Question of the Day

Book 4

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SOLUTIONS

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 4^{th} 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: (14-Nov-08)

A, B and C are friends, they have some money. Amount with B is Rs. 6 more than that with A. Amount with C when divided by amount with A gives a quotient that is equal to the quotient obtained when amount with C is divided by amount with B. The number of different values of amount with C which satisfy the given conditions is 65. What is the amount with A?

OPTIONS

1) 22
2) 25
3) 20
4) 27
5) 28

Question of the Day #02: (15-Nov-08)

The question consists of a certain number of sentences. Some sentences are grammatically incorrect or inappropriate. Select the option that indicates the grammatically incorrect and inappropriate sentence(s).

A. Phosphorescence and fluorescence seem especially to result from the alpha and beta rays, particularly from the alpha rays, to which belongs the most important part of the total energy of the radiation.
B. Sir W. Crookes has invented a curious little apparatus, the spinthariscope, who enables us to examine the phosphorescence of the blend excited by these rays.
C. By means of magnifying glass, a screen covered with sulphide of zinc is kept under observation, and in front of it is disposed, at a distance of about half a millimetre, a fragment of some salt of radium.
D. We then perceive multitudes of brilliant point on the screen, which appear and at once disappear, producing a scintillating effect.
E. It seems probable that every particle falling on the screen produces by its impact a disturbance in the neighbouring region, and it is this disturbance which the eye perceives as a luminous point.

OPTIONS

1) B, C and D
2) A, B and E
3) C, D and E
4) A, B and C
5) B and D

Question of the Day #03: (16-Nov-08)

If f(x) = ax4 + bx3 + cx2 + dx + e and m, n, o and p are the roots of the equation f(x) = 0, then what is the value of (m + n + o + p + mn + mo + mp + no + np + op + mno + mnp + mop + nop + mnop)? Given f(0) = 1, f1(0) = 1, f2(0) = 2, f3(0) = 6 and f4(0) = 24, where fn(x) is the nth derivative of f(x).

OPTIONS

1) 1
2) 22
3) 9
4) 18
5) None of these

Question of the Day #04: (17-Nov-08)

The question consists of a certain number of sentences. Some sentences are grammatically incorrect or inappropriate. Select the option that indicates the grammatically incorrect and inappropriate sentence(s).

A. Scepticism is as much the result of knowledge, as knowledge is of scepticism.
B. To be content with what we at present know, is, for the most part, shutting our ears against conviction.
C. Since, from the very gradual character of our education, we must continually forget, and emancipate ourselves from, knowledge previously acquired.
D. We must set aside old notions and embrace fresh ones; and, as we learn, we must be daily unlearning something which it has cost us no small labour and anxiety to acquire.
E. And this difficulty attaches itself more closely to an age in which progress has gained a strong ascendency over prejudice, and in which persons and things are, day by day, finding their real level, in lieu of its conventional value.

OPTIONS

1) B and C
2) A and D
3) D and E
4) B and E
5) Only E

Question of the Day #05: (18-Nov-08)

Four friends P, Q, R and S have Rs. 200 among them. They made the following statements about the money with them.

P: Q has Rs. 60 and if I give Rs. 10 to R, then Q and R will have equal amounts of money.
Q: I have more money than R and two people have the same amount of money
R: The person(s) with the lowest amount has (ve) Rs. 30 and S does not have the highest amount.
S: Q and I have the same amount of money and if R gives Rs. 10 to Q, he would have Rs. 5 less than Q.

Only one of the statements is completely incorrect.
How much money does S have?

OPTIONS

1) Rs. 50
2) Rs. 60
3) Rs. 20
4) Rs. 30
5) Cannot be determined

Question of the Day #06 (19-Nov-08)

Each of the questions consists of a certain number of sentences. Some sentences are grammatically incorrect or inappropriate. Select the option that indicates the grammatically incorrect and inappropriate sentence(s).

A. He paid little attention to what he said, and blamed Glaucus for his stupidity in taking in and feeding maimed and enfeebled persons.
B. However, he bade him bring the stranger to him.
C. Glaucus told Homer what had taken place, asked him to follow him, and assured him that good fortune would be the result.
D. Conversation soon showed that the stranger was a man of much clever and general knowledge, and the Chian persuaded him to remain, and to undertake the charge of his children.
E. Beside the satisfaction of driving the impostor Thestorides from the island, Homer enjoyed considerable success as a teacher.

OPTIONS

1) A and E
2) D and E
3) A and D
4) C and D
5) B and C

Question of the Day #07: (20-Nov-08)

On January 01, 1989, the difference between the ages of Mr. and Mrs. Naidu was equal to the age of their son Shrinivas. (Mr. Naidu is older than his wife.) After a few years, when Mr. Naidu turns 35, Mrs. Naidu's age was half the square of Shrinivas' age. Ten years after this, the difference between the sum of the ages of the parents and that of their son was 69. How old will Mrs. Naidu be on January 01, 2014?

OPTIONS

1) 49
2) 50
3) 54
4) 52
5) 53

Question of the Day #08: (21-Nov-08)

Choose an option that best captures the essential elements of the text without changing the expressed or implied meaning of the original text.

J. R. R. Tolkien was a British writer and university professor and is best known as the author of The Hobbit and The Lord of the Rings. He was a professor of Anglo-Saxon language at Oxford University from 1925 to 1945, and of English language and literature, also at Oxford, from 1945 to 1959. He was a strongly committed Roman Catholic. Tolkien was a close friend of C. S. Lewis, with whom he shared membership in the literary discussion group the Inklings. In addition to The Hobbit and The Lord of the Rings, Tolkien's published fiction includes The Silmarillion and other posthumously published books about what he called a legendarium, a connected body of tales, fictional histories, invented languages, and other literary essays about an imagined world called Arda, and Middle-earth. Most of these works were compiled from Tolkien's notes by his son Christopher Tolkien. The enduring popularity and influence of Tolkien's works have established him as the "father of modern fantasy literature". Tolkien's other published fiction includes stories not directly related to the legendarium, some of them originally told to his children.

OPTIONS

1) J.R.R. Tolkein was a British writer, professor and a staunch catholic who authored The Hobbit and The Lord of the Rings. Most of his work is a connected body of tales, fictional histories, invented languages and other essays about an imagined world called Arda, and middle-earth. His works have established him as the “father of modern fantasy literature.”
2) J.R.R. Tolkein was a British writer and professor who authored The Hobbit and The Lord of the Rings. He was a close friend of C.S. Lewis and a member of a literary discussion group the inklings. His legendarium is a connected body of tales, fictional histories, invented languages and other essays about an imagined world called Arda, or Middle-earth. His works have established him as the “father of modern fantasy literature.”
3) J.R.R. Tolkein is best known as the author of The Hobbit and The Lord of the Rings. His legendarium is a connected body of tales, fictional histories, invented languages and other essays about an imagined world called Arda, and Middle-earth. He has been rightfully called the “father of modern fantasy literature.”
4) J.R.R. Tolkein was a staunch catholic best known for The Hobbit and The Lord of the Rings. Some of his published works were about what he referred to as a legendarium, a connected body of tales, fictional histories, real languages, and other essays about an imagined world called Arda, and Middle-earth. His works have established him as the “father of modern fantasy literature.”
5) J.R.R.Tolkein is best known as the author of The Hobbit and The Lord of the Rings. His legendarium is a connected body of tales, fictional histories, invented languages, and other essays about an imagined world called Arda, and Middle-earth. His works have established him as the “father of modern fantasy literature.”

Question of the Day #09: (22-Nov-08)

A botanist selects n^2 trees on an island and studies (2n + 1) trees everyday where n is an even integer. He does not study the same tree twice. Which of the following cannot be the number of trees that he studies on the last day of his exercise?

OPTIONS

1) 13
2) 28
3) 17
4) 31
5) 79

Question of the Day #10: (23-Nov-08)

Choose an option that best captures the essential elements of the text without changing the expressed or implied meaning of the original text.

El Greco was a prominent painter, sculptor and architect of the Spanish Renaissance. El Greco was born in Crete, which was at that time part of the Republic of Venice, and at 26 travelled to Venice to study. In 1570 he moved to Rome, where he opened a workshop and executed a series of works. During his stay in Italy, El Greco enriched his style with elements of Mannerism and of the Venetian Renaissance. In 1577 he emigrated to Toledo, Spain, where he lived and worked until his death. In Toledo El Greco received several major commissions and produced his best known paintings. El Greco's dramatic and expressionistic style was met with puzzlement by his contemporaries but found appreciation in the 20th century. El Greco is regarded as a precursor of both Expressionism and Cubism, while his personality and works were a source of inspiration for poets and writers such as Rainer Maria Rilke and Nikos Kazantzakis. El Greco has been characterized by modern scholars as an artist so individual that he belongs to no conventional school. He is best known for tortuously elongated figures and often fantastic or phantasmagorical pigmentation, marrying Byzantine traditions with those of Western civilization.

OPTIONS

1) El Greco was a prominent painter, sculptor and architect of the Spanish Renaissance whose style was appreciated only in the 20th century. He is regarded as a precursor to both Expressionism and Cubism and his style was so individualistic that he cannot be said to belong to any conventional school.
2) El Greco was a prominent painter, sculptor and architect who spent much of his life in Spain. He is regarded to have been a precursor to Expressionism and Cubism. His unique style was appreciated only in the 20th century.
3) El Greco was a prominent painter, sculptor and founder of the Spanish Renaissance who spent much of his life in Spain. His dramatic style was appreciated only in the 20th century and he is regarded as a precursor to both Expressionism and Cubism.
4) El Greco was a prominent painter, sculptor and architect of the Spanish Renaissance whose style was appreciated only in the 20th century. He is regarded as the founder of both Expressionism and Cubism and his style was so individualistic that he cannot be said to belong to any conventional school.
5) El Greco was a prominent painter, sculptor and architect of the Spanish school whose style was appreciated only in the 20th century. He is regarded as a precursor to both Expressionism and Cubism and his style was so individualistic that he cannot be said to belong to any conventional school.

Question of the Day #11: (24-Nov-08)

What is the value of $(-101/3)^3 + (60)^3 + (-79/3)^3$?

OPTIONS

1) 100000
2) 123650
3) 143270
4) 159580
5) 171000

Question of the Day #12: (25-Nov-08)

10 persons, A, B, C, D, E, F, G, H, I and J are sitting in a row, not neccessarily in the same order. In how many ways can they be seated such that:

1. A always sits to the immediate left of B
2. F sits to the right of A
3. I sits to the right of B and left of F

OPTIONS

1) ${}^{10}C_2 \times {}^{8}C_2$
2) 128
3) 204
4) $84 \times 6!$
5) Cannot be determined

Question of the Day #13: (26-Nov-08)

Rohan has created a computer based cricket game, in which a player can face different types of balls and hit different shots on them. Depending on the choice of shot and the timing, a player can score 2, 3, 4 or 6 runs. If the player misses the shot, a wicket is lost, which also causes a deduction of 5 runs in the score. No other result is possible on a ball. If a player faces 60 balls in a game, which of the following is not a possible score at the end of the game?

OPTIONS

1) 281 runs with 7 wickets lost
2) 291 runs with 6 wickets lost
3) 301 runs with 5 wickets lost
4) 261 runs with 9 wickets lost
5) 271 runs with 8 wickets lost

Question of the Day #14: (27-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.

One of the chief diversities of human character, indeed, arises from the circumstance of one man being habitually influenced by the simple and straight-forward principle of duty, and another merely by a kind of contest between desires and motives of a very inferior or selfish nature. Thus also we acquire a knowledge of the moral temperament of different men, and learn to adapt our measures accordingly in our transactions with them. In endeavouring, for example, to excite three individuals to some act of usefulness, we come to know, that in one we have only to appeal to his sense of duty; in another to his vanity or love of approbation; _____

OPTIONS

1) and with the third, we have only one of the two options already exercised.
2) but there is another class of emotions, in their nature distinct from these; though, in a practical point of view, they are much connected.
3) while we have no hope of making any impression on the third, unless we can make it appear to bear upon his interest.
4) in the third, the determination may arise from a sense of duty, or an impression of moral rectitude, apart from every consideration of a personal nature.
5) and in the third, by exciting to conduct which requires a sacrifice of self-love, and so prevents this principle from interfering with the sound exercise of the affections.

Question of the Day #15: (28-Nov-08)

PQRS is a parallelogram with coordinates P(5x, 2), Q(x2, 1), R(3, 3) and S(3, 4). Find the length of the longest diagonal of the parallelogram.

OPTIONS

1) $\sqrt{18}$ or $\sqrt{493}$
2) 6 or $\sqrt{495}$
3) $\sqrt{10}$ *or* $\sqrt{495}$
4) $\sqrt{10}$ or $\sqrt{485}$
5) $\sqrt{18}$ or $\sqrt{485}$

Question of the Day #16: (29-Nov-08)

The question has a sentence with two blanks. Given below the question are five pairs of words. Choose the pair that best completes the sentence.

Particularly at a time when standard _____ is not available for most Chinese stroke patients, few will wait to try acupuncture until its role is confirmed or _____ by reliable evidence.

OPTIONS

1) medication, rejected
2) tests, approved
3) treatment, disprove
4) procedure, challenged
5) rehabilitation, refuted

Question of the Day #17: (30-Nov-08)

Meena has 5 distinct pencils, 4 distinct erasers and 3 distinct sharpeners. The number of ways in which she can give these things to her three younger sisters such that each of her younger sisters receives at least one object of each kind is:

OPTIONS

1) $312 - 1$
2) $(35 - 1) \times (34 - 1) \times (33 - 1)$
3) 32400
4) 3255
5) 38880

Question of the Day #18: (01-Dec-08)

Answer the question based on the information given in the passage.

A well-regulated judgment conducts the propensity to worthy objects; and directs it in such a manner as to make it most useful to others. The tendency of this high principle must depend on the objects to which it is directed. These may vary from the idle tattle of the day, to the highest attainments in literature or science. The principle may be applied to pursuits of a frivolous or useless kind, and to such acquirements as lead only to pedantry or sophism; - or it may be directed to a desultory application, which leads to a superficial acquaintance with a variety of subjects, without a correct understanding of any of them.

It can be inferred from the passage that the subject under discussion is:

OPTIONS

1) the desire for knowledge.
2) the desire for intellectual improvement.
3) the pitfalls of an indiscreet pursuit of knowledge.
4) the desire for moral improvement.
5) the cultivation of young minds.

Question of the Day #19: (02-Dec-08)

If p, q and r are in Arithmetic Progression such that p + q ≠ r, p ≠ q + r and p4 + q4 + r4 = 2[(pq)2 + (qr)2 + (pr)2] then find the value of (p + r).

OPTIONS

1) 0
2) 1
3) −1
4) 2
5) −2

Question of the Day #20: (03-Dec-08)

In the question, a word has been used in sentences in five different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.

Strain

OPTIONS

1) The laboratory has produced a high yielding strain of wheat.
2) The song strains the warm memories I have of the past.
3) A strain of fanaticism marked his speeches.
4) She carefully strained the bandage over the wound.
5) The heavy load on his shoulders strained his back.

Question of the Day #21: (04-Dec-08)

If f(x) = x5 − x4 − x2 − x, and a, b, c are the roots of the cubic equation x3 − x2 − 1 = 0, then what is the sum of f(a), f(b) and f(c)?

OPTIONS

1) 0
2) 3
3) 1
4) −1
5) −3

Question of the Day #22: (05-Dec-08)

From the following words, identify which word will make an analogous relationship as the first pair.

Dialectic: Idea:: Pidgin:

OPTIONS

1) Chinese
2) Concept
3) Language
4) Logic
5) Argot

Question of the Day #23: (06-Dec-08)

If X = 2891 × 2892 × 2893 × .....2898 × 2899 × 2900, then what is the remainder when X is divided by 17?

OPTIONS

1) 0
2) 7
3) 14
4) 4
5) 10

Question of the Day #24: (07-Dec-08)

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

Children, when they begin to learn each separate letter of the alphabet, find no pleasure in it, because they miss the real purpose of the lesson; in fact, while letters claim our attention only in themselves and as isolated things, they fatigue us. They become a source of joy to us only when they combine into words and sentences and convey an idea. Likewise, our soul when detached and imprisoned within the narrow limits of a self loses its significance. For its very essence is unity. It can only find out its truth by unifying itself with others, and only then it has its joy.

OPTIONS

1) Letters join together to form meaningful words and souls join together to form joyful relationships.
2) Every one should strive to join their souls with their friends to find joy just as letters join together to form meaning in words.
3) Letters lose meaning when alone and so does the soul lose friendships.
4) Having a soul that is detached within the limits of a self is fatiguing, depressing and insignificant, just like having single letters rather than words.
5) Always unite your soul with others to find joy and significance just as letters unite to form words and ideas.

Question of the Day #25: (08-Dec-08)

If N = 853 − 773 − 83, then what is the sum of the remainders obtained when N is divided by 3, 5, 7, 8, 11 and 17?

OPTIONS

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

Question of the Day #26: (09-Dec-08)

Fill in the blanks in the passage with the most appropriate set of words from the options for each blank.

The fuel value of the foods we eat ___1____ is so important a factor in life that physicians, ____2_____, nurses, and those having the care of institutional cooking acquaint themselves with the relative fuel values of practically all of the important food substances. The life or death of a ____3_____may be determined by the patient's diet, and the working and earning capacity of a father depends ____4_____ upon his prosaic three meals. An ounce of fat, whether it is the fat of meat or the fat of olive oil or for that matter any other food, produces in the body two and a quarter times as much ____5_____ as an ounce of starch.

OPTIONS

1) daily, dentists, person, mildly, moisture
2) everyday, dietitians, family, largely, protein
3) daily, dermatologists, generation, mildly, heat
4) daily, dietitians, patient, largely, heat
5) everyday, theists, patient, no word required, carbohydrate

Question of the Day #27: (10-Dec-08)

If a, b, c, d and e are the five positive roots of the equation x5 − 5x4 + kx3 + mx2 + nx − 1 = 0, what is the product of k, m and n?

OPTIONS

1) More than 77
2) Less than −457
3) 0
4) Multiple of 7
5) Cannot be determined

Question of the Day #28: (11-Dec-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.

Society not only continues to exist by transmission, by communication, but it may fairly be said to exist in transmission, in communication. There is more than a verbal tie between the words common, community, and communication. Men live in a community in virtue of the things which they have in common; and communication is the way in which they come to possess things in common. What they must have in common in order to form a community or society are aims, beliefs, aspirations, knowledge- a common understanding- like-mindedness as the sociologists say. Such things cannot be passed physically from one to another, like bricks; they cannot be shared as persons would share a pie by dividing it into physical pieces. The communication which insures participation in a common understanding is one which secures similar emotional and intellectual dispositions. _____

OPTIONS

1) So obvious, indeed, is the necessity of teaching and learning for the continued existence of a society that we may seem to be dwelling unduly on a truism.
2) But justification is found in the fact that such emphasis is a means of getting us away from an unduly scholastic and formal notion of education.
3) It has similar ways of responding to expectations and requirements.
4) All the psychological faculties are brought to the fore to ensure that.
5) But in dealing with the young, the fact of association itself as an immediate human fact, gains in importance.

Question of the Day #29: (12-Dec-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.

P is an integer having all of its divisors as a, b, c, …
Q = 1/a + 1/b + 1/c + …
Is Q a prime number?
P is an even number
P is a perfect number

OPTIONS

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

Question of the Day #30: (13-Dec-08)

Fill in the blanks in the passage with the most appropriate set of words from the options for each blank.

In August 2001, President George W. Bush told Americans that he worried about "a _____ that devalues life," and that he believed that, as President of the United States, he has "an _____ obligation to foster and encourage respect for life in America and throughout the world."

OPTIONS

1) religion, superior
2) law, inconsequential
3) nation, unforeseen
4) culture, important
5) rule, essential

Question of the Day #31: (14-Dec-08)

If k, m, n, p, q are the five roots of the equation $ax^5 + bx^4 + cx^3 + dx^2 + ex + f = 0$, which of the following is true?

OPTIONS

1) $(1 + k)(1 + m)(1 + n)(1 + p)(1 + q) = abcdef$
2) $(1 + f) = (11 + a + b + c)(d + e + f)$
3) $a(1 - k)(1 - m)(1 - n)(1 - p)(1 - q) = a + b + c + d + e + f$
4) $kmnpq + 13 > a + b + c + d + e + f > 0$
5) Data insufficient

Question of the Day #32: (15-Dec-08)

The question consists of a certain number of sentences. Some sentences have incorrect word usage. Select the option that indicates the grammatically correct and appropriate sentence(s).
The dispute brewed through the summer as Nehru remained intransigent and U.S. officials confronted an unbending legal mandate.
He found it difficult to find his way through the tortuous, narrow streets of Delhi's old city.
He was cheerful and became maudlin and jovial in the company of his friends.
The lecture was so interesting that the students became enervated as stimulating concepts followed one another.
His fondness for recondite vocabulary teased his peer and impressed the panel during the Group Discussion.

OPTIONS

1) A, B and C
2) A, B and E
3) A only
4) B and C
5) E only

Question of the Day #33: (16-Dec-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.

What is the number of terms in a geometric progression?

Sum of first and the last term of the series is 2190 and the product of the second and second last terms is 6561.
Sum of all the terms is 3279.

OPTIONS

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

Question of the Day #34: (17-Dec-08)

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

Systems of philosophy, therefore, are not so dependent on our progressive knowledge of facts as the theories of natural science, and change less quickly; notwithstanding their mutual conflicts, and in spite of the talk about discarded standpoints, they possess in a measure the permanence of classical works of art, they retain for all time a certain relative validity.
Like historical science in general, philosophy is, on the one hand, in touch with exact inquiry, while, on the other, it has a certain relationship with art.
Metaphysical principles are less easily verified from experience than physical hypotheses, but also less easily refuted.
With the former it has in common its methodical procedure and its cognitive aim; with the latter, it's intuitive character and the endeavor to compass the whole of reality with a glance.
In no other department is a thorough knowledge of history so important as in philosophy.

OPTIONS

1) EBDCA
2) EBCDA
3) CEABD
4) CBEDA
5) ECDAB

Question of the Day #35: (18-Dec-08)

Deepak was given a task to distribute 400 gifts amongst 11 people in such a manner that no two people get same number of gifts and no two pairs of any two people should have same number of gifts and Deepak could take remaining gifts himself. What is the maximum number of gifts that Deepak can get?

OPTIONS

1) 35
2) 25
3) 40
4) 20
5) None of these

Question of the Day #36: (19-Dec-08)

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

The United States has not embarked upon its formidable program of space exploration in order to make or perpetuate a gigantic astronautic boondoggle. There are good reasons, hard reasons for this program. But, in essence, they all boil down to the fact that the program is expected to produce a number of highly valuable payoffs. It not only is expected to do so, it is doing so right now.

OPTIONS

1) The space exploration program of America is not boorish but is paying off and will continue to pay good results.
2) The American space exploration program is a boon as it is giving valuable payoffs now and will continue to in future.
3) The entire American space exploration program is only a hogwash, though it has given them some valuable payoffs.
4) The American space exploration is not a bunkum but is paying off and will continue to pay good results.
5) The American space exploration is not a valueless job done to look busy but it is paying off and will continue to pay good results.

Question of the Day #37: (20-Dec-08)

If a, b, c are whole numbers, and ab + bc + ca = 17 and ac + ca = 17, what could be the possible sum of a and c?

OPTIONS

1) 17
2) 18
3) 0
4) 11
5) None of these

Question of the Day #38: (21-Dec-08)

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

These innovations stored water for prolonged periods of drought, and enabled the city to prosper from its sale.
The area is visited by flash floods and archaeological evidence demonstrates the Nabataeans controlled these floods by the use of dams, cisterns and water conduits.
Excavations have demonstrated that it was the ability of the Nabataeans to control the water supply that led to the rise of the desert city, in effect creating an artificial oasis.
Enclosed by towering rocks and watered by a perennial stream, Petra not only possessed the advantages of a fortress but controlled the main commercial routes which passed through it to Gaza in the west, to Bosra and Damascus in the north, to Aqaba and Leuce Come on the Red Sea, and across the desert to the Persian Gulf.
Additionally, Eusebius and Jerome assert that Rekem was the native name of Petra, supposedly on the authority of Josephus. Pliny the Elder and other writers identify Petra as the capital of the Nabataeans, Aramaic-speaking Semites, and the centre of their caravan trade.
Rekem is an ancient name for Petra and appears in Dead Sea scrolls associated with Mount Seir.

OPTIONS

1) CABFDE
2) FDBECA
3) DFECBA
4) FDEBCA
5) FEDCBA

Question of the Day #39: (22-Dec-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.

P and R are two distinct integers and S = P × R

Is 2 the last digit of S?

R = P + 2
P is an odd prime number

OPTIONS

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

Question of the Day #40: (23-Dec-08)

From the following words, identify the word that will not make an analogous relationship as the first pair.

Warlock: Necromancy: : Aficionado:

OPTIONS

1) Adulation
2) Advection
3) Exaltation
4) Adoration
5) Veneration

Question of the Day #41: (24-Dec-08)

Which of the following statements are true?

If, f(x) = 2x2 - 5 and g(x) = 2x2 + 4, then the graph of f(x) is 9 units above the graph of g(x).
Sum of the zeros of the function f(x) = (2x - 3)(x - 4) is 4.5.
The y-intercept of the function whose graph has a slope of -3 and passes through the point (6, 4) is 14.
If the domain of the function f(x) = 12x2 + 2 is {-4, 0, 3}, then the range of the function is {194, 2, 110}.
If f(x) = 6x2 and g(x) = x2/6, then the graph of f(x) will be narrower parabola as compared to the graph of g(x).
If a graph shows the relationship between the amount of sand in the top of an hourglass y, over time x, then the x-intercept of the graph represent the speed at which the sand passes to the bottom of the hourglass.

OPTIONS

1) A and C
2) B and D
3) D and E
4) D, E and F
5) A, B, C and F

Question of the Day #42: (25-Dec-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.

In all countries there are many, among even the most refined and highly cultivated classes, who are not at all embarrassed by any moral delicacy. This is especially the case in those countries in Europe, particularly on the Continent, where the idea of the allowableness of falsehood in certain cases as a means for the attainment of a good end, is generally entertained. The French have two terrible bugbears, under the names of Monsieur and Madame Croquemitaine, who are as familiar to the imaginations of French children as Santa Claus is, in a much more agreeable way, to the juvenile fancy at our firesides. Monsieur and Madame Croquemitaine are frightful monsters, who come down the chimney, or through the roof, at night, and carry off bad children. They learn from their little fingers - which whisper in their ears when they hold them near - who the bad children are, where they live, and what they have done. _____

OPTIONS

1) The instinctive faith of young children in their mother's truthfulness is so strong that no absurdity seems gross enough to overcome it.
2) The instinctive faith of young children in these stories is so strong that no absurdity seems gross enough to overcome it.
3) And Santa Claus misses them every year for gifting them with the goodies.
4) What a false story to be weaved indeed!
5) Such grotesque bugbears are found even in other European countries where the ends justify the means.

Question of the Day #43: (26-Dec-08)

Arjun is traveling from Andheri to Dadar by car and Bharat is traveling from Dadar to Andheri by bike (on the same road). Speed of Arjun and Bharat is 60 kmph and 15 kmph. Arjun and Bharat meet at Bandra, somewhere between Andheri and Dadar. After reaching Dadar Arjun takes a rest of 1 hour and then returns to Andheri. The total time taken by Arjun to travel from Andheri to Dadar and then from Dadar to Andheri (including the halt) is 10 minutes more than the time required by Bharat to travel from Bandra to Andheri. What could be the distance between Andheri and Dadar? [Note: Speed of Arjun's car and Bharat's Bike is constant throught the journey]

OPTIONS

1) 20 km
2) 10 km
3) 12.5 km
4) 30 km
5) 15 km

Question of the Day #44: (27-Dec-08)

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

In all the forms of the Chanakya legend, he is thrown out of the Nanda court by the king, whereupon he swears revenge.
While in Magadha, Chanakya by chance met Chandragupta in whom he spotted great military and executive abilities.
Chandragupta Maurya, with the help of Chanakya, began laying the foundation of the Maurya Empire.
Chanakya was impressed by the Prince's personality and intelligence, and immediately took the young boy under his wing to fulfill his silent vow.
Chandragupta's adviser or Prime minister, Chanakya, who is also known as Kautilya and was the author of the Arthashastra, is regarded as the architect of Chandragupta's early rise to power.

OPTIONS

1) EADCB
2) EABCD
3) ECABD
4) EACDB
5) ECDAB

Question of the Day #45: (28-Dec-08)

A solid cube of side 1 cm is cut into two identical solid parts by a plane surface. The total surface area of both the solid parts is maximum possible. Two points are then selected on one of these solid parts. What is the maximum possible distance between these two points?

OPTIONS

1) 1 cm
2) $\sqrt{2}$ cm
3) $\sqrt{3}$ cm
4) 1.5 cm
5) 1.33 cm

Question of the Day #46: (29-Dec-08)

In the question, a word has been used in sentences in five different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.

Injury

OPTIONS

1) It adds insult at injury that after this carnage, the terrorists got away because of lackadaisical policing.
2) Sania missed the season due to a spate of injuries delaying her return to action.
3) Warm ups before exercising can help prevent injury later.
4) The footballer had to pull out of the match through injury.
5) While he nurses his injuries, his sister plays, blissfully unaware of the turmoil she would create in a short while.

Question of the Day #47: (30-Dec-08)

Semi-perimeter of triangle ABC is 70 cm, side BC is 60 cm and angle ACB is 60°. What is AB × BC × CA?

OPTIONS

1) 90000 cm3
2) 84240 cm3
3) 72000 cm3
4) 87660 cm3
5) None of these

Question of the Day #48: (31-Dec-08)

For each of the blanks in the paragraph, choose from among the options the most appropriate word/words that complete/s the meaning of the paragraph.

Myths are narratives about divine or heroic beings, arranged in a _____ system, passed down traditionally, and linked to the spiritual or religious life of a community, endorsed by rulers or priests. Once this link to the spiritual leadership of society is broken, they lose their mythological qualities and become folktales or fairy tales. Myths are often intended to explain the universal and local beginnings, natural phenomena, _____ cultural conventions or rituals, and anything else for which no simple explanation presents itself. This broader truth runs deeper than the advent of critical history, and it may or may not exist as in an _____ written form which becomes "the story". Myths are not the same as fables, legends, folktales, fairy tales, anecdotes or fiction, but the concepts may _____

OPTIONS

1) articulate, strange, authoritative, concur.
2) coherent, incomprehensible, unreliable, clash.
3) deific, mysterious, unreliable, concur.
4) coherent, inexplicable, authoritative, overlap.
5) defic, strange, dependable, clash.

Question of the Day #49: (01-Jan-09)

64 distinct gifts are to be distributed among 4 students Ravi, Amit, Soniya and Nilesh. What is the probability that Soniya will get 60 gifts?

OPTIONS

1) $\frac{24 \times 62 \times 189 \times 61}{4^{64}}$
2) $\frac{{}^{64}C_4 \times 4^3}{4^{64}}$
3) 0.5
4) 0.64
5) None of these

Question of the Day #50: (02-Jan-09)

Fill in the blanks in the passage with the most appropriate set of words from the options for each blank.

Not only liquids are _____1_____ by heat and cold, but solids also are subject to similar changes. A metal ball which when ____2____ will just slip through a ring will, when heated, be too large to ____3_____ through the ring. Telegraph and telephone wires which in winter are stretched _____4____ from pole to pole, sag in hot weather and are much too long. In summer they are ____5_____ to the fierce rays of the sun, become strongly heated, and expand sufficiently to sag.

OPTIONS

1) affected, cooled, slip, taut, exposed
2) effected, cold, slip, jump, open
3) affected, cold, dive, along, open
4) effected, cooled, slip, taut, exposed
5) affected, cooled, dive, jump, open

SOLUTIONS

Solution #01: (14-Nov-08)

Let amounts with A and C be x (in Rs.) and y (in Rs.) respectively.

∴ Amount with B will be Rs. (x + 6)

Quotient obtained by dividing y by x will be equal to quotient obtained by dividing y by (x + 6) for following values of y.

0, 1, 2, … , (x − 1) i.e. x values

Between x and 2x there will be x – (x + 6 − x) = x − 6 values.

Similarly between 2x and 3x there will be x − 12 and so on.

∴ Total possible values of y = x + x − 6 + x − 12 + … n terms

∴ 65 = nx – (6 + 12 + 18 +… n – 1 terms)

$$\therefore 65 = nx - \frac{n-1}{2}[12 + (n-2)6]$$

∴ 65 = nx – (n – 1)[6 + (n – 2)3]

∴ 65 = nx – 6n + 6 – $3n^2$ + 9n – 6

∴ 65 = nx – $3n^2$ + 3n

Now substituting the value of x from options we only get integer value of n for x = 25

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #02: (15-Nov-08)

In statement B, the relative pronoun 'which' is to be used in place of the pronoun "who". This is because the relative pronoun, 'which' refers to inanimate things such as, in this case, the spinthariscope.

In statement C, the article 'a' is required before "magnifying glass" as it signifies, 'any one' and is being mentioned for the first time.

In statement D, as the word "multitudes" is mentioned which is a plural term. It should be followed by 'brilliant points' instead of "brilliant point" which is singular.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #03: (16-Nov-08)

$\because f(x) = ax^4 + bx^3 + cx^2 + dx + e$
$\therefore f(0) = e = 1$
$\because f1(x) = 4ax^3 + 3bx^2 + 2cx + d$
$\therefore f1(0) = d = 1$
$\because f2(x) = 12ax^2 + 6bx + 2c$
$\therefore f2(0) = 2c = 2, \therefore c = 1$
$\because f3(x) = 24ax + 6b$
$\therefore f3(0) = 6b = 6, \therefore b = 1$
$\because f4(x) = 24a$
$\therefore f4(0) = 24a = 24, \therefore a = 1$

If m and n are the roots of the equation $ax^2 + bx + c = 0$, then $m + n = -b/a$ and $mn = c/a$

Similarly, if m, n and o are the roots of the equation $ax^3 + bx^2 + cx + d = 0$, then $m + n + o = -b/a$, $mn + no + om = c/a$ and $mno = -d/a$

By the same logic, when m, n, o and p are the roots of the equation $f(x) = ax^4 + bx^3 + cx^2 + dx + e = 0$, then $m + n + o + p = -b/a$, $mn + mo + mp + no + np + op = c/a$, $mno + mnp + mop + nop = -d/a$ and $mnop = e/a$

Therefore,
$m + n + o + p = -b/a = -1/1 = -1$
$mn + mo + mp + no + np + op = c/a = 1/1 = 1$
$mno + mnp + mop + nop = -d/a = -1/1 = -1$
$mnop = e/a = 1/1 = 1$
$\therefore m + n + o + p + mn + mo + mp + no + np + op + mno + mnp + mop + nop + mnop = -1 + 1 - 1 + 1 = 0$

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #04: (17-Nov-08)

Statement B has an error of parallel construction. “To be content” and ‘to shut our ears’ are parallel infinitive forms. Also, ‘being content’ and “shutting our ears” are parallel forms.

Statement E is incorrect because of incorrect pronoun usage. The antecedents (nouns the pronouns refers to) of pronoun “its” (its conventional value) are “persons” and therefore the pronoun “its” should be replaced by ‘their’.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #05: (18-Nov-08)

Let’s see if we can spot the incorrect/correct statements by looking at them one by one.

Observe the statements of P, Q and S. The statements of P and Q are logically consistent as both of them imply that Q has more money than that of R. The statement of S is inconsistent with their statements.

Since only one of the statements is completely incorrect, we can conclude that P and Q are right and S is wrong. This also implies that the statement of R is correct.

Based on this we can conclude the following.

Q has Rs. 60 and R has Rs. 50. (From the correct statement of P)

The lowest amount is Rs. 30 (From the correct statement of R)

So the remaining amount is Rs. 60. (200 − 60 − 50 − 30)

Since S does not have the highest amount, he has to have Rs. 30 with him.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #06: (19-Nov-08)

Statement D can easily be understood to be having some awkwardness in usage. “Clever” does not sound right, so it should be ‘cleverness’ (for the sake of parallelism). Once we are sure that statement D is incorrect, we may eliminate options 1 and 5.

Statement E has a problem with word usage. While “beside” means ‘next to’, ‘besides’ means ‘as well as’ or ‘apart from’. Therefore, statement E should start with the word ‘besides’ which means, ‘apart from’ in this context and not “beside”.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #07: (20-Nov-08)

Let the ages of Mr. Naidu, Mrs. Naidu and Shrinivas be *x*, *y* and *z* respectively on January 01, 1989.
$x - y = z$

Let *a* be the number of years that have elapsed between 1989 and Mr. Naidu turning 35.
$x + a = x' = 35$

$\text{Similarly}, y' = \frac{z'^2}{2}$

After 10 years, Mr. Naidu will be 45. Also, Mrs. Naidu will be y' + 10 and Shrinivas will be z'+ 10.

We know from the condition in the statement that

$(45 + y' + 10) - (z' + 10) = 69$

$\text{But } y = \frac{z'^2}{2}$

$\therefore \frac{z'^2}{2} - z' = 24$

$\therefore z'^2 - 2z' = 48$
$\therefore (z' - 8)(z' + 6) = 0$
$\therefore z' = 8 \text{ or } z' = -6$

But the age cannot be negative and so $z' = 8$.
$\therefore y' = 32$ while $x' = 35$

Now, $x - y = x' - y' = 3 = z$
Also, $z + a = z'$
$\therefore z' - z = a = 5$
$\therefore y = y' - a = 32 - 5 = 27$

∴ On January 01, 1989, Mrs. Naidu was 27 years old. On January 01, 2014, she would be (27 + 25) = 52 years old.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #08: (21-Nov-08)

The essential elements should include the fact that J.R.R. Tolkein authored The Hobbit and The Lord of the Rings, what the legendarium is about and the fact that his works have established him as the "father of modern fantasy literature."

Option 1 states "Most of his work is a connected body of tales, fictional histories, invented languages and other essays about an imagined world called Arda, and middle-earth." The paragraph does not mention this nor can it be implied.

Option 2 is incorrect as it states "his stories and essays were about an imaginary world called Arda or Middle-earth". It should read "Arda and Middle earth".

Option 3 states "he has been rightfully called the father of modern fantasy literature." It is an opinion which is not present in the paragraph.

Option 4 presents incorrect "real languages" instead of "invented languages" mentioned in the paragraph.

Option 5 presents all the important ideas without any change in meaning.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #09: (22-Nov-08)

The trees studied on the last day are equal to the remainder when n^2 is divided by $2n + 1$.

Let this remainder be R.

Then n^2 can be expressed as $(2n + 1)m + R$ where m is an integer.

If $m = \frac{n}{2}$, we get,

$$(2n+1)m = n^2 + \frac{n}{2}$$

$$\therefore R = -\frac{n}{2}$$

If we get a negative remainder, we add the negative remainder to the divisor to get the positive remainder.

$$\therefore R = 2n + 1 - \frac{n}{2}$$

$$= \frac{3n}{2} + 1$$

Equate each option with $\frac{3n}{2} + 1$

Only option 3 does not give an integer value.

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #10: (23-Nov-08)

The essential elements of the text should ideally include the following: El Greco was a prominent painter, sculptor and architect of the Spanish Renaissance. His style was appreciated only in the 20th century. He is regarded as the precursor to both Expressionism and Cubism and his style was so individualistic that he cannot be said to belong to any conventional school.

Option 2 misses out on two important aspects- Spanish Renaissance, and his not belonging to any school.

In option 3, "founder" is contextually incorrect. The paragraph mentions that he was "the architect of the Spanish Renaissance".

Option 4 incorrectly mentions he was the "founder" of Expressionism and Cubism. The paragraph mentions he was "a precursor".

Option 5 mentions "Spanish school" instead of "Spanish Renaissance".

Option 1 encompasses all the important ideas of the original text without any change in meaning.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #11: (24-Nov-08)

Note that $(a^3 + b^3 + c^3 - 3abc)$ can be factorized as:

$(a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$

Thus, if $(a + b + c) = 0$, then $(a^3 + b^3 + c^3) = 3abc$

In our question, take $a = -101/3$, $b = 60$ and $c = -79/3$

By direct computation, $(a + b + c) = 0$

∴ We only have to find 3abc. This is easily computed as 159580.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #12: (25-Nov-08)

A always sits to the immediate left of B. F sits to the right of A. Therefore, F can sit anywhere after B.

Using the condition 3 we can easily conclude that I sits between B and F. Therefore, A can occupy any of the first 7 places as shown below.

1) A B - - - - - - - -

2) - A B - - - - - - -

3) - - A B - - - - - -

4) - - - A B - - - - -

5) - - - - A B - - - -

6) - - - - - A B - - -

7) - - - - - - A B - -

For case 1, the remaining two places for I and F can be selected in ${}^{8}C_{2}$ ways.

Since there is only one possible way of arranging them, total number of ways in which they can be arranged is ${}^{8}C_{2} \times 1$. The other six places can be occupied by the other six persons in 6! ways.

Similarly for case 2, the remaining two places for I and F can be selected in ${}^{7}C_{2}$ ways, and so on and so forth for the remaining cases.

Therefore, the final result obtained by adding up all these possibilities =
$({}^{8}C_{2} + {}^{7}C_{2} + {}^{6}C_{2} + \ldots + {}^{2}C_{2}) \times 6! = 84 \times 6!$

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #13: (26-Nov-08)

The maximum score possible in the game is 360 (60 balls × 6 runs) with no wickets lost.

For each wicket lost, this score decreases by 11 (6 runs not scored plus 5 runs lost due to the wicket). For example, if 3 wickets are lost, the maximum possible score is 327 [360 − (3 × 11)], which could be achieved by hitting sixes on all the remaining 57 balls.

∴ For 7, 6, 5, 9 and 8 wickets lost (as given in the options), the maximum possible scores are 283, 294, 305, 261 and 272 respectively. The scores in options 1 to 4 can be achieved if a player hits 2, 3, or 4 runs instead of 6 on one ball. However, option 5 is not possible, as for that, a player would have to hit 5 runs instead of 6 on one ball, which is not possible in this game.

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #14: (27-Nov-08)

The paragraph clearly states that there are two "chief diversities of human character"- duty and selfishness. In order to "excite three individuals to some act of usefulness" two of the characteristics of human nature have already been mentioned in the paragraph viz duty and love of approval. The third would ideally involve something of a "selfish" nature since this "character" has been mentioned as among the two chief diversities of human character. This fits in best with option 3.

Option 4 includes duty again, when it is one of the characteristics of human nature already mentioned in the penultimate paragraph.

Options 1 and 2 are probable, but they lose out on the continuity, clarity and completion provided by option 3. Secondly, they introduce new ideas which do not make for an effective paragraph completion.

Option 5 mentions "a sacrifice of self love" which is brings a new element into the paragraph and is therefore eliminated.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #15: (28-Nov-08)

Since PQRS is a parallelogram
$5x + 3 = x^2 + 3$
$\therefore x^2 - 5x = 0$
$\therefore x(x - 5) = 0$
$\therefore x = 0$ or $x = 5$
$\because$ PQRS is a parallelogram, opposite sides are equal.
$\therefore$ PS = RQ

Now, if $x = 0$,

$$\text{PR} = \sqrt{(3-0)^2 + (3-2)^2} = \sqrt{10}$$

$$\text{and QS} = \sqrt{(3-0)^2 + (4-1)^2} = \sqrt{18}$$

And if $x = 5$,

$$\text{PR} = \sqrt{(25-3)^2 + (2-3)^2} = \sqrt{484+1} = \sqrt{485}$$

$$\text{and QS} = \sqrt{(25-3)^2 + (1-4)^2} = \sqrt{484+9} = \sqrt{493}$$

$$\therefore \text{The longest diagonal is } \sqrt{18} \text{ or } \sqrt{493}.$$

Hence, option 1.

Alternatively,

Using distance formula, we get,

$$\therefore \sqrt{(3-5x)^2 + (4-2)^2} = \sqrt{(3-x^2)^2 + (3-1)^2}$$

$\therefore (3 - 5x)^2 + 4 = (3 - x^2)^2 + 4$
$\therefore 3 - 5x = 3 - x^2$
$\therefore x^2 - 5x = 0$
$\therefore x = 0$ or $x = 5$
Now we can solve it according to the latter part of the above solution.

$$\therefore \text{The longest diagonal is } \sqrt{18} \text{ or } \sqrt{493}.$$

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #16: (29-Nov-08)

At the moment when this statement was made, most Chinese stroke patients did not have access to something and few would be able to wait for evidence that would confirm or something the role of acupuncture.

In option 2, the first word would lead to a grammatically incorrect sentence. The phrase should be 'standard tests are not available' (not 'is', subject-verb disagreement).

In option 3, the first word 'treatment' fits the first blank well, but the second word 'disprove' does not. The word should have been 'disproved.'

The second blank in option 4 seems correct. Few patients can wait till the role of acupuncture is confirmed or 'challenged', but the use of the first word 'procedure' does not fit in the context. If Chinese stroke patients do not have the proper 'procedure' why would the patients be looking for therapy in the form of acupuncture?

Option 1 comes close to being the correct answer but loses out to the appropriateness of option 5.

On comparing 'medication' to 'rehabilitation', it is apparent that acupuncture cannot be classified under 'medication', 'therapy' would be a better name for it. Secondly, the word 'rejected' does not combine well with 'role is confirmed or...'. 'Refuted' fits in better since roles are generally refuted not rejected.

Option 5 is correct since in the absence of standard 'rehabilitation', stroke patients would turn to acupuncture even if its role is yet to be confirmed or 'refuted' by evidence.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #17: (30-Nov-08)

In this case we need to find the number of ways in which the objects can be distributed among the three sisters separately for pencils, erasers and sharpeners.

Consider the distribution of 5 pencils among the three sisters such that each sister gets at least one pencil. There are two cases as follows.

Case 1: One sister gets 3 pencils and the other two sisters get 1 pencil each.
The number of ways in which we can select the sister who gets 3 pencils = ${}^3C_1 = 3$
The number of ways in which 3 pencils can be selected out of 5 pencils = ${}^5C_3 = 10$
The number of ways in which remaining 2 pencils can be distributed to other two sisters = 2
∴ Total number of ways in this case = $3 \times 10 \times 2 = 60$

Case 2: Two of the sisters get 2 pencils each and the third sister gets 1 pencil.
The number of ways in which we can select the sister who gets 1 pencil = ${}^3C_1 = 3$
The number of ways in which one pencil can be given to her out of 5 pencils = 5
Now we have to find out the number of ways in which remaining 4 pencils can be distributed between the remaining 2 sisters.
The number of ways in which two pencils can be selected out of remaining 4 pencils = ${}^4C_2 = 6$
∴ Total number of ways in this case = $3 \times 5 \times 6 = 90$
∴ Total number of ways in which 5 distinct pencils can be distributed to 3 sisters = 60 + 90 = 150
Consider the distribution of 4 erasers among the three sisters such that each of them gets at least one.
One sister gets 2 erasers and the other two get 1 eraser each.
Number of ways in which the sister who receives 2 erasers can be selected out of the 3 sisters is 3.
The number of ways in which 2 erasers out of 4 can be selected and given to her = ${}^4C_2 = 6$
The number of ways in which the remaining two erasers can be given to the remaining two sisters = 2
∴ Total number of ways in which 4 distinct erasers can be distributed to 3 sisters = $3 \times {}^4C_2 \times {}^2C_1 = 3 \times 6 \times 2 = 36$

Consider the distribution of 3 sharpeners among the three sisters such that each one gets at least one.
This can be done in ${}^3P_3 = 3! = 6$ ways
The distribution of these objects among the sisters are independent events.
∴ Total number of ways = $150 \times 36 \times 6 = 32400$

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #18: (01-Dec-08)

Option 5 can be logically eliminated as the age factor is not reflected in the passage. All the pursuits spoken of can be for people of any age.

Option 4 is disconnected with the passage. Morality has not been discussed in the passage.

Option 3 is ruled out as the word 'indiscreet' is to a degree that is not reflected in the passage. Secondly there is no indication of pitfalls.

It's a close call between options 1 and 2.

The word 'improvement' in option 2 makes it incorrect since the passage is talking about the attainment of various kinds of knowledge and not of any 'improvement' from the past line of thinking or knowledge.The line "the highest attainments in literature or science" clinches the answer in favour of option 1.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #19: (02-Dec-08)

$p^4 + q^4 + r^4 = 2[(pq)^2 + (qr)^2 + (pr)^2]$
$\therefore p^4 + q^4 + r^4 = 2(pq)^2 + 2(qr)^2 + 2(pr)^2$
$\therefore p^4 + q^4 + r^4 + 2(pq)^2 - 2(qr)^2 - 2(pr)^2 = 4(pq)^2$ ... (i)

Now,
$(p^2 + q^2 - r^2)^2 = p^4 + q^4 + r^4 + 2(pq)^2 - 2(qr)^2 - 2(pr)^2$ ... (ii)
From (i) and (ii), we get,
$(p^2 + q^2 - r^2)^2 = 4(pq)^2$
$\therefore (p^2 + q^2 - r^2)^2 = (\pm 2pq)^2$
$\therefore p^2 + q^2 - r^2 = -2pq$ or $p^2 + q^2 - r^2 = 2pq$
$\therefore p2 + q2 + 2pq = r2$ or $p2 + q2 - 2pq = r^2$
$\therefore (p + q)^2 = r^2$ or $(p - q)^2 = r^2$
$\therefore p + q = r$ or $p + q = -r$ or $p - q = r$ or $p - q = -r$
$\therefore p - r = -q$ or $p + r = -q$ or $p - r = q$ or $p + r = q$

Since $p + q \neq r$ and $p \neq q + r$
$p + r = -q$ or $p + r = q$
But $p + r = 2q$ since p, q and r are in Arithmetic Progression.
$\therefore 2q = q$ or $2q = -q$
In either case $q = 0$
$\therefore p + r = 0$

Hence, option 1.

Alternatively,

We can solve this question by taking values for p, q and r that satisfy the given conditions.

By trial and error, one such set of values is $p = -1$, $q = 0$ and $r = 1$.

$\therefore p + r = -1 + 1 = 0$

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #20: (03-Dec-08)

In option 1 the word means 'type' or 'kind'.
In option 3 the meaning is 'trace'.
In option 4 the meaning is to 'wind tightly'.
In option 5 the meaning is a 'muscular injury'.
In option 2, 'The song strains the warm memories I have of the past' is incorrect usage. One can 'recall' or 'bring back' past memories. One cannot strain warm memories of the past.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #21: (04-Dec-08)

∵ a, b and c are the root of the equation $x^3 - x^2 - 1 = 0$

∴ $a^3 - a^2 - 1 = 0$, $b^3 - b^2 - 1 = 0$ and $c^3 - c^2 - 1 = 0$

And, sum of the roots = a + b + c = −(−1/1) = 1

Now, f(x) = x5 − x4 − x2 − x

∴ $f(a) = a^5 - a^4 - a^2 - a$

∴ $f(a) = a^2(a^3 - a^2 - 1) - a$

∴ $f(a) = a^2(0) - a = -a$

Similarly,

f(b) = −b and f(c) = −c

∴ f(a) + f(b) + f(c) = −(a + b + c) = −(1) = −1

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #22: (05-Dec-08)

The reasoning for this question goes beyond mere vocabulary. “Dialectic” is the ‘juxtaposition of ideas, generally contrasting to form a singular entity’. Thus, ideas together form a dialectic. Similarly, “pidgin” is the ‘confluence of two different languages to form a commonly used language’. Pidgin in some parts of Asia and South Asia is a mixture of Chinese and French or English. However, there is no need for Chinese to be a necessary component.

Similarly, option 2 and 4 can be ruled out as they are irrelevant to the analogous relationship with pidgin.

‘Argot’ is a local dialect and is thus similar to “pidgin”. But it is a synonym and the analogy in this case is not for synonyms.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #23: (06-Dec-08)

2890 = 289 × 10 = 17 × 17 × 10

∴ The remainder when 2891 is divided by 17 is 1

This can be represented as,

2891 ≡ 1(mod 17)

Similarly, 2892 ≡ 2(mod 17)

2893 ≡ 3(mod 17)

and so on.

∴ X ≡ (1 × 2 × 3 × ..... × 9 × 10)(mod 17)

∴ X ≡ (6! × 56 × 90)(mod 17)

When 6! (= 720) is divided by 17, the remainder is 6

Similarly when 56 and 90 are divided by 17 the remainders are 5 and 5 respectively.

∴ X ≡ (6 × 5 × 5)(mod 17)

∴ X ≡ 150(mode 17)

∴ X ≡ 14(mode 17)

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #24: (07-Dec-08)

Option 1 mentions 'relationships' but the paragraph does not.
Options 2 and 5 are in an advisory tone but the paragraph is not.
Option 3 mentions losing 'friendships' but the paragraph does not.
Option 4 summarizes the paragraph in the same style and tone.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #25: (08-Dec-08)

$N = (85)^3 + (-77)^3 + (-8)^3$

Here, $(85) + (-77) + (-8) = 0$

$\because$ When $a + b + c = 0$, then $a^3 + b^3 + c^3 = 3abc$

$\therefore N = 3 \times (85) \times (-77) \times (-8)$

$\therefore N = 3 \times 17 \times 5 \times 7 \times 11 \times 8$

$\therefore$ N is divisible by 3, 5, 7, 8, 11 and 17.

$\therefore$ Sum of the required remainders = 0

Hence, option 1

Discuss the solution with Testfunda users.

Solution #26: (09-Dec-08)

Blanks 1 and 5 are open to several interpretations with the answer options given, therefore it is important to eliminate the options by looking at the other three blanks.

Blank 2 cannot logically have 'theists' being interested in food, since 'theists' means 'those who believe in the existence of a God or Gods'.

It also cannot have 'dentists' since 'dentists' are those who are concerned with 'the prevention and treatment of diseases pertaining to the teeth, gums or the oral cavity' while the statement is about "the fuel values of the food we eat" as well as "the care of institutional cooking" and nowhere in the paragraph do the statements pertain to the teeth, gums or oral cavity. This eliminates options 1 and 5.

Blank 3 explicitly mentions a "patient's diet". Therefore it cannot be a 'family' or 'generation' in the given context. This eliminates options 2 and 3.

All the words in option 4 fit in the given context.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #27: (10-Dec-08)

For the given equation,
Sum of the roots = $a + b + c + d + e = -(-5)/1 = 5$
Product of the roots = $abcde = -(-1)/1 = 1$
Now, arithmetic mean of roots = 5/5 = 1
And, geometric mean of the roots = 5^{th} root of 1 = 1
∵ A.M. of roots = G.M. of roots
∴ All roots are equal
∴ $a = b = c = d = e = 1$
∴ The given equation is $(x - 1)^5 = 0$ or $x^5 - 5x^4 + 10x^3 - 10x^2 + 5x - 1 = 0$
∴ $k = 10$, $m = -10$ and $n = 5$
∴ Product of k, m and $n = 10 \times (-10) \times 5 = -500$
Which is less than −457.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #28: (11-Dec-08)

The essence of the paragraph is that communication helps develop a lot of common links. The sentence that completes the paragraph needs to be an extension of the core idea.

Option 1 is extremely close but loses out by bringing in a new idea of 'teaching and learning'.
Option 2 is logically inconsistent as there is no need for 'justification' as mentioned in the option.
Option 4 is loose and brings in a new element of 'psychological faculties', which is out of context.
Option 5 with 'but', assumes what is mentioned earlier, is about adults or elders, which is not the case.

"Similar emotional and intellectual dispositions" will result in 'similar ways of responding to expectations and requirements' as expressed in option 3.

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #29: (12-Dec-08)

From statement (A) alone,

If P = 4, Q = 1/1 + 1/2 + 1/4 = 7/4 (which is not a prime number)

But if P = 6, Q = 1/1 + 1/2 + 1/3 + 1/6 = 12/6 = 2 (which is a prime number)

∴ Statement A alone is not sufficient to answer the question.

From statement (B) alone,

P is a perfect number.

For any perfect number, sum of the reciprocals of all the divisors is always 2 (which is a prime number).

For example,

If P = 28, Q = 1/1 + 1/2 + 1/4 + 1/7 + 1/14 + 1/28 = 56/28 = 2

∴ Statement B alone is sufficient to answer the question.

Hence, option 2.

Discuss the solution with Testfunda users.

Solution #30: (13-Dec-08)

Although option 1 comes close to being the correct answer, it would result in a grammatically incorrect sentence ('an superior obligation'). This rules out option 1.

Also, a 'rule' can be changed by the President (option 5). Therefore, in option 5, the solution (fostering and encouraging respect for life all over the world) does not match the problem.

In option 2, even if a law does devalue life, the president cannot refer to his obligation to remedy it as 'inconsequential'.

Option 3 also comes very close to being the correct answer, if a nation has been devaluing life, it is his 'unforeseen obligation' to 'foster and encourage respect for life…'. However, why would the problem be referred to as 'unforeseen'? Option 4 would make a better answer.

In option 4, the president is worried about a 'culture' that devalues life and consequently feels that his obligation to foster respect for life is 'important'.

Compare the two words that fill the first blank in both options - 'nation' and 'culture'. If a nation is devaluing life, it seems strange that the president does not mention which nation or talks about reforming that one nation. In fact he says that he would foster "respect for life in America" as well. But if a 'culture' is guilty of devaluing life, it is likely that that culture is present in not just America but also in the rest of the world.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #31: (14-Dec-08)

$\because$ k, m, n, p, q are the roots of the equation $ax^5 + bx^4 + cx^3 + dx^2 + ex + f = 0$

$\therefore a(x - k)(x - m)(x - n)(x - p)(x - q) = ax^5 + bx^4 + cx^3 + dx^2 + ex + f$

Substituting x = 1 in the above equation, we get,

$a(1 - k)(1 - m)(1 - n)(1 - p)(1 - q) = a + b + c + d + e + f$

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #32: (15-Dec-08)

"Intransigent": 'uncompromising'.
"Tortuous": 'marked by repeated turns and bends'.
"Maudlin": 'excessively sentimental' or weepy- unsuitable with "cheerful" and "jovial" in the context.
"Enervate": 'to weaken'.Unsuitable with "interesting" and "stimulating" in the context.
"Recondite": 'difficult to understand'.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #33: (16-Dec-08)

From statement (A) alone,
∵ The sum of first and the last term is 2190
∴ $a + ar^{n-1} = 2190$ …(i)
And, product of the second and second last terms is 6561.
∴ $ar \times ar^{n-2} = 6561$ …(ii)

Solving these two equations we get,
a = 3 or 2187
For a = 3

Substituting a = 3 in one of the equations we get,
$r^{n-1} = 729$
∴ r = 3 then n = 7 or r = 9 then n = 4
∴ The series can be (3, 9, 27, 81, 243, 729 and 2187) or (3, 27, 243 and 2187)

Similarly for a = 2187 the series can be (2187, 729, 243, 81, 27, 9 and 3) or (2187, 243, 27 and 3)
∴ Statement A alone is not sufficient to answer the question.

From statement (B) alone,
Using statement B alone we cannot determine the number of terms of the series.
∴ Statement B alone is not sufficient to answer the question.
From statements (A) and (B) together,

Sum of all the terms is 3279 when the series is { 3, 9, 27, 81, 243, 729, 2187 } or { 2187, 729, 243, 81, 27, 9, 3 }
∴ Number of terms in the series is 7.
∴ Statements A and B together are sufficient to answer the question.

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #34: (17-Dec-08)

There is a clear EB link. This is because statement E emphasizes the importance of history in philosophy and statement B continues the argument by comparing historical science with philosophy as both of them have a common connection with history.

There is a clear BD link as well. Statement B mentions the relationship Philosophy has with "historical science" on the one hand and "art" on the other, while statement D mentions what philosophy has in common with the former (historical science) and the latter (art).

Statement C will come after statement D in the sequence as statement D compares historical science and historical philosophy.

Statement C then compares the two by stating that "metaphysical principles are less easily verified" than physical hypotheses (science).

Statement A is an effective concluding statement as it compares the permanence of philosophical theories with that of art.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #35: (18-Dec-08)

As Deepak has to distribute the gifts among 11 people and remaining gifts will be taken by Deepak himself, Deepak will try to maximize the number of gifts that he will get.
∴ Deepak will try to minimize the number of gifts that he will distribute.
For that he will give 1 gift to the first person, 2 gifts to the second and 3 gifts to the third.
Now, he cannot give 4 gifts to the 4^{th} person as in that case, number of gifts with 1^{st} and 4^{th} person will be equal to number of gifts with 2^{nd} and 3^{rd} person i.e. 1 + 4 = 2 + 3

Now he can give 5 gifts to the 4^{th} person, and so on.

By trial and error we find out that Deepak saves maximum gifts for himself if he distributes the gifts in following manner.
1, 2, 3, 5, 8, 13, 21, 30, 39, 53 and 74.
∴ The total number of gifts that Deepak can take himself = 400 – (1 + 2 + 3 + 5 + 8 + 13 + 21 + 30 + 39 + 53 + 74)
= 400 – 249 = 151

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #36: (19-Dec-08)

All the options appear to be good summaries. The clincher is the meaning of the word "boondoggle" which means 'work of little or no value done merely to look busy.'

Option 3 with "hogwash" and option 2 with "boon" change the meaning of the paragraph and hence can be eliminated.

Option 1 with "not boorish", and option 4 with "not a bunkum" come close but lose out on the clarity of the paragraph provided in option 5 with the exact meaning of "boondoggle".

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #37: (20-Dec-08)

By trial and error, we get,

For $a^b + b^c + c^a = 17$, the possible solution pair for (a, b, c) are (0, 16, 1), (16, 1, 0) and (1, 0, 16).

And, for $a^c + c^a = 17$, the possible solution pair for (a, c) are (1, 16), (16, 1), (2, 3) and (3, 2).

The values of a and c, that satisfy both the conditions are a = 1 and c = 16

Therefore, sum of a and c = 1 + 16 = 17

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #38: (21-Dec-08)

Statement F is the opening sentence of the paragraph as it introduces “Petra” and talks about its ancient name “Rekem”.

Statement E continues the discussion about “Rekem” being the ancient name of “Petra” as well as provides more details about “Petra”. Therefore, statement E logically follows statement F.

Statement D states the features of “Petra”. Therefore, statement D logically follows E.

Statement C states the Nabataean’s ability to “control” water and statement B justifies this ability by listing their ways of doing so.

Statement A reasons the above mentioned ability to control water was the key factor for the city’s prosperity.

Hence, the correct answer is option 5.

Discuss the solution with Testfunda users.

Solution #39: (22-Dec-08)

From statement (A) alone,
R = P + 2
So both P and R are odd or both are even.
If both are odd then last digit of S cannot be 2.
If both are even then their last digits can be of the form (P, R) = (0, 2), (2, 4), (4, 6), (6, 8) or (8, 0)
For none of these pairs the last digit of S is 2.
∴ Statement A alone is sufficient to answer the question.
From statement (B) alone,
P is an odd prime number.
But we do not know anything about R.
∴ We cannot conclude that the last digit of S is 2 or not.
[For P = 7 and R = 6, S = 7 × 6 = 42 (last digit of S is 2)
But, for P = 7 and R = 9, S = 7 × 9 = 63 (last digit of S is not 2)]
∴ Statement B alone is not sufficient to answer the question.

Hence, option 1.

Discuss the solution with Testfunda users.

Solution #40: (23-Dec-08)

A "warlock" is 'a wizard' and he practices "necromancy" or 'black magic'.
Likewise "Aficionado" is 'a fan or an enthusiast'. He shows, "adoration", "adulation", "exaltation" and "veneration".
All of them mean to show enthusiasm, respect and a liking for something.
Advection means 'horizontal flow of air'.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #41: (24-Dec-08)

Consider statement A,
f(x) can be written as g(x) − 9, ∴ the graph of f(x) will be 9 units below the graph of g(x).
∴ Statement A is not true.
Consider statement B,
Zeroes i.e. roots of the given function are 3/2 and 4, ∴ the sum of the zeroes = 1.5 + 4 = 5.5
∴ Statement B is also not true.

Consider statement C:
Substituting the values of x, y and m in the equation y = mx + c, we get,
4 = −3 × 6 + c
∴ y-intercept = c = 22
∴ Statement C is also not true.
Consider statement D,

Substituting the values of x in the function from the domain, the values of f(x) that we get, represent the range.
For, x = −4, $f(x) = 12 \times (-4)^2 + 2 = 194$
Similarly, for x = 0, f(x) = 2 and for x = 3, f(x) = 110
∴ Statement D is true.

Consider statement E,
Nature of graphs of both the functions f(x) and g(x) is same (similar to x^2), but the coefficient of f(x) is more than the coefficient of g(x), therefore graph of f(x) will be narrow as compared to graph of g(x).
∴ Statement E is true.

Consider statement F,
The x-intercept represents the amount of time it takes for all of the sand to pass to the bottom of the hourglass (and not the speed).
∴ Statement F is not true.

Hence, option 3.

Discuss the solution with Testfunda users.

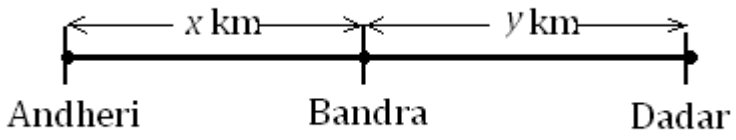
Solution #42: (25-Dec-08)

There is no data on mothers in the paragraph, so option 1 can be eliminated.
Option 3 is bringing in Santa Claus which disconnects it from the penultimate statement in the paragraph.
Options 4 and 5 are very close but lose out to option 2 for two reasons.Option 2 mentions 'stories' which is what the passage is doing, (story about "Monsieur and Madame Croquemitaine"). Secondly, the story mentioned in the paragraph is absurd, which is what is mentioned in option 2.
Therefore, option 2 connects and completes the whole idea of the paragraph.

Hence, the correct answer is option 2.

Discuss the solution with Testfunda users.

Solution #43: (26-Dec-08)



Let the distance between Andheri and Bandra be *x* km and the distance between Bandra and Dadar be *y* km.

$$\therefore \frac{2(x+y)}{60} + 1 = \frac{x}{15} + \frac{10}{60}$$

$$\therefore \frac{2(x+y)}{60} + \frac{60}{60} = \frac{4x}{60} + \frac{10}{60}$$

$\therefore 2(x + y) + 60 = 4x + 10$
$\therefore 2x - 2y = 50$
$\therefore x - y = 25$
$\therefore x + y > 25$ km

Hence, option 4.

Discuss the solution with Testfunda users.

Solution #44: (27-Dec-08)

The paragraph is about Chandragupta's advisor, Chanakya, who helps Chandragupta lay the "foundations of the Mauryan Empire".

Statement E is the opening statement of the paragraph as it introduces Chanakya and mentions the relationship between Chandragupta and Chanakya.

Statement B talks about how Chanakya met Chandragupta and D talks about Chanakya being "impressed" by Chandragupta. Hence, there is a clear BD link.

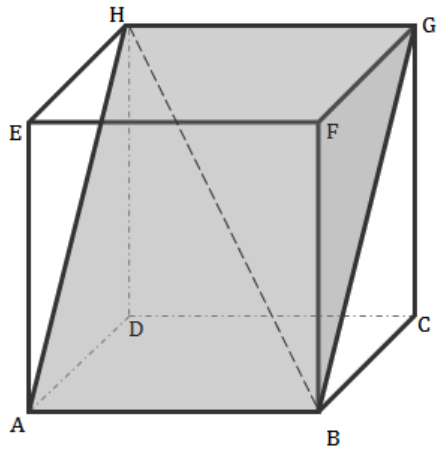
Also, A has to appear before D. This is because D talks about Chanakya's intention of fulfilling "his silent vow" which is first described in statement A.

There is also a link EC as the second half of statement E talks about Chanakya being the "architect of Chandragupta's early rise to power" and C talks about the fact that Chandragupta with the assistance of Chanakya, starts "laying the foundation of the Mauryan Empire".

Hence, the correct answer is option 3.

Discuss the solution with Testfunda users.

Solution #45: (28-Dec-08)



Refer the diagram,

The cube ABCDEFGH is cut in to two solid parts by plane surface (for example ABGH), to get the maximum possible total surface area of the resulting solid parts.

On one of the solid parts, the maximum possible distance between any two points is equal to the length of diagonal on newly exposed surface (for example BH).

$$\text{The length of diagonal BH} = \sqrt{1^2 + 1^2 + 1^2} = \sqrt{3} \text{ cm}$$

Hence, option 3.

Discuss the solution with Testfunda users.

Solution #46: (29-Dec-08)

The usage of injury in options 2, 3, 4 and 5 is correct.
In option 2, it means a series of injuries.
'Prevent injury' in option 3 is also used sensibly.
In option 5, nursing an injury is akin to suffering from one.
In option 4, 'through injury' means 'because of injury'. Although, it is seen less, the usage is correct.
In option 1, it should have been 'adding insult to injury'. The preposition 'at' should be replaced by 'to'.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

Solution #47: (30-Dec-08)

In triangle ABC, let the length of sides AB, BC and CA be c, a and b cm respectively.

Perimeter of triangle = a + b + c = 2 × semi-perimeter = 2 × 70 = 140 cm

∵ BC = a = 60 cm (given)

∴ b + c = 140 − 60 = 80 cm

∴ c = 80 − b …(i)

Now, using the cosine formula,

$$\cos C = \frac{a^2 + b^2 - c^2}{2ab}$$

Here, m ∠C = angle ACB = 60° (given)

$$\therefore \cos 60^\circ = \frac{1}{2} = \frac{60^2 + b^2 - c^2}{2 \times 60 \times b}$$

∴ $60b = 60^2 + b^2 - c^2$

On substituting c = 80 − b from equation (i), we get,

$60b = 60^2 + b^2 - (80 - b)^2$

∴ $60b = 3600 + b^2 - 6400 - b^2 + 160b$

∴ 100b = 6400 − 3600

∴ 100b = 2800

∴ b = 28 cm

and c = 80 − 28 = 52 cm

∴ AB × BC × CA = c × a × b = 52 × 60 × 28 = 87360 cm^3

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #48: (31-Dec-08)

With the article "a" before blank 1 and "an" before blank 3, we can eliminate options 1 and 5.
In blank 4, the concepts of "fables, legends, folktales, fairy tales, anecdotes or fiction" have similarity therefore they will not 'clash' but 'overlap'. Eliminate option 2.
Cultural phenomena may be 'inexplicable','incomprehensible' but it is usually not referred to as 'strange' or 'mysterious'. Also, 'unreliable' is inappropriate in the context.
All the words given in option 4 fit appropriately in the context.

Hence, the correct answer is option 4.

Discuss the solution with Testfunda users.

Solution #49: (01-Jan-09)

Total number of ways to distribute 64 distinct gifts to 4 students = 464

Number of ways to select 60 gifts out of total 64 = 64C60 = 64C4

Number of ways to distribute the remaining 4 gifts to any of the other 3 students = 34

$$\therefore \text{Required probability} = \frac{^{64}C_4 \times 3^4}{4^{64}} = \frac{72 \times 62 \times 189 \times 61}{4^{64}}$$

Hence, option 5.

Discuss the solution with Testfunda users.

Solution #50: (02-Jan-09)

In blank 1, the correct answer option can only be 'affected'. Eliminate options 2 and 4.

In blank 3, the word 'dive' completely distorts the text. Eliminate options 3 and 5.

In blank 5, the word 'exposed' fits in the context better than 'open'.

Hence, the correct answer is option 1.

Discuss the solution with Testfunda users.

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