DIRECTIONS *for Questions 1 to 6:* Select the correct alternative from the given choices.

1. The values of the numbers 2^{2004} and 5^{2004} are written one after another. How many digits are there in all?
    (1) 4008   (2) 2003   (3) 2004   (4) None of these

2. Given a and b = a – b; a and b but c = a + c – b; a or b = b – a; a but not b = a + b;
    find 1 or (2 but not (3 or (4 and 5 but (6 but not (7 and (8 or 9)))))).
    (1) 9   (2) –8   (3) –11   (4) 17

3. Rajat draws a 10 x 10 grid on the ground such that there are 100 identical squares numbered 1 to 100. If he has to place two identical stones on any two separate squares in the grid, how many distinct ways are possible?
    (1) 2475   (2) 4950   (3) 9900   (4) 10000

4. Mohan is a carpenter who specialises in making chairs. For every assignment he undertakes, he charges his commission and cost. His commission is fixed and equals Rs.560 per assignment while the cost equals Rs.$2n^2$ where n is the total number of chairs he makes. If for a certain assignment the average cost per chair is not more than Rs.68 then the minimum and maximum possible number of chairs in the assignment are, respectively.
    (1) 13 and 19   (2) 13 and 20   (3) 14 and 19   (4) 14 and 20

5. Let $f_{n+1}(x)$ $= f_n(x) + 1$ if n is a multiple of 3
                        $= f_n(x) – 1$ otherwise.
    If $f_1(1) = 0$, then what is $f_{50}(1)$?
    (1) –18   (2) –16   (3) –17   (4)

6. On a plate in the shape of an equilateral triangle ABC with area $16\sqrt{3}$ sq.cm, a rod GD, of height 8 cm, is fixed vertically. G is a point on the plate. If the areas of the triangles AGD and BGD are both equal to $4\sqrt{19}$ sq.cm, find the area of the triangle CGD (in sq.cm).

    (1) $3\sqrt{19}$ (2) $4\sqrt{19}$ (3) $12\sqrt{3}$ (4) None of these

DIRECTIONS *for questions 7 and 8:* These questions are based on the following data.

Consider the following operators defined below.
x @ y: gives the positive difference of x and y.
x $ y: gives the sum of the squares of x and y.
x £ y: gives the positive difference of the squares of x and y.
x & y: gives the product of x and y.
Also x, y $\in$ R, and x $\neq$ y. The other standard algebraic operations are unchanged.

7. Given that x @ y = x – y, then find (x $ y) + (x £ y).
    (1) $2x^2$ (2) $2y^2$ (3) $2(x^2 + y^2)$ (4) Cannot be determined

8. The expression $[(x £ y) \div (x @ y)]^2 – 2(x \& y)$ will be equal to
    (1) x £ y   (2) x $ y   (3) (x £ y) (x @ y)   (4) Cannot be determined

**DIRECTIONS** *for Questions 9 to 13:* Select the correct alternative from the given choices.

9. Vaibhav wrote a certain number of positive prime numbers on a piece of paper. Vikram wrote down the product of all the possible triplets among those numbers. For every pair of numbers written by Vikram, Vishal wrote down the corresponding GCD. If 90 of the numbers written by Vishal were prime, how many numbers did Vaibhav write?
    (1) 6   (2) 8   (3) 10   (4) Cannot be determined

10. Two cars A and B start from two points P and Q respectively towards each other simultaneously. After travelling some distance, at a point R, car A develops engine trouble. It continues to travel at 2/3rd of its usual speed to meet car B at a point S where PR = QS. If the engine trouble had occurred after car A had travelled double the distance it would have met car B at a point T where ST = SQ/9. Find the ratio of speeds of A and B.
    (1) 4 : 1   (2) 2 : 1   (3) 3 : 1   (4) 3 : 2

11. There are two water drums in my house whose volumes are in the ratio 1 : 5. Every day the smaller drum is filled first and then the same pipe is used to fill the bigger drum. Normally by the time I return from my college i.e. at 1.30 p.m., the smaller drum would just be full. But today I returned a little early and started drawing water from the well with the help of a bucket, poured one-third into the smaller drum and the remaining into the bigger drum. I continued this till the smaller drum was filled. Immediately after that, I shifted the pipe into the bigger drum and went for lunch. Today if the bigger drum was filled in 12 minutes before its normal time, when was the smaller drum full?
    (1) 1 : 18 p.m.   (2) 1 : 28 p.m.   (3) 1 : 26 p.m.   (4) Cannot be determined.

12. Let S_n denote the sum of the squares of the first n odd natural numbers. If $S_n = 533n$, find the value of n.
    (1) 18   (2) 20   (3) 24   (4) 30

13. In the figure alongside, triangle ABC is equilateral with area S. M in the mid-point of BC and P is a point on AM extended such that MP = BM. If the semicircle on AP intersects CB extended at Q, and the area of a square with MQ as a side is T, which of the following is true?
    (1) $T = \sqrt{2}\,S$ (2) $T = S$
    (3) $T = \sqrt{3}\,S$ (4) $T = 2S$
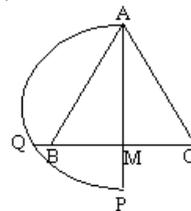
DIRECTIONS *for questions 14 and 15:* These questions are based on the following data.

One morning, Govind Lal the owner of the local petrol bunk, was adulterating the petrol with kerosene. He had two identical tanks – the first was full of pure petrol while the second was empty. First he transferred an arbitrary amount of petrol from the first tank into the second and then replaced the petrol removed from the first tank with kerosene. He then repeated this process one more time but this time he ensured that by the end of the process the second tank was exactly full.

14. Which of the following can be the concentration of petrol in the second tank?
    (1) 50%   (2) 60%   (3) $66\,^2/_3\%$ (4) 80%

15. If the concentration of petrol in the second tank is 75% and the cost price of kerosene is half that of petrol, then what is Govind Lal's net profit percentage on selling the contents of the second tank given that he claims to sell the petrol at a profit of 25%?

    (1) $42\,^6/_7\%$ (2) $66\,^2/_3\%$ (3) $83\,^1/_3\%$ (4) 100%

DIRECTIONS *for questions 16 to 20:* Select the correct alternative from the given choices.

16. Auto fare in Bombay is Rs.2.40 for the first 1 km, Rs.2.00 per km for the next 4 km, and 1.20 for each additional km thereafter. Find the fare in rupees for k km. $(k \geq 5)$.
    (1) $2.4k + 1.2(2k - 3)$ (2) $10.4 + 1.2(k - 5)$
    (3) $2.4 + 2(k - 3) + 1.2\,(k - 5)$ (4) $10.4 + 1.2(k - 4)$

17. In the figure alongside, O is the centre of the circle, and AC the diameter. The line FEG is tangent to the circle at E. If $\angle GEC = 52°$, find the value of $\angle e + \angle c$.
    (1) 154°   (2) 156°   (3) 166°   (4) 180°
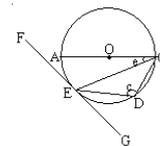
18. Rekha drew a circle of radius 2 cm on a graph paper of grid 1 cm x 1 cm. She then calculated the area of the circle by adding up only the number of full unit-squares that fell within the perimeter of the circle. If the value that Rekha obtained was d sq.cm less than the correct value, then find the maximum possible value of d?
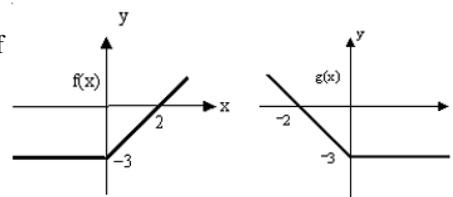   (1) 6.28   (2) 7.28   (3) 7.56   (4) 8.56

19. In the above question what is the minimum possible value of d?
    (1) 4.56   (2) 5.56   (3) 6.56   (4) 3.56

20. The graphs given alongside represent two functions f(x) and g(x) respectively. Which of the following is true.
    (1) $g(x) = |f(x)|$
    (2) $g(x) = f(-x)$
    (3) $g(x) = -f(x)$
    (4) None of the above

DIRECTIONS *for questions 21 and 22:* These questions are based on the following data.

A is standing 5 m East and 4 m North of a point P while B is standing 15 m East and 24 m North of P. A walks at a speed of 1.4 m/s while B walks at a speed of 2.1 m/s.

21. If A and B simultaneously start walking towards each other and finally meet at a point Q, then find the distance PQ.
    (1) 13 m   (2) $12\sqrt{3}$ m   (3) 15 m   (4) $13\sqrt{2}$ m

22. If A and B simultaneously start walking East and South respectively, then which of the following is true of the distance of closest approach 'd_1' between them?
    (1) $d_1 > 5$ m   (2) $d_1 < 5$ m   (3) $d_1 = 5$ m   (4)   Cannot be determined

DIRECTIONS *for questions 23 and 24:* For these questions, consider the function given by $f(x) = |x - 1| - x$

23. What is the area of the triangle bounded by the graph of the given function with the coordinate axes given by x = 0 and y = 0?
    (1) 2   (2) 1/4   (3) 1/2   (4) 1

24. Which of the following is not true about the graph of f(x)?
    (1)   A portion of the graph is parallel to the line y = 25.
    (2)   A portion of graph is in 2nd quadrant.
    (3)   Some portion of graph lies in 1st quadrant.
    (4)   Some portion of graph lies in 3rd quadrant.

DIRECTIONS *for Questions 25 to 27:* These questions are based on the data given below.

On the eve of a special function in view of 'National Integration', seven participants – A, B, C, D, E, F and G, are to be accommodated in two rooms, each room having a capacity of four persons only. For the allocation, the following conditions must be considered:
(a)   A, a Gujarati, also speak Tamil and Bengali.
(b)   B and F are both Bengali and speak only that language.
(c)   C, a Gujarati, also speaks Tamil.
(d)   D and G are Tamilians and speak only Tamil.
(e)   E, a Gujarati, also speaks Bengali.
(f)   Bengalis and Tamilians refuse to share their rooms with each other.
Further, it is necessary for each participant in a room to be able to converse with at least one other participant in the same room, in at least one language.

25. Which of the following combinations of participants in a room will satisfy all conditions for both the rooms?
    (1)   B, C, F   (2)   C, D, F, G   (3)   A, D, E, G   (4)   D, G, C, E

26. What is the total number of various combinations of room-mates possible, which satisfy all the conditions mentioned?
    (1) 2   (2) 3   (3) 4   (4) 5

27. If another participant, H, is to join the group, then he can be placed with any of the following, except
    (1)   B, E and F, if H is a Bengali.   (2)   C, D and G, if H is a Tamilian.
    (3)   B, E and F, if H is a Tamilian.   (4)   A, B and F, if H is a Gujarati.

DIRECTIONS *for Questions 28 and 29:* These questions are based on the data given below.

Three trains – Rajdhani Express, Shataabdi Express and Taj Mahal Express – travel between two stations without stopping anywhere in between. No two trains have the same starting station or the same terminating station or the same travel fare. Also, the following is known about these trains.
    (i)   The fare for the train which travels between Chennai and Pune is Rs.1650.
    (ii)   Taj Mahal Express runs between Delhi and Mumbai.
    (iii) Fare for the train which travels between Bangalore and Agra is Rs.750 less than the fare for Taj Mahal Express.
    (iv) The fare for Rajdhani Express is Rs.150 less than the fare for Taj Mahal Express.

28. What is the fare for Shataabdi Express?
    (1)   Rs.1650   (2)   Rs.1800   (3)   Rs.1050   (4) Cannot be determined

29. Which among the following statements is definitely true?
    (1)   The fare for Shataabdi Express which, travels between Bangalore and Agra is Rs.1800.
    (2)   The fare for Taj Mahal Express, which travels between Delhi and Mumbai is Rs.1050.
    (3)   The fare for Rajdhani Express, which travels between Chennai and Pune is Rs.1650.
    (4)   None of these

DIRECTIONS *for questions 30 and 31:* These questions are based on the data given below.

In a recently held test series consisting of three matches – I, II and III, five players – Sehwag, Ganguly, Tendulkar, Dravid and Laxman, are the top five scoring batsmen, not necessarily in the same order.
(A)   No two players scored the same number of runs in any match.
(B)   Sehwag scored more runs than Ganguly in the 1st and 2nd matches.
(C)   The player who scored the highest runs in the 3rd match scored the least runs in the 1st match.
(D)   Dravid scored more runs than Laxman but less runs than Tendulkar in the 2nd match. Tendulkar scored more runs than Laxman in the 1st match. Laxman scored more runs than Ganguly but less than Dravid in the 3rd match.
(E)   Tendulkar scored the lowest runs in one match and in two matches his position in the decreasing order of the runs scored by the batsmen is same. He was not the top scorer in any of the three matches.

30. Among the given five players, who scored the least number of runs in the 3rd match?
    (1)   Sehwag   (2)   Ganguly   (3)   Tendulkar (4)   Cannot be determined

31. If Tendulkar scored more runs than Ganguly in the 2nd match then who is the second highest scorer in the 1st match?
    (1)   Sehwag   (2)   Laxman   (3)   Dravid   (4)   None of these

DISBURSEMENT OF LOANS BY VARIOUS BANKS FROM 1982 TO 1986
(IN RS. CRORES)

Banks	1982	1983	1984	1985	1986
A	18	23	45	30	70
B	27	33	18	41	37
C	29	29	22	17	11
D	31	16	28	32	43
E	13	19	27	34	42
Total	118	120	140	154	203

32. In which year did the average disbursement of loans record the highest percentage increase over that of the previous year?
(1) 1984   (2) 1986   (3) 1985   (4) 1983

33. In which year and for which bank was the percentage contribution to the total value of loans disbursed for that year the lowest?
(1) C, 1986   (2) B, 1984   (3) C, 1985   (4) A, 1985

34. For a certain scheme, the qualification is that a bank should have consistently achieved a minimum of 20% of the total disbursement of all banks for each of the last four years. Which of the banks qualify as on the year 1986?
(1) A   (2) B   (3) C   (4) None of these

DIRECTIONS *for questions 35 to 37:* Answer these questions on the basis of the information given below.

Each of the following pie charts gives the percentage split up of the total time spent by a certain student towards preparation for CAT2005.
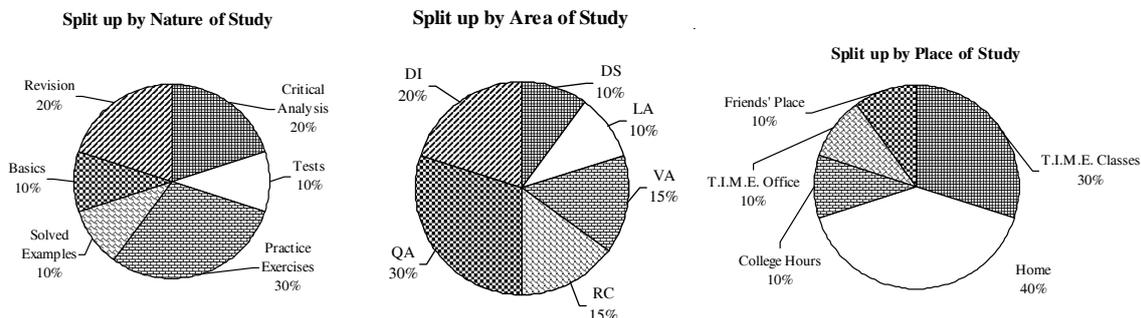
35. If at least 5% of the time spent on each area of study was spent on solved examples of that area, then the time spent on solved examples in any area of study, as a percentage of the total time spent on that area of study, is at most
(1) $21\frac{1}{6}\%$ (2) 30%   (3) $38\frac{1}{3}\%$ (4) 55%

36. The number of areas of study for which the critical analysis was done at friends' place alone is at most
(1) 2   (2) 3   (3) 5   (4) 6

37. If at least 50% of the time spent on the practice exercises done in any area of study is spent at T.I.M.E. classes, then at most what percentage of the total time spent on QA was spent at T.I.M.E. classes?
(1) 10%   (2) 20%   (3) 50%   (4) 100%

DIRECTIONS *for questions 38 to 41:* Answer these questions on the basis of the information given below.

When Munna Bhai joined the university of South Ghatkopar for his M.S., Mr. Irani, his professor, asked him to prove his calibre in a test conducted for the entire class. The class comprised of exactly 10 students. The test contained exactly 10 multiple choice type questions. However, Munna as is always the case, managed to get the correct answer-key for all the 10 questions well before the exam. But in the exam, he wrongly marked exactly one question, on purpose, to avoid raising any suspicion. All the other nine students of the class also formed their respective answer-keys in the following manner. They first obtain the answer-key from one or two of the students, who are called his/her jigris, who already have their answer-keys. If a student has two jigris, then he/she first compares the answer-keys from both the jigris. If the key to any question from both the jigris is identical, it is copied, otherwise it is left blank. If a student has only one jigri, then he/she copies the jigri's keys into his/her copy. However, in the exam, each student intentionally replaced exactly one of the answers, other than a blank, with a wrong answer. It is known that no two students replaced the answers to the same question.

When Mr. Irani finally assessed all the answer-keys, he formulated the following table, which gives the answer-keys that each of the ten students marked for the 10 questions – I through X.

Question No. / Student	I	II	III	IV	V	VI	VII	VIII	IX	X
Arun	b	a	-	b	c	-	-	a	c	b
Chinky	a	a	-	d	c	-	-	-	c	b
Jassi	b	-	d	d	c	b	d	a	d	b
Lucky	b	a	-	d	c	b	-	b	c	b
Munna	b	a	b	d	c	b	d	a	c	b
Niran	b	a	d	d	c	b	d	a	c	b
Praveen	b	a	b	d	c	b	c	a	c	b
Rahul	b	c	d	d	c	b	d	a	c	b
Ritesh	b	a	-	d	s	b	-	-	c	b
Sastry	b	a	d	d	c	a	d	a	c	b

38. Munna is the jigri of
(1) Sastry and Ritesh
(2) Niran and Praveen
(3) Lucky and Rahul
(4) Jassi and Lucky

39. Who among the following is not the jirgri of any of the ten students?
(1) Jassi
(2) Praveen
(3) Lucky
(4) Rahul

40. Who are the jigris of Chinky?
(1) Niran and Rahul
(2) Rahul and Sastry
(3) Sastry and Lucky
(4) Cannot be determined

41. How many questions have choice (*b*) as the correct answer choice?
(1) 2
(2) 3
(3) 4
(4) Cannot be determined

DIRECTIONS *for questions 42 to 44:* Each question is followed by two statements, I and II. Answer each question using the following instructions.

Choose 1 if the question can be answered by using one of the statements alone but not by using the other statement alone.
Choose 2 if the question can be answered by using either of the statements alone.
Choose 3 if the question can be answered by using both statements together but not by either statement alone.
Choose 4 if the question cannot be answered even using both the statements.

42. Among 3 boys – A, B and C – A is standing behind B, who, in turn, is standing behind C. From a collection of 3 black hats and 2 white hats, which is shown to all of them, three hats are chosen at random and placed on their heads. Each boy can see only the colour of the hat/s of the boy/s standing ahead of him. First, A is asked if he can deduce the colour of the hat that he is wearing. After he answers, B is asked the same question and after B answers, C is asked the same question. If it known that each of them answers intelligently, considering all the information that is available, including the answers of all the boys who answered before them, what is the colour of C's hat?
I. A's answer is No.
II. B's answer is No.

43. In the year X – 1, a group of children, A, joins class VIII in a school. In the year X + 1, i.e., when the same class enters class X, another group of children, B, leaves the class. If no other children joined or left the class in between, was the average age of the class just before group A joined it, less than 14 years?
I. The average age of the children in group B in the year X + 1 was 16 and after group B leaves, the average age of the class is less than 16.
II. When group A joined the class, the average age of the class dropped.

44. Four persons are ranked according to their heights and weights. No two persons have the same height or same weight and no person got the same rank in both the rankings. Is the 3rd tallest person heavier than 2nd tallest person

I. The tallest person is heavier than 3rd tallest person.

II. The shortest person is lighter than 2nd tallest person.

DIRECTIONS *for questions 45 to 54:* Read the passages given below and answer the questions that follow.

<center>PASSAGE – I</center>

In the rush to capture first-mover advantage, many start-ups have offered untenably low prices. Because the Internet, the reasoning goes, is the most transparent and efficient of markets, low prices—for both consumers and businesses—outweigh such factors as product benefits, quality and service.

Many incumbents, by contrast, have largely neglected on-line pricing and simply transferred their off-line prices to the Internet. They may have done so in the belief that their brand strength inoculates them against the threat posed by their new competitors. More likely, they felt pressure to establish an on-line presence before they had a chance to weigh the complexities of multi channel pricing.

But on-line customers are neither slaves to prices nor clones of traditional shoppers. Instead, they base their buying decisions on a wide range of factors. Far from being a price destroyer, the Internet can bring new detail to pricing strategy, creating enormous value. But companies must act quickly and rethink their on-line policies before habit and customer expectations make change difficult if not disastrous.

Low-price strategies aren't without foundation. Indeed, of the various reasons to shop on-line, consumers cite price most frequently. But an analysis of consumer click-through behaviour reveals that most buyers do very little cross-shopping. A separate study of on-line shoppers in North America reveals that only 8 percent of Internet users are aggressive bargain hunters. Most of the remainder keep returning to the same sites.

Now, the primary goal of businesses that buy on-line is cutting the total cost of ownership. On its face, this might suggest that they are more likely than retail consumers to shop for the best price. But in on-line business-to-business (B2B) markets too, factors other than price are driving most buyers' choices. In a recent study, only 30 percent of purchasing managers identified lower prices as the key benefit of buying on-line. B2B purchasing managers said that they expected the primary benefits to be lower transaction and search costs—for example, less time required for paperwork—and automated purchasing information that permits them to track their purchases and to make better purchasing decisions. When asked to identify the source of these cost savings, only 14 percent said that they would come from the suppliers' lower profit margins, so buyers clearly recognize the benefit, to both themselves and suppliers, of reduced transaction costs.

Business behaviour confirms such findings. Half of the companies buying through reverse auctions don't choose the cheapest supplier. Also, 87 percent of the buyers that didn't choose the cheapest supplier stayed with their current ones, even at a higher price. Overall, only 15 percent of companies that make purchases over the Internet have even tried reverse auctions.

Neither business-to-consumer (BtoC) price insensitivity nor B2B purchasing behaviour means that on-line suppliers can raise prices indiscriminately. While price may not be the most important factor, it is one of several that consumers weigh before making on-line purchasing decisions. It is critical that prices, both on- and off-line, be competitive so that customers can meet strategic volume and profit objectives. Price changes that appear capricious or, worse, deceptive can cause long-term damage to a company's price proposition.

The Internet gives companies that respect such constraints better information about who their customers are. It also gives these companies the flexibility to set the maximum price customers would be willing to pay and to adjust that price instantly as circumstances change.

All products have a pricing-indifference band: a range of prices within which price changes have little or no impact on customers' willingness to make a purchase. Pricing-indifference bands can range from 17 percent for branded consumer health and beauty products to as little as 0.2 percent for some financial products. A product's location within this band can dramatically affect a company's profits.

Determining the off-line boundaries of these bands is difficult, expensive, and time-consuming. Traditional price sensitivity research into a given product category can cost up to $300,000 and take from six to ten weeks to complete. No wonder only about a quarter of companies have conducted such research. In addition, only categories, such as airlines and other reservation-based industries, with enough price variability to create a statistically significant demand curve can be subjected to historical regression analysis. Market mechanisms define the extremes of a product's price range but offer companies little help in determining how much room there is to maneuver within it.

But on the Internet, measurements of consumer tolerance for different price levels are cheap and instantaneous. If, for example, an e-business wants to test the sales impact of a 3 percent price increase, it might quote the higher price to every 50th visitor to its site. Such tests can also be used to predict volume fluctuations that result from price changes falling outside the pricing-indifference band.

The sales impact of labeling a price as a percentage discount or a limited-quantity offer can be tested in much the same way. Such continual testing of Internet pricing approaches is a low-risk way to develop pricing principles that won't lead companies astray. In a brick-and-mortar store, these tests would be impractical or unaffordable.

Off-line price changes take time. B2B markets may need several months to a year to communicate changes to distributors, to print and send out new price lists, and to implement systemic changes. B2C prices, such as those printed on concert tickets, are set too far in advance to permit revision. On-line pricing allows companies to make instantaneous adjustments and thus to profit from even small fluctuations in market conditions, such as customer demand and competitors' behaviour.

Contrary to the conventional view, companies can sometimes charge more on the Internet, especially when demand fluctuates sharply; Tickets.com has increased revenue for some events by up to 45 percent in this fashion. On-line prices for hot products—from video games to luxury cars to concert tickets—are 17 percent to 45 percent higher than off-line prices because the World Wide Web increases the chances of finding a buyer willing to pay a higher price. And as products near the end of their life cycle, companies can test the consumer's willingness to continue to pay the established price. Products for which there is little demand fare better on-line as well because the consumer base is often larger on the Internet.

In addition, the Internet allows companies to pinpoint their industry's supply-and-demand situation and to revise their pricing structure accordingly. For example, when capacity utilization is high, order lead times short, or inventory levels low, prices can be raised temporarily. When demand sags, a company might try auctions, lower prices, or targeted short-term promotions. The ability to react quickly and decisively is essential. One electronics supplier realized an estimated $25 million increase in profits by adjusting prices faster than its competitors did after an overseas production shortfall led to temporary shortages of a key component.

It is well understood that some consumers will pay more than others for a product because they attach great value to the benefits it offers. But in the off-line world, companies have trouble tailoring prices to customer segments—particularly retail segments—either because those companies cannot identify which customers to target before a purchase or because it is difficult to customize offerings. Usually, visitors entering a store are a statistical mystery. The sales staff has no idea what their buying histories are, what combination of price and benefits would be likely to trigger a purchase, whether they generally buy high-priced or discounted items, and whether some kind of incentive would turn their browsing into sales. The mystery is cleared up on the Internet. On-line companies can quickly segment their customers by drawing upon multiple sources of information, from clickstream data on the current on-line session to customer buying histories tracked in databases or stored in "cookies" on customers' computers.

Once a retailer can identify an on-line customer's segment, that retailer can immediately offer a segment-specific price or promotion. Ford, for example, expects that on-line customer information will significantly improve the yield from its nearly $10 billion in annual expenditures on promotional pricing. From time to time over the years, the automaker has offered discount financing and cash-back programmes to all customers. But the Internet, by permitting Ford to track an individual customer's history and behaviour, should put an end to such wasteful blanket offers.

The Internet also makes it possible to identify customers willing to pay a price premium. An on-line electronic-components company, for example, relies on the purchase histories of its customers to determine if they are core customers, who buy a majority of their components from the company, or "fill-in" customers, who buy a majority of their components from its competitors and come to the company only in emergencies. Through segmented on-line pricing, this supplier regularly charges its fill-in customers up to a 20 percent premium on the price its core customers pay. Fill-in customers gladly pay that premium for an assured supply in crises.

45. As understood from the passage, many companies seem to have neglected their online pricing policy due to their belief that
(1) the strength of their brands is sufficient to ward off competitors.
(2) price is not an important factor contributing to sales in the online medium.
(3) online pricing is not a useful technique as there is no difference between online and offline selling.
(4) establishing their online presence is more important than waiting for concrete pricing policies to emerge.

46. According to the author, the term "price indifference band" refers to that range of prices
(1) within which price changes have little or no impact on consumers' willingness to buy.
(2) within which the profits of the selling company is dramatically affected.
(3) bounded by the online price on one side and the off line price on the other.
(4) determined by the way market mechanism works.

47. Internet benefits online sellers in one of the following ways :
(1) The Internet is the fastest mode of selling goods and services all over the world.
(2) Measurements of consumer tolerance for different price levels are cheap and instantaneous.
(3) Test marketing of new products is much easier on the Internet as against the physical world.
(4) The price indifference band for a product can be calculated more accurately.

48. In which case can companies charge more on the Internet than offline?
(1) When demand fluctuates sharply
(2) When demand is relatively stable
(3) When there is scarcity of supply
(4) When the market for the product is not fully developed

49. According to the author, what are the primary benefits expected by B2B purchasing managers?
(1) Lower profit margins for the suppliers who sell their products online.
(2) Lower transaction and search costs.
(3) Linking up of the entire supply chain, both forward as well as backward.
(4) Creating a large market for intermediate/semi finished products.

We had moved to a little cottage on Arkley Lane, very close to my parent's home. Distance is relative. My parents stayed aloof. They did not visit. On my birthday, three months later, my father rang up to wish me. It was the first contact with them since the baby. They were extending a hand out to us again. I took it. I needed to. My father asked me what I wanted as a birthday present. "To see you", I cried, "Come tonight", he said in a choked voice.

I told Mustafa. He happily agreed to visit my parents. We got there. As we climbed the stairs to the upper section of the house, we crossed Adila. For me it signified my ascent and her descent (My younger sister Adila, at one point of time, had an illicit affair with Mustafa). Mustafa had no choice. He followed me up. Stuttering a little at first, family life began again and gradually became more coherent. Mustafa's obsession with me took perverse forms. He was visibly jealous of my relationship with my parents. He would never let me relax. Whenever he saw me laughing or joking with them, he would go into one of his dark moods. He would then find a pretext for an argument which would lead to violence. He had an amazing method of breaking my will. He would put me in the dock and impute motives which had never ever occurred to me.

The spiral of allegations would exhaust me. It would begin as soon as we entered our room at night and continue till daylight seeped through our curtains. Intermittently, he would make a point with his fists or with his shoes. He would pick up my own words and then hurl them at me till I lost all thread of logic. I would beg him to stop. I would apologise with folded hands. I just wanted it to stop. Sensing victory, he would continue the questioning and interrogation.

I tried to avoid contradicting him, just to escape from this inquisition. He knew that I had an independent spirit. He seemed to enjoy fencing. I realised gradually, that our relationship was becoming just the arguments. Mustafa communicated with me through his fights. These nocturnal verbal skirmishes were curbing my independence. They also served to isolate me from my immediate surroundings. I was building on shifting sand.

I had to bear the total responsibility of camouflaging our relationship. I lived a constant lie. I believed that bringing out my humiliation into the open would be a slur on me. I felt that he had the power to make people point at me as the guilty party and that he would emerge smelling of roses. A male dominated society survives because of gender unity. A woman is vulnerable. Anything that goes wrong behind the four walls of a home can always be manipulated by the man to cast his wife in a bad light. I resolved to keep the combination of my mind's safe to myself.

My two children became my world. I had to protect them from their father. He loved them and played with them, but only upto a point. The moment they were distracted or failed to respond to his kitchi-koos, he would become agitated. He could not stand them crying. I trained my children not to cry. It was like trying to enclose an ocean in your palms. I did this by anticipating their needs. I was constantly on my marks, getting set to administer to their baby wants. Like a sprinter consigned to a marathon, I was exhausted by the end of the day.

He needed the children as props for his paternal instincts. Once he was in the bathroom with Naseeba. While he was shaving, he deposited my one and a half year old child in the bubble bath. The little girl splashed about for a while till the water was no longer a novelty and the bubbles ceased to fascinate her.

She began to cry. I rushed into the bathroom to retrieve her. "I better take her out. She is tired". "No", he said, razor in hand. "Leave her there". "But she is tired". "You can't take her out. I have ordered her to stay there". "Ordered? Mustafa but she is only a year and a half old". "So what? She better learn to stay there till I decide".

Naseeba took the harsh decree badly. She wailed. I stood there desperate and very flustered. I could sense his anger. How dare his child disobey his orders? I tried my best to pacify the confused child who voted with her tonsils. I tried to divert her attention by splashing her with the water, but the wailing baby had a mind of her own. Mustafa turned menacingly. My heart sank. He caught hold of the baby and submerged her head under the water. Tiny bubbles floated up. He held her under. He looked determined to teach her a lesson. I begged him to let Naseeba out. He held her in this manner for what seemed like an eternity. Then as he felt the struggle go out of the child, he released her. I pulled her out. She coughed and spluttered. Her eyes bulged in fear. My baby was traumatised but safe. He stood there watching. He looked so evil. I ran out.

Naseeba developed aquaphobia. It became an ordeal to bathe her. The bathroom became a punishment room in her little mind.Her Pavlovian response to bath-time was to scream out of fear. It took a long while to get her over this fear of drowning.

After this incident, I was afraid to let Mustafa take the children out on his own. Little walks in the park might suddenly turn into excursions to hell. His 'Jekyl and Hyde' personality could not be trusted. He turned this personality flaw into an advantage against me. He kept me enclosed. I always felt that I was under surveillance. He was like Orwell's Big Brother. He watched even at a distance. When you are conscious of being observed you behave strangely. Your natural behaviour looks stagy and stilted. Mustafa enjoyed watching me squirm.

He was away in America. He would call me up very early in the morning, quite oblivious of the time difference. If he found me groggy he would be upset. He expected me to be awake and waiting for his call. "Are you awake"? "Yes". "You sound sleepy. You are telling a lie". Advantage-Mustafa. He began to abuse me-long distance. I was expected to do things to please him when he was not around. I was supposed to miss him.

50. The word "ascent" implies
(1) the legal and moral recognition bestowed on one's lawfully wedded wife.
(2) the protagonist's achievements in life.
(3) the superiority complex exhibited by the protagonist.
(4) the moral victory of truth.

51. Which of the following can we infer regarding the author?
(1) She strongly believes in the institution of marriage.
(2) She loves her family very much.
(3) She always tries to confront any problem head on.
(4) She feels that her independent streak is what irritates Mustafa.

52. The relationship between her parents and her family can at best be explained as
(1) estranged.   (2) strained.   (3) fulfilling.   (4) perfect.

53. The statement, "I resolved to keep the combination of my mind's safe to myself," implies that the author
(1) was apprehensive about exposing her true feelings.
(2) had decided not to reveal her emotional turmoil to the outside world.
(3) had decided to sort out her problems on her own.
(4) did not want sympathy from the society.

54. The term "Pavlovian response" as per the passage implies
(1) learnt behaviour towards a manipulated stimulus.
(2) anticipation of pain.
(3) response to a stimulus.
(4) discomfort due to the fear of water.

DIRECTIONS *for questions 55 to 59:* Each question has a word used in four different sentences. Select the option in which the usage is INCORRECT or INAPPROPRIATE.

55. SQUEEZE

(1)	I had to squeeze my way through the crowd to reach the dias.
(2)	Maids seldom squeeze the water from clothes before drying them.
(3)	Mather squeezed the flattened tube to see if she could get some paste out of it.
(4)	He gave my hand a squeeze to reassure me.

56. TASTE

(1)	With greater exposure, people's tastes are changing.
(2)	The absence of salt robbed the dish of all taste.
(3)	Rajan's joke were in a poor taste and reflected his chauvinistic attitude.
(4)	For the first time, the students tasted freedeom from adult control.

57. MARKET

(1)	The government has removed all restrictions and fire arms are now available in the open market.
(2)	With liberalization a host of new products are on the market.
(3)	There is always a market for quality services.
(4)	After the issue of shares, the company hopes to increase its share of the market.

58. ROUND

(1)	That is the latest joke doing the rounds on the net.
(2)	The team had to work round the clock to complete the project on time.
(3)	Fences built round the property did not keep intruders out.
(4)	The day before the polling, the police rounded all the antisocail elements likely to cause trouble.

59. WORK

(1)	People in show busniness need to work regularly to keep fit.
(2)	Don't work yourself up over trifles, remember you have blood pressure.
(3)	Arun keeps beating about the bush and never works round to what he wants to say.
(4)	You can work miracles if you put your heart and soul into what you are doing.

DIRECTIONS *for questions 60 to 63:* Each sentence has a missing part. From the options given choose the most appropriate one to make up the missing part.

60. The North East _____ would create a surge of employment and infrastructure development in addition to improving connectivity.
(1) where the creation of more airports and consequently more small flights across connecting people
(2) where the creation of more airports and consequently more and flights across to connect people
(3) is where the creation of more airports and consequently more small flights across to connect people
(4) is where the creation of more airports and consequently more small flights across connecting people

61. The action against three unruly congress legislators _____ where the speaker is unable to control violent outbursts.
  (1) who are handed a penalty of Rs 20,000 each could become a healthy precedent to other houses
  (2) who have been handed a penalty of Rs 20,000 each could become a healthy precedent for other houses
  (3) who are handed a penalty of Rs 20,000 each could become a healthy precedent for other houses
  (4) who have been handed a penalty of Rs 20,000 each could become a healthy precedent to other houses

62. The haste with which the police jumped to conclusions that were lapped up by a less than responsible and sensation hungry media _____.
  (1) really portrays a prejudiced mindset, one which causes members of the minority community to be deemed suspect consistently
  (2) really portrays a prejudiced mindset, which cause members of the minority community to be consistently deemed suspect
  (3) really portrays a prejudiced mindset, which cause members of the minority community to be deemed suspect consistently
  (4) really portrays a prejudiced mindset, one which causes members of the minority community to be consistently deemed suspect

63. The party _____ now offers 5000 acres of prime land to MNC for shopping malls, residential complexes, food, health and IT parks.
  (1) that had made solid inroads in the rural belt by embracing landless peasants
  (2) had made solid inroads in the rural belt by embracing landless peasants
  (3) that made solid inroads of the rural belt by embracing landless peasants
  (4) making solid inroads of the rural belt by embracing landless peasants

DIRECTIONS *for questions 64 to 67:* Identify the incorrect sentecne or sentences.

64. A. There is an ever increasing number of foreign interns.
  B. Many are in India to study globalisation first hand.
  C. This is often not possible in China.
  D. Unlike India, English is not widely spoken there.
  (1) Only A   (2) Only D   (3) A and B   (4) C and D

65. A. Think of your favourite scent, say the fragrance of jasmine.
  B. Now try to describe that smell.
  C. Odours are tough to capture with words.
  D. But they are linked indelibly with memories.
  (1) Only A   (2) Only C   (3) C and D   (4) A and B

66. A. The key to a successful business is good customer relations.
  B. But the customer doesn't always keep his end of the bargain.
  C. 'Would you like a basket?' an employee asked a woman struggling with an armful of item.
  D. 'Don't you think I've got enough to carry?' the woman shot back.
  (1) B and C   (2) A and C   (3) A, C and D   (4) A, B, C, D

67. A. The best way to succeed in your career is enjoy what you do.
  B. From time to time analyse this aspect.
  C. Look for what truly holds your attention.
  D. Think of what originally attracted you to your line of work.
  (1) A and B   (2) C and D   (3) B and C   (4) A and D

DIRECTIONS *for questions 68 and 69:* Four alternative summaries are given below each text Choose the option that best captures the essence of the original.

68. Of late, Karnataka in general and Bangalore in particular, have been in the news, mostly for the wrong reasons. Notwithstanding the good and pleasant people of the region, unfortunately, Karnataka has figured among the four most corrupt states of a country, that itselft ranks among the most corrupt and the most difficult of countries in the world to do business in - a distinction both Karnataka and India could well do without.

And Bangalore has been attracting flak from the industry for its crumbling infrastructure, its woeful power situation, its pathetic and narrow roads, the time it takes to commute the shortest of distances, the time it takes to build the shortest of flyovers, the clogged drainage, haywire traffic, absent sidewalks, and open sewers, have all gone to wrinkle the noses of not just the IT czars as widely reported in the press, but of the common man as well - a fact much less reported.
  (1) Both Karnataka and India could do without the label as the most corrupt state and country. Bangalore has been further criticised for its infrastructure which is breaking down.
  (2) Karnataka is among the four most corrupt states of India, which is also ranked as corrupt and the most difficult to do business in. Bangalore has been criticised for its poor infrastructure not only by the IT czars but by the common man as well.
  (3) Bangalore, Karnataka and India have been criticized for corruption, poor infrastructure and being difficult to do business in despite the people being good and pleasant. This has been the case with not only the IT czar but the comman man also.
  (4) Both Karnataka and Bangalore have been in news. The state is among the four in the country which have traditionally been held to be corrupt and difficult to do business in Bangalore too has been the butt of critics for its poor power situation, non-existent roads clogged drains open sewers etc.

69. For decades asbestos has been known to cause cancer in those who inhale its tiny fibres. That has triggered restrictions on its use and, ultimately, thousands of laswsuits in the US and elsewhere. But in Japan, asbestos barely cracked the headlines over the years, let alone the court system. It was only last October that Tokyo finally banned asbestos in all but a handful of products - 14 years after similar action int he US. Even then the government implemented no measures to prevent asbestos - once widely used as fire-retardant insulation - from being released into the air as older buildings were renovated or torn down.

Today the carcinogen is suddenly big news from Kyushu to Hokkaido. Recently farm machinery maker Kubota Corp acknowledged, in response to inquiries from the daily 'Mainichi Shimbun', that since 1978, 79 of its workers had died after inhaling asbestos fibres. Within days dozens of companies reported previously undisclosed fatalities blamed on asbestos. Now the government is scrambling to explain why it paid scant attention to the issue for so long. "We should have banned asbestos sooner," health, labour, and welfatre minister Hidehisa Otsuji told a parliamentary committee recently.

(1) Inhalation of asbestos fibre is known to be carcinogenous but it was banned in Japan only recently. Even then no steps were taken against its release into the air. It has become news after several companies blamed its inhalation as the reason for the death of some of their workers.

(2) Lawsuits in the US have shown asbestos to be carcinogenous but Japan banned it only when several companies acknowledged that the inhalation of asbestos fibre was the reason for the death of some of their workers. The health minister felt it should have been done earlier.

(3) Asbestos can cause cancer which is why it is banned in the US and elsewhere. But Japan woke up to this reality only after the death of workers in several asbestos company.

(4) Asbestos became big news in Japan recently when several companies thought their workers had died and welfare minister felt the step should have been taken when the US and other countries banned asbestos production.

DIRECTIONS *for questions 70 to 74:* Fill in the blanks choosing the word that is most appropriate in the context of the passage.

Just as economic liberalization is freeing the Indian city financially, so is local self-government (panchayatraj) **70** the Indian village politically. While we keep vigorously debating economic reforms almost no one speaks or writes about this far reaching political reform. It may be because the village has **71** in our urban middle class imagination, and has become a remote memory. This political revolution began in 1993 when the seventy third amendment to the constitution came into force. We are witnessing real **72** of power and seem to be returning to the India of the centuries - to the old India of autonomous villages. When a panchayat undertakes a poverty project, the village assembly meets again to **73** the panchayat accounts. Overall it is a mixed record. In many elections the fendal forces of the village and caste have **74** their power. Where voluntary organization are present, panchayats are working better. The important thing is that a beginning has been made.

70. (1) discharging   (2) ensalving   (3) emancipating   (4) emasculating

71. (1) rebounded   (2) receded   (3) abated   (4) surged

72. (1) surrender   (2) dichotomy   (3) dialectic   (4) devolution

73. (1) ratify   (2) countersign   (3) rationalize   (4) rebuke

74. (1) integrated   (2) consolidated   (3) consigned   (4) conscripted