https://www.mbacorner.com/

1. How many positive integer values of 'a' are possible such that (a + 20)/a + 4 is an integer?

(a) 12	(b) 13
(c) 15	(d) 16

2. The function f(x) is defined for all positive values of x and y as f(xy) = f(x) + f(y). Also, f(2) = 2 and f(3) = 3. What is the value of f (32/27) ?

(a) 1	(b) 5/3
(c) 10	(d) None of these

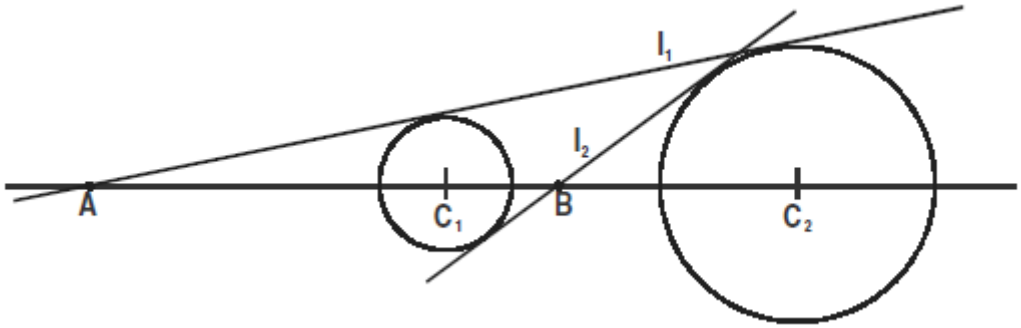
3. a and b are natural numbers such that a > b > 1. If 8! is divisible by $a^2 \times b^2$, then how many such sets (a, b) are possible?

(a) 5	(b) 6
(c) 7	(d) 8

4. Appurv and Vikram play a game in which they roll a 6-faced die alternately starting with Appurv. Each of them keeps on adding the numbers rolled by him and the first one to get to a sum of at least 3 wins the game. What is the probability of Vikram winning the game?

(a) 2/9	(b) $293/6^4$
(c) $299/6^4$	(d) None of these

5. The figure given below shows two circles with centers C_1 and C_2 and radii 2 cm and 4 cm respectively such that C_1C_2 = 9 cm. Two common tangents, l_1 and l_2, are drawn to the circles and they intersect the line passing through C_1 and C_2 at points A and B respectively. What is the length (in cm) of AB?



(a) 27	(b) 21
(c) 18	(d) 12

6. The density of milk at 25°C is 1000 g/litre and it varies with temperature according to the following relation :

$d_t = 2500 – kt$, where d_t = density of milk (at temperature t) in g/litre, t = temperature in °C and k is a constant.

A milkman buys milk from a place where the temperature is 25°C and sells it at a place where the temperature is 30°C. If he claims to buy and sell milk at the same price (in Rs./litre), then what is the profit made by him?

(a) 80/3 %	(b) 200/7 %
(c) 100/3 %	(d) 300/7 %

7. w, x, y and z are natural numbers such that :

(a) $\log_y x = 3/2$

(b) $\log_z w = 5/4$

(iii) $y – z = 9$

What is the value of 'x – w'?

(a) 81	(b) 117
(c) 93	(d) 109

Directions for questions 8 and 9 : Answer the questions on the basis of the information given below.

Fifteen countries participated in a competition organized by International Math Organization in the year 2010. There were three rounds in the competition and the countries were awarded non-negative integer points in all the rounds. Round–1 had two stages – Stage–X and Stage–Y – and the points scored in Round–1 were the sum of the points scored in the two stages. The Final Score was the sum of the points scored in Round–1, Round–2 and Round–3. The country with the highest, the second highest and the third highest Final Scores received the Gold, the Silver and the Bronze medals respectively. Also, the Final Scores of no two countries were found to be equal.

The table given below has partial information about the points scored by different countries.

Country	Stage–X	Stage–Y	Round–1 (X + Y)	Round–2	Round–3	Final Score
Argentina	1072	1337	2409	405	1019	3833
Brazil	864	2155	3019	424	885	4328
Canada	865	2128	2993	410	890	4293
Denmark	3612	3978		1083	2239	10912
Egypt	2374	5294	7668	1465	3165	
France	3918			1083	3950	
Germany	4852	6371	11223	1181	4916	17320
Hungary	5853	7766	13619		4963	
India	6658	9642		1652	5649	
Japan	6081	9747		2398	5987	
Kenya	795	2327	3122	439	1096	
Libya	919	3292	4211	549	1284	
Malaysia	1371	3000	4371	672	1528	
Netherlands	1555	3362	4917	769	1595	
Oman	2128	3135	5263	806	1719	

8. Hungary won the Silver medal and France got the fourth highest Final Score. What is the least number of points that Hungary must have scored in Round–2?

(a) 5020	(b) 4438
(c) 5010	(d) None of these

9. France won the Bronze medal and Hungary got the fourth highest Final Score. What is the least number of points that France must have scored in Stage–Y of Round–1?

(a) 8361	(b) 8371
(c) 7861	(d) None of these

10. What is value of 10.11.12.13 + 11.12.13.14 + … + 96.97.98.99?

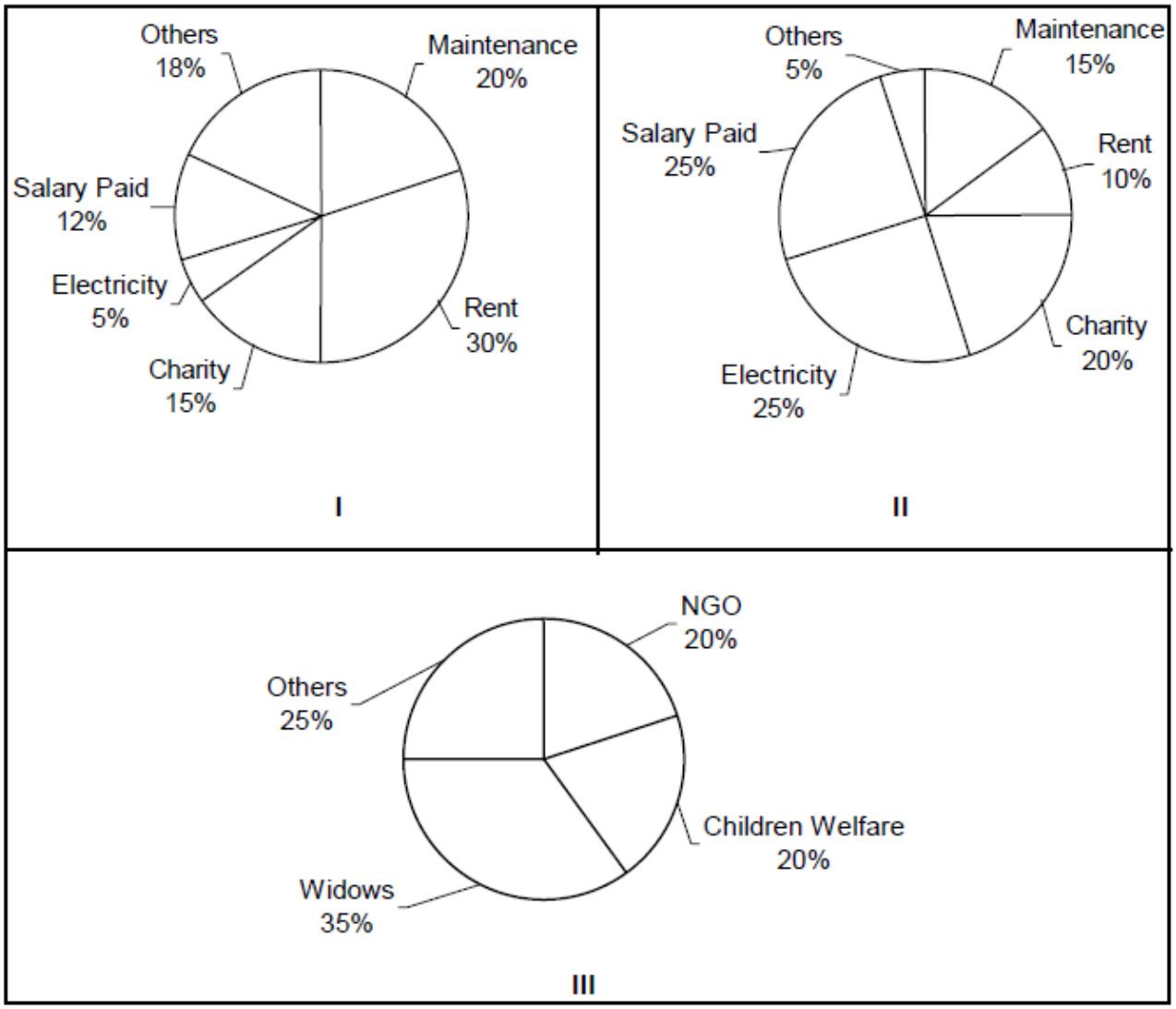
(a) 1806869592	(b) 1806869594
(c) 1806869596	(d) 1806869598

11. A container is filled up to half of its total volume with liquids L_1 and L_2 in the ratio 3 : 7. L_1 and L_2 evaporate at the rate of 25 litre/hr and 20 litre/hr respectively. After an hour the container is filled completely by adding another mixture which contains L_1 and L_2 in the ratio 2 : 3. The final ratio of L_1 and L_2 in the container becomes 1 : 2. What is the volume (in litres) of the container?

(a) 300	(b) 360
(c) 420	(d) 480

Directions for questions 12 and 13: Answer the questions on the basis of the information given below.

Pie Chart I and Pie Chart II show the percentage break-up of the "Total Expenditure" of Vidyapeeth and Christ College respectively in the year 2010. Pie Chart III shows the percentage break-up of the combined expenditure on "Charity" by the two colleges in 2010.



12. If Vidyapeeth's expenditure on "Charity" was double the combined expenditure of the two colleges on "Children Welfare", then what was the ratio of the "Total Expenditure" of Vidyapeeth to that of Christ College in 2010?

(a) 8 : 9	(b) 9 : 8
(c) 7 : 8	(d) None of these

13. If Vidyapeeth's expenditure on "Electricity" was one-fifth that of Christ College, then find the combined expenditure of the two colleges on "NGO" as a percentage of the "Total Expenditure" of Vidyapeeth in 2010.

(a) 10%	(b) 14%
(c) 12%	(d) None of these

Directions for questions 14 and 15 : Answer the questions on the basis of the information given below.

In a class of 96 students, each student opts for at least one of the three subjects – Physics, Chemistry and Mathematics. It is also known that :

(i) The number of students who opt for Physics only is equal to the number of students who opt for Mathematics only and is also equal to twice the number of students who opt for both Mathematics and Physics but not Chemistry.
(ii) The number of students who opt for exactly two subjects is 25.
(iii) The number of students who opt for Chemistry is 31.
(iv) Among those who opt for Chemistry, 13 students opt for at least two subjects.

14. If the number of students who opt for Mathematics is the maximum among the three subjects, then what is the maximum possible number of students who opt for both Physics and Chemistry but not Mathematics?

(a) 5	(b) 6
(c) 7	(d) Cannot be determined

15. Which additional piece of information is required to find the exact number of students who opt for both Chemistry and Mathematics but not Physics?

(a) The number of students who opt for exactly one of the three subjects is 70.	(b) Only one student opts for all the three subjects.
(c) The number of students who opt for Mathematics is 50.	(d) The number of students who opt for Mathematics only is 26.

16. In the figure given below, C is a point inside the square PQRS. If PC = 6 m, QC = 8 m and SC = 10 m, then find the length of RC.

(a) $9\sqrt{2}$m	(b) $8\sqrt{3}$m
(c) $8\sqrt{2}$m	(d) $9\sqrt{3}$m

17. A company took a loan for three years at 20% p.a. C.I. with annual compounding. It repaid the entire loan amount in three equal annual installments of Rs. 21.60 crores each. What was the amount of the loan (in Rs.) taken by the company?

(a) 45.50 crores	(b) 45.50 lakhs

(c) 37.50 crores.	(d) 37.50 lakhs

18. The sum of the digits of a four-digit number is 31. What fraction of such numbers are divisible by 11?

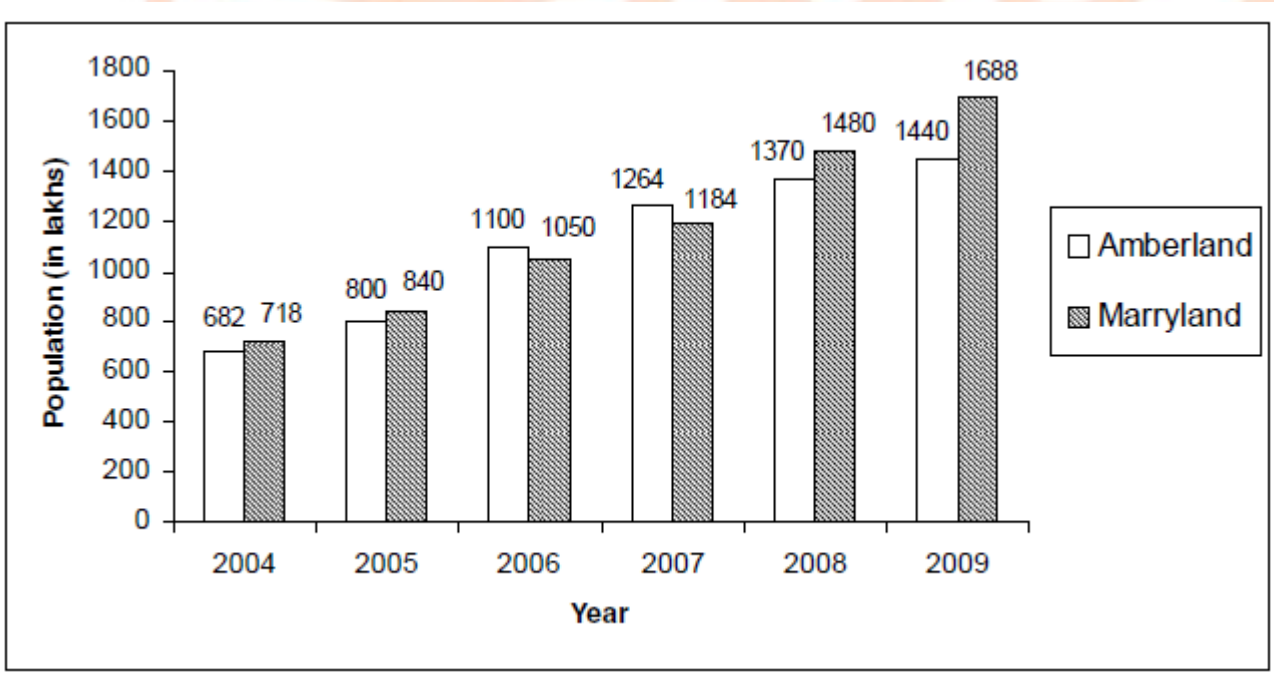
(a) 1/4	(b) 1/5
(c) 1/6	(d) None of these

19. Aman, Baman and Chaman can finish a job working alone in 15, 20 and 25 days respectively. However, while working with somebody the efficiency of Aman, Baman and Chaman reduces by 30%, 20% and 50% respectively. If none of them is allowed to work for three consecutive days, then what is the maximum possible fraction of the job that they can complete in four days?

(a) 21/50	(b) 17/50
(c) 8/25	(d) 1/3

Directions for questions 20 and 21: Answer the questions on the basis of the information given below.

The bar graph given below shows the population (in lakhs) of two countries - Amberland and Marryland - in each year from 2004 to 2009.



20. For which two years was the percentage increase in the population of Marryland over the previous year the same?

(a) 2006 and 2008	(b) 2007 and 2009

(c) 2004 and 2007	(d) None of these

21. If the percentage increase in the population of Amberland in 2010 over 2009 was the same as that in 2006 over 2005, then what was the population (in lakhs) of Amberland in the year 2010?

(a) 2040	(b) 1980
(c) 1800	(d) None of these

22. In ΔABC, D is the midpoint of BC. E is a point on AC such that AE : EC = 2 : 1 and F is a point on AB such that AF : FB = 3 : 1. Line segments AD and FE intersect at point O. What is the ratio of the area of ΔDOF to the area of ΔDOE?

(a) 8 : 9	(b) 9 : 8
(c) 3 : 4	(d) 4 : 3

23. Pia and Ria start running simultaneously from the same point on a circular track of length 4200 m. If they run in opposite directions, they meet for the first time exactly after 2 minutes from the start and they meet at seven distinct points on the track. If they run in the same direction, they meet at three distinct points on the track. How much time (in minutes) does Ria take to complete one round, if she is the slower runner?

(a) 3.5	(b) 7
(c) 10.5	(d) None of these

24. In a test consisting of 15 questions, 3 marks are awarded for a correct answer, 1 mark is deducted for an incorrect answer and no mark is awarded for an unattempted question. If a student attempts at least one question in the paper, what is the number of distinct scores that he can get?

(a) 57	(b) 58
(c) 59	(d) None of these

25. The question given below is followed by two statements, A and B. Mark the answer using the following instructions:

Mark (a) if the question can be answered by using either statement alone.

Mark (b) if the question can be answered by using one of the statements alone, but cannot be answered by using the other statement alone.

Mark (c) if the question cannot be answered even by using both the statements together.

Mark (d) if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.

Q. Each student in a class opts for one of the two foreign languages – French and Spanish. Six boys opt for French and eight girls opt for Spanish. What is the maximum possible number of girls who opt for French?

A. The total number of students in the class is 35.

B. The students who opt for Spanish are fewer than the students who opt for French.

26. A man, starting from a point P, takes exactly six equal steps. Each step is in one of the four directions – East, West, North and South. What is the total number of ways in which the man ends up at point P after the six steps?

(a) 200	(b) 256
(c) 400	(d) 512

27. What is the remainder obtained when the sum of the squares of any thirty consecutive natural numbers is divided by 12?

(a) 0	(b) 3
(c) 11	(d) Cannot be determined

28. What is the area (in square units) of the quadrilateral ABCD formed by the points A(0, 0), B(6, 0), C(8, 4) and D(2, 8) in the x-y plane?

(a) 40	(b) 32
(c) 56	(d) 48

29. The question given below is followed by two statements, A and B. Mark the answer using the following instructions :

Mark (a) if the question can be answered by using either statement alone.

Mark (b) if the question can be answered by using one of the statements alone, but cannot be answered by using the other statement alone.

Mark (c) if the question cannot be answered even by using both the statements together.

Mark (d) if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.

Q. If $(347)^x \times (467)^y = N$, where x and y are positive integers, then what is the unit digit of N?

A. $x + y = 9$

B. $x = 5$

30. If $a^2 + b^2 = 1$, $c^2 + d^2 = 1$ and $ac + bd = 0$, where a, b, c and d are real numbers, then what is the value of $a^2 + c^2$?

(a) 2	(b) 1

(c) 0	(d) Cannot be determined

31. A paragraph is given below from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

Afghanistan is so dependent on foreign aid that it could face an economic crisis when the West ends its military intervention in the country in 2014, a United States Senate report warned yesterday, criticizing the way the US had sunk billions into unsustainable projects in the shattered country. The US is spending $320m (£195m) a month in Afghanistan on reconstruction projects alone and has spent $18.8bn since it invaded in 2001. President Barack Obama's administration has requested a further $3.2bn for projects in the coming fiscal year.

(a) The U.S. program of assistance to Afghanistan confers long-term stability to the Afghan geopolitical environment and blunts popular support for extremist forces in the region.	(b) Hence, there are plans to increase direct funding, but only when ministries are able to execute the development funds that they do receive, and do so accountably.
(c) However, a number of humanitarian situations in Afghanistan, most stemming from the years of war that preceded the U.S. intervention, need to be addressed first.	(d) Yet the expensive nation-building efforts haven't utilized Afghanistan's resources effectively.

32. A paragraph is given below 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 area of specialization that I'm particularly skeptical of, is Computers. In recent years, a lot of hoopla has surrounded the arrival of computers in the classroom. Frankly, I'm not so sure that the ability to work a computer is all that essential to the future of this world. After all, what is a computer? It's a sort of brain that you can numbly call on with your fingers to obtain information.

(a) This information is by and large needed, thus making computers a necessity.	(b) But what are you going to do with all that information once you get it?
(c) There are several other specializations much more important for the future of this world, than computers.	(d) What for then do we require computers? We can very well progress without these.

33. All the students of a class are standing in a row. Some data regarding five of the students – Naman, Randhir, Karthik, Pratham and Swati – is given below.

(i) Twenty four students are standing between Naman and Randhir.

(ii) Thirty six students are standing between Naman and Karthik.

(iii) Twelve students are standing between Pratham and Karthik.

(iv) Swati is standing exactly in the middle of Naman and Pratham.

(v) Randhir is standing somewhere between Swati and Karthik.

What is the strength of the class if the students standing at the two ends of the row are two of these five students only?

(a) 38	(b) 51
(c) 63	(d) Cannot be determined

34. Fardeen distributed 18 chocolates among five children – Amit, Bimal, Chatur, Deepak and Ehsan – such that each child received at least one chocolate. The number of chocolates received by each of them was distinct. Deepak received two chocolates more than Ehsan. Amit received more chocolates than Chatur but fewer than Ehsan. Bimal received more chocolates than Ehsan. Bimal did not receive the highest number of chocolates among the five. What was the absolute difference between the number of chocolates received by Amit and Bimal?

(a) 2	(b) 3
(c) 4	(d) Cannot be determined

35. Five sentences are given below, labeled A, B, C, D and E. They need to be arranged in a logical order to form a coherent paragraph. From the given options, choose the most appropriate one.

A. But it's not always easy to find one with genuine value that you connect with.

B. There are literally thousands of them written on the same topic every year.

C. So deciphering the 'good' from the 'great' can prove to be quite a challenge.

D. That's because, these days, books and online articles are a dime a dozen.

E. It's fairly easy to find a well-written book or an online article.

(a) EADBC	(b) EADCB
(c) EDABC	(d) EBCDA

36. Five sentences are given below, labeled A, B, C, D and E. They need to be arranged in a logical order to form a coherent paragraph. From the given options, choose the most appropriate one.

A. This felicity of forgetfulness lasted but half an hour.

B. Soon the lights went out and the show started a Tamil film with all the known gods in it.

C. He sat rapt in the vision of a heavenly world which some film director had chosen to present.

D. Soon the heroine of the story sat on a low branch of a tree in paradise and wouldn't move out of the place.

E. He soon lost himself in the politics and struggles of gods and goddesses.

(a) DBAEC	(b) EACBD
(c) BECAD	(d) CABED

37. Five sentences are given below, labeled A, B, C, D and E. They need to be arranged in a logical order to form a coherent paragraph. From the given options, choose the most appropriate one.

A. When they move to another flower to feed, some of the pollen can rub off onto this new plant's stigma.

B. They are not trying to pollinate the plant.

C. Usually they are at the plant to get food, the sticky pollen or sweet nectar made at the base of the petals.

D. When animals such as bees, butterflies, moths, flies, and hummingbirds pollinate plants, it's accidental.

E. When feeding, the animals accidentally rub against the stamens and get pollen stuck all over themselves.

(a) EABDC	(b) DBCEA
(c) DCABE	(d) EADBC

38. There are two gaps in the sentence/paragraph given below. From the pairs of words given, choose the one that fills the gaps most appropriately.

After two days of_____—when teams representing competitors and stakeholders role-played against a "company" team—the executives understood that a strong competitor on the sidelines was likely to enter the market_____.

(a) reflection, tactfully	(b) simulations, aggressively
(c) fabrications, shortly	(d) discussions, energetically

39. Given below are a few sentences. Identify the sentence(s)/ part(s) of the sentence(s) that is/are correct in terms of grammar and usage (including spelling, punctuation and logical consistency). Then choose the most appropriate option.

A. René Descartes had a short working life and it begin late.

B. He did not get down to sustained research in philosophy and the natural sciences until 1628.

C. Had he confined himself to the natural sciences his achievement would be remarkable enough.

D. But his range was, in fact, considerably wider.

(a) B & C	(b) A & B
(c) A & D	(d) B & D

40. Given below are a few sentences. Identify the sentence(s) part(s) of the sentence(s) that is/are incorrect in terms of grammar and usage (including spelling, punctuation and logical consistency). Then choose the most appropriate option.

A. The ancient Greeks believed that everything is made from a few basic elements.

B. The idea was basically correct; it were the details that were wrong.

C. Their 'earth, air, fire, and water' are made of what today we know as the chemical elements.

D. Pure water is made from two elements: hydrogen and oxygen.

(a) A & C	(b) B & C
(c) Only B	(d) D & A

Directions for questions 41 to 43: The passage given below is followed by a set of three questions. Choose the most appropriate answer to each question.

I was recently shocked to read that several city councils in the UK are getting ready to expunge everyday Latin words from the English lexicon. Along with 'via' and 'etc' would be banished 'viz' and 'i.e.', not to speak of 'inter alia' and 'bona fide'. There goes away that exotic literary advantage. It was only recently that Amrita, my 10-year-old, fighting against a tide of domestic protestations voted against romantic French and prevalent Spanish and chose Latin as her second language in middle school. I had cheered her and actually promised to help out with the homework, given that three out of five words in English are of Latin origin. Blame this vicarious decision on my formative years but growing up in Mumbai, Latin was never an option in my school, as our national language Hindi was strictly enforced. Shiv Sainiks had decreed that local Marathi was de rigueur for all citizens of the city. I therefore ended up needing to speak three additional languages, not to forget Tamil, my mother tongue.

Languages rarely heard have always fascinated me. I always had this burning desire to speak them, particularly when my travel stints exposed me to the strangest of tongues. Language CDs didn't help me a whole lot. The thing about languages is that though you may be gifted with the art of penmanship, spoken word skills are mostly inherited or acquired after birth. I have always packed my dog-eared phrasebook along with my toothbrush and shaving cream for my travels. These haven't helped me much either, often eliciting that controlled giggle or even outright laughter at my stuttered attempts. Printed words won't tell you that Thai is a tonal language with grammatical minefields

or Mandarin and Cantonese have a lilt to them flowing like Indian ink applied with a Chinese brush. These city councils argue that they needed to create a language devoid of such linguistic minefields. However, there could be far-reaching consequences in the professional community. Just like abstruse scientific papers and brain-twisting mathematical theorems, legal documents are made to sound pompous with Latin words sprinkled generously all over those reams of printed matter. With Latin slowly oozing out of our English dictionary our lawyers will be hard-pressed to retain their mystifying status quo.

41. Which of the following is a suitable title for the passage?

(a) My Fascination with Languages	(b) Languages Seldom Spoken
(c) Should English be pruned?	(d) Latin: The Legal Language

42. According to the passage, why did the author choose to help his daughter?

(a) The author felt that his daughter's choice of language was relevant in light of its close links with English.	(b) The author felt that his daughter's choice of language was justified given that he had never been allowed to study Latin.
(c) The author felt that his daughter's choice of language was practical and much better than romantic French and prevalent Spanish.	(d) The author felt that his daughter's choice of language was relevant since it would give her an exotic literary advantage.

43. According to the passage, why have councils in the UK decided to remove Latin from the English lexicon?

(a) They feel that the linguistic hurdles in Latin make it difficult to gain mastery over it.	(b) They want to create a language that does not have the linguistic problems associated with the use of Latin.
(c) They find themselves unable to overcome the linguistic hurdles provided by Latin.	(d) They want to create a language that will help them remove the ambiguities associated with the use of Latin which has now become an obsolete language.

Directions for questions 44 to 46: The passage given below is followed by a set of three questions. Choose the most appropriate answer to each question.

Henry Tyrrell, art critic of The New York World, now replies with the question "Is Chesterton Sane?" Apparently, his conclusion is that Chesterton is misled by his head, though his "heart is in the right place."

Chesterton said: "It was the whole point of Whistler and his school that they produced the picture without troubling about the meaning. We may say it is the point of Picasso and the rest to paint the meaning without troubling about the picture."

Henry Tyrrell, quoting Elie Faure, writer of the greatest history of art of recent years, says: "Picasso was undoubtedly a great criminal, in the sense that he is largely

responsible for the muddle which painting has got into latterly. It is from him chiefly that the younger artists have taken the notion of looking within themselves to interpret the outer world, instead of, like their elders, looking at the outside world to realize themselves. Because oftentimes they are unable to distinguish much of anything within themselves, you know what happens (They get themselves called crazy). That is Picasso's crime. But Michael Angelo shares his guilt, and Rembrandt, and Delacroix, and Cezanne."

From this, Mr. Tyrrell concludes that Chesterton is quite wrong about Picasso and the mad modern artists.

However, though it certainly is not crazy, modern art, according to M. Faure he is in a "muddle." It is lost and groping its way in its search for new forms, and this naturally troubles such conservatives as Chesterton. The followers of Michael Angelo (individualists, like Picasso) represented a definite decline in Italian art. Are the imitators of Picasso also on the wrong track?

Some of them seem to think so, for they are attempting, in their latest craze for being "primitive," a thing really opposed to the earlier phase. They are trying to get back to the "unspoiled vision" of a child or a savage; which is the same as looking "out" instead of "in."

Mr. Chesterton also objects to this phase, as being an affectation. He is convinced that modern artists are mad, whatever they choose to do.

44. What is the central purpose of the passage?

(a) To bring forward the unending debate on the concept of modern art.	(b) To discuss the views of Henry Tyrell and Chesterton on modern art and artists.
(c) To discuss and critically analyze the views of the art critic Chesterton.	(d) To discuss and critically analyze the views of Chesterton and Henry Tyrell.

45. According to Elie Faure, how are the younger artists different from their elder ones?

(a) The paintings of the younger artists are a reflection of how the outer world impresses itself on the inner being of the artist.	(b) The paintings of the younger artists reflect the outer world as they interpret it within themselves.
(c) The paintings of the younger artists are inspired by Picasso's style and they followed his interpretation of the outside world.	(d) Their paintings are an expression of their independent thinking as opposed to the elder artists.

46. What is the role of the first paragraph in this passage?

(a) It indicates that Chesterton is misguided in his approach to art in general.	(b) It introduces the conflicting opinions of Tyrrell and Chesterton on art.

(c) It brings forward Tyrrell's opinion on the subject of modern art.	(d) It indicates that Tyrrell and Chesterton are two contemporaries who are at odds with each other.

Directions for questions 47 and 48: Answer the questions on the basis of the information given below.

Each of the six people – Panchi, Qureshi, Radha, Sonal, Tarun and Umesh – studies exactly two subjects among the four – Physiology, Ecology, Cell Theory and Genetics. No two persons among the six have the same combination of two subjects. Each person chooses one of the two subjects as Major and the other as Minor. It is also known that :

(i) The Minor subject of Qureshi and Radha is the same.

(ii) The Major subject of Umesh and Radha is the same.

(iii) The Major subject of Panchi is Physiology and the Minor subject of Sonal is Ecology.

(iv) The Major subject of Tarun is Cell Theory, which is not true for Radha.

(v) The Major subject of both Qureshi and Sonal is the same as the Minor subject of Umesh.

47. Which are the two subjects studied by Radha?

(a) Physiology and Genetics.	(b) Physiology and Cell Theory
(c) Ecology and Cell Theory	(d) Genetics and Ecology

48. Who among the following doesn't study Ecology?

(a) Panchi	(b) Tarun
(c) Sonal	(d) Qureshi

Directions for questions 49 to 51: Answer the questions on the basis of the information given below.

Each of the six people – Akshita, Babita, Chintan, Devina, Engela and Farooq – works in a different department among Marketing, Finance, Operations, Academics, IT and HR and belongs to a different city among Dhaka, Kashipur, Meerut, Bikaner, Jaipur and Pune, in no particular order. It is also known that :

(i) The person who works in Operations belongs to Kashipur.

(ii) Neither Akshita nor Devina belongs to Bikaner.

(iii) Akshita works in neither IT nor Marketing. The same is true for Farooq.

(iv) Devina works in HR and belongs to neither Jaipur nor Pune.

(v) Babita belongs to Dhaka and doesn't work in Finance.

(vi) The person who works in Academics belongs to neither Jaipur nor Pune. The same is true for the person who works in Finance.

49. Who works in Operations?

(a) Akshita	(b) Chintan
(c) Engela	(d) None of these

50. Who works in Finance?

(a) Akshita	(b) Chintan
(c) Engela	(d) Farooq

51. The person who works in Academics belongs to which city?

(a) Jaipur	(b) Dhaka
(c) Meerut	(d) None of these

Directions for questions 52 to 54: The passage given below is followed by a set of three questions. Choose the most appropriate answer to each question.

The data suggest Indians are scaling corporate heights. In a study of S&P 500 companies, Egon Zehnder found more Indian CEOs than any other nationality except American. Indians lead seven companies; Canadians, four. Among the C-suite executives in the 2009 FORTUNE 500 were two mainland Chinese, two North American Chinese and 13 Indians, according to a study by two professors from Wharton and China Europe International Business School.

For multinationals, it makes good sense to have leaders experienced in working with expanding Asian markets. And India is already the location of many of their operations. "If you look at companies like Pepsi or Hewlett-Packard or IBM, a huge chunk of their global workforce is sitting out in India," says Anshuman Das, a co-founder of CareerNet, a Bangalore executive-search company. "India and China are also the countries of future profits for the multinationals, so they may want their global leaders to come out of them."

Competitive and complex, India has evolved from a poorly run, centrally controlled economy into the perfect etri dish in which to grow a 21st century CEO. "The Indians are the friendly and familiar faces of Asia," says Ader. "They think in English, they're used to multinationals in their country, they're very adaptive, and they're supremely confident." The subcontinent has been global for centuries, having endured, and absorbed, waves of foreign colonizers, from the Mughals to the British. Practiced traders and migrants, Indians have impressive transnational networks. "The earth is full of Indians," wrote Salman Rushdie. "We get everywhere." Unlike, say, a Swede or a German, an Indian executive is raised in a multiethnic, multifaith, multilingual

society, one nearly as diverse as the modern global marketplace.

Unlike Americans, they're well versed in negotiating India's byzantine bureaucracy, a key skill to have in emerging markets. And unlike the Chinese, they can handle the messiness of a

litigious democracy. "In China, you want something done, you talk to a bureaucrat and a politician — it gets done," observes Ajay. "In India, if you talk to a bureaucrat or a politician, there are going to be 600 other people with their own points of view." There's an old saying about Asian business cultures: "The Chinese roll out the red carpet; Indians roll out the red tape."

Maybe that's why Indian managers are good at managing it. They have cut their teeth in a country ranked 134th by the World Bank for ease of doing business. To be fair, it's also the reason some of them left home. They're practiced in the exasperating culture of local, state and national permits. "To build a factory in China, a CEO will have to get two or three different permissions from various departments," observes Signe Spencer, a co-author of The Indian CEO, a 2007 study from the HayGroup consultancy. "An Indian CEO may have to get 80 different permissions from 80 different places." No wonder Indian executives spend much of their time networking and lobbying — tasks Western CEOs leave to their corporate public-affairs departments.

52. It can be inferred that the style of the passage is

(a) Factual	(b) Didactic
(c) Analytical	(d) Argumentative

53. Which of the following is the best analogy for the Indian executive's advantage over his Chinese counterpart?

(a) Structured: Constrained	(b) Constrained: Structured
(c) Control: Autonomy	(d) Restrictions: Autonomy

54. It can be inferred that the author will move on to discuss

(a) further points of comparison between the Indian and the Chinese executive.	(b) further specific points on how Indian executives are able to manage bureaucratic hurdles.
(c) further points that substantiate why the Indian executive will always scale corporate heights.	(d) further points on the how the Indian executive scores over executives from countries other than China.

55. The word given below has been used in sentences in four different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.

Rake

(a) When the dotcom boom occurred in the 1990s, his company raked in more than $300 million.	(b) She asked him to stop raking up the past at the slightest excuse.

(c) The manager raked me around the coals for being late again.	(d) She got a 5% rake-off from the deal.

56. The word given below has been used in sentences in four different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.

Scrape

(a) Bringing up that minor legal point proves that you're scraping the bottom of the barrel.	(b) I might scrape out the exam if I'm lucky.
(c) After many attempts he managed to scrape into an Ivy League college.	(d) Her parents were able to scrape up the money to send their daughter to an international business school.

57. The word given below has been used in sentences in four different ways. Choose the option corresponding to the sentence in which the usage of the word is incorrect or inappropriate.

Talk

(a) You can't have a real conversation with him—he just talks at you all the time.	(b) I didn't want to move abroad but Bill talked me over it.
(c) Can you talk me through the various investment options?	(d) They talked up the tourist attractions to encourage more visitors.

Directions for questions 58 to 60: Answer the questions on the basis of the information given below.

A company has five directors – Parjit, Manjit, Charjit, Daljit and Jasjit. Two of the directors are females. All the directors have different ages. Their annual incomes (in Rs. Lakhs) are 40, 45, 50, 60 and 75, in no particular order. It is also known that :

(i) The director with the least annual income is not the oldest. The director with the highest annual income is older than one of the two female directors and younger than the other.

(ii) The absolute difference between the annual incomes of Manjit and Daljit is Rs. 15 lakhs.

(iii) The annual income of Charjit is not the highest among the five directors.

(iv) The annual income of the older female director is more than that of the younger female director.

(v) Manjit is the youngest among the male directors and Jasjit is the older of the two female directors. Parjit was older than both Manjit and Jasjit.

(vi) The annual income of one among Parjit, Daljit and Jasjit is the average of the annual incomes of the other two.

58. What is the annual income (in Rs. Lakhs) of Parjit?

(a) 40	(b) 45
(c) 50	(d) Cannot be determined

59. What is the annual income (in Rs. Lakhs) of the oldest among the five directors?

(a) 45	(b) 50
(c) 60	(d) 75

60. What is the absolute difference (in Rs. Lakhs) between the annual incomes of the younger female director and the youngest male director?

(a) 10	(b) 30
(c) 15	(d) None of these

Solutions

1. a

(a + 220)/(a +4) = (a + 4 + 2016)/(a +4) = 1 + 216/(a+4)

Therefore, (a + 4) must be a factor of 216.

The number of factors of 216 = 16

But (a + 4) cannot be equal to 1, 2, 3 and 4 as ‘a’ has to be a positive integer.

Total possible values = 16 – 4 = 12

2. a

f(xy) = f(x) + f(y)

Putting y = 1, we get

f(x) = f(x) + f(1)

Hence, f(1) = 0.

Putting y = 1/x, we get

=> f(x) = f(1/x)

Also,

$f(x^2) = f(x) + f(x) = 2f(x)$
$f(x^3) = f(x^2) + f(x) = 3f(x)$
Thus, $f(x^n) = nf(x)$.
Hence, $f(32) = f(2^5) = 5f(2) = 10$
and $f(27) = f(3^3) = 3f(3) = 9$
$f(32/27) = f(32) + f(1/27) = f(32) - f(27) = 10 - 9 = 1$

3. c

There are four prime numbers less than 8 i.e. 2, 3, 5 and 7

The highest powers of 2, 3, 5 and 7 in 8! are 7, 2, 1 and 1 respectively.

The possible sets of values of (a^2, b^2) are :
$(3^2, 2^2)$
$(4^2, 2^2)$
$(4^2, 3^2)$
$(6^2, 2^2)$
$(8^2, 3^2)$
$(6^2, 4^2)$
$(12^2, 2^2)$

4 . c

Vikram can win in one of the three ways that are described below.

Case 1 :

1st Roll: Appurv gets 1 or 2 and then Vikram gets more than 2.
Probability = 2/6 X 4/6 X 2/9

Case 2 :

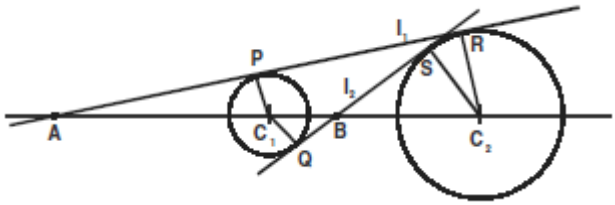
1st Roll: Appurv gets 1 and then Vikram gets 1.
2nd Roll: Appurv gets 1 and then Vikram gets more than 1.
Probability = 1/6 X 1/6 X1/6 x 5/6 = $5/6^4$

Case 3 :

1st Roll: Appurv gets 1 and then Vikram gets 2.
2nd Roll: Appurv gets 1 and then Vikram wins irrespective of what he gets.
Probability = 1/6 X1/6X1/6 = $1/6^3$
Required probability = $2/9 + 5/6^4 + 1/6^3 = 299/6^4$

5. d

Construction: Join C_1 with the points of contact P and Q and C_2 with the points of contact R and S (see the figure).



Triangles APC1 and ARC2 are similar as both are rightangled triangles with common angle RAC2. Hence,

$$\frac{PC_1}{AC_1}=\frac{RC_2}{AC_2}=\frac{RC_2}{AC_1+C_1C_2}=\frac{RC_2}{AC_1+9}$$
$$\Rightarrow \frac{AC_1-9}{AC_1}=\frac{RC_2}{PC_1}=\frac{4}{2}$$
$$\rightarrow AC_1=9 \text{ cm.}$$

Similarly, triangles BQC_1 and BSC_2 are similar. On solving, we get $BC_1 = 3$ cm.

$AB = AC_1 + BC_1 = 9 + 3 = 12$ cm.

6. d

$d_t = 2500 – kt$

Hence, $d_{25} = 1000 = 2500 – k \times 25$

So $k = 60$

Density of milk at 30^oC

$= d_{30} = 2500 – 60 \times 30 = 700$ g/litre

Let’s assume that he buys x litres of milk at Rs. y/litre.

Total cost of milk = Rs. xy

At 1000 g/litre, x litres = x kg.

He sells x kg of milk at Rs. y/litre at 30^oC.

At 700g/litre, x kg = 10/7 x itre

Total selling price of milk = Rs. 10/7 xy

Hence, the profit = 300/7 %

7. c

x2/3 - w4/5 = 9

=> $(x^{1/3})^2 - (w^{2/5})^2 = 9$

Since both x and w are natural numbers, the above is true only when $x^{1/3} = 5$ and $w^{2/5} = 4$

Hence, x = 125, w = 32 and x – w = 93.

For questions 8 and 9 : Some of the missing entries have been filled in the table given below

Country	Stage X	Stage Y	Round 1 (X + Y)	Round 2	Round 3	Final Score
Argentina	1072	1337	2409	405	1019	3833
Brazil	864	2155	3019	424	885	4328
Canada	865	2128	2993	410	890	4293
Denmark	3612	3978	**7590**	1083	2239	10912
Egypt	2374	5294	7668	1465	3165	**12298**
France	3918			1083	3950	
Germany	4852	6371	11223	1181	4916	17320
Hungary	5853	7766	13619		4963	
India	6658	9642	**16300**	1652	5649	**23601**
Japan	6081	9747	**15828**	2398	5987	**24213**
Kenya	795	2327	3122	439	1096	**4657**
Libya	919	3292	4211	549	1284	**6044**
Malaysia	1371	3000	4371	672	1528	**6571**
Netherlands	1555	3362	4917	769	1595	**7281**
Oman	2128	3135	5263	806	1719	**7788**

8. a

To win the Silver medal, the Final Score of Hungary must be at least 23602 points. Therefore, the least that Hungary must have scored in Round–2 is 5020 points.

9. d

Since Hungary's Final Score was at least 18582 points (the sum of the scores of Round–1 and Round–3), the minimum Final Score of France to win the Bronze medal must be 18583 points (assuming that Hungary scores 0 points in Round–2). Therefore, the least that France must have scored in Stage–Y is 9632 points.

10. a

$$n(n+1)(n+2)(n+3)$$

$$= n(n+1)(n+2)(n+3)\frac{1}{5}\{(n+4) - (n-1)\}$$

$$=\frac{1}{5}\left[\begin{matrix}\{n(n+1)(n+2)(n+3)(n+4)\} \\ - \{(n-1)n(n+1)(n+2)(n+3)\}\end{matrix}\right]$$

Hence,

$$10.11.12.13 = \frac{1}{5}[10.11.12.13.14 - 9.10.11.12.13]$$

$$11.12.13.14 = \frac{1}{5}[11.12.13.14.15 - 10.11.12.13.14]$$

.

.

$$96.97.98.99 = \frac{1}{5}[100.99.98.97.96 - 99.98.97.96.95]$$

Adding the terms given above, we get

10.11.12.13 + 11.12.13.14 + … + 96.97.98.99

= 1/5 [100.99.98.97.96 – 9.10.11.12.13]

= 1806869592

Note :
We need not calculate the exact value; just checking the last digit of the answer will suffice in this case.

1/5 [100.99.98.97.96 – 9.10.11.12.13]

= 20.99.98.97.96 – 9.2.11.12.13

[ends with 0] [ends with 8]

Hence, the unit digit of the answer must be 10 – 8 = 2 and there is just one option with unit digit 2.

11.c
Let the volume (in litres) of the container be 200x. When container was filled up to half its volume :

Quantity (in litres) of L_1 = 30x
Quantity (in litres) of L_2 = 70x
After an hour:
Quantity (in litres) of L_1 remaining = 30x – 25

Quantity (in litres) of L_2 remaining = 70x – 20
Quantity of L_1 added = 40x + 18
Quantity of L_2 added = 60x + 27
∴ 70x 7/130x + 7 = 1/2 and 10x 21

Volume of the container = 200x = 420 litres

For questions 12 and 13 :

Let the Total Expenditure (in Rs.) of Vidyapeeth and Christ College be 100x and 100y respectively.

12. a

According to the question,

15x = 2 (20% of (15x + 20y))

On solving, x : y = 8 : 9.

13. d

Vidyapeeth's expenditure on Electricity = 5x

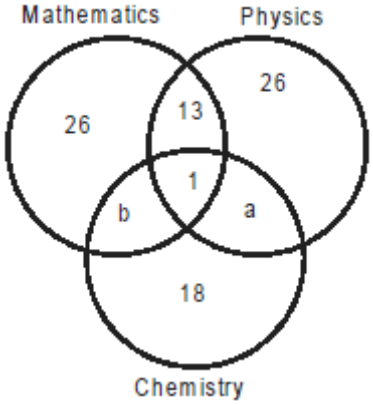
Christ College's expenditure on Electricity = 25y

5x : 25y = 1 : 5

On solving, x = y.

Required percentage = 20/100 X 35x/100x X100 =7%

For questions 14 and 15 :



The total number of students in the class is 96 and the number of students who opt for Chemistry is 31; so the number of students who opt for Physics only, Mathematics only and both Mathematics and Physics but not Chemistry will be 65.

From the given information, the number of students who opt for: Physics only = 26, Mathematics only = 26, both Mathematics and Physics but not Chemistry = 13.

$a + b + 13 = 25$

$a + b = 12$.

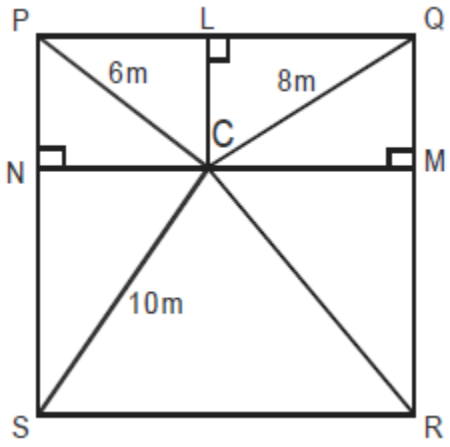
14. a

As the number of students who opt for Mathematics is the maximum among the three subjects, $b > a$. As we have to maximise 'a', we get $a = 5$ and $b = 7$.

15. c

If the exact number of students who opt for Mathematics is known, a and b can be calculated. The rest three statements don't give any new information.

16 . c



Let CL, CM and CN be the perpendiculars from C on PQ, QR and PS respectively.

So, PL = NC, QL = MC and SN = RM.

In right angled triangle PLC, $PC^2 = PL^2 + CL^2$ ...(i)

In right angled triangle QLC, $QC^2 = QL^2 + CL^2$ ...(ii)

In right angled triangle SNC,

$SC^2 = SN^2 + NC^2 \Rightarrow SC^2 = SN^2 + PL^2$ ...(iii)

In right angled triangle RMC,

$RC^2 = RM^2 + MC^2 \Rightarrow RC^2 = SN^2 + QL^2$ ...(iv)

Adding (i) and (iv), we get

$PC^2 + RC^2 = PL^2 + CL^2 + SN^2 + QL^2$ ...(v)

Adding (ii) and (iii), we get

$QC^2 + SC^2 = QL^2 + CL^2 + SN^2 + PL^2$ ...(vi)

From (v) and (vi), we get

$PC^2 + RC^2 = QC^2 + SC^2$

$\Rightarrow 6^2 + RC^2 = 8^2 + 10^2$

$\Rightarrow RC = 8\sqrt{2}$m.

17. a

The situation is similar to the company taking three loans of amount P_1, P_2 and P_3 from three different banks for 1, 2 and 3 years respectively. The company repays Rs. 21.60 crores to each of the banks at the end of the respective loan terms. Hence,

$$P_1\left(1+\frac{20}{100}\right)=216\times10^6 \Rightarrow P_1=180\times10^6$$

$$P_2\left(1+\frac{20}{100}\right)^2=216\times10^6 \Rightarrow P_2=150\times10^6$$

$$P_3\left(1+\frac{20}{100}\right)^3=216\times10^6 \Rightarrow P_3=125\times10^6$$

Total loan amount = $P_1 + P_2 + P_3$ = Rs. 45.50 crores.

18. d

Let the four-digit number be abcd.

For the number to be divisible by 11, (a + c) – (b + d) = 0 or ±11k, where k is a natural number.

Let us assume that a + c = x and b + d = y.

x + y = 31 and x – y = 11

(For x and y to be integers, x – y can neither be 0 nor an even multiple of 11.)

Solving the above equations, we get

x = 21 and y = 10.

As x is the sum of two single digit numbers, the maximum possible value of x is 18.

Therefore, no such number is possible.

19. b

Let the job be of L.C.M.(15, 20, 25) = 300 units.

The number of units completed by Aman, Baman and Chaman in a day while working alone on the job are 0, 15 and 12 respectively.

The number of units completed by Aman, Baman and Chaman in a day while working on the job with somebody else are 14, 12 and 6 respectively.

Aman, Baman and Chaman together complete 14 + 12 + 6 = 32 units of work in a day.

The work must be distributed in either of the following ways to ensure the maximum output in four consecutive days:

The number of units completed will be 32 + 20 + 18 + 32 = 102.

Hence, the answer = 102/300 = 17/50

20. a

Percentage increase in the population of Marryland in 2006 over 2005

= (1050 - 840)/840 X100 =25%

Percentage increase in the population of Marryland in 2008 over 2007

= (1480 - 1184)/840 X100 =25%

21. b.

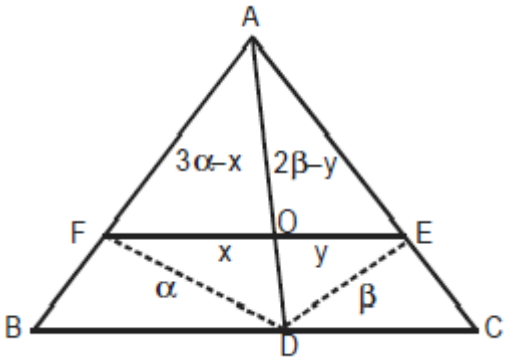
Percentage increase in the population of Amberland in 2006 over 2005

= (1100 - 800)/800 X 100 = 37.5 %

The population (in lakhs) of Amberland in 2010

= 1440 X 137.5/100 = 1980

22. b.



Let area (in sq. units) of ΔDBF be α.

As AF : FB = 3 : 1, area (in sq. units) of ΔAFD will be 3α …(i)

(The areas of triangles with the same vertex and bases on the same straight line are in the ratio of the lengths of their bases.)

Let area (in sq. units) of ΔDCE be β.

As AE : EC = 2 : 1, area (in sq. units) of ΔAED will be 2β …(ii)

As BD = DC, using equations (i) and (ii), we get

4α = 3β i.e α/β = 3/4

Let α and β be 3a and 4a respectively.

Let area (in sq. units) of ΔFOD be x and area (in sq. units) of ΔEOD be y.

∴ (9x - x)/ x = (8a -y)/y and x/y = 9/8 i.e. 9 : 8

23. b

Let the ratio of the speeds (in m/s) of Pia and Ria be x : y, where x > y.

x + y = 7 and x – y = 3.

So x = 5 and y = 2.

Let their respective speeds (in m/s) be 5a and 2a.

∴ 4200/(2a + 5a) = 120 and a = 5

The time taken by Ria to complete one round

=4200/10 = 420 sec. or 7 minutes.

24. b

A student can get any integer score from –15 to 45, except 44, 43 and 40. So the answer is 61 – 3 = 58.

25. b

Let the number of girls who opt for French be ‘a’ and the number of boys who opt for Spanish be ‘b’.

From Statement A :

There are 35 students in the class.

$\therefore 6 + a + b + 8 = 35$

$\Rightarrow a + b = 21$

In order to maximise ‘a’, we have to minimise ‘b’. Since the question doesn’t say that there has to be at least one boy who opts for Spanish, the minimum value of ‘b’ can be 0 and hence the maximum value of ‘a’ will be 21. This statement alone is sufficient to answer the question.

From Statement B :

The information given in the statement is clearly insufficient to answer the question.

26. c

To ensure that the man comes back at point P :

(i) the number of steps taken by the man in the North and the South directions must be the same.

(ii) the number of steps taken by the man in the East and the West directions must be the same.

Let N, E, W and S denote a step in the North, East, West and South direction respectively.

Case I: 3 N and 3 S

Total arrangements = 6!/3!3! = 20

Case II: 1 N, 1 S, 2 E and 2 W

Total arrangements = 6!/2!2! = 180

Case III: 2 N, 2 S, 1 E and 1 W

Total arrangements = 6!/2!2! = 180

Case IV: 3 E and 3 W

Total arrangements = 6!/3!3! = 20

Total possible ways = 20 + 180 + 180 + 20 = 400

27. c

Let a, a + 1, a + 2, …, a + 29 be thirty consecutive natural numbers and N be the sum of their squares.

$= N = a^2 + (a + 1)^2 + (a + 2)^2 + \ldots + (a + 29)^2$

$= N = 30a^2 + 2a(1 + 2 + \ldots + 29) + (1^2 + 2^2 + \ldots + 29^2)$

$N = 30a^2 + 2a((29 \times 30)/2) + 29 \times 30 \times 59/6$

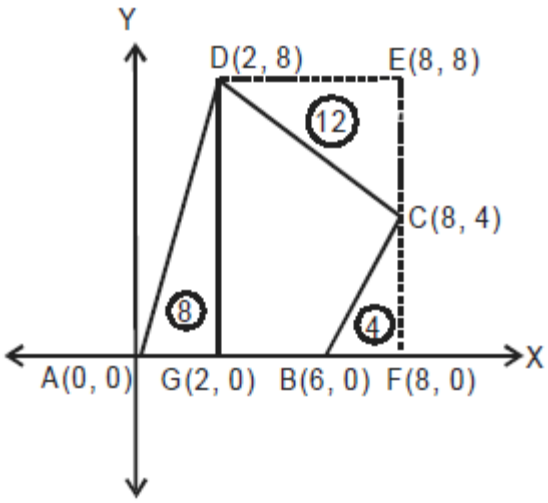
Remainder when (29 x 30 x 59)/6 is divided by 12 = 11

Now $30a^2 + 2a((29 \times 30)/2) = 30(a^2 + 29a)$

As $(a^2 + 29a)$ is always even, remainder obtained when $30(a^2 + 29a)$ is divided by 12 = 0.

So the remainder obtained when the sum of the squares of any thirty consecutive natural numbers is divided by 12 = 11.

28. a



Area (ABCD) = Area (ΔADG) + Area (BCDG)

Area (ΔADG) = 1/2 (DG x AG) = 1/2(8 x2) = 8 sq.units .....(i)

Area(BCDG) = Area(DGFE) - Area (ΔCDE) - Area(ΔBCF)

= (DG x GF) - 1/2(CE x DE) - 1/2(BFxCF)

= (8 x6) - 1/2 (4 x 6) - 1/2(2X4)

= 48 − 12 − 4 = 32 sq. units ...(ii)

Adding (i) and (ii) :

Area (ABCD) = 8 + 32 = 40 square units

29. b

As both the numbers end in 7, the unit digit of N will be the same as the unit digit of $7^x \times 7^y$ i.e. $7^{(x+y)}$. Therefore, we need to know the value of 'x + y' in order to find the units digit of N.

From Statement A:

We have x + y = 9. Therefore, the unit digit of N will be the same as the unit digit of 7^9. This statement alone is sufficient to answer the question.

From Statement B :

No information regarding 'y' is given. This statement alone is not sufficient to answer the question.

30. b

ac + bd = 0

ac = –bd

$a^2c^2 = b2d2$

$a2(1 – d2) = (1 – a^2)d^2$

$\therefore a^2 = d^2$

Since $c^2 + d^2 = 1$, $c^2 + a^2 = 1$.

31. d

The paragraph talks about how Afghanistan has become so dependent on foreign aid that it can face an economic crisis in the future. So the U.S. program of assistance definitely doesn't confer long-term stability to Afghanistan. Hence, option (a) is eliminated. Option (b) does not fit in with the paragraph which provides no reason or background for increasing direct funding. Option (c) talks about humanitarian situations while the paragraph focuses exclusively on the economy. Option (d) talks about the distortion that has happened in the Afghan economy thanks to "the expensive nation-building efforts" – domestic resources have not been utilized effectively.

32. b

'Skeptical' means having doubts. The author mentions, in the beginning, that he is skeptical about Computers as an area of specialization. Option (b) logically carries the idea further by stating that once one has obtained the information what will one do with it. Option (a) has a positive tone and goes against the nature of the argument. Option (c) is out of scope of the paragraph. Option (d) is extremely definitive in nature whereas the author is just skeptical about Computers.

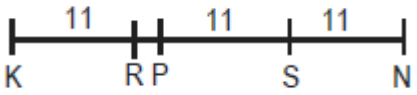
33. a

Let Naman, Randhir, Karthik, Pratham and Swati be represented by N, R, K, P and S respectively. As nothing is mentioned about the directions of the students, we can start the arrangement from any side by fixing the relative positions of N and R.

Case I : K and R are on the opposite sides of N. Therefore, P will be on the same side of N as K and hence S will be on the same side of N as P. In this case R is not standing between S and K, which violates statement (v).

Case II: K and R are on the same side of N. When P is on the opposite side of K as R, the number of students between N and P will be 49. So the middle position will already be occupied by R and hence cannot be occupied by S. Hence, P is on the same side of K as R and S is standing between N and P.

The only possible arrangement of the students will be as given below.



Hence, the strength of the class is 38.

34. b

Let the number of chocolates received by Amit, Bimal, Chatur, Deepak and Ehsan be a, b, c, d and e respectively. Hence, a + b + c + d + e = 18.

If a, b, c, d and e are distinct then they must be (in no particular order) :

CASE I: {1, 2, 3, 4, 8} or

CASE II: {1, 2, 3, 5, 7} or

CASE III: {1, 2, 4, 5, 6}.

Also, it is given that c < a < e < d.

It is given that b is not the highest and hence the highest must be d. Also, d > b > e and b must be equal to e + 1. This is satisfied only by CASE III.

The number of chocolates with Amit and Bimal are 2 and 5 respectively. Hence, the answer = 3.

35. a

Sentence E introduces the topic of books and online articles and states that finding them is easy. Sentence A mentions the difficulty related to the search. Thus, EA is a mandatory pair. D provides the reason for the difficulty which is further explained in B. So, ADB is a sequence. Statement C mentions the consequence of the plethora of books and articles. The reason for why it becomes difficult to differentiate a good book from a great one is that there are literally thousands of books written on the same topic every year. Statements B and C form a reason-consequence pair. Thus, the correct sequence is EADBC.

36. c

Sentence B is the introductory sentence as it mentions about a Tamil film that had lots of gods and goddesses. E describes the effect of the film on the protagonist. C carries the idea forward. E and C describe the state of enchantment into which the protagonist was transported after the film began. The 'this felicity' in A refers to this state of enchantment. Thus, ECA is a sequence. Sentence D begins a new idea should come in the end. Hence, BECAD is the correct sequence.

37. b

Sentence D introduces the subject of pollination and mentions the names of the animals: bees, butterflies, moths, flies and hummingbird that accidentally help in pollination. B elaborates on why the pollination is accidental. The 'they' in B refers to the animals mentioned in D. So DB is a mandatory pair. C starts describing the events that take place when these animals go to the plants to obtain their food. E continues the description of the events and elaborates on what happens when the animals are feeding. So, CE is another mandatory pair. A explains how the pollination takes place, by rubbing of the pollen from the previous plant to the new one when the animals move from one plant to another. Hence, DBCEA is the correct answer.

38. b

The word 'simulation' means a situation in which a particular set of conditions is created artificially in order to study or experience something that could exist in reality, for example: An

important part of training is role-play and the simulation of cases. ‘Aggressively’ means acting with force and determination in order to succeed, for example: an aggressive advertising campaign. ‘Simulation’ and ‘aggressively’ are the best words in the given context.

39. d

Sentence A is incorrect. The correct statement should use the past tense “René Descartes had a short working life and it began late.” Statement C is incorrect. The correct statement should be “Had he confined himself to the natural sciences his achievement would have been remarkable enough.”

40. c

Only sentence B is incorrect. The correct statement should be “it was the details that were wrong.”

41. c

The author begins by talking about the decision of city councils in the UK to expunge everyday Latin words from the English lexicon. He mentions his fascination with languages, but this is not the main point being discussed. Option (c) is the correct answer. The author discusses the motivations behind this pruning- “to create a language devoid of such linguistic minefields...” and then goes on to talk about ‘far reaching consequences.’ He wonders whether English should be pruned or not. Option (b) can be ruled out because the author’s main purpose is not to discuss languages rarely spoken. Option (d) is beyond the scope of the passage; the author mentions that a few Latin words are used by lawyers. However, it can’t be inferred that Latin is ‘the legal language.’

42. a

The sixth line of the first paragraph provides the answer to this question. Option (a) is the answer. Option (b) is incorrect because there is no information in the passage to suggest that the author was not allowed to study Latin. Option (c) is also incorrect because the author does not say that his daughter’s choice of Latin was better than the choice of French and Spanish. In fact the phrase used, “domestic protestations” indicates the opposite. Though the author does mention that the use of Latin words provides an exotic literary advantage, this is not the reason for his deciding to help his daughter. So, option (d) is incorrect.

43. b

Refer to the last half of the second paragraph. The author says that there are linguistic minefields and problems that are associated with languages like Thai, Mandarin, Cantonese

and Latin. The city council wanted to create a language that did not have these hurdles and so is getting ready to remove Latin from the English lexicon. Option (b) is the answer. Option (a) is incorrect as there is no suggestion that mastery over Latin is the issue at hand here.

44. b

The author presents the views of Chesterton and Henry Tyrell and presents his opinions on modern art. The discussion is about modern art and artists and the author moves the discussion by presenting different points. Option (a) does not stand correct as it is general in nature and does not take into account that the passage primarily presents views of Chesterton and Henry Tyrrell. Options (c) and (d) are incorrect because the author does not critically analyze the views of either Chesterton or Henry Tyrell. He presents his opinion on modern art but not on the comments made by the art critics.

45. b

In the third paragraph, the Elie Faure is quoted as saying that the younger artists "have taken the notion of looking within themselves to interpret the outer world, instead of, like their elders, looking at the outside world to realize themselves." Option (b) is the correct answer. Option (a) is factually incorrect as it refers to the style adopted by the elder artists. Though the author states that the younger artists were inspired by Picasso, but there is no mention in the passage that the younger artists followed Picasso's interpretation of the outside world. So, option (c) is incorrect. Option (d) cannot be inferred as the passage mentions that the younger artists draw most of the inspiration for their artistic notions from Picasso.

46. b

Option (a) is not indicated in the passage. The first paragraph only quotes Tyrrell's opinion about Chesterton and sets the stage for bringing out the conflicting opinions of Tyrrell and Chesterton on art. Option (c) is incorrect. In the first paragraph, the opinion of Tyrrell on Chesterton has been mentioned but there is no mention of Tyrrell's opinion on modern art. Option (d) is eliminated since we cannot infer from the passage that Chesterton and Tyrrell are contemporaries.

For questions 47 and 48 :

As four subjects are given and each person studies exactly two subjects (which are not the same as that of any other person) the number of possible cases must be ${}^4C_2 = 6$. The possible combinations are shown below in the table.

Physiology and Genetics	Physiology and Ecology	Physiology and Cell Theory	Genetics and Ecology	Genetics and Cell Theory	Ecology and Cell Theory

This means that each subject is studied by exactly three students. The common subject studied by Qureshi, Sonal and Umesh can be Genetics only. Thus, Umesh and Radha must be having Physiology as their Major subject. Subsequently, Qureshi and Radha must be having Cell Theory as their Minor subject. The conclusions can be tabulated as given below.

Person	**Majors**	**Minors**
Panchi	Physiology	Ecology
Qureshi	Genetics	Cell Theory
Radha	Physiology	Cell Theory
Sonal	Genetics	Ecology
Tarun	Cell Theory	Ecology
Umesh	Physiology	Genetics

47. b

Physiology and Cell Theory

48. d

Qureshi

For questions 49 to 51 :

From statements (i), (iv) and (vi), either the person who works in Marketing or the person who works in IT belongs to Jaipur, and the other belongs to Pune. From statements (iii), (iv) and (v), it can be concluded that either Chintan or Engela belongs to Jaipur and the other belongs to Pune. From statements (ii) and (v), Farooq belongs to Bikaner. Now only Akshita can be the one who belongs to Kashipur and works in Operations. So Devina belongs to Meerut. From statement (v), Farooq works in Finance and so Babita works in Academics. The conclusions made thus far can be tabulated as given below.

Name	**Department**	**City**
Akshita	Operations	Kashipur
Babita	Academics	Dhaka

Chintan	Marketing/ IT	Jaipur/Pune
Devina	HR	Meerut
Engela	IT/Marketing	Pune/Jaipur
Farooq	Finance	Bikaner

49. a

Akshita

50. d

Farooq

51. b

Dhaka

52. c

The author analyses the reasons for why Indians are scaling corporate heights. He cites several studies and quotes several managers to understand the factors that have led to the rise of the Indian executive internationally. Option (c) is the answer. Option (a) is incorrect because even though the author presents facts, he does not refrain from giving his opinion and analysis. 'Didactic' means designed to teach people something, especially a moral lesson. The author does bring in Chinese executives as a comparative example; however, his aim is to understand how the Indian executive scores even over his Chinese counterpart. His tone is not didactic. Option (d) is incorrect because the author never makes an attempt to be argumentative.

53. b

The Indian executive's advantage over his Chinese counterpart has been mentioned in the context of managing bureaucratic hurdles. Option (b) fits in best as the Indian executive works in an environment of constraints and emerges as a better manager than the Chinese executive for whom things are arranged by bureaucrats and politicians. Hence a Chinese executive works in a more structured environment. Option (a) is an inverted analogy so, it is incorrect. Options (c) and (d) are incorrect as one cannot infer that the Indian executive works in an environment that is controlled or that has many restrictions. Also the term autonomy or self-governance does not apply correctly to the description of the environment that the Chinese executive has to function in.

54. b

The author discusses why Indian managers are good at managing business. He substantiates his points using facts and statements. He mentions various factors that contributes to the success of the Indian executive. In the last lines, he mentions why they are good at networking and lobbying. Keeping in with the central idea of the passage and its last lines, the author would go on to discuss further specific points on how Indian executives are able to manage bureaucratic hurdles. Options (a) and (d) can be ruled out because the author is not primarily using a comparative style in the passage. Option (c) can also be ruled out. There is nothing in the passage to indicate that Indian executives will 'always' scale corporate heights.

55. c

Sentence (c) is incorrect. 'Rake somebody over the coals'/ 'haul somebody over the coals' is the correct idiom. It means to criticize somebody severely because they have done something wrong. 'Rake in something' means to earn a lot of money, especially when it is done easily. So, sentence (a) is correct. 'Rake up something' means to mention something unpleasant that happened in the past and that other people would like to forget, for example: Raking up the past will only make things worse. So, sentence (b) is correct. 'Rake-off' is a noun and it means a share of profits, especially from dishonest or illegal activity. Thus, sentence (d) is also correct.

56. b

Sentence (b) is incorrect. The correct phrasal verb is 'scrape through something'. It means to succeed in doing something with difficulty, especially in passing an exam. The correct sentence is 'I might scrape through the exam if I'm lucky'. 'Scrape (the bottom of) the barrel' means to have to use whatever things or people you can get, because there is not much choice available. So, sentence (a) is correct. 'Scrape in/ scrape into something' means to manage to get a job, a position, a place at college, etc, but with difficulty. So, sentence (c) is correct. 'Scrape something up/together' means to obtain or collect together something, but with difficulty, for example:
We managed to scrape together eight volunteers. Hence, sentence (d) is also correct.

57. b Sentence (b) is incorrect. The correct phrasal verb is 'talk somebody into something' which means to persuade somebody to do something. The correct sentence is 'I didn't want to move abroad but Bill talked me into it.'

'Talk at somebody' means to speak to somebody without listening to what they say in reply. Thus, sentence (a) is correct. 'Talk through something' means to discuss something thoroughly until you are sure you understand it. So sentence (c) is correct. Talk somebody/something up

means to describe somebody/ something in a way that makes them sound better than they really are. So, sentence (d) is also correct.

For questions 58 to 60 :

Let Parjit, Manjit, Charjit, Daljit and Jasjit be represented by P, M, C, D and J respectively. From statement (ii), the annual incomes (in Rs. Lakhs) of (M, D) can be (75, 60) or (60, 45), not necessarily in the same order.

From statement (vi), one of the three cases is true :

Case I: The annual incomes (in Rs. Lakhs) of (P, D and J) are (45, 60 and 75), not necessarily in the same order. This case is not possible because it violates statement (ii).

Case II: The annual incomes (in Rs. Lakhs) of (P, D and J) are (40, 45 and 50), not necessarily in the same order. Now the annual income of D must be Rs. 45 lakhs and hence the annual income of M must be Rs. 60 lakhs. Thus, annual income of C is Rs. 75 lakhs. This case is not possible because it violates statement (iii).

Case III: The annual incomes (in Rs. Lakhs) of (P, D and J) are (40, 50 and 60), not necessarily in the same order. So the annual income of D is Rs. 60 lakhs and hence the annual income of M is Rs 75 lakhs and that of C is Rs. 45 lakhs.

From statement (v), J was the older of the two females and hence the annual income of J was Rs. 50 lakhs and the annual income of P was Rs. 40 lakhs. Also, C is the younger female director. Thus it can be concluded that: Age of D > Age of P > Age of J > Age of M > Age of C.

The conclusions made thus far can be shown as below.

58. a

Rs. 40 Lakhs

59. c

Rs. 60 Lakhs

60. b

Rs. 30 Lakhs