #35: (29-Oct-08) 29
Question of the Day #36: (30-Oct-08) 30
Question of the Day #37: (31-Oct-08) 30
Question of the Day #38: (01-Nov-08) 31
Question of the Day #39: (02-Nov-08) 31
Question of the Day #40: (03-Nov-08) 32
Question of the Day #41: (04-Nov-08) 32
Question of the Day #42: (05-Nov-08) 33
Question of the Day #43: (06-Nov-08) 33
Question of the Day #44: (07-Nov-08) 34
Question of the Day #45: (08-Nov-08) 34
Question of the Day #46: (09-Nov-08) 35
Question of the Day #47: (10-Nov-08) 35
Question of the Day #48: (11-Nov-08) 36
Question of the Day #49: (12-Nov-08) 37
Question of the Day #50: (13-Nov-08) 38

SOLUTIONS

Solution #01: (25-Sep-08) 40
Solution #02: (26-Sep-08) 41
Solution #03: (27-Sep-08) 41
Solution #04: (28-Sep-08) 42
Solution #05: (29-Sep-08) 42
Solution #06: (30-Sep-08) 43
Solution #07: (01-Oct-08) 44
Solution #08: (02-Oct-08) 45
Solution #09: (03-Oct-08) 46
Solution #10: (04-Oct-08) 47
Solution #11: (05-Oct-08) 47
Solution #12: (06-Oct-08) 49
Solution #13: (07-Oct-08) 50
Solution #14: (08-Oct-08) 51
Solution #15: (09-Oct-08) 52
Solution #16: (10-Oct-08) 53
Solution #17: (11-Oct-08) 54

Solution #18: (12-Oct-08) 55
Solution #19: (13-Oct-08) 56
Solution #20: (14-Oct-08) 58
Solution #21: (15-Oct-08) 59
Solution #22: (16-Oct-08) 60
Solution #23: (17-Oct-08) 61
Solution #24: (18-Oct-08) 63
Solution #25: (19-Oct-08) 64
Solution #26: (20-Oct-08) 65
Solution #27: (21-Oct-08) 66
Solution #28: (22-Oct-08) 67
Solution #29: (23-Oct-08) 67
Solution #30: (24-Oct-08) 68
Solution #31: (25-Oct-08) 69
Solution #32: (26-Oct-08) 70
Solution #33: (27-Oct-08) 71
Solution #34: (28-Oct-08) 72
Solution #35: (29-Oct-08) 73
Solution #36: (30-Oct-08) 74
Solution #37: (31-Oct-08) 75
Solution #38: (01-Nov-08) 76
Solution #39: (02-Nov-08) 77
Solution #40: (03-Nov-08) 77
Solution #41: (04-Nov-08) 78
Solution #42: (05-Nov-08) 79
Solution #43: (06-Nov-08) 80
Solution #44: (07-Nov-08) 81
Solution #45: (08-Nov-08) 82
Solution #46: (09-Nov-08) 83
Solution #47: (10-Nov-08) 83
Solution #48: (11-Nov-08) 84
Solution #49: (12-Nov-08) 85
Solution #50: (13-Nov-08) 86
About TestFunda.com 87

PREFACE

For the past couple of years, CAT and other MBA entrance exams have shown a trend towards questions testing a student's ability to apply Mathematical Principles and Analytical Reasoning to solve problems. The unpredictable nature of CAT has ensured that most students are never fully prepared to ace the exam. This is because students limit their preparation to just the learning and practice of core concepts of Mathematics, Verbal Ability and Data Interpretation & Logical Reasoning.

This book is a compilation of the questions with a difficulty level typically on par with CAT. Every single question is original and unique, created by our dedicated team of subject matter experts. The questions are designed to give our readers greater exposure to the types of questions that appear in CAT. The detailed solutions in this book may also provide alternate strategies and shortcuts to solve problems. This book will give students that extra edge and confidence needed to be ready for any surprise that CAT might throw their way.

This book is the 3rd in a series of books on the 'Question of the Day' featured on the TestFunda site. We are sure that our readers will benefit greatly from these books.

Question of the Day #01: (25-Sep-08)

Ashok has some 5 rupee and some 2 rupee coins. He finds that he cannot choose a set of coins out of his collection whose total value is Rs. 21. However, he can choose a set of coins whose total value is Rs. 65. Which of these statements could be true?

OPTIONS

1) Ashok has only one 5 rupee coin
2) Ashok has only two 5 rupee coins
3) Ashok has only five 2 rupee coins
4) Ashok has only one 2 rupee coin
5) Ashok has only seven 5 rupee coins

Question of the Day #02: (26-Sep-08)

The passage given below is followed by a set of question. Choose the most appropriate answer to each question.

The Kayans of Borneo constitute a well-defined and homogeneous tribe or people. Although their villages are scattered over a wide area, the Kayan people everywhere speak the same language and follow the same customs, have the same traditions, beliefs, rites, and ceremonies. Such small differences as they present from place to place are hardly greater than those obtaining between the villagers of adjoining English counties. Although communication between the widely separated branches of the people is very slight and infrequent, yet all are bound together by a common sentiment for the tribal name, reputation, tradition and customs. The chiefs keep in mind and hand down from generation to generation the history of the migrations of the principal branches of the tribe, the names and genealogies of the principal chiefs, and important incidents affecting any one branch. At least fifteen sub-tribes of Kayans, each bearing a distinctive name, are recognised. The word uma, which appears in the names of each group, means village or settlement, and it seems probable that these fifteen sub-tribes represent fifteen original Kayan villages which at some remote period, before the tribe became so widely scattered, may have contained the whole Kayan population. At the present time the people of each sub-tribe occupy several villages, which in most cases, but not in all, are within the basin of one river. In spite of the community of tribal sentiment, which leads Kayans always to take the part of Kayans, and prevents the outbreak of any serious quarrels between Kayan villages, there exist no formal bonds between the various sub-tribes and villages. Each village is absolutely independent of all others, save in so far as custom and caution prescribe that, before undertaking any important affair (such as a removal of the village or a warlike expedition), the chief will seek the advice, and, if necessary, the co-operation of the chiefs of neighbouring Kayan villages. The people of neighbouring villages, especially the families of the chiefs, are also bound together by many ties of kinship; for intermarriage is frequent.

The main purpose of the passage is to:

OPTIONS

1) emphasise that the Kayans of Borneo, though geographically scattered, are bound by a common sentiment for the tribal name, reputation, and customs.
2) describe the social system of the Kayans of Borneo.
3) make a brief and general sketch of the life of the Kayans of Borneo.
4) describe briefly the physical characteristics of the Kayans of Borneo.
5) describe the history, traditions and culture of the Kayans of Borneo.

Question of the Day #03: (27-Sep-08)

The following facts correspond with the irrigation distribution in India.

- If the rainfall is more than 200 cm, the region does not need artificial irrigation.
- If the region receives less than 200 cm rainfall, it needs artificial irrigation.
- Tube wells, canals and tanks can be used to provide artificial irrigation.
- Tube wells can be used only if there is a high ground water table in the region and if there are either fragmented lands or scattered population.
- Canals can be used only if a dam is constructed and if there is either uninterrupted supply of electricity or the ground water table is low.
- Tanks are used only if there is uninterrupted supply of electricity and there is either scattered population or fragmented agricultural land.

A farmer sows seeds in his land which recorded a rainfall of 75 cm previous year and he uses canal irrigation.

Which of the following statements may be true?

OPTIONS

1) There is a high ground water table in the region and uninterrupted supply of electricity.
2) The ground water table is low and the land is fragmented.
3) There is a dam constructed nearby and the region has scattered population.
4) There is uninterrupted supply of electricity and a dam is constructed nearby.
5) The ground water table is low and the population is fragmented.

Question of the Day #04: (28-Sep-08)

The question consists of a paragraph in which the first sentence is fixed and the sentences following it are jumbled. Choose from among the options the most logical order of the sentences.

As political orders go, federal political arrangements pose peculiar problems concerning stability and trust.

A. Political parties often disagree on constitutional issues regarding the appropriate areas of sub-unit autonomy, the forms of co-operation and how to prevent fragmentation.
B. Federations are often marked by a high level of 'constitutional politics'.
C. Federations tend toward disintegration in the form of secession, or toward centralization in the direction of a unitary state.
D. Such instability should come as no surprise given the tensions typically giving rise to federations in the first place.
E. Such sampling bias among states that federalize to hold together makes it difficult to assess claims that federal responses perpetuate cleavages and fuel rather than quell secessionist movements.

OPTIONS

1) DAEBC
2) CBADE
3) DABEC
4) CDBAE
5) EBACD

Question of the Day #05: (29-Sep-08)

Find the highest power of 23 in the following.
1001 × 2001 × 3001 × 4001 × 1002 × 2002 × 3002 × 4002 × 1003 × … × 1099 × 2099 × 3099 × 4099

OPTIONS

1) 57
2) 20
3) 19
4) 18
5) 27

Question of the Day #06 (30-Sep-08)

The passage given below is followed by a question. Choose the most appropriate answer to the question.

Philosophical and scientific teaching of the Early Middle Ages was based upon a few copies and commentaries of ancient Greek texts that remained in Western Europe after the collapse of the Western Roman Empire. Much of Europe had lost contact with the knowledge of the past. This scenario changed during the Renaissance of the 12th century. The increased contact with the Islamic world in Spain and Sicily, the Crusades, the Reconquista, as well as increased contact with Byzantium, allowed Europeans to seek and translate the works of Hellenic and Islamic philosophers and scientists, especially the works of Aristotle, Euclid, Ptolemy, Plotinus, Geber, Al-Khwarizmi, Rhazes, Abulcasis, Alhacen, Avicenna, Avempace, and Averroes, among others. The development of medieval universities allowed them to aid materially in the translation and propagation of these texts and started a new infrastructure which was needed for scientific communities.Medieval scholars sought to understand the geometric and harmonic principles by which God created the universe. At the beginning of the 13th century there were reasonably accurate Latin translations of the main works of almost all the intellectually crucial ancient authors, allowing a sound transfer of scientific ideas via both the universities and the monasteries. By then, the natural science contained in these texts began to be extended by notable scholastics such as Robert Grosseteste, Roger Bacon, Albertus Magnus and Duns Scotus. Precursors of the modern scientific method can be seen already in Grosseteste's emphasis on mathematics as a way to understand nature, and in the empirical approach admired by Bacon, particularly in his Opus Majus.

The first half of the 14th century saw much important scientific work being done, largely within the framework of scholastic commentaries on Aristotle's scientific writings. William of Ockham introduced the principle of parsimony: natural philosophers should not postulate unnecessary entities, so that motion is not a distinct thing but is only the moving object and an intermediary ‘‘sensible species’’ is not needed to transmit an image of an object to the eye. Scholars such as Jean Buridan and Nicole Oresme started to reinterpret elements of Aristotle's mechanics. In particular, Buridan developed the theory that impetus was the cause of the motion of projectiles, which was a precursor of the modern concept of inertia. Meanwhile, the Oxford Calculators began to mathematically analyze the kinematics of motion, conducting this analysis without considering the causes of motion. Even though the devastation brought by the Black Death (mid 14th century) and other disasters sealed a sudden end to the previous period of massive philosophic and scientific development, two centuries later started the European Scientific Revolution, which may also be understood as a resumption of the process of scientific change halted during the crisis of the Late Middle Ages.

The spread of scientific and philosophical ideas was a direct result of:

OPTIONS

1) The increase of friendly relations with neighbouring states.
2) Transfer of knowledge brought about by increased trade relations.
3) The fall of the Western Roman Empire.
4) The onset of disasters led to increase in spread of scientific ideas.
5) The crusades which brought the Western Europeans eastwards

Question of the Day #07: (01-Oct-08)

In a shooting competition, four shooters participated in two rounds. In each round, the shooters took one shot each at the target. For hitting the bull's eye, the shooters were awarded 10 points. If they did not hit the bull's eye, depending upon the distance of the shot from the bull's eye, they were awarded either 5 or 0 points. The following facts were known about the competition.

- At least 2 shooters in the first round and at least 3 shooters in the second round hit the bull's eye
- No shooter scored a zero in the competition
- The total score in both the rounds put together was 65

Which of the following cannot be a true statement.

OPTIONS

1) There was only one shooter who hit the bull's eye in both the rounds
2) There were only two shooters who hit the bull's eye in both the rounds
3) Exactly one shooter had the same score in both the rounds
4) Exactly two shooters had the same score in both the rounds
5) Exactly three shooters had the same score in both the rounds

Question of the Day #08: (02-Oct-08)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

As part of its drive to stem the rise in greenhouse gas emissions from transport, the European Commission is preparing the ground for an overhaul of EU rules on the information that must be provided to consumers regarding fuel consumption and CO^2 emissions of new cars. With fuel consumption by passenger cars generating 12% of overall EU CO^2 emissions, the Commission has already proposed a controversial directive aimed at slashing average emissions from new cars and vans. Among these flanking measures is a planned revision of the 1999 directive on car labelling, which is meant to enable consumers to make an informed choice among more or less fuel-efficient and low-emission models. _____

OPTIONS

1) This, however, is contrary to a study that concluded that the 1999 directive "does not yet show the desired effectiveness".
2) Labels are not displayed or are poorly visible; not all dealers provide the national guides; and some advertisements contain little or no relevant information or the data that is printed is too small.
3) This, however, is based on the assumption that by informing and influencing consumers it is possible to create a more energy-efficient passenger car fleet.
4) The commission intends to encourage carmakers to compete on the basis that their cars are safe and stylish and environment friendly.
5) This requires dealers to label all new cars, provide national guides on fuel efficiency, and include such data in promotional literature and advertisements.

Question of the Day #09: (03-Oct-08)

The question is followed by two statements A and B. Answer the question using the following instructions.
Mark (1) if the question can be answered by using statement A alone but not by using statement B alone.
Mark (2) if the question can be answered by using statement B alone but not by using statement A alone.
Mark (3) if the question can be answered by using both the statements together but not by using either of the statements alone.
Mark (4) if the question cannot be answered on the basis of the two statements.

Two students Pravin and Nitin gave a test of 20 questions. For every right answer the students were awarded one mark each and for every wrong answer 0.25 mark was deducted. How many questions were attempted by Nitin?

A. They together scored total 31.25 marks

B. Pravin had an accuracy of exactly 80%

OPTIONS

1) 1
2) 2
3) 3
4) 4

Question of the Day #10: (04-Oct-08)

Mark the option that is grammatically incorrect. Ignore punctuation errors, if any.

OPTIONS

1) But the reason this works is that
2) they don't butt in all the time;
3) my mom typically mentions things only when there was an unusually bad day/event;
4) many times she bites her tongue about issues until I bring them up;
5) they approach it as a mutual effort to 'help my girl'.

Question of the Day #11: (05-Oct-08)

Moreshwar and Ganesh started travelling towards each other from their hometowns, Hyderabad and Bangalore respectively. They met at point P in between for the first time. As soon as they met, they exchanged their cars (which could travel with their predefined speeds only) and turned back to travel towards their respective hometown cities. As soon as they reached their hometowns, they again started travelling back towards the other city and met at point Q for the second time. Note that after meeting at point P they did not meet each other before they reached their respective hometown cities. What was the ratio of their speeds such that the distance PQ was the highest?

OPTIONS

1) 2 : 5
2) 1 : 2
3) 2 : 3
4) 5 : 6
5) 1 : 3

Question of the Day #12: (06-Oct-08)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

There should be nothing more disheartening for an MBA student than, after all that work, graduating into an economic downturn. Particularly when the organisations suffering the biggest economic woes are prime recruiters of MBAs; financial services and banks. But, while no one doubts that the prospects for the economy and job market have worsened, compared with previous downturns, something feels different this time around. _____

OPTIONS

No one really knows how bad the economic situation is.

Commentators are divided about whether the country really is in a recession.

Some argue that an economic upturn may begin later this year.

MBA students appear resigned to downgrading from high - paying positions to more mundane corporate posts.

Both business schools and MBA students are remarkably upbeat.

Question of the Day #13: (07-Oct-08)

Alberto, the baker, placed dough for cookies in a rectangular tray of length 21 cm and width 10 cm. He cut the dough using a circular mould of radius 1.5 cm. He began at the top left corner and proceeded horizontally towards the right. When he could no longer cut the dough horizontally, he moved to the row below and proceeded as previously. In the end, he was left with bits of dough. He took these bits of dough, mixed them and placed the dough in the tray, once again, so that its thickness was the same as earlier. He always used the entire width of the tray. He proceeded to cut the shapes once more. Alberto went on doing so, reusing the remaining dough for the next batch of cookies, until he was left with a quantity of dough that he wouldn't be able to cut with this method. He shaped it into a circle using his hands. What was the approximate radius of this last cookie?

OPTIONS

1) 0.9
2) 1.2
3) 1.4
4) 1.9
5) 2.5

Question of the Day #14: (08-Oct-08)

The question below contains a paragraph with a missing sentence. Choose an option that fits best in the context.

Statistics illustrate the broader trend of shifts in the content of news. The Centre for Media Studies in Delhi did a study which showed that the time spent on political news in the year 2007 has come down by more than 50 per cent. Political news coverage by Hindi news channels dipped from 23.1 per cent in 2005 to 10.09 per cent in 2007._____. At the same time, agriculture, education, health and environment-related news have not seen any net change; their coverage has been as insignificant in 2007 as earlier. Corruption, TV executives report, is no longer of interest to the audiences.

OPTIONS

1) Channels responded by adding reality show content news.
2) A new news consumer is inevitably a less sophisticated news consumer, more attracted to neighbourhood crime and bizarreness than matters of State.
3) It takes demand to create supply.
4) But sports, entertainment, crime and human interest news coverage almost doubled in 2007.
5) When you watch the news, think of what it would have cost to substitute that item with hard news from several locations, and you will know why we see the news we do.

Question of the Day #15: (09-Oct-08)

A question is followed by two statements, A and B. Answer the question using the following instructions:

Mark (1) if the question can be answered by using any one of the statements alone and not by the other.
Mark (2) if the question can be answered by using either of the statements alone.
Mark (3) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (4) if the question cannot be answered on the basis of the two statements.

A boat travels from point P in the direction of the flow of the stream to point Q which is 40 m away from P and comes back to point P. While coming back it encounters a log of wood which had started at the same time as the boat from point P.

What was the effective speed of the boat with respect to the bank of the river while it was moving from point P to Q?

1. Total time taken by the boat to come back to point P is 40 sec.
2. Boat and the log meet 20 seconds after the start of their journey.

OPTIONS

1) 1
2) 2
3) 3
4) 4

Question of the Day #16: (10-Oct-08)

The question below contains a paragraph followed by alternative summaries. Choose the option that best captures the essence of the text.

The atom is the smallest unit of an element that retains the chemical properties of that element. An atom has an electron cloud consisting of negatively charged electrons surrounding a dense nucleus. The nucleus contains positively charged protons and electrically neutral neutrons. When the number of protons in the nucleus equals the number of electrons, the atom is electrically neutral; otherwise it is an ion and has a net positive or negative charge. An atom is classified according to its number of protons and neutrons: the number of protons determines the chemical element and the number of neutrons determines the isotope of that element. The name atom comes from the Greek ἄτομος/átomos, α-τεμνω, which means uncuttable, something that cannot be divided further. The concept of an atom as an indivisible component of matter was first proposed by early Indian and Greek philosophers. In the 17th and 18th centuries, chemists provided a physical basis for this idea by showing that certain substances could not be further broken down by chemical methods. During the late 19th and early 20th centuries, physicists discovered subatomic components and structure inside the atom, thereby demonstrating that the 'atom' was not indivisible. The principles of quantum mechanics were used to successfully model the atom.

OPTIONS

1) An atom consists of negatively charged electrons surrounding a nucleus that contains positively charged protons and electrically neutral neutrons. The concept of an atom was first proposed by early Indian and Greek philosophers. They were considered indivisible until physicists in the late 19th and early 20th century developed techniques to divide it into subatomic components.
2) An atom consists of negatively charged electrons surrounding a nucleus that contains positively charged protons and electrically neutral neutrons. The concept of an atom was first proposed by Indian and Greek philosophers. The name atom means uncuttable, something that cannot be divided further. The concept of an atom was first proposed by Indian and Greek philosophers. However modern physics with the help of quantum mechanics has discovered subatomic particles thereby demonstrating that the atom is not indivisible.
3) An atom consists of negatively charged electrons surrounding a nucleus that contains positively charged protons and electrically neutral neutrons. An atom is classified according to its number of protons and neutrons: the number of protons determines the chemical element and the number of neutrons determines the isotope of that element. During the late 19th and early 20th centuries, physicists discovered subatomic components and structure inside the atom, thereby demonstrating that the 'atom' was not indivisible.
4) An atom consists of negatively charged electrons surrounding a nucleus that contains positively charged protons and electrically neutral neutrons. The concept of an atom was first proposed by Indian and Greek philosophers as an indivisible component of matter. However modern physics has discovered subatomic particles thereby demonstrating that the atom is not indivisible.

5) An atom consists of negatively charged electrons surrounding a nucleus that contains positively charged protons and electrically neutral neutrons. The atom as an indivisible component of matter was first invented by early Indian and Greek philosophers until modern physicists discovered subatomic components and structure inside the atom, thereby demonstrating that the 'atom' was not indivisible.

Question of the Day #17: (11-Oct-08)

The country of Tialmoner has a unique six-stringed musical instrument. The frequencies of the strings decrease from the first string to the sixth string. A visitor to this nation was given a tuner and the following instructions:

I. The frequency of the fifth string is a three-digit prime number not greater than 125.
II. The fifth and fourth strings share a common harmonic overtone of 15478 Hz.
III. Satisfying the above conditions, the fourth string has the least possible frequency.
IV. The second string has a frequency of 241 Hz.
V. The last five strings are placed at intervals such that the intervals are part of an arithmetic progression
VI. The first string has a frequency that is a harmonic overtone of that of the sixth.

The visitor successfully tuned the instrument. From the following options, what is a possible frequency of the first string?

(A harmonic overtone is an integer multiple of a certain frequency. The first overtone of 55 Hz is 110 Hz and so on...)

OPTIONS

1) 336
2) 262
3) 174
4) 344
5) 348

Question of the Day #18: (12-Oct-08)

The question below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

The distinguished speaker made a (A) ceremonious/ceremonial (B) entry. He was known for his righteous crusade against the dictators, but at the same time was (A) discreet/discrete (B) in voicing his opinions. His (A) opposite/apposite (B) remarks won him accolades from the press and the public. He urged the (A) complacent/complaisant (B) citizens to raise their voices and to constructively complain where improvements are necessary. He reiterated that wrongdoers should get their just (A) deserts/desserts (B).

OPTIONS

1) AAAAB
2) ABBAB
3) AABBA
4) BABAB
5) BABBA

Question of the Day #19: (13-Oct-08)

Following inequalities represent length of sides of ΔABC,

$|a - 7| \leq 2$

$||b - 4| - 7| \leq 3$

$c^2 - 2c - 24 < 0$

If a, b and c are integers, what is the difference between the minimum possible and maximum possible perimeter of the ΔABC?

OPTIONS

1) 14
2) 11
3) 10
4) 12
5) 13

Question of the Day #20: (14-Oct-08)

The question consists of a paragraph in which the first and last sentences are identified and the sentences in between are jumbled. Choose from among the options the most logical order of the intermediate sentences.

I. The minutiae of verbal criticism I am far from seeking to despise.

A. Three parts of the emendations made upon poets are mere alterations, some of which, had they been suggested to the author by his Maecenas or Africanus, he would probably have adopted.
B. Moreover, those who are most exact in laying down rules of verbal criticism and interpretation, are often least competent to carry out their own precepts.
C. Indeed, considering the character of some of my own books, such an attempt would be gross inconsistency.
D. But, while I appreciate its importance in a philological view, I am inclined to set little store on its aesthetic value, especially in poetry.

II. Grammarians are not poets by profession, but may be so per accidents.

OPTIONS

1) CABD
2) CDAB
3) CBAD
4) DBCA
5) BADC

Question of the Day #21: (15-Oct-08)

1000 students appeared for the talent search examination NCERT. The examination had 1000 questions. During checking of the papers, a very peculiar trend was noticed. The first student attempted all the questions, the second student attempted questions with question numbers which were multiples of 2, the third student attempted the questions with question numbers which were multiples of 3 and so on.

Let f(n) = the number of students who attempted the question number n

For example, f(10) represents the number of students who attempted the question number 10 and f(10) = 4 because four students (1^{st}, 2^{nd}, 5^{th} and 10^{th}) attempted the question.

For how many questions was f(n) odd?

OPTIONS

1) 234
2) 31
3) 78
4) 101
5) None of these

Question of the Day #22: (16-Oct-08)

The question below contains a paragraph followed by alternative summaries. Choose the option that best captures the essence of the text.

Mumbai is India's largest city. It serves as an important economic hub of the country, contributing 10% of all factory employment, 40% of all income tax collections, 60% of all customs duty collections, 20% of all central excise tax collections, 40% of India's foreign trade and Rs. 40 billion (US$ 910 million) in corporate taxes. Mumbai's per-capita income is Rs. 48,954 (US$ 1,119.19) which is almost three times the national average. Many of India's top conglomerates (including State Bank of India, Tata, Godrej and Reliance), and four of the Fortune Global 500 companies are based in Mumbai. Many foreign banks and financial institutions also have branches in this area, the World Trade Centre (Mumbai) being the most prominent one. Until the 1980s, Mumbai owed its prosperity largely to textile mills and the seaport, but the local economy has since been diversified to include engineering, diamond-polishing, healthcare and information technology. Mumbai is home to the Bhabha Atomic Research Centre, and most of India's specialized, technical industries, having a modern industrial infrastructure and vast, skilled human resources. Rising venture capital firms, start-ups and established brands work in aerospace, optical engineering, medical research, computers and electronic equipment of all varieties, shipbuilding and salvaging, and renewable energy and power. Along with the rest of India, Mumbai, its commercial capital, has witnessed an economic boom since the liberalisation of 1991, the finance boom in the mid-nineties and the IT, export, services and BPO boom in this decade. The middle class in Mumbai is the segment most impacted by this boom and is the driver behind the consequent consumer boom. Upward mobility among Mumbaikars has led to a direct increase in consumer spending. Mumbai has been ranked 10th among the world's biggest centres of commerce in terms of financial flow in a survey compiled by Mastercard Worldwide.

OPTIONS

1) Mumbai is India's commercial capital and is responsible for generating a substantial portion of the country's tax and foreign trade revenues. Prior to liberalization, Mumbai owed much of its prosperity to textile mills and its seaport, but is now witnessing an economic boom in IT, export, services and BPOs. The city is ranked 10th among the world's biggest centres of commerce in terms of financial flow.
2) Mumbai is India's largest city and an important economic hub contributing 10% of all factory employment, 40% of all income tax collections, 60% of all customs duty collections, 20% of all central excise tax collections, 40% of India's foreign trade and Rs. 40 billion (US$ 910 million) in corporate taxes. Mumbai's per-capita income is Rs. 48,954 (US$ 1,119.19) which is almost three times the national average. Along with the rest of India, Mumbai, its commercial capital, has witnessed an economic boom since the liberalisation of 1991, the finance boom in the mid-nineties and the IT, export, services and BPO boom in this decade. The middle class in Mumbai is the segment most impacted by this boom and is the driver behind the consequent consumer boom.
3) Mumbai is India's commercial capital and is responsible for generating most of the country's revenues. Mumbai's per-capita income is Rs. 48,954 (US$ 1,119.19) which is almost three

times the national average. Along with the rest of India, Mumbai, its commercial capital, has witnessed an economic boom since the liberalisation of 1991, the finance boom in the mid-nineties and the IT, export, services and BPO boom in this decade. Mumbai has been ranked 10th among the world's biggest centres of commerce in terms of financial flow in a survey compiled by Mastercard Worldwide.

4) Mumbai is India's largest city and is responsible for generating most of the country's tax and foreign trade revenues. Prior to liberalization, Mumbai owed much of its prosperity to textile mills and its seaport, to finance in the mid-nineties and now to IT, automobiles, export, services and BPOs. The city is ranked 10th among the world's biggest centres of commerce in terms of financial flow.
5) Mumbai is India's commercial capital and its largest city. Many of India's largest conglomerates as well as foreign banks and financial institutions are based in this city. Most of India's specialized, technical industries, having a modern industrial infrastructure and vast, skilled human resources are also based there. Rising venture capital firms, start-ups and established brands work in aerospace, optical engineering, medical research, computers and electronic equipment of all varieties, shipbuilding and salvaging, and renewable energy and power. Mumbai has been ranked 10th among the world's biggest centres of commerce in terms of financial flow in a survey compiled by Mastercard Worldwide.

Question of the Day #23: (17-Oct-08)

A cube of radioactive material with side 1 cm is kept in the space. The radiation effect of this radioactive material is up to 1 cm. What is the volume of the space influenced by the radiation effects of this radioactive cube (excluding the volume of the cube itself)?

OPTIONS

1) $27\ cm^3$
2) $13\pi\ cm^3$
3) $\frac{13\pi + 18}{3}\ cm$
4) $22\ cm^3$
5) $26\ cm^3$

Question of the Day #24: (18-Oct-08)

Each of the questions below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

The (A) phenomena/phenomenon (B) was truly splendid. Nothing could (A) detract/distract (B) from the magic of the show. The gravity defying rockets when ignited raced into the sky to burst into a thousand colours and let their (A) crumby/crummy (B) invisible leftovers silently fall to the ground. The spectators could (A) decry/descry (B) miniature crackers exploding close to a big one making designs which were a (A) sheer/shear (B) delight to watch.

OPTIONS

1) BABBA
2) BBABB
3) AABBA
4) BBAAA
5) BAABA

Question of the Day #25: (19-Oct-08)

A question is followed by two statements, A and B. Answer the question using the following instructions:

Mark (1) if the question can be answered by using the statement A alone but not by using the statement B alone.
Mark (2) if the question can be answered by using the statement B alone but not by using the statement A alone.
Mark (3) if the question can be answered by using either of the statements alone.
Mark (4) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (5) if the question cannot be answered on the basis of the two statements.

Let p and q be the two distinct roots of the quadratic equation $ax^2 + bx + c = 0$. Both p and q are two digit integers with same units digit. Let Δ be the determinant of this equation.

What is the units digit of $\frac{b}{2a}$?

A. $\frac{\Delta}{a^2}$ is not a multiple of 100.

B. Units digit of $\frac{p+q}{2}$ is not 0.

OPTIONS

1) 1
2) 2
3) 3
4) 4
5) 5

Question of the Day #26: (20-Oct-08)

The question below contains a paragraph with a missing sentence. Choose an option that best fits the context.

There are vast amounts of water on earth. Unfortunately, over 97% of it is too salty for human consumption and only a fraction of the remainder is easily accessible in rivers, lakes or groundwater. Climate change, droughts, growing population and increasing industrial demand are straining the available supplies of fresh water. More than 1 billion people live in areas where water is scarce, according to the United Nations, and that number could increase to 1.8 billion by 2025. _____. Its appeal is obvious. The world's oceans, in particular, present a virtually limitless and drought-proof supply of water.

OPTIONS

1) However, there are now 13,080 desalination plants in operation around the world, producing expensive but desalinated potable water.
2) But desalination requires large amounts of energy and can cost several times as much as treating river or groundwater.
3) One time-tested but expensive way to produce drinking water is desalination: removing dissolved salts from sea and brackish water.
4) As more parts of the world face prolonged droughts or water shortages, desalination seems to be the only way out.
5) However, apart from being expensive, a large desalination plant can suck up enough electricity in one year to power more than 30,000 homes.

Question of the Day #27: (21-Oct-08)

x and y are positive integers. How many pairs of (x, y) satisfy the following relation?

$$\frac{1}{\sqrt{x}}+\frac{1}{\sqrt{y}}=\frac{1}{\sqrt{20}}$$

OPTIONS

1) 8
2) 11
3) 3
4) 1
5) None of these

Question of the Day #28: (22-Oct-08)

The question consists of a paragraph in which the first and last sentences are fixed and the sentences in between are jumbled. Choose from among the options the most logical order of the intermediate sentences.

I. On the surface and along the banks of the river alligators play sport; mocason snakes twist their way along, and scouring kingfishers croak in the balmy air.
A. He will not approach disguised; he will politely give us warning.
B. At present it only presented a few beds rank with weeds.
C. We emerged from the mossy walk and reached a slab fence, dilapidated and broken, which enclosed an area of an acre of ground, in the centre of which stood the mansion: the area seemed to have been a garden, which, in former days, may have been cultivated with great care.
D. If a venerable rattlesnake warn us, we need not fear- being an honourable snake partaking of the old southerner's affected chivalry.
II. We were told the gardener had been dismissed in consideration of his more lucrative services in the corn-field.

OPTIONS

1) CBDA
2) CBAD
3) DACB
4) DBCA
5) DABC

Question of the Day #29: (23-Oct-08)

The question is followed by two statements, A and B. Answer the question using the following instructions:
Mark (1) if the question can be answered by using the statement A alone but not by using the statement B alone.
Mark (2) if the question can be answered by using the statement B alone but not by using the statement A alone.
Mark (3) if the question can be answered by using either of the statements alone.
Mark (4) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (5) if the question cannot be answered on the basis of the two statements.

What is the remainder when $a^{(n+1)}$ is divided by (a + 1), where a and n are two digit positive integers?

A. $(p^n - p)$ is divisible by n for any value of p, where p is a positive integer.
B. When n^2 is divided by 8, remainder is 1.

OPTIONS

1) 1
2) 2
3) 3
4) 4
5) 5

Question of the Day #30: (24-Oct-08)

The question below contains a paragraph followed by alternative summaries. Choose the option that best captures the essence of the text.

The Age of Reason: Being an Investigation of True and Fabulous Theology, a deistic treatise written by eighteenth-century British radical and American revolutionary Thomas Paine, critiques institutionalized religion and challenges the inerrancy of the Bible. Published in three parts in 1794, 1795, and 1807, it was a bestseller in America, where it caused a short-lived deistic revival. British audiences, however, fearing increased political radicalism as a result of the French revolution, received it with more hostility. The Age of Reason presents common deistic arguments; for example, it highlights the corruption of the Christian Church and criticizes its efforts to acquire political power. Paine advocates reason in the place of revelation, leading him to reject miracles and to view the Bible as an ordinary piece of literature rather than as a divinely inspired text. The Age of Reason is not atheistic, but Deistic: it promotes natural religion and argues for a creator-God.

OPTIONS

1) Thomas Paine's The Age of Reason criticizes institutionalized religion and challenges the usefulness of the Bible. The book was very popular in America but less so in Britain. The book promotes a rational belief in the existence of God.
2) The Age of Reason, a book written by Thomas Paine in the 18th century, criticizes institutionalized religion and the beliefs written in the Bible. It was a bestseller in America but was less well received in Britain where people were more God fearing. The book is essentially deistic in nature, i.e. it promotes a rational belief in God.
3) The Age of Reason, a book written by Thomas Paine, who was an 18th century radical and revolutionary, challenges institutionalized religion and the writings in the Bible. It was a bestseller in America, but less so in Britain due to its increased political radicalism. The book highlights the corruption of the church and its efforts to acquire political power.
4) Thomas Paine's, The Age of Reason is a book which criticizes institutionalized religion, challenges the inerrancy of the Bible, and promotes deism. It was a bestseller in America but was less well received in Britain.
5) Thomas Paine's, The Age of Reason is a book which criticizes the authority of institutionalized religion and people's belief in the Bible. It was a bestseller in America but was less well received in Britain which feared that the book may incite a wave of political radicalism. The book also highlights the corruption of the church and its efforts to acquire power.

Question of the Day #31: (25-Oct-08)

My complete date of birth is represented as d/m/1976. Here, d, m and 1976 are the date, month and year of birth respectively. Now d is multiplied by the highest possible value of date in a month and m is multiplied by the highest possible value of month in a year. The sum of these two products is 487. What is the sum of my date and month of birth?

OPTIONS

1) 23
2) 13
3) 7
4) 15
5) None of these

Question of the Day #32: (26-Oct-08)

Each of the questions below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

The atmosphere in the office was (A) taut/taught (B) and the employees were (A) tetchy/touchy (B). They were in a complaining mood, feeling agitated about the latest company policy. This (A) tortuous/torturous (B) new policy outlined more number of working hours and less compensation. The (A) substantive/substantial (B) elements of the policy outlined more stringent rules for both managers and subordinates and greater cost-cuts. Worse, the policy was to be executed (A) write-off/right off (B).

OPTIONS

1) BABBB
2) AABAB
3) ABBAB
4) ABABB
5) AAABA

Question of the Day #33: (27-Oct-08)

The question is followed by two statements, A and B. Answer the question using the following instructions:
Mark (1) if the question can be answered by using the statement A alone but not by using the statement B alone.
Mark (2) if the question can be answered by using the statement B alone but not by using the statement A alone.
Mark (3) if the question can be answered by using either of the statements alone.
Mark (4) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (5) if the question cannot be answered on the basis of the two statements.

An incircle is drawn in an isosceles triangle of area 60 cm^2.

What is the area of the incircle?

A. The length of the equal sides of the triangle is 13 cm.
B. Distance of the meeting point of the two medians drawn on the equal sides of the triangle from their respective opposite vertices is 4 cm from the non equal side of the triangle.

OPTIONS

1) 1
2) 2
3) 3
4) 4
5) 5

Question of the Day #34: (28-Oct-08)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

This, then, is the first stage of representation. What was the nature of this new force which had come into the world and was destined to so profoundly affect the whole course of human affairs? One result of immense importance is apparent at a glance. It solved a problem which had baffled the ancients-that of the nationalization of local communities on a free basis. But it is generally assumed that the only difficulty overcome was that of size. _____

OPTIONS

1) And that the representations were not very effective.
2) That the representative assembly is a mere substitute for the larger assembly of the whole nation.
3) And it gave rise to the second stage of representation.
4) But the representations were also very effective.
5) And it served no other purpose.

Question of the Day #35: (29-Oct-08)

The question is followed by two statements, A and B. Answer the question using the following instructions:
Mark (1) if the question can be answered by using the statement A alone but not by using the statement B alone.
Mark (2) if the question can be answered by using the statement B alone but not by using the statement A alone.
Mark (3) if the question can be answered by using either of the statements alone.
Mark (4) if the question can be answered by using both the statements together but not by either of the statements alone.
Mark (5) if the question cannot be answered on the basis of the two statements.

250 children were offered ice-cream bowls, with the possibility of having up to four different flavours in the bowl. The options they had were between Chocolate, Vanilla, Strawberry and Mango. While some children took a single flavour, others took multiple flavours. What was noticed was that no one took combinations of only Strawberry and Chocolate or only Mango and Vanilla. The number of students who ate single flavours and those who ate exactly two flavours is known. In addition to this, the total number of children with Chocolate in their bowls was twice the number of children with Strawberry in their bowls. How many children had a combination of Mango, Strawberry and Vanilla?

A. The number of children who had a combination of Mango, Chocolate and Vanilla is known.
B. The number of children who had a combination of Strawberry, Vanilla and Chocolate is known.

OPTIONS

1) 1
2) 2
3) 3
4) 4
5) 5

Question of the Day #36: (30-Oct-08)

The question below consists of a set of labeled sentences. These sentences, when properly sequenced, form a coherent paragraph. Choose the most logical order of sentences from among the options.

A. We can be appropriately modest about our knowledge of other things, but not so about our ability to explain the workings of the world.
B. But we seem to have a specific "illusion of explanatory depth" – the belief that we possess a more profound causal understanding than we really do.
C. We are good at estimating how well we know simple facts such as the capitals of countries, procedures such as how to make an international phone call, and narratives such as the plots of well-known movies.
D. People are often surprised and dismayed at their ignorance, but we are not generally bad at estimating how much we know.
E. Instead, we have a special deficit with regard to our explanatory understandings.

OPTIONS

1) ABCED
2) CEDBA
3) DECBA
4) DEBAC
5) BEDCA

Question of the Day #37: (31-Oct-08)

A town is protected by a circular wall which has three doors A, B and C. The door A is at a distance of 3 km from both the doors B and C. The perpendicular distance between the line joining doors A and B and the centre of the town is 2 km. What is the distance between the doors B and C?

OPTIONS

1) 4.8 km
2) 4 km
3) 3.9 km
4) 4.2 km
5) 5.1 km

Question of the Day #38: (01-Nov-08)

The following question has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

There is a sweetness as well as a bitterness of grief; and something like a feeling of joy and gladness will spring up in the mother's heart, and mingle with and soothe her sorrow, if she can think of her boy, when he is gone, as always docile, tractable, submissive to her authority, and obedient to her commands. Such recollections, it is true, cannot avail to remove her grief, perhaps not even to diminish its intensity._____

OPTIONS

1) Infact they will inculcate the fear of the unknown in the mother's heart about the safety of the child in the bitterness of grief.
2) Infact they will inculcate the fear of the unknown in the mother's heart about the child's well being.
3) Although they will greatly assuage the bitterness of it, and wholly take away its sting.
4) Although they will greatly reduce the tensions associated with it in alleviating the desired outcomes.
5) But what it will do is bring about a sea change in the way such recollections are perceived.

Question of the Day #39: (02-Nov-08)

A loan of Rs. 48,000 is borrowed at an interest rate of 10% per annum compounded annually and repaid in 3 equal yearly installments of Rs. X starting after one year. What is the approximate value of X?

OPTIONS

1) Rs. 19300.50
2) Rs. 19300.75
3) Rs. 19301
4) Rs. 19301.25
5) Rs. 19301.50

Question of the Day #40: (03-Nov-08)

The questions below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

It had been a thoroughly (A) exhaustive/exhausting (B) experience. The (A) factitious/fractious (B) child's tantrums were never ending. Mother was getting irritated. She had to purchase at least five different toys for her (A) bawling/baulking (B) baby. And yet the child wasn't satisfied. When he pointed to a big toy train, with his wailing in (A) continuation/continuance (B), her frustration was (A) complimented/complemented (B).

OPTIONS

1) BBAAB
2) BAAAB
3) AABBB
4) ABABB
5) BBABB

Question of the Day #41: (04-Nov-08)

$$S_1 = \left(1 + \frac{4}{3} + \frac{9}{3^2} + \frac{16}{3^3} + \frac{25}{3^4} + \cdots\right)$$

S2 = (4 + 7 + 11 + 17 + 27 + 45 + … 11 terms)

and $S = S_1 \times S_2$
What is the value of S?

OPTIONS

1) 2190
2) 9855
3) 1095
4) 1760
5) 9055

Question of the Day #42: (05-Nov-08)

The question below contains a number of sentences. Each sentence has pairs of word(s)/phrases that are highlighted. From the highlighted word(s)/phrase(s), select the most appropriate word(s)/phrase(s) to form correct sentences. Then, from the options given, choose the best one.

This book is a (A) classic/classical (B) example of brilliant (A) etymological/entomological (B) research. A detailed analysis of the chapters would (A) connote/denote (B) more interpretations and insights than the mere meaning of scientific words and terms. (A) Beside/Besides (B) the general introductory session which explains the significance of these tiny creatures, there are sections which devote entirely to the evolutionary and futuristic aspect of these. The (A) distinct/distinctive (B) thing about this book is that it delves into the subject like no other book has ever done.

OPTIONS

1) BABBA
2) AABAA
3) AAABB
4) ABABB
5) BBABB

Question of the Day #43: (06-Nov-08)

How many sets of three or more consecutive odd numbers can be formed such that their sum is 500?

OPTIONS

1) 10
2) 0
3) 3
4) 4
5) 5

Question of the Day #44: (07-Nov-08)

The question below consists of a set of labeled sentences. These sentences, when properly sequenced, form a coherent paragraph. Choose the most logical order of sentences from among the options.

A. Economic theory, however, holds that items of economic utility and in limited supply should be priced in order to be used efficiently by the market.
B. Globalization has not taken the interests of poorer nations, the working class, and the natural environment into account. One of the proposed solutions to the uncontrolled environmental damage created by global economic expansion is to set prices for that environmental damage done to the biosphere, so that the economy 'sees' the price signals from the environment, and begins to internalize the value of the environment.
C. In terms of the controversial global migration issue, disputes revolve around both its causes, whether and to what extent it is voluntary or involuntary, necessary or unnecessary; and its effects, whether beneficial, or socially and environmentally costly.
D. The present global economic system, critics of globalization would note, does not price the damage done to limited environmental resources making those resources, in effect, free.
E. Proponents tend to see it simply as a process whereby white and blue collar workers may go from one country to another to provide their services, while critics tend to emphasize negative causes such as economic, political, and environmental insecurity, and cite as one notable effect, the link between migration and the enormous growth of urban slums in developing countries.

OPTIONS

1) CABDE
2) DABCE
3) CEBDA
4) DAECB
5) BDAEC

Question of the Day #45: (08-Nov-08)

Anand, Jaspal and Gaurav buy some fruits from a vendor. Anand buys 5 apples, 3 oranges and 6 pineapples at Rs. 118. Jaspal buys 8 pineapples, 6 apples and 4 oranges at Rs. 152. Gaurav buys 4 apples, definitely some oranges and more pineapples than oranges at Rs. 58. Unhappy with the quality of pineapples, Gaurav exchanges them for oranges and gets back Rs. 2 so that there is no loss of value. Gaurav now has 4 times the oranges he originally had. What is the cost of an apple, a pineapple and an orange?

OPTIONS

1) 20
2) 24
3) 16
4) 26
5) Cannot be determined

Question of the Day #46: (09-Nov-08)

The question below consists of a paragraph in which the first and last sentences are identified as S_1 and S_2 respectively. Choose the option that has the most logical order of the intermediate sentences.

S_1 Time to return to the Wolfian theory.
S_2 Moreover, we find no contradictions warranting this belief, and the so-called sixteen poets concur in getting rid of the following leading men in the first battle after the secession of Achilles: Elphenor, chief of the Euboeans; Tlepolemus, of the Rhodians; Pandarus, of the Lycians; Odius, of the Halizonians; Pirous and Acamas, of the Thracians; None of these heroes again make their appearance, and we can but agree with Colonel Mure, that "it seems strange that any number of independent poets should have so harmoniously dispensed with the services of all six in the sequel.

A. Nor is Lachmann's modification of his theory any better.
B. While it is to be confessed, that Wolf's objections to the primitive integrity of the Iliad and Odyssey have never been wholly got over, we cannot help discovering that they have failed to enlighten us as to any substantial point, and that the difficulties with which the whole subject is beset, are rather augmented than otherwise, if we admit his hypothesis.
C. This, as Grote observes, "explains the gaps and contradictions in the narrative, but it explains nothing else."
D. He divides the first twenty-two books of the Iliad into sixteen different songs, and treats as ridiculous the belief that their amalgamation into one regular poem belongs to a period earlier than the age of Peisistratus.

OPTIONS

1) BADC
2) DCBA
3) CADB
4) ABDC
5) ACDB

Question of the Day #47: (10-Nov-08)

What maximum power of 5 divides S!?
where S is the sum of digits of (4 + 44 + 444 + … 9 terms)

OPTIONS

1) 5
2) 15
3) 10
4) 8
5) None of these

Question of the Day #48: (11-Nov-08)

The passage given below is followed by a question. Read the passage, and mark the most appropriate answer to the question.

From an actualist point of view, such as Adams', possible worlds are nothing more than fictions created within the actual world, i.e. this very one, i.e. the one where this sentence is being written and read, the one where its author and reader and all their surroundings are. Possible worlds are mere descriptions of ways this world, the actual one, might have been, and nothing else. Thus, as modal constructions, they come in as a handy heuristic device to use with modal logic; as it helps our modal reasoning to imagine ways the world might have been. Thus, the actualist interpretation of "◊p" sees the modality, i.e. "the way" in which it is true, as being de dicto and not entailing any ontological commitment.

So, from this point of view, what distinguishes the actual world from other possible worlds is what distinguishes reality from a description of a simulation of reality, this world from Sherlock Holmes': the former exists and is not a product of imagination and the latter does not exist and is a product of the imagination set in a modal construction. From a modal realist's point of view, such as Lewis', the proposition "◊p" means that p obtains in at least one other, distinct world that is as real as the one we are in. If a state of affairs is possible, then it really obtains, it physically occurs in at least one world. Therefore, as Lewis is happy to admit, there is a world where someone named Sherlock Holmes lived at 221B, Baker Street in Victorian times, there is another world where pigs fly, and there is even another world where both Sherlock Holmes exists and pigs fly. This leaves open the question, of course, of what an actually existing "way the world could be" is; and on this question actualists are divided. One of the most popular solutions is to claim, as William Lycan and Robert Adams do, that "possible worlds" talk can be reduced to logical relations amongst consistent and maximally complete sets of propositions. "Consistent" here means that none of its propositions contradict one another; if they did, it would not be a possible description of the world; "maximally complete" means that the set covers every feature of the world. More precisely: a set of propositions is "maximally complete" if, for any meaningful proposition P, P is either an element of the set, or the negation of an element of the set, or entailed by the conjunction of one or more elements of the set, or the negation of a proposition entailed by the conjunction of one or more elements of the set. Here the "possible world" which is said to be actual is actual in virtue of all its elements being true of the world around us.Another common actualist account, advanced in different forms by Alvin Plantinga and David Armstrong views "possible worlds" not as descriptions of how the world might be, through a very large set of statements, but rather as a maximally complete state of affairs that covers every state of affairs which might obtain or not obtain. Here, the "possible world" which is said to be actual is actual in virtue of that state of affairs obtaining in the world around us. Since it is maximally complete, only one such state of affairs could actually obtain; all the others would differ from the actual world in various large or small ways.

Which of the following would best describe the actualist point of view?

OPTIONS

1) Everything that exists is actual.
2) Some entities do not exist and are only possible.
3) Everything that exists and everything that can be obtained in future are actual.
4) Moralists' precedence over the possibilist theory is surprising.
5) There are other worlds just like ours, except that we are not in them.

Question of the Day #49: (12-Nov-08)

Point O is the orthocentre of triangle ABC, which lies outside the triangle. AD is the perpendicular drawn from the vertex A to side BC. If AB = 5 cm, AD = 4 cm, OA = OC > OB, what is AC^2?

OPTIONS

1) 80 cm^2
2) 25 cm^2
3) 50 cm^2
4) 144 cm^2
5) None of these

Question of the Day #50: (13-Nov-08)

The following question has a paragraph from which a part of the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most logical way.

Fiction has said so much in regret of the old days when there were plantations and overseers and masters and slaves, that it was good to come upon such a household as Berry Hamilton's, if for no other reason than that it afforded a relief from the monotony of tiresome iteration. The little cottage in which he lived with his wife, Fannie, who was housekeeper to the Oakleys, and his son and daughter, Joe and Kit, sat back in the yard some hundred paces from the mansion of his employer. It was somewhat in the manner of the old cabin in the quarters, with which usage as well as tradition had made both master and servant familiar. But, unlike the cabin of the elder day, it was a neatly furnished, modern house, the home of a typical, good-living negro. For twenty years Berry Hamilton had been butler for Maurice Oakley. He was one of the many slaves who upon their accession to freedom had not left the South, but had wandered from place to place in their own beloved section, waiting, working, and struggling to rise with its rehabilitated fortunes. The first faint signs of recovery were being seen when he came to Maurice Oakley as a servant. Through thick and thin he remained with him, _____

OPTIONS

1) and when the final upward tendency of his employer began, his fortunes increased in like manner.
2) and when, having married, Oakley bought the great house in which he now lived, he left the little servant's cottage in the yard, for, as he said laughingly, "There is no telling when Berry will be following my example and be taking a wife unto himself."
3) and Berry, over a period of time, developed a kind of tenderness for Fannie, the housekeeper.
4) never pretending to be the one who ran the house, in spite of truly doing so at various points of time.
5) never imagining nor regretting the twists and turns of his otherwise mundane life.

SOLUTIONS

Solution #01: (25-Sep-08)

The sum of Rs. 21 can be arrived at in two ways using 2 and 5 rupee coins. They are 5 + 16 (one 5 rupee coin and eight 2 rupee coins) and 15 + 6 (three 5 rupee coins and three 2 rupee coins).

The sum of Rs. 65 can be arrived at using 2 and 5 rupee coins as 5 + 60 (one 5 rupee coin and thirty 2 rupee coins), 15 + 50 (three 5 rupee coins and twenty five 2 rupee coins), 25 + 40 (five 5 rupee coins and twenty 2 rupee coins), 35 + 30 (seven 5 rupee coins and fifteen 2 rupee coins), 45 + 20 (nine 5 rupee coins and ten 2 rupee coins), 55 + 10 (eleven 5 rupee coins and five 2 rupee coins) and 65 + 0 (thirteen 5 rupee coins and no 2 rupee coin).

Consider option 1.

If Ashok has only one five rupee coin, he would have at least thirty 2 rupee coins so that he can arrive at the value of Rs. 65. This would mean that he can also arrive at the value of Rs. 21 as he would have sufficient number of 5 and 2 rupee coins to do so. Hence this option cannot be true.

Consider option 2.

The same logic as that in option 1 would apply here, as he would have sufficient number of 5 and 2 rupee coins to arrive at the value of Rs. 21. Hence this option also cannot be true.

Consider option 3.

If Ashok has only five 2 rupee coins he would have at least eleven 5 rupee coins to arrive at the value of Rs. 65. This would mean that he can also arrive at the value of Rs. 21 as he would have sufficient number of 5 and 2 rupee coins to do so. Hence this option cannot be true.

Consider option 4.

If Ashok has only one 2 rupee coin, he would have at least thirteen 5 rupee coins to arrive at the value of Rs. 65. Now in order to arrive at the value of Rs. 21, he would need at least two more 2 rupee coins. Thus this option can be a possibility.

Consider option 5.

The same logic as that in option 1 would apply here, as he would have sufficient number of 5 and 2 rupee coins to arrive at the value of Rs. 21. Hence this option also cannot be true.

Hence option 4.

Discuss the solution with Testfunda users.

Solution #02: (26-Sep-08)

The passage is merely a description of the tribal Kayans and how their society is organized. Hence, "bound by a common sentiment" as the main purpose is over-emphasizing a smaller part of the passage. Hence, option 1, while correct in itself, is not the answer to the question asked.

The first sentence implicitly directs us towards the purpose, though not completely "constitute a well-defined and homogeneous tribe" - the rest of the points mentioned support the main idea. Hence, it does describe the social system of the tribal Kayans (option 2).

A 'sketch' of their life is not given to us: only the social organization. Hence, option 3 is eliminated. Option 4 is completely beside the point - the passage does not give us any details about their physical characteristics.

Option 5 is incorrect. We are not given either the history or the traditions, or the culture of the Kayans. Every example is merely about the social organization.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #03: (27-Sep-08)

The nested conditions in the question can be simplified and written logically as follows:

* If rainfall less than 200 cm, then irrigation.
* If high ground water table and (fragmented land or scattered population) then tube wells.
* If dams and (uninterrupted supply of electricity or low ground water table) then canals.
* If uninterrupted power supply and (scattered population or fragmented land) then tanks.

Thus, out of the three conditions for each of tube wells, canals and tanks, one has to necessarily match and either of the remaining two has to match i.e. A and (B or C) for the option to be satisfied.

Only option 4 satisfies the conditions given in the question.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #04: (28-Sep-08)

Looking at the answer options, it is easy to remove option 5 because of the choice of first sentence. Looking at the remaining options, C can follow the header (options 2 and 4), or be the last sentence (options 1 and 3). Looking at the order, C does not make sense as the last sentence.

While both CD and CB seem possible, "such instability'' in D will not make any sense unless there are specific problems pointed, which is the case in C. Hence, C will follow the header and CD becomes mandatory.

Problems involving political parties; 'they disagree on constitutional issues' can come only after the subject of ''constitutional politics'' is introduced, making BA mandatory.

Once these two aspects of the paragraph are solved, the answer option becomes obvious.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #05: (29-Sep-08)

1001 × 2001 × 3001 × 4001 × 1002 × 2002 × 3002 × 4002 × 1003 × … × 1099 × 2099 × 3099 × 4099
= (1001 × ... × 1099) × (2001 × ... × 2099) × (3001 × ... × 3099) × (4001 × ... × 4099)

$$= \frac{1099!}{1000!} \times \frac{2099!}{2000!} \times \frac{3099!}{3000!} \times \frac{4099!}{4000!}$$

∴ We will find the highest power of 23 in each case.

$$\text{Highest power of 23 in } 1099! = \left[\frac{1099}{23}\right] + \left[\frac{1099}{23^2}\right] + \left[\frac{1099}{23^3}\right] = 49$$

$$\text{Highest power of 23 in } 1000! = \left[\frac{1000}{23}\right] + \left[\frac{1000}{23^2}\right] + \left[\frac{1000}{23^3}\right] = 44$$

Similarly, highest powers of 23 in 2099!, 2000!, 3099!, 3000!, 4099! and 4000! are 94, 89, 139, 135, 185 and 180 respectively.

∴ Highest power of 23 in 1001 × 2001 × 3001 × 4001 × 1002 × 2002 × 3002 × 4002 × 1003 × … × 1099 × 2099 × 3099 × 4099
= (49 – 44) + (94 – 89) + (139 – 135) + (185 – 180)
= 19

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #06: (30-Sep-08)

Statements 1 and 2 are incorrect because the nature of relations during the Renaissance has not been specified in the paragraph.

Statement 3 is incorrect because there is no direct relation, mentioned in the paragraph, between the fall of the Western Roman Empire and the increased contact with the Islamic and Byzantium world which resulted in the spread of scientific and philosophical ideas.

Statement 4 is incorrect because disasters were responsible for a decline in the spread of scientific and philosophical ideas.
Statement 5 can be arrived at by eliminating the other options.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #07: (01-Oct-08)

Let the scores of the shooters in the first round be 10, 10, a and b.
Let the scores of the shooters in the second round be 10, 10, 10 and c not necessarily in the same order as that in round 1.
Since the total score in both the rounds put together is 65 we can write the equation.
10 + 10 + a + b + 10 + 10 + 10 + c = 65
∴ a + b + c = 15
Since zero was never awarded to the any of the shooters we can say that a, b and c each has a value of 5.
∴ The scores in the first round are 10, 10 , 5, 5 and the scores in the second round are 10, 10, 10, 5 not necessarily in the same order.
Now there are only two cases possible in which the scores can be arranged as follows.

Case 1
Player 1 - (10, 10)
Player 2 - (10, 10)
Player 3 - (5, 10)
Player 4 - (5, 5)

Case 2
Player 1 - (10, 10)
Player 2 - (5, 10)
Player 3 - (5, 10)
Player 4 - (10, 5)
where the scores in brackets represent the score in the first and second round respectively.

Let us see the options now.
Option 1
This statement is true in case 2.
Option 2
This statement is true in case 1.
Option 3
This statement is true in case 2.
Option 4
This statement is not true in both the cases as there are either 1 or 3 such shooters who have hit the bull's eye in both the rounds.
Option 5
This is true in case 1.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #08: (02-Oct-08)

The first sentence states: " … Commission is preparing the ground for an overhaul of EU rules on the information that must be provided to consumers …"

Option 1 mentions a study contrary to this: possible, but it does not help conclude the paragraph.

Option 2 mentions the current inadequacies - an explanation of the reasons for the commission's decisions. To make this option effective, without extending the paragraph, it should logically start with 'However' since it is expresses a contrasting opinion.

Option 3 has similar flaws as option 2. Moreover it is silent on CO_2 reduction which is the core assertion of the paragraph, not energy efficiency.

Option 4 is tangential - the commission's intention is not to ensure car makers compete.

Option 5 spells out the measures and helps complete the idea presented in the first statement.

Hence, the correct answer option is 5.

Discuss the solution with Testfunda users.

Solution #09: (03-Oct-08)

Consider statement A alone.
From this statement, we cannot determine the number of questions attempted by Nitin as there are various possible values that the marks of Pravin and Nitin can take. Hence this statement alone is not sufficient.

Consider statement B alone.
The only data available with us is the accuracy of Pravin. From this we cannot determine the number of questions attempted by Nitin. Hence this statement alone is also not sufficient.
Consider both the statements together. Since Pravin has an accuracy of exactly 80% he can attempt either 5, 10, 15 or 20 questions, because only these numbers would give an integer value of the right and wrong questions.

Now the maximum marks that can be scored by Nitin is 20 hence the minimum marks scored by Pravin would be 11.25 which would rule out the cases that he attempt 5 or 10 questions. This leaves us with two cases as follows.

Case I: Pravin attempted 15 questions
In this case, he would get 12 questions right and 3 questions wrong. So his score would be 11.25. Therefore from the first statement, the score of Nitin would be 20. This score is possible only when Nitin attempts 20 questions and gets all of them right.

Case II: Pravin attempted 20 questions
In this case, he would get 16 questions right and 4 questions wrong. So his score would be 15. Therefore from the first statement the score of Nitin would be 16.25. This score is possible only when Nitin gets 17 questions right and 3 questions wrong. So even in this case he would attempt 20 questions.
Thus both statements together are sufficient to answer the question.

Hence, option 3

Discuss the solution with Testfunda users.

Solution #10: (04-Oct-08)

Option 3 has a tense error. The entire sentence is in the present tense.

Therefore the correct usage would be, “Only when it has been an unusually bad day/event" (Present perfect tense)

All the other idioms are correctly used.

Bite one's lip or tongue means to repress one's anger or other emotions.

To butt in means to interfere.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #11: (05-Oct-08)

Let the speed of Moreshwar and Ganesh be u and v respectively. Their relative speed was u + v and the time they took for the first meeting was d/(u + v) where d is the total distance between the two cities. Therefore, the distance of the point P from Hyderabad (H), where they met for the first time is

$$l(\mathrm{HP}) = u \times \frac{d}{u+v} \qquad \ldots (\mathrm{i})$$

Similarly, after meeting they exchange their cars and start travelling back to their own cities. Now the condition given is that they would not meet each other before reaching their respective cities. Let us say that u > v. (We will get similar results and the same ratio even if we consider v > u) This means that Ganesh would not overtake Moreshwar before Moreshwar reaches Hyderabad.

$$\text{Now, the time taken by Moreshwar to reach Hyderabad} = \frac{\left(\frac{ud}{u+v}\right)}{v}$$

$$\text{In this time the distance travelled by Ganesh} = \frac{\left(\frac{ud}{u+v}\right)}{v} \times u = \frac{u}{v} \times \frac{ud}{u+v}$$

This distance is not more than the distance between the point P to Bangalore and back to Hyderabad.

$$\therefore \frac{u}{v} \times \frac{ud}{u+v} < \frac{vd}{u+v} + d$$

Solving this we get,
(u + v)(u − 2v) < 0

Therefore u has to lie between −v and 2v. But since we have assumed u > v, the allowed interval for u is v to 2v, both inclusive.

Now we need to find the distance of the point Q from Hyderabad so that we can find the distance PQ.

After leaving point P and meeting again at point Q they would have travelled a distance of 2d and their relative speed would be same as (u + v).

$$\therefore \text{The time taken by them to meet again} = \frac{2d}{(u+v)}$$

$$\text{In this time the distance travelled by Moreshwar} = \frac{2vd}{u+v}$$

This is same as the distance between point P and Hyderabad and the distance between Hyderabad and point Q.

$$l(\text{HP}) + l(\text{HQ}) = \frac{2vd}{u+v} \qquad \ldots (\text{ii})$$

Now, l(PQ) = l(HP) − l(HQ)

Solving for l(PQ) from equations (i) and (ii) we get,

$$l(\text{PQ}) = \frac{2d(u-v)}{u+v}$$

Looking at the expression, we can see that l(PQ) is an increasing function with the value of u. Therefore given the range of u, we would see that the value of l(PQ) is maximum when u = 2v.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #12: (06-Oct-08)

The second last sentence of the paragraph is "But, while no one doubts that the prospects for the economy and job market have worsened, compared with previous downturns something feels different …" We need to conclude the paragraph, with this difference. Hence, we look for a contrasting last statement, something quite positive in its outlook.

'How bad the economic situation is' (option 1), whether it is a 'recession' or not (option 2), when an 'upturn' may begin (option 3) are positive in their nature (option 1 can be read to be both positive as well as negative), but they do not take account of the MBA students mentioned at the beginning of the paragraph.

Option 4 merely reinforces the grim situation and does not provide the contrast.

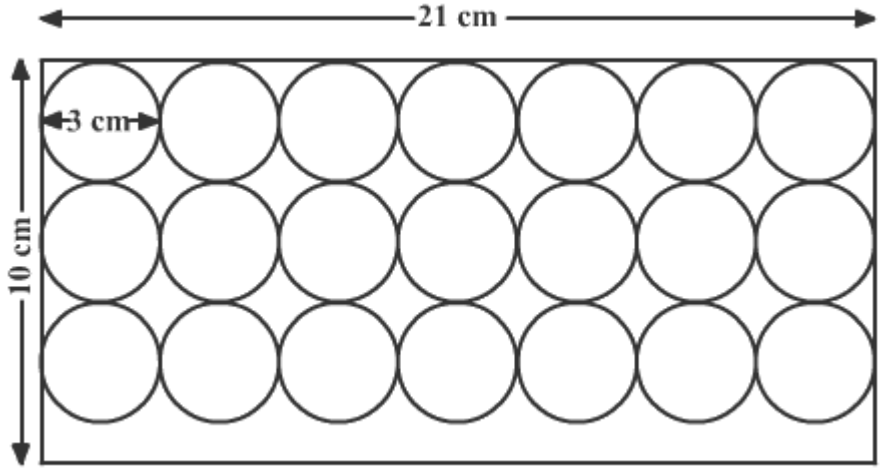
Option 5 provides the contrast signaled by 'but, while' and states the difference in relation to business schools and students as compared to other economic downturns.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

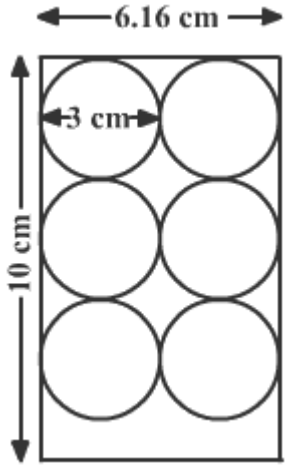
Solution #13: (07-Oct-08)

Initially, Alberto had an area of 21 cm × 10 cm = 210 sq cm to cut.
Since his mould had a radius of 1.5 cm, he could only cut seven cookies of diameter 2 × 1.5 cm = 3 cm in each row (3 × 7 = 21). Also, he could only cut three columns of cookies (3 × 3 = 9 < 10). This gives us a total of twenty one cookies in the first batch.



The total area cut after the first batch = $21 \times \pi \times r^2 \approx 21 \times 3.14 \times 2.25 \approx 148.4$ sq cm
This leaves us with 210 − 148.4 = 61.6 sq cm of dough.

Since Alberto always uses the entire width of the tray, the dimensions of the dough in the tray will now be 10 cm × 6.16 cm. This allows only two cookies per row.
∴ Six cookies in all can be cut in this batch.



The total area cut after the second batch = $6 \times \pi \times r^2 \approx 6 \times 3.14 \times 2.25 \approx 42.39$ sq cm
This leaves us with 61.5 − 42.39 = 19.1 sq cm of dough.

We know that Alberto MUST use the entire width of the tray. However, this will give us dough of dimensions 10 cm × 1.91 cm. Alberto cannot use his cookie mould on this dough. So, he makes a single cookie with this dough.

The radius of the final circular cookie can be calculated as follows

$$\text{Radius of final cookie} = \sqrt{\frac{19.21}{\pi}} \approx 2.5 \text{ cm}$$

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #14: (08-Oct-08)

The paragraph is pure statistics. And we need to have a sentence that does nothing but give more statistics. This is not a logical question. We do not need to link the two sentences on either side of the blank logically; they are complete in themselves – at the most what we need is a transition word, or phrase. This is provided in option 4. More statistics and a transition word, but.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #15: (09-Oct-08)

Let the speed of the boat in still water be b m/s and the speed of the stream be w m/s.
Using statement A:
∵ The boat takes 40 seconds to travel from point P to Q and come back to point P and the distance between point P and Q is 40 m

$$\therefore \frac{40}{b+w}+\frac{40}{b-w}=40$$

But we do not know the speed of the boat and the speed of the stream,
∴ Statement A alone is not sufficient to answer the question.
Using statement B:
Let x be the distance between point P and their meeting point.
Speed of the log of wood will be w m/s since it is travelling with the stream.

$$\therefore w=\frac{x}{20}$$

∴ x = 20w

and,

$$\frac{40}{b+w}+\frac{40-x}{b-w}=20$$

$$\therefore \frac{40}{b+w}+\frac{40-20w}{b-w}=20$$

∴ $40b - 40w + 40b + 40w - 20wb - 20w^2 = 20b^2 - 20w^2$

∴ $80b - 20wb = 20b^2$

∴ b = 0 or b + w = 4

∵ Speed of the boat cannot be 0 as it is travelling against the stream also,

∴ b + w = 4

∴ Effective speed of the boat w.r.t the bank of the river while travelling from point P to Q will be 4 m/s.
∴ The question can be answered using statement B alone.

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #16: (10-Oct-08)

The central idea of the paragraph is the atom, it's structure, it's definition, it's first conception and the latest findings about it.
Option 1 is incorrect because physicists did not develop techniques to subdivide it, rather they discovered subatomic components.
Option 2 is incorrect because modern physics did not discover subatomic components with the help of quantum mechanics. Quantum mechanics was only used to model the atom.
Option 3 comes close but loses out on two counts: it is verbose and it is silent on who first conceived of the atom, an important point in the paragraph.
Option 5 is incorrect because the atom was never invented, it was only conceived of by Indian and Greek philosophers.
Option 4 encompasses all the important ideas contained in the paragraph in a succinct manner.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #17: (11-Oct-08)

First, we consider conditions 1 and 2.

There are only five possible primes between 100 and 125: 101, 103, 107, 109 and 113. We check which of these is a prime factor of 15478.

101 is NOT a prime factor.
103 is NOT a prime factor.
107 is NOT a prime factor.
109 IS a prime factor of 15478. (109 × 71 × 2 = 15478)
∴ The fifth string has a frequency of 109 Hz.

Consider condition 3.
To find the frequency of the fourth string, we need to find the prime factors of 15478 other than 109. We will then determine the least common multiple of these factors which will give us a base frequency.

The factors of 15478 are 1, 2, 71, 109, 142, 218, 7739 and 15478.
Now, the frequency of the fourth string will be greater than the fifth (109).
∴ The least possible value for the frequency of the fourth string is 142 (= 71 × 2).

Consider condition 4 and 5. The frequency interval between the fourth and fifth strings is (142 – 109 =) 33 Hz.
Also, the interval between the fourth and the second string is 99 Hz.
For the condition that the intervals form a progression, we can conclude that the interval between the third and the fourth strings is 44 Hz while that between the second and the third is 55 Hz such that the frequency of the third string is 186 Hz.

Using this information, we can see that the difference between the fifth and sixth strings is 22 Hz.
∴ The frequency of the sixth string is 87 Hz.
6^{th}: 87 Hz
5^{th}: 109 Hz
4^{th}: 142 Hz
3^{rd}: 186 Hz
2^{nd}: 241 Hz

Since the frequency of the first string is a harmonic overtone of that of the sixth, we check the options provided to see which one is divisible by 87.
348 is divisible by 87.

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #18: (12-Oct-08)

Here, the first word is "ceremonial". "Ceremonious" means ‘displaying excessive ceremony’ (e.g. Pakhi Pawan made her usual ceremonious entry at the party) whereas, "ceremonial" means ‘with or concerning ritual or ceremony.’

"Discreet" is using caution in speech or action, and fits in with the idea of the sentence. "Discrete" is 'distinct' or 'separate'.

"Apposite" is 'appropriate' or 'suitable' and is hence the correct third word.
Between "complacent" and "complaisant", the latter fits the idea of ‘not complaining’ (and therefore should start complaining constructively) or 'subservient' better than the former; complacent means ‘smugly self-satisfied.’

The last word is definitely not a piece of cake. This use of "deserts" - which means ‘what one deserves’ is not that common. "Dessert" is of course the sweet course of a meal.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #19: (13-Oct-08)

Consider the first inequality $|a - 7| \leq 2$

$\therefore -2 \leq a - 7 \leq 2$

$\therefore 5 \leq a \leq 9$

$\therefore$ Possible values of a are 5, 6, 7, 8 and 9

$||b - 4| - 7| \leq 3$

$-3 \leq |b - 4| - 7 \leq 3$

$4 \leq |b - 4| \leq 10$

Consider $|b - 4| \geq 4$

$b - 4 \geq 4$ or $b - 4 \leq -4$

$\therefore b \geq 8$ or $b \leq 0$

$\because$ Side of triangle cannot be 0 or negative

$\therefore b \geq 8$ .....(i)

Consider $|b - 4| \leq 10$

$-10 \leq b - 4 \leq 10$

$\therefore -6 \leq b \leq 14$

$\because$ Side of triangle cannot be 0 or negative

$\therefore b \leq 14$ .....(ii)

From (i) and (ii),

$8 \leq b \leq 14$

$\therefore$ Possible values of b are 8, 9, 10, 11, 12, 13 and 14

$c2 - 2c - 24 < 0$

$(c - 6)(c + 4) < 0$

$\therefore -4 < c < 6$

$\because$ Side of triangle cannot be 0 or negative

$\therefore c < 6$

$\therefore$ Possible values of c are 1, 2, 3, 4 and 5.

Now we have all the possible values of the sides a, b, c. We need to consider an additional condition that in a triangle the sum of any two sides is greater than the third side.

$\therefore$ The possible triangle which satisfies the given inequalities and has the minimum perimeter will be having side lengths 5, 4, 8. (Other combinations are also possible like 8, 8, 1)

$\therefore$ Minimum possible perimeter = 5 + 4 + 8 = 17

Similarly,

Maximum possible perimeter = 9 + 13 + 5 = 27

Required Difference = 27 − 17 = 10

$\therefore$ The difference between the minimum possible and maximum possible perimeter of the ΔABC is 10 units.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #20: (14-Oct-08)

The possible starting statements are B, C, and D. Of these, statements C and D are better than statement B, since they continue the idea presented in statement I. Hence, eliminate option 5.

Between statements C and D, note that the "its" in D does not fit in as a continuation to the "minutiae" in Statement I; it should be "their". Hence, eliminate option 4.

Also, with the same logic as above, statement D cannot follow statement B or statement A. Hence, eliminate options 1 and 3.

Finally, let us look at whether the remaining option makes sense:

Statement D will follow statement C since it starts with “but” and a contrasting opinion is expressed here.

Statement A will follow D since the topic of poetry is introduced in D and continued in A.

Statement B will follow statement A since it starts with “moreover” and the theme of the sentences are the same, i.e. criticism.

Statement II connects well with B and extends the idea.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #21: (15-Oct-08)

The first student attempted all the questions i.e. question number 1, 2, 3, ..., 999, 1000.

The second student attempted the questions with numbers which were multiple of 2 i.e. question number 2, 4, 6, ..., 998, 1000.

The third student attempted the questions with numbers which were multiple of 3 i.e. question number 3, 6, 9, 12, ..., 999.

And so on.

Here we can see that the number of students who have attempted a particular question is the number of factors (including the number itself and 1) it has. For example, f(24) = 8 as the question number 24 was attempted by 8 students (1^{st}, 2^{nd}, 3^{rd}, 4^{th}, 6^{th}, 8^{th}, 12^{th} and 24^{th} student).

∴ We have to find the question numbers for which the number of factors are odd.

We know that any number 'n' can be expressed in the form,

n = 2(b)3(c)5(d)... where 2, 3, 5,.... are prime numbers

The number of factors for n = (b + 1)(c + 1)(d + 1)...

To have odd number of factors each of (b + 1), (c + 1), (d + 1), ... should be odd.
∴ b, c, d, ... all should be even.

∴ n is a perfect square.

∴ The questions with numbers which were perfect squares were attempted by odd number of students.

∴ The problem reduces to finding out the number of perfect squares in the range 1 - 1000.

There are 31 perfect squares between 1 to 1000 including 1 and 1000.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #22: (16-Oct-08)

The important points of the paragraph are: Mumbai's status as a commercial capital, its generation of large tax revenues and much of the country's foreign trade, change of industry profile that led to prosperity in the past and in the present and the city being ranked 10th among the world's biggest centres of commerce in terms of financial flow.

Option 2 is verbose, and yet loses out on Mumbai being the 10th biggest commercial centre - an important statistic.

Option 3 presents a lot of unnecessary statistics, and an additional data not indicated in the paragraph - responsible for generating most of the country's revenues.

Option 4 has two issues: Adding data which is not indicated- Mumbai generating most of the country's tax and foreign trade revenues, and automobiles as one of the sectors where Mumbai is experiencing a boom.

Option 5 incorrectly mentions foreign banks and financial institutions are based in Mumbai whereas the paragraph suggests they have established branches in the city. 'Based' would mean they are 'headquartered' in Mumbai which is incorrect. Moreover no mention is made of the industries to which Mumbai owes its past success and current boom.

Option 1 captures the essence of the paragraph without changing its meaning or inserting detailed statistics.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

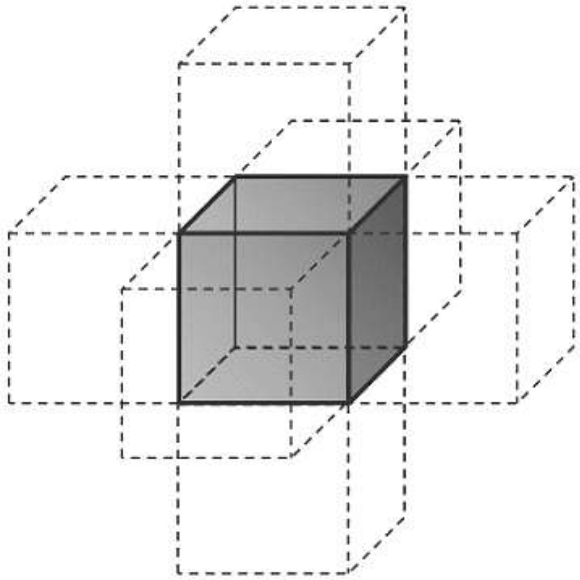
Solution #23: (17-Oct-08)

Since the radiation effect is spread over a distance of 1 cm from the cube, we need to find all the points which are at a distance of 1 cm or less from the surface of the cube.

To simplify the understanding of the volume of the space influenced by the radiation effect, we divide the total volume in parts of known shape.

Consider the radiation effect spread over a distance of 1 cm from all the 6 faces of the cube.

In this case, we consider the volume of the space influenced by radiation effect caused by one face, and it will be of the shape of a cube of side 1 cm. Refer the diagram.

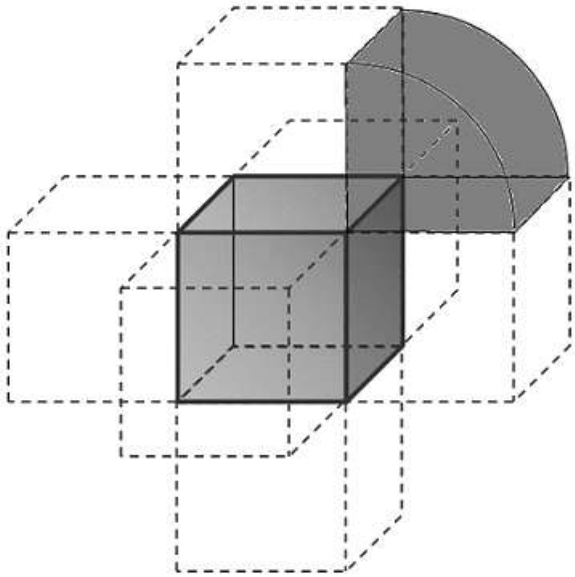


∴ Total volume of the space influenced by radiation effects caused by all the 6 faces = 6 × volume of the space influenced by one of the faces

= 6 × (1 × 1 × 1)
= 6 cm^3

Now, consider the additional radiation effect spread over a distance of 1 cm from all the 12 edges of the cube.

In this case, we consider the extra volume of the space influenced by radiation caused by one edge, and it will be of the shape of a quarter cylinder of radius 1 cm and height 1 cm. Refer the diagram.



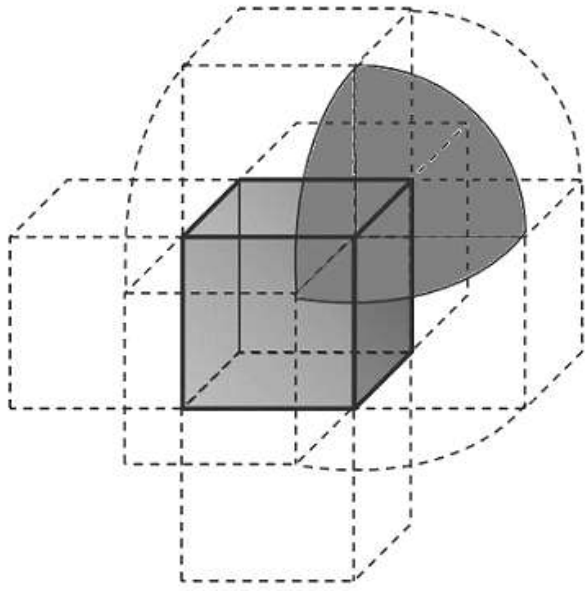
∴ Total extra volume of the space influenced by radiation effect caused by all the edges
= 12 × volume of the space influenced by one of the edges

$$= 12 \times \left(\frac{1}{4} \times \pi \times 1^2 \times 1\right)$$

$$= 3\pi \text{ cm}^3$$

Now, consider the additional radiation effect spread over a distance of 1 cm from all the 8 vertices of the cube.

In this case, we consider the extra volume of the space influenced by the radiation effect caused by one of the vertices, and it will be of the shape of 1/8th part of a sphere of radius 1 cm. Refer the diagram.



∴ Total extra volume of the space influenced by the radiation effect caused by all the vertices = 8 × volume of the space influenced by one of the vertices

$$= 8 \times \left(\frac{1}{8} \times \frac{4}{3} \times \pi \times 1^3\right)$$

$$= \frac{4}{3}\pi \text{ cm}^3$$

∴ Total volume of the space influenced by radiations around the cube

$$= 6 + 3\pi + \frac{4\pi}{3} = \frac{13\pi + 18}{3} \text{ cm}^3$$

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #24: (18-Oct-08)

"Phenomena" is the plural form of "phenomenon". The verb is singular, ‘was’, hence the subject is also singular. Therefore, the first word is "phenomenon".

"Detract" works like subtract in some ways. It means, ‘to diminish its value or merit’ and hence is the word in this context. "Distract" is 'to divide' or 'draw away someone’s attention'.

When we refer to actual crumbs, the use of "crumby" is fine. Here, "crummy" is the word, as it means ‘of little or no value’.

"Descry" means ‘to catch sight of’ and thus is the word to be used whereas, "decry" means 'to belittle someone'.

The final word is "sheer" which means 'absolute' whereas "shear" means ‘to cut the wool of (a sheep)’.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #25: (19-Oct-08)

Two roots of the quadratic equation $ax^2 + bx + c = 0$ are given by,

$$p = \frac{-b}{2a} + \frac{\sqrt{\Delta}}{2a}$$

$$\text{And, } q = \frac{-b}{2a} - \frac{\sqrt{\Delta}}{2a}$$

$$\therefore p + q = -\frac{b}{a}$$

$$\text{And, } p - q = \frac{\sqrt{\Delta}}{a}$$

From statement (A) alone,

$$\frac{\Delta}{a^2} \text{ is not a multiple of } 100.$$

$$\therefore \frac{\sqrt{\Delta}}{a} \text{ i.e. } (p - q) \text{ is not a multiple of } 10.$$

∴ p and q are not of the same sign.

[∵ If p and q are of same sign two digit number with same units digit, for example, 32 and 72, there difference will be a multiple of 10]

∴ Sum of p and q is a multiple of 10.

[For example, if p = 32 and q = −72, p + q = −40]

$$\therefore -\frac{b}{a} \text{ is a multiple of } 10.$$

$$\therefore \text{Units digit of } \frac{b}{2a} \text{ is either 0 or 5.}$$

Therefore, we are not getting a unique solution from statement A alone.
From statement (B) alone,

$$\text{Units digit of } \frac{p+q}{2} \text{ is not 0.}$$

$$\therefore \text{Units digit of } \frac{b}{2a} \text{ is not 0.}$$

$$\therefore \text{Units digit of } \frac{b}{2a} \text{ is any digit except 0.}$$

[For example, if p = 22 and q = 12, units digit of (p + q)/2 will be 2, but if p = 23 and q = 13, units digit of (p + q)/2 will be 3, and so on]

Therefore, we are not able to find a unique solution from statement B alone.

From statement (A) and (B) together,

As we already know from statement A,

$$\text{That, units digit of } \frac{b}{2a} \text{ is either 0 or 5.}$$

And, from statement B, we know,

$$\text{That, units digit of } \frac{b}{2a} \text{ is not 0.}$$

$$\therefore \text{ Units digit of } \frac{b}{2a} \text{ is 5.}$$

Therefore, we are able to find a unique solution after combining both the statements A and B.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #26: (20-Oct-08)

A very straightforward question! From the severe problems faced by mankind to 'Its appeal' being obvious, the "it" has to be some method that will solve the crisis hence very appealing. The "it" is clearly stated in option 3. None of the other options, though they make apparent sense, can provide the necessary link to the "it". Although option 4 comes close, option 3 is more comprehensively related to the rest of the paragraph by explaining desalination.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #27: (21-Oct-08)

We have,

$$\frac{1}{\sqrt{x}}+\frac{1}{\sqrt{y}}=\frac{1}{\sqrt{20}} \qquad \ldots(i)$$

$$\frac{1}{\sqrt{x}}=\frac{1}{\sqrt{20}}-\frac{1}{\sqrt{y}}$$

$$\frac{1}{\sqrt{x}}=\frac{\sqrt{y}-\sqrt{20}}{\sqrt{20}\sqrt{y}}$$

Squaring on both sides, we get,

$$\frac{1}{x}=\frac{y+20-4\sqrt{5y}}{20y}$$

This implies that $\sqrt{5y}$ is a rational number.

But y is a positive integer and thus $5y$ must also be the positive integer.

We can say that 5y is the square of an integer which is divisible by 5.
∴ $5y = (5a)^2$ where 'a' is some natural number.
∴ $y = 5a^2$

And similarly we can prove that $x = 5b^2$ where 'b' is some natural number.

∴ Equation (i) becomes,

$$\frac{1}{a}+\frac{1}{b}=\frac{1}{2}$$

∴ 2(a + b) = ab
∴ (a − 2)(b − 2) = 4
∴ (b, a) = {(3, 6), (4, 4), (6, 3)}
∴ (x, y) = {(45, 180), (80, 80), (180, 45)}
∴ There are 3 solution sets are possible for 'x' and 'y' satisfying the above relation.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #28: (22-Oct-08)

Statement I introduces different creatures. The best connection to statement I is provided in D.
Statements I and C cannot go together as there is an abrupt change in tense. Eliminate options 1 and 2.
Also, statement II can be linked either with statement B or C preceding it. Eliminate option 4.
In statement B, the pronoun 'it' links it to C wherein C talks about a garden and statement B describes its state. Therefore there is a C-B link.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #29: (23-Oct-08)

$a^{(n+1)} = (a + 1 - 1)^{(n+1)}$
Using binomial theorem, this expression can be expanded as follows.
$a^{(n+1)} = (a + 1)^{(n+1)} - (a + 1)^{n} + ... + (-1)^{(n+1)}$

All the terms in the expression are divisible by (a + 1) except the last one. Therefore the remainder is determined by the last term.
If (n + 1) is even the remainder is 1 and if (n + 1) is odd the remainder is a.
Consider Statement A alone.
This statement is true only if n is a prime number. Since n is a two digit integer, n has to be odd.

∴ (n + 1) is even.

The remainder asked in the question is 1.
Hence, statement A alone is sufficient.
Consider Statement B alone.
Square of an even number is even and that of an odd number is odd.
Even number when divided by 8 (which is even number) cannot give an odd remainder.

∴ n must be odd.
∴ n + 1 is even.
∴ The remainder is 1.
∴ The question can be answered by using statement B alone.
∴ The question can be answered by using either of the statements alone.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #30: (24-Oct-08)

The central idea of the paragraph is that the book criticizes institutionalized religion and the inerrancy of the Bible. It was very well received in America but less so in Britain due to fear that it may incite a wave of political radicalism. The book also promotes deism, a rational belief in God.

Option 1 mentions usefulness of Bible. The paragraph mentions inerrancy of Bible. The meaning changes completely.

Option 2 states the book was less well received in Britain because the people of Britain were more God fearing than those in America. The paragraph states it was less well received because of fears that it would incite political radicalism.

Option 3 incorrectly mentions that Britain already had increased political radicalism. The paragraph states the British feared increased political radicalism. Moreover the option misses out on an important part - the book also promotes deism.

Option 5 also misses out on the important aspect of book also promoting deism.

Option 4 is crisp, covering all the important aspects of the paragraph without any digression.

Hence, the correct answer is option4.

Discuss the solution with Testfunda users.

Solution #31: (25-Oct-08)

The highest possible value of date and month in a calendar are 31 and 12 respectively.
∴ 31d + 12m = 487 …(i)

Since there is only one equation and number of variables is two, we cannot find the solution of this equation by normal method.

But, there is other information given in the question implicitly. The date can be any of the integers 1, 2, …, 31 and the month can be any of the integers 1, 2, …, 12. By combining this information with equation (i) we can find a unique solution.

Consider equation (i), when left hand side and right hand side of this equation is divided by 12, the remainders should be same. [Note: we are taking 12 here, because 12 is the smaller coefficient]

Second term 12m will not give any remainder when divided by 12, and the remainder when 31d is divided by 12 will be same as the remainder when 7d is divided by 12. Also, the remainder when 487 is divided by 12 will be 7.
∴ From L.H.S. (the remainder when 7d is divided by 12) = from R.H.S. (the remainder when 487 is divided by 12)
∴ The remainder when 7d is divided by 12 = 7

To satisfy the above condition the minimum value of d could be 1. [Because when 7 is divided by 12 the remainder is 7 itself]

The corresponding value of m can be obtained by substituting d = 1 in equation (i).

∴ When d = 1, m = 38
We have to discard this pair of (d, m), because the month of birth cannot be 38.

To find the other pair of values for d and m, we increase the value of d by 12 (the coefficient of m) and decrease the value of m by 31 (the coefficient of d).

∴ The other pair for (d, m) will be (13, 7), (25, −24) and so on. Here also, we have to reject the second pair because month cannot be negative. Therefore no other pair is possible, and the only valid pair of date and month possible is d = 13 and m = 7.

∴ My complete date of birth is 13/7/1976.
∴ Sum of my date and month of birth = 13 + 7 = 20

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #32: (26-Oct-08)

The first word is "taut" which means 'tight' or 'tense'.

The second word is slightly tricky. "Touchy" means ‘over-sensitive’ whereas "tetchy" means ‘irritable, peevish’, making tetchy more appropriate. Also, the next sentence talks about agitated employees, making tetchy correct.

The policy can be both "tortuous" which means 'complex' and "torturous" which means 'involving or causing torture'. In the context of the paragraph, the policy is more painful than complicated, hence, torturous is more appropriate here.

Again, regarding the fourth word, "substantive" is a better option because of the mention of elements - "substantive" means 'relating to the essential elements of a thing'. "Substantial" is a more general word used to mean, ‘having importance' or 'of a considerable amount or quantity.’
"Right off" means 'immediate' and is the word for the last sentence. To "write-off" something is to acknowledge its complete loss.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #33: (27-Oct-08)

Consider statement A alone.
Length of the equal sides of the triangle is 5 cm.

$$\text{Area of an isosceles triangle} = \frac{b}{4}\sqrt{4a^2 - b^2}$$

where a represents the length of the equal side and b represents the length of the third side.

$$\therefore 60 = \frac{b}{4}\sqrt{4(13)^2 - b^2}$$

$$\therefore 60 = \frac{b}{4}\sqrt{676 - b^2}$$

On squaring both the sides we get,
$3600 \times 16 = b^2(676 - b^2)$
$\therefore b^4 - 676\, b^2 + 57600 = 0$
$\therefore b^2 = 576$ or $b^2 = 100$
As the length of the side of a triangle cannot be negative.
$\therefore b = 24$ or $b = 10$
∴ The length of the third side of the triangle can be 24 cm or 10 cm
∴ We get two values for the semi-perimeter of the triangle.

Area of the triangle = r × S
where r represents the radius of the incircle drawn in the triangle and S represents the semi-perimeter of the triangle.
∵ We get two values for the semi-perimeter of the triangle, we will get two values for the inradius and thus two values for the area of the incircle.
∴ Using statement A alone, we cannot find the exact area of the incircle.

Consider statement B alone.
Distance of the meeting point of the two medians drawn on the equal sides of the triangle from their respective opposite vertices is 4 cm from the non equal side of the triangle.
Meeting point of the two medians is the centroid of the triangle.
∴ Distance of the centroid from the non equal side of the triangle is 4 cm.

The centroid divides the median in the ratio of 2:1
∴ Length of the median will be 12 cm which is also the height of the triangle.

$$\text{Area of the triangle} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$60 = \frac{1}{2} \times \text{base} \times 12$$

∴ Length of the base of the triangle = 10 cm

$$\text{Area of an isosceles triangle} = \frac{b}{4}\sqrt{4a^2 - b^2}$$

$$\therefore 60 = \frac{10}{4}\sqrt{4a^2 - 10^2}$$

$\therefore 3600 \times 16 = 100\ (4a^2 - 100)$
$\therefore 400\ a^2 = 67600$
$\therefore a^2 = 169$
As the length of the side of a triangle cannot be negative.
$\therefore a = 13$ cm
$\therefore$ Length of the equal sides of the isosceles triangle is 13 cm.
Area of the triangle = r × S
Since the semiperimeter can be uniquely determined, the inradius can be uniquely determined.
$\therefore$ Area of the incircle can be uniquely determined.
$\therefore$ Statement B alone is sufficient to answer the question.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #34: (28-Oct-08)

The paragraph is about representations of local communities. The paragraph talks about how the representations of communities changed the course of human affairs. It solved the problem of nationalization of communities. In the concluding lines of the paragraph, it also says that the representations only solved the problem of size.

Option 2 talks about representative assembly being just a substitute for the whole nation, thus linking it to the reference of size which is mentioned in the concluding sentence.

There is nothing mentioned about the efficiency of the representative assembly. Therefore, options 1and 4 are eliminated.

Option 3 continues the paragraph instead of completing it. It introduces a new idea which requires elaboration.

Option 5, although comes close, loses out on the smooth flow and logical connection provided by option 2.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #35: (29-Oct-08)

Let the letters that follow represent the number of children who had:
a – only Strawberry
b – only Vanilla
c – only Chocolate
d – only Mango
e – only Strawberry and Vanilla
f – only Vanilla and Chocolate
g – only Chocolate and Mango
h – only Mango and Strawberry
i – only Strawberry, Vanilla and Chocolate
j – only Vanilla, Chocolate and Mango
k – only Chocolate, Mango and Strawberry
l – only Mango, Strawberry and Vanilla
m – all four flavours

From the question, we know that values for *a*, *b*, *c*, *d*, *e*, *f*, *g* and *h* is known. Also, the total number of children is known.
From this, we can obtain the total number of children who had three or more flavours.
$i + j + k + l + m = 250 – (a + b + c + d + e + f + g + h) = x$ (say)
Also, the number of children who had Chocolate in their bowls is twice the number of children who had Strawberry in their bowls. This gives us the following:
$2 (a + e + h + i + l + k + m) = c + g + f + k + i + j + m$
$i + k + m + 2l – j = c + g + f – 2 (a + e + h) = y$ (say, since all values on RHS are known)
We now have two equations, as follows:
$i + j + k + l + m = x$ ... (i)
$i – j + k + 2l + m = y$ ... (ii)
We have to determine *l*.
From statement A, we know the value of *j*.
Subtracting the equation (i) from (ii) we get:
$l – 2j = y – x$
$\therefore l = 2j + y – x$
We can determine the value of *l* since all other values in this equation are known.
∴ We can use statement A to determine the value of *l*.
From statement B, we know the value of *i*.
Since we don't want to eliminate *i* from the equation, we add equations (i) and (ii). We get:
$2 (i + k + m) + 3l = x + y$
However, we do not know the value of *k* and *m*.
∴ We cannot use statement B to determine the value of *l*.

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #36: (30-Oct-08)

The linking words 'but' and 'instead' are clear pointers that neither of these should, ideally, be the first statement in the paragraph. Eliminate option 5.

The first statement is likely to introduce the main idea, which seems to be what people know and how they estimate how much they do not know. This is done in statement D wherein the primary idea expressed is how people feel about their ignorance as compared to their knowledge.

Although statement C seems to be a likely introductory sentence, this is ruled out since it only contains examples. Statement A can similarly be ruled out since there is no reference to what "other things" refers to in the sentence. Eliminate options 1 and 2.

Statement E adds another idea to statement D, that of people exhibiting a "special deficit" when it comes to "explanatory understandings".

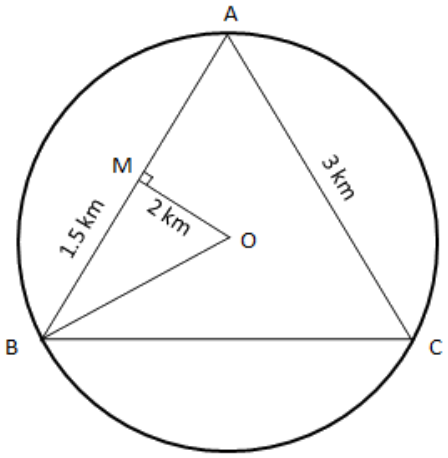
Examples supporting these ideas are given in statements C and B – estimating knowledge of simple facts, procedures and narratives, but lacking causal understanding.
The paragraph is summed up in statement A.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #37: (31-Oct-08)

The distance between the doors A and C and doors A and B is 3 km. The given information can be summarized in a diagram as follows. The diagram also shows the point M which is the midpoint of the chord AB. The distance OM is 2 km.



Using Pythagoras theorem for the right angle triangle OMB we get,

$OM^2 + MB^2 = OB^2$

Solving we get OB = 2.5 km which is the radius of the circle.

Consider the triangle OAB. The area for the same can be calculated using AB as the base and OM as the height.

Now consider extending the line AO till it intersects with BC, say at point N. Since the triangle ABC is an isosceles triangle, the line AN is a perpendicular bisector of the line BC. Thus the area of the triangle OAB can also be calculated by taking BN as the height and AO as the base.

Equating these two areas we get,

$AB \times OM = OA \times BN$

$3 \times 2 = 2.5 \times BN$

$BN = 2.4$

$BC = 2 \times BN = 4.8$ km

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #38: (01-Nov-08)

The last statement of the paragraph needs to contrast the sadness and grief experienced by a mother on the loss of her son.

Option 5 is close but disconnected with the last statement of the paragraph. Firstly, it is expected from "cannot avail to remove her grief" in the last statement that a contrasting emotion would be present in the correct answer option. This contrasting opinion or lessening of the mother's grief is not stated. Secondly, the mother's recollections of her son were wholly positive, i.e. docile, tractable, submissive as well as obedient. According to option 5 there would be a sea change in the way those recollections are perceived, implying that the positive emotions of the mother towards her son would change. Nothing in the paragraph calls for this change in the mother's recollections. Thirdly, the word 'it' in the option is incorrect and should ideally be 'they' to cater to "recollections" which is plural.

Options 1 and 2 can be eliminated as the idea moves totally away from grief to fear.

Option 4 mentions 'desired outcomes'. This makes the option a little vague and loses out on the clarity provided by option 3.

Option 3 expresses the contrasting emotion and gives the paragraph a logical finish.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #39: (02-Nov-08)

∵ Amount due at the beginning of first year = Principal = Rs. 48,000

∴ Amount at the end of one year = Principal + Interest = 48000 × 1.1 = 48000 + 4800 = Rs. 52,800

∴ After repayment of first installment at the end of one year, amount due at the beginning of second year = (52800 − X)
∴ Amount at the end of second year = (52800 − X) × 1.1 = (52800 + 5280 − 1.1X) = (58080 − 1.1X)
∴ After repayment of second installment at the end of second year, amount due at the beginning of third year = (58080 − 1.1X) − X = (58080 − 2.1X)

∴ Amount at the end of third year = (58080 − 2.1X) × 1.1 = (58080 + 5808 − 1.1 × 2.1X) = (63888 − 2.31X)

∵ Amount at the end of third year = third installment

∴ (63888 − 2.31X) = X

∴ 3.31X = 63888
∴ X = 63888/3.31 ≈ Rs. 19301.50

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #40: (03-Nov-08)

The first word is "exhausting" which means 'tiring'. "Exhaustive" means ‘to use up the whole of’ or ‘comprehensive’.
The second word is "fractious" which means 'irritable' or 'peevish' whereas "factitious" means 'artificial' or 'contrived'.
The child was irritable and his "bawling" - 'crying', 'wailing', 'howling' - the third word, was making his mother frustrated. "Baulk" means to 'recoil' or 'pull back'.
The fourth word is "continuation" which means 'to continue' or 'resume’ whereas, "continuance" relates mainly to the sense ‘to be still in existence.’
The last word is "complemented" which relates more to 'completing something' rather than "complimented" which means ‘to praise'.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #41: (04-Nov-08)

$$S_1 = \left(1 + \frac{4}{3} + \frac{9}{3^2} + \frac{16}{3^3} + \frac{25}{3^4} + \cdots\right) \quad \ldots (i)$$

Multiplying (i) with 1/3 we get,

$$\frac{1}{3}S_1 = \left(\frac{1}{3} + \frac{4}{3^2} + \frac{9}{3^3} + \frac{16}{3^4} + \frac{25}{3^5} \ldots\right) \quad \ldots (ii)$$

Subtracting (iii) from (i),

$$\left(1 - \frac{1}{3}\right)S_1 = \left(1 + \frac{3}{3} + \frac{5}{3^2} + \frac{7}{3^3} + \frac{9}{3^4} + \cdots\right) \quad \ldots (iii)$$

Multiplying (iii) with 1/3 we get,

$$\frac{1}{3}\left(1 - \frac{1}{3}\right)S_1 = \left(\frac{1}{3} + \frac{3}{3^2} + \frac{5}{3^3} + \frac{7}{3^4} + \cdots\right) \quad \ldots (iv)$$

Subtracting (iv) from (iii),

$$\left(1 - \frac{1}{3}\right)\left(1 - \frac{1}{3}\right)S_1 = \left(1 + \frac{2}{3} + \frac{2}{3^2} + \frac{2}{3^3} + \frac{2}{3^4} + \cdots\right)$$

$$\therefore \left(\frac{2}{3}\right)^2 S_1 = 1 + \frac{2}{3}\left(1 + \frac{1}{3} + \frac{1}{3^2} + \frac{1}{3^3} + \frac{1}{3^4} + \cdots\right)$$

∵ Sum of an infinite geometric progression when r < 1 is given by,

$$S_\infty = \frac{a}{1 - r}$$

$$\therefore \frac{4}{9}S_1 = 1 + \frac{2}{3}\left[\frac{1}{1 - \frac{1}{3}}\right]$$

$$\therefore \frac{4}{9}S_1 = 2$$

$$\therefore S_1 = \frac{9}{2}$$

Now,

S_2 = (4 + 7 + 11 + 17 + 27 + 45… 11 terms)

S_2 = (3 + 5 + 7 + 9 + 11 + 13… 11 terms) + (1 + 2 + 4 + 8 + 16 + 32… 11 terms)

Here first expression is in arithmetic progression with first term 3 and common difference of 2,
And the second expression is in geometric progression with first term as 1 and common ratio 2.

Sum of n terms of an arithmetic progression is given by,

$$S = \frac{n}{2} \times [2a + (n-1)d]$$

Sum of n terms of an geometric progression when r > 1 is given by,

$$S = \frac{a(r^n - 1)}{(r-1)}$$

∴ S_2 = 143 + 2047 = 2190

∴ S = $S_1 \times S_2$ = 9/2 × 2190

∴ S = 9855

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #42: (05-Nov-08)

"Classic", the word here, means ‘acknowledged excellence’ or ‘remarkably typical’. "Classical" has more to do with serious art or is used in reference with ancient art or literature.

The next word, though not easily figured out in the reading of the first few lines can be deduced after reading the third sentence. ‘Tiny creatures’ definitely relates to insects - "entomology" is the 'study of insects' and "etymology" is the 'study of word origins' - than words.

"Denote" means 'to be a mark or sign of' whereas "connote" - the correct word in this context - refers to 'signify or suggest'.

"Besides" is used to mean, ‘apart from’ whereas "beside" means ‘next to’.

Though both "distinct" and "distinctive" are related to ‘distinguished as not being the same’, there are differences in usage. "Distinct" means essentially 'separate’ whereas "distinctive" means 'notable' or 'having a special quality' (thing about this book…).

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #43: (06-Nov-08)

Consecutive odd numbers form an AP with a common difference of 2. So we are considering such APs with sum of 500.

Let the first term of the AP be a and let the number of terms be n.

By using the formula for the sum of first n terms of an AP, we get,

$$\frac{n}{2}[2a + (n-1)2] = 500$$

∴ (a + n − 1) × n = 500

∴ n2 + (a − 1)n = 500

Since a is odd, (a − 1) and consequently the term (a − 1)n will be even. This means that the term n2 should be even. Therefore, n is also even.

Rearranging the terms, we get,

$$n = \frac{500}{n} - (a-1)$$

Since n as well as (a − 1) are even, hence the quotient when 500 is divided by n should be even.

So, the possible values that n can take are those even numbers such that when 500 is divided by n the quotient is even. It means that we have to split 500 in two even factors.

500 = 4 × 125 = $2^2 \times 5^3$

The possible combinations of even factors are (2, 250), (10, 50), (50, 10) and (250, 2) where the first term represents n. Now since n is more than 2, we have to discard the first pair. All the remaining pairs are possible. Thus, three pairs are possible.

Note that high values of n are possible as for them the value of a would be negative, which is perfectly acceptable.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #44: (07-Nov-08)

Statement C talks about globalization in terms of migration and E adds to this statement C by saying that migration is seen as a process whereby white and blue collar workers may go from one country to another to provide their services. This establishes the CE link. Thus the answer can be either of the options 2 or 3.

Statement B introduces the damage done to the environment and D expands on the subject by stating that "the damage done to limited environmental resources" is not priced. Statement A argues that it should be. Therefore, there is a clear BDA link.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #45: (08-Nov-08)

Let the cost of an apple, an orange and a pineapple be Rs. x, y and z respectively.

Therefore, for the purchase made by Anand, Jaspal and Gaurav, we can write the following equations:

$5x + 3y + 6z = 118$ ...(i)
$6x + 4y + 8z = 152$ ...(ii)
$4x + my + nz = 58$ ...(iii)
where m and n are the number of oranges and pineapples respectively bought by Gaurav.
Solving equations (i) and (ii), we get, $x = 8$
Substituting this value of x in equation (i), we get,
$y + 2z = 26$ ...(iv)

Now for equation (iii), if we substitute the value of x as 8 we get,
$32 + my + nz = 58$
$\therefore my + nz = 26$

Now the minimum value of m is one and since n is more than m the minimum value of n is 2.

Now one orange and two pineapples cost Rs. 26 [from equation (iv)]. Thus he buys one orange and two pineapples.

So when he exchanges 2 pineapples for oranges, he gets 3 oranges [because, at the end he is having 4 oranges] and Rs. 2.

$\therefore 2z = 3y + 2$

We also know $y + 2z = 26$
Solving these two equations we get,
$y = 6$ and $z = 10$
Cost of an apple is Rs. 8.
Therefore the cost of an apple, a pineapple and an orange is Rs. 24.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #46: (09-Nov-08)

Statement B will logically follow S1 since in both the statements, Wolf and "Wolfian theory" are discussed.

Statement A will follow statement B since an alternative theory by Lachmann is being discussed in statement D which will follow statement A.

Statement C will be the last sentence since it talks about "gaps and contradictions" and statement S2 expands on that theme.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #47: (10-Nov-08)

Let X = (4 + 44 + 444 + … 9 terms)
∴ X = 4(1 + 11 + 111 + … 9 terms)

Now,
1 + 11 = 12 (2 terms)
1 + 11 + 111 = 123 (3 terms)

Similarly,
1 + 11 + 111 + … 9 terms = 123456789
∴ X = 4(123456789) = 493827156
∴ Sum of digits of X is 45.
∴ S = 45
∴ We need to find out maximum power of 5 that exactly divides 45!
$[45/5] + [45/5^2] = 9 + 1 = 10$
∴ 10th power of 5 divides 45!

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #48: (11-Nov-08)

Though the passage is mostly analysing how the actualists would look at the possibilist theories, we can understand that actualists believe that anything that is projection of the mind and not related to the immediate reality that surrounds them is termed as 'possible' and not actual. This eliminates option 2 and 3.

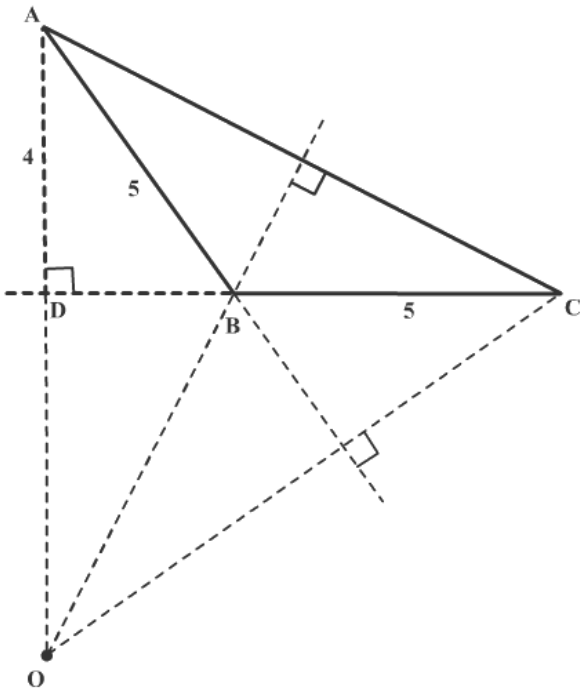
Option 4 is unrelated to the passage.

Option 5 is meaningless and distorts the meaning.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #49: (12-Nov-08)



Refer the diagram,

Orthocentre in an obtuse triangle lies outside the triangle and is near to the vertex containing obtuse angle.

∵ OA = OC > OB

∴ ABC is an isosceles triangle with AB = BC = 5 cm and angle B > 90°.

In right angled triangle ADB, AD = 4 cm and AB = 5 cm, ∴ DB = 3 cm

Now, in right triangle ADC, AD = 4 cm, DC = DB + BC = 3 + 5 = 8 cm

∴ $AC^2 = AD^2 + DC^2$

∴ $AC^2 = 4^2 + 8^2 = 16 + 64 = 80\ cm^2$

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #50: (13-Nov-08)

The central theme of the paragraph is - Berry Hamilton's life taking a turn after joining as a servant with Maurice Oakley.

Options 2 and 3 are disconnected from the paragraph. Berry Hamilton was already married to Fannie, the housekeeper. The options not only add more data to the paragraph, but also appear discontinuous with the last two lines of the paragraph.

Options 4 and 5 come close but lose out on the clarity and logical connection provided by option 1. Option 1 brings the idea of the paragraph to a smooth closure - Berry struggling, then showing signs of recovery after joining Maurice, staying with him through thick and thin and finally his fortunes growing along with that of his employer.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

About TestFunda.com

TestFunda.com is an initiative by Enabilion Learning Private Limited. Enabilion is a sister-concern of Zeus Learning, an e-learning solutions company. Products designed and created by us are currently being used in thousands of US schools and colleges. Clients include some of the world's largest publishers and developers of educational software: Discovery Education, Reader's Digest, Pearson Education, etc.

TESTfunda.com is managed by four IIT-IIM Alumni. It has a 85+ member team of Educationists, Instructional Designers and Systems Architects with vast experience in MBA Coaching and Computer-Based Training and Testing. The TestFunda Team has 9 years of experience designing and creating international award-winning eLearning courses.