T.I.M.E.
Triumphant Institute of
Management Education Pvt. Ltd.

AIM CAT
(All-India Mock CAT)

(Test Ref.: AIMCAT1215)

INSTRUCTIONS

1. Read the instructions given at the beginning/end of a section or group of questions very carefully.

2. The total time for the test is **135 minutes**. You may apportion this time among various sections as you wish.

3. **Pattern of the test and marking scheme**

Section	Questions	Number of questions	Marks per question	Negative marks
Quantitative Ability	1 – 20	20	3	1
Verbal Ability	21 – 40	20	3	1
Logic & Data Interpretation	41 – 60	20	3	1
Total	–	60	–	–

4. You are expected to show your competence in all the three sections.

5. Each wrong answer will attract a penalty of one mark.

6. There are no negative marks for unattempted questions.

7. You can navigate to any question of your choice.

8. During the test, you can mark questions for review and return to them at a convenient time.

9. An answer once marked can be changed any number of times before submitting the test. However the last marked answer will be considered as the final answer.

10. Do not carry calculators, slide rules or any other calculating devices. Do not carry any other papers with you except your HALL TICKET. Rough papers for calculations will be provided.

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INSTRUCTIONS

1. Read the instructions given at the beginning/end of each section or at the beginning of a group of questions very carefully.

2. This test has three sections with 60 questions – 20, 20, and 20 respectively in the first, second and third sections. The TOTAL TIME available for the paper is **135 minutes**. The student may apportion this time among various sections as he/she wishes. However, the student is expected to show his/her competence in all the three sections.

3. All questions carry three marks each. Each wrong answer will attract a penalty of one mark.

SECTION – I
Number of Questions = 20

DIRECTIONS *for questions 1 to 20:* Answer the questions independently of each other.

1. In a race A beats B by 40 m and C by 60 m. If B's speed is 40% higher than that of C, then find the distance over which the race was run (in metres)?
(1) 90 (2) 110 (3) 140 (4) 220

2. If $S = \frac{1}{2}+\frac{1}{12}+\frac{1}{30}+\frac{1}{56}+....+\frac{1}{4032}$, then which of the following statements is true?
(1) $S = \frac{1}{17}+\frac{1}{18}+\frac{1}{19}+...+\frac{1}{64}$
(2) $S = \frac{1}{33}+\frac{1}{34}+\frac{1}{35}+....\frac{1}{64}$
(3) $S = \frac{1}{16}+\frac{1}{17}+\frac{1}{18}+....\frac{1}{64}$
(4) None of these

3. If $f(x) = \frac{25^x}{25^x+5}$, then find the value of $f(\frac{1}{99}) + f(\frac{2}{99}) + ------ + f(\frac{98}{99})$?
(1) 49 (2) 48 (3) 99 (4) 1

4. A series is defined such that $\frac{C_{n+2}+C_{n+1}}{2} = C_{n+1}+\frac{C_n}{2}$ $(n \geq 1)$, where C_i is the ith term. Given $C_2 = C_1 = 1$. If C_k is prime, then
(1) k must be prime
(2) k = 4
(3) k must be a perfect square
(4) Either (1) or (2)

5. A open chain consists of 33 diamonds with the diamond in the middle being the largest and the best. Starting from the left end, each successive diamond till the largest diamond costs 75 euros more than the previous one and starting from the right end, each successive diamond till the largest diamond costs 175 euros more than the previous one. Find the value of the largest diamond (in euros) if the total value of diamonds on the chain is 1,64,000 euros.
(1) 5000 (2) 4500 (3) 4000 (4) 6000

6. f(x) and g(x) are two quadratic functions such that f(1) – g(1) = 1, f(2) – g(2) = 2 and f(3) – g(3) = 5. Find the value of f(4) – g(4)?
(1) 8 (2) 9
(3) 10 (4) Cannot be determined

7. Water flows at a speed of 2 cm/sec from a pipe of square cross-section of side 3 cm into an empty tank and fills the entire tank in 30 minutes in the absence of any leaks. A leak at the bottom of the tank can empty a full tank at the rate of 6 cm^3/sec. In how much time does the empty tank get filled in the presence of the leak?
(1) 35 minutes (2) 45 minutes
(3) 40 minutes (4) 25 minutes

8. The number of common roots for the equations $y = x^3 + 5x^2 + 6x + 8$ and $y = x^3 + 4x^2 + 10x + 4$ is
(1) 0 (2) 1 (3) 2 (4) 3

9. A real valued function f(x) is such that $f(x + y) = f(x) + f(y) + 6xy + 3$ for all real values of x and y. Find the value of $f(3)$ if $f(-1) = 6$.
(1) 0 (2) –6 (3) 6 (4) –3

10. The remainder obtained when 12345678987654321 is divided by 1001 is
(1) 10 (2) 309 (3) 692 (4) 995

11. The sum of two natural numbers when added to their LCM, gives a total of 143. How many such pairs of numbers exist?
(1) 6 (2) 8 (3) 9 (4) 12

12. In a triangle ABC, if P_a, P_b and P_c, represent the perpendiculars drawn to sides, BC, AC, and AB respectively such that $\frac{P_a}{P_c} = \frac{P_b - P_a}{P_c - P_b}$, then which of the following relations is true regarding the sides a, b, and c of the triangle.
(1) $a^2 = bc$ (2) $b^2 = ac$
(3) 2b = a + c (4) b(a + c) = 2ac

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13. If the sum of four consecutive positive odd integers is a perfect cube, which of the following can be one of the numbers?
(1) 253 (2) 133 (3) 49 (4) 343

14. If a, b, c are real, $ac > 0$ and $cx^2 - ax + b = 0$, which of the following is true about the roots of the equation given that $\frac{2b}{a} - \frac{a}{2c} < 0$?
(1) If one of the roots is rational, the other root is also rational.
(2) If one of the roots is of the form $a + \sqrt{b}$ then the other root must be of the form $a - \sqrt{b}$.
(3) The equation has no real roots.
(4) If one of the roots is rational the other root can be irrational.

15. If the highest power of 20 in n! is x, then x can take all the following values except
(1) 27 (2) 28 (3) 30 (4) 31

16. Sita starts at 9 a.m. from A towards B, which is 24 km away from A, at a constant speed of 6 km/hr while Gita starts at 10 a.m. from B towards A at a constant speed of 12 km/hr. When they reach their respective ends, they turn back and start walking in the opposite direction without any change in their speeds. In this manner, they travel back and forth between A and B.
How far is Sita from B, when she meets Gita for the second time?
(1) 6 km (2) 12 km (3) 8 km (4) 4 km

17. *The question below is followed by some information and two statements I and II.*

Is the side of the cube an odd integer?

Several unit cubes are used to construct a larger cube. The large cube is now cut perpendicular to one of its faces along both the diagonals of that face. K is a natural number.
I. The total number of unit cubes cut is $2k^2 + 3k + 1$
II. The total number of unit cubes cut is $72K^2$

Which of the two statements can be used to answer the above the question?
(1) Only I (2) Only II
(3) Either I or II (4) Neither I nor II

18. A beaker contained V litres of a mixture of milk and water with milk and water ratio of 3 : 2. The volume of liquid in the mixture was increased by 60% by adding water. Next 38.4 litres of the solution in the beaker was replaced by water. If the final ratio of milk and water in the beaker is 3 : 7, then find the value of V. (in litres)
(1) 80 (2) 96 (3) 120 (4) 192

19. How many nine-digit numbers exist such that when a single digit is crossed out, a given telephone number, comprising eight digits is obtained?
(1) 90 (2) 89 (3) 72 (4) 99

20. Along the periphery of a circular park of radius 80 m, are located four Gulmohar trees at points P, Q, R, S. Supandi, a regular visitor to the park, notices that the line joining points P and R perpendicularly intersects the line joining point Q and S at point O. Find $PS^2 + QR^2$.
(1) 6400 m^2 (2) 25600 m^2
(3) 12800 m^2 (4) Cannot be determined

SECTION – II
Number of Questions = 20

DIRECTIONS *for questions 21 to 23:* The sentences given in each of the following questions (when properly sequenced), form a coherent paragraph. Each sentence is labelled with a letter. From among the four choices given below each question, choose the most logical order of sentences that constructs a coherent paragraph.

21. (a) It is to this powerful libertarian mid-19th century principle that we owe the idea that free speech cannot be proscribed merely because we find it disagreeable.
(b) There is no such nexus in Ms. Roy's statement on Kashmir which is shaped around the theme of gross human rights violations.
(c) In his classic defence of free speech, On Liberty, John Stuart Mill laid down what is known as the harm principle.
(d) Curbs may be imposed only if such expression constitutes a direct, explicit, and unequivocal incitement to violence.
(e) It postulates that the only justification for silencing a person against his will is to prevent him from causing harm to others.
(1) a d b e c (2) c b d e a
(3) c d b a e (4) c e a d b

22. (a) The true accomplishment of Ensemble doesn't lie in merely developing games.
(b) Over two years have passed since the shutting down of Ensemble Studios, one of the industry's most accomplished developers of real time strategy games.
(c) They also gave us Halo Wars, a console RTS that utilized intuitive controls to create a strategy gaming experience on the Xbox 360 – something that could previously only be enjoyed by PC gamers.
(d) It lies in the fact that they are able to do it so that everyone can enjoy them – be it hardcore or casual players.
(e) Ensemble was responsible for a trilogy of highly successful Age of Empires titles, various expansion packs and age of mythology.
(1) b a d e c (2) b e c a d
(3) e a d c b (4) a d e c b

23. (a) It provided an ideal forum for 27 major players, though no consensus was reached on how to deal with terrorism.
(b) The ARF had no hesitation in condemning terrorism and endorsing Jakarta's appeal for increased intelligence sharing.

(c) The Phuket meeting of the Asean Regional Forum (ARF), the security platform of the Association of South East Asian Nations, was dominated by informal discussion on terrorism.
(d) The ARF came out with a vision statement that called for increased cooperation to promote an effective security partnership among the participants.
(e) With the United States and the European Union joining in the dialogue, the deliberation did acquire an international significance.

(1) c a e d b (2) c e d a b
(3) d a c e b (4) a e b a c

DIRECTIONS *for questions 24 to 26:* Read the following passage and answer the questions that follow it.

At the neurological level, cultivating a competence means extinguishing the old habit as the brain's automatic response and replacing it with the new one. The final stage of mastering a competence comes at the point when the old habit loses its status as the default response and the new one takes its place. At that point, the behaviour change has stabilized, making a relapse into the old habit unlikely.

Generally, underlying deep attitudes and related values are harder to change than work habits. For example, an ethnic stereotype is less readily altered than what a person says and does in the presence of someone from that group. Motives like the need for achievement and personality traits like affability can be upgraded or modified, but the process is lengthy. So, too, with building underlying capacities like self-awareness, managing distressing emotions, empathy, and social skills.

Beyond the complexity of the competence being learned, the distance from the person's baseline behaviour to the new matters immensely. For people who are already fairly empathic, learning to give performance feedback artfully or to attune themselves to customers' needs may come quite easily, since these competences represent specific applications of a capability they already have. But for those who struggle to empathize, this mastery requires more determined and lengthy effort.

Training programmes that offer people a chance to practise the desired competence through well-focused simulations, games, role-playing, and other such methods can offer a strong beginning for practice. But with more complicated simulated job tasks, computerized business games, role-playing, team problem-solving exercises, and large-scale simulations of an entire organizational reality, the results tend to be mixed.

It is often unclear precisely what skills such simulations are meant to cultivate; there typically is little or no attention paid to exactly what competencies are being practised. Moreover, merely taking part in a game or an exercise is not the same as learning. The overall recommendation for such simulations and games is that they be carefully planned, focus on specific competencies that are clearly described to participants, and end with a debriefing of the experience. They should also be used in conjunction with (rather than as a replacement for) coaching and feedback, reinforcement, and on-the-job practice.

Computer-aided instruction, a current vogue in training, has limits when it comes to offering practice for emotional competence. While it has real promise in terms of individualized instruction, self-pacing, private opportunities for rehearsal and practice, immediate feedback on progress and remedial assistance, and the like, computer-aided techniques are generally better suited for training in technical skills than for developing personal and interpersonal capabilities.

"People say you can sit at your computer, assess yourself, and find out how to develop a competency," observes Richard Boyatzis, of Case Western Reserve University. "But you can't do this without relationships – you can't learn this in isolation."

24. Which of the following significantly determines the prowess for acquiring a new competence?
(1) The complicatedness of the competence to be learnt and the sources of such learning.
(2) The usefulness of the competence to be learnt and the nature of team mates.
(3) A person's natural qualities and the values estimated as high by the learner.
(4) The intricacy of the competence and the gap between the possessed and desired level of competence

25. The use of technology for training in competence such as emotional intelligence is, according to the author,
(1) counterproductive as it makes the trainees more like machines.
(2) useful as long as it is coupled with programmes involving human contact.
(3) perfectly suited especially in the modern work environment.
(4) highly expensive and hence unsuited for organizations.

26. Training programmes that are meant to develop competencies such as business games, role-playing etc. do not unfailingly lead to desired objectives because
(1) they are ill designed.
(2) people taking part in them are not enthusiastic about the programmes.
(3) the duration of the programmes is usually short.
(4) of lack of clarity of the desired goals.

DIRECTIONS *for questions 27 to 29:* In each question, there are five sentences or parts of sentences that form a paragraph. Identify the sentence(s) or part(s) of sentence(s) that is/are correct in terms of grammar and usage. Then, choose the **most appropriate** option.

27. a. One way to celebrate Darwin's birthday is contemplating how evolutionary studies
b. can achieve broader adoption in secondary and higher education.
c. Natural selection and the complementary idea of how genes, individuals and species change
d. over time should be as much part of developing critical
e. thinking skills as deductive reasoning and study of ethics.
(1) a, b and d (2) a, d and c
(3) b and c (4) d and e

28. a. The psychological pressure looks well orchestrated and is being well
b. executed, though it would gain even great strength if American intelligence
c. could lead the inspectors to another damning evidence.
d. Such knowledge may be being held back to disclose at a time when war
e. could plausibly be launched at a moments notice and thus when the dictator would have no room to wriggle.
(1) a, c and e (2) Only a
(3) b and d (4) c, d and e

29. a. Digital technologies are not only making it easier to copy all sorts of works,
b. but also reducing sharply the costs of creating or distributing them,
c. and also reducing the required incentives. The flood of free
d. content on the internet has showed that most creators do not
e. need incentives that stretch across generations.
(1) a and e (2) b, d and e
(3) b, c and d (4) b and e

DIRECTIONS *for questions 30 to 32:* Read the following passage and answer the questions that follow it.

The rules for work are changing. We are being judged by a new yardstick: not just by how smart we are, or by our training and expertise, but also by how well we handle ourselves and each other. This yardstick is increasingly applied in choosing who will be hired and who will not, who will be let go and who retained, who passed over and who promoted.

The new rules predict who is most likely to become a star performer and who is most prone to derailing. And, no matter what field we work in currently, they measure the traits that are crucial to our marketability for future jobs.

These rules have little to do with what we were told was important in school; academic abilities are largely irrelevant to this standard. The new measure takes for granted having enough intellectual ability and technical knowhow to do our jobs; it focuses instead on personal qualities, such as initiative and empathy, adaptability and persuasiveness.

This is no passing fad, nor just the management nostrum of the moment. The data that argue for taking it seriously are based on studies of tens of thousands of working people, in callings of every kind. The research distills with unprecedented precision which qualities mark a star performer. And it demonstrates which human abilities make up the greater part of the ingredients for excellence at work most especially for leadership.

If you work in a large organization, even now you are probably being evaluated in terms of these capabilities, though you may not know it. If you are applying for a job, you are likely to be scrutinized through this lens, though, again, no one will tell you so explicitly. Whatever your job, understanding how to cultivate these capabilities can be essential for success in your career.

If you are part of a management team, you need to consider whether your organization fosters these competencies or discourages them. To the degree your organizational climate nourishes these competencies, your organization will be more effective and productive. You will maximize your group's intelligence, the synergistic interaction of every person's best talents.

If you work for a small organization or for yourself, your ability to perform at peak depends to a very great extent on your having these abilities – though almost certainly you were never taught them in school. Even so, your career will depend, to a greater or lesser extent, on how well you have mastered these capacities.

In a time with no guarantees of job security, when the very concept of a "job" is rapidly being replaced by "portable skills," these are prime qualities that make and keep us employable. Talked about loosely for decades under a variety of names, from "character" and "personality" to "soft skills" and "competence," there is at last a more precise understanding of these human talents, and a new name for them: emotional intelligence.

30. Which of the following can be considered to be the essence of the passage?
(1) Organizations depend upon the competencies of individual employees for their success.
(2) The teaching in schools is totally irrelevant to the organizational climate at the work place.
(3) One who is incapable of handling oneself cannot handle others efficiently.
(4) Emotional quotient rather than intelligence quotient is considered more important for employees today.

31. According to the author, social competencies of individuals in an organization lead to
(1) a better working atmosphere.
(2) a pooling of individual competencies.
(3) solutions to problems related to human interactions.
(4) a better image of the organization.

32. According to the author, which of the following is not taught in schools?
(1) Perseverance at work, in any job
(2) How organizations function now-a-days
(3) Leadership qualities
(4) Effective communication skills

DIRECTIONS *for questions 33 to 35:* There are two blanks in each of the following sentences. From the pairs of words that follow them, choose the pair that fills the blanks most appropriately.

33. The beaver has long been _____, along with the bee and the ant, as a paragon of intelligence and industry, but most of the _____ are untrue.
(1) exulted . . . laments
(2) exalted . . . anecdotes
(3) belittled . . . tales
(4) arraigned . . . onuses

34. The mountains that rise from these _____ plains are _____ green – but with scrub and thorn, seldom with grass; their harsh skylines are almost constantly veiled in curtains of intense heat.
(1) innocuous . . . duplicitously
(2) impervious . . . deceitfully
(3) impoverished . . . beguilingly
(4) impecunious . . . salubriously

35. No exact statistics exist on the _____ killing of innocent animals, but it is _____ an important factor in the deaths of bears, foxes and other animals.
(1) inadvertent . . . undoubtedly
(2) blithesome . . . iridescently
(3) comradely . . . contentiously
(4) unctuous . . . tenuously

DIRECTIONS *for questions 36 to 38:* Read the following passage and answer the questions that follow it.

In the financial life of every culture built upon faulty monetary policy, there are points at which the thin thread of economic faith; the thread that ties the entire failing system together, the thread made tangible by the hopes (and sometimes ignorance) of the general populace, finally snaps. From Ancient Rome, to Weimar Germany, to Argentina, to modern day America, no society fuelled by unsustainable debt and fiat inflation can duck the 'Fiscal Reaper' for very long. The U.S. alone has survived since the early 1970s (after Nixon removed the last vestiges of the gold standard) on nothing but questionable credit practices and baseless optimism, but there is a limit to the power of fantasy. This is a fact that most mainstream financial analysts and some in the American public refuse to grasp. Mere belief in the enduring nature of the marketplace is not enough; the fundamentals must also support that belief.

Today, we face an atmosphere in which the fundamentals are fiercely opposed to the publicly promoted perception of the economy, and it is moments in history like this that present a clear primer for total collapse. Financial disaster is bad enough when it is at least partially anticipated. When the masses are caught completely unaware and unprepared in the midst of misguided conviction, this leads to the worst kind of tragedy: the ironic and Shakespearian kind. To avoid this brand of tragedy is one of the primary reasons why we in the Liberty Movement do what we do. We may not be able to stop the current crisis from developing, but we can create awareness, and through this we can lessen the cultural shock, and thereby lessen the impact.

Mainstream economists crowed about the "invincible" rise of globalism and the unstoppable U.S. financial juggernaut for years while more level headed and intelligent men tried to warn the public of danger. The initial derivatives collapse in 2007/2008 should have put all of these pathetic establishment cheerleaders to shame, not to mention out of work. Yet three years later, amazingly, we are asked, even expected, to continue to look to such sad and useless people for predictions on market stability that always turn out absolutely inaccurate, and advice on savings and investment that they are not equipped to give.

I suppose we should not be surprised by the continued lifespan of Main stream media parrots and puppets. They may not be helpful to the average American, but they are very helpful to international banks and the globalist companies that pay their salaries. They distract and confuse us. They comfort when they should caution, and contradict when they should pay heed. Our financial house is burning from the bottom floor up, and they assure us that the warm orange glow is just the dawn of a new and beautiful day. We are told to "look to the future", a return to normalcy is "just around the corner". Never would they dare to weigh the cold hard factors of the present, or the ruse would be up. Whether they are aware of it or not, the lies media pundits perpetuate set the stage for even greater upheaval, to the detriment of most, and the benefit of only a handful.

It is necessary that we examine those lies, as well as the truths they are meant to hide. The most important truth of all being that not only are we not in the middle of a recovery but that the final phase of the economic meltdown is about to commence.

36. In the context of the passage, what can be understood from the phrase 'Fiscal Reaper'?
(1) Accumulating monetary deficits
(2) Questionable government policies
(3) The inevitable result of debatable fiscal policies
(4) The losses resulting from globalization

37. Which of the following can be a suitable title for the passage?
(1) Globalization – A Radical perspective
(2) Financial Meltdown – The Road Ahead
(3) Recovering from Financial Meltdown?
(4) Financial Meltdown- The Road Taken

38. The author, in this passage, is
(1) Cautioning. (2) Advising.
(3) Analysing. (4) Condescending.

DIRECTIONS *for questions 39 and 40:* Each of the following two questions has a paragraph from which the last sentence has been deleted. From the given options, choose the one that completes the paragraph in the most appropriate way.

39. The government of India should make the integration of research and teaching, particularly in science and education, mandatory. It should incentivize knowledge and innovation making the academic community alive to the demands of industry. While the government must step up its allocations to higher education and research there is enormous scope to supplement these with private funds, by way of grants and research funding from industry and tuition fees by those who can afford them. _____
(1) Merely spending money will not ensure improvements.
(2) Intervention is necessary to disrupt the close correlation between socio-economic status and educational attainment.
(3) India cannot hold back serious educational reforms any longer.
(4) A change would mean empowering people at every level and de-centralizing administration.

40. To ensure that the benefits of market liberalization reach the poor, the planning commission has aptly adopted "inclusive growth" as a guiding principle. The good news is that inclusive growth is achievable: all it needs is a trigger to spark a nationwide revolution in innovation. Competition law can provide that spark. By curbing the abuse of dominance, it opens the terrain for radical innovators. _____
(1) Industry outsiders have little to lose in pursuing radical innovations.
(2) They have every economic incentive to overturn the existing order.
(3) They have abundant reasons to be slow in developing radical innovations.
(4) They can achieve the twin objective of offering new technologies and better products at lower costs and throw out old technology incumbents.

SECTION – III
Number of Questions = 20

DIRECTIONS *for questions 41 to 44:* Answer the questions on the basis of the information given below.

Five friends Akash, Billu, Chunky, Dilip and Emily, who stay in five different houses in the same colony, order cakes from *Bakers Out* for their new year party. They arrange for their cakes to be delivered before 11:45 p.m. The following table gives the distances (in km) between their houses.

	Akash	Billu	Chunky	Dilip	Emily
Akash	0	6	3	3	1
Billu	6	0	2	7	8
Chunky	3	2	0	5	4
Dilip	3	7	5	0	3
Emily	1	8	4	3	0

It is also known that the distance (in km) from the bakery to the houses of Akash, Billu, Chunky, Dilip, and Emily is 4, 7, 5, 6, and 3 respectively.
The delivery boy travels at a constant speed of 12 km/hr and takes 3 minutes at each house to deliver the cake.

41. What is the latest time by when which the delivery boy can leave the bakery and complete delivery of all the cakes before 11:45 p.m.?
(1) 10:23 p.m.
(2) 10:20 p.m.
(3) 10:10 p.m.
(4) 10:15 p.m.

42. Suppose Billu and Chunky ordered a Pizza each along with the cakes. If the pizzas are to delivered hot, i.e., within 42 minutes after removing from the oven in the bakery, what is the minimum time taken by the delivery boy to deliver the pizzas as well as all the cakes? [Assume the time lag between the removal of Pizza from oven and starting from bakery is nil]
(1) 102 minutes
(2) 100 minutes
(3) 97 minutes
(4) The pizza can never be delivered hot.

43. As a part of maintenance work, the telecom department dug up the road directly connecting Akash's house to Emily's house, making it unusable for commuting. If all the other roads are available for commuting, what is the minimum time taken by the delivery boy to deliver all the cakes?
(1) 107 minutes (2) 92 minutes
(3) 85 minutes (4) 82minutes

44. If the road which connects Billu's house and Chunky's house is rendered unusable and all the other roads are usable then which of the following is true?

(I) The difference between the maximum and minimum time taken to deliver all the cakes is 45 minutes.

(II) In case of minimum time of delivery, Billu was not the last one to be delivered his cake.

(1) Only I is true
(2) Only II is true
(3) Both I and II are true
(4) Neither I nor II is true

DIRECTIONS *for questions 45 to 47:* Answer the questions on the basis of the information given below.

A website allows its customers to download films from its database. The audio and video quality of a film is rated, each on an integer scale of 0 – 10. The product of the Audio and Video ratings gives the final rating. The following table gives the partial information of the ratings of 8 films A, B, C, D, E, F, G and H.

	Audio Rating	Video Rating	Final Rating
A	6		
B			24
C		7	
D	7		
E		9	
F		4	
G	5		
H		10	

Further it is known that
- No film has a final rating of less than or equal to 10.
- The films are categorised based on the final rating as 'Bad', 'Average', 'Good' and the 'Best'.
- If final rating is in the range of 0 – 20 then the film quality is 'Bad'.
- If the final rating is in the range of 21 – 50 then the film quality is 'Average'.
- If the final rating is in range of 51 – 75 then the film quality is 'Good'.
- If the final rating is in range of 76 – 100 then the film quality is 'Best'.
- Exactly two films got equal video ratings.
- G is categorised as a 'Bad' quality film.
- The number of films under each category is the same.
- E obtained a higher video rating than A and a higher final rating than H.
- Exactly two films obtained equal audio rating.
- The audio rating of B was higher than its video rating.

45. What is the video rating obtained by A?
(1) 5
(2) 6
(3) 7
(4) Cannot be determined

46. What is the final rating obtained by D?
(1) 42 (2) 56 (3) 63 (4) 70

47. Which of the following is true?
(I) Film F obtained the lowest final rating.
(II) The final rating of A is at least 30.

(1) Only I is true
(2) Only II is true
(3) Both I and II are true
(4) Neither I nor II is true.

DIRECTIONS *for question 48:* The question below is followed by two statements, A and B. Answer the question using the following instructions:

Mark (1) if the question cannot be answered even by using both the statements together
Mark (2) if the question can be answered only by using both the statements together but not each statement alone
Mark (3) if the question can be answered by using either statement alone
Mark (4) if the question can be answered by one statement alone but not by the other statement alone.

48. Four friends-Ajay, Bharat, Charan and Dinesh, stand in a line one behind the other in increasing order of their heights. Ajay does not stand behind Bharat and Dinesh does not stand in front of Charan.
Who is the tallest among the four friends?

Statement I: Charan stands behind at least one the three friends and Bharat stands before at least one of the three other friends.

Statement II: Bharat does not stand in front of Charan and Ajay does not stand behind Dinesh.

DIRECTIONS *for questions 49 to 52:* These questions are based on the following information.

Food and Agricultural Organization (FAO) conducted a study to analyze the price behaviour of various food commodities for the years 2008-09 and 2009-10 across emerging, developing and developed countries. To enable comparison of price behaviour across the three regions, a food basket, of a total weight of 30 kg, comprising 5 kg of each of six commodities, commonly consumed across the three regions, was defined.

The average annual base price (in Rs./kg) in 2008-09 of the six commodities across the three regions is given below.

Average price (in Rs./kg) of the six commodities in 2008-09.

	Corn	Rice	Wheat	Rapeseed	Soyabean oil	Palm Oil
Emerging Countries	20	25	28	15	30	32
Developing Countries	30	38	34	24	34	40
Developed Countries	35	42	35	29	38	46

For each region, a representative value of the basket, known as the 'Basket value', was calculated as follows.

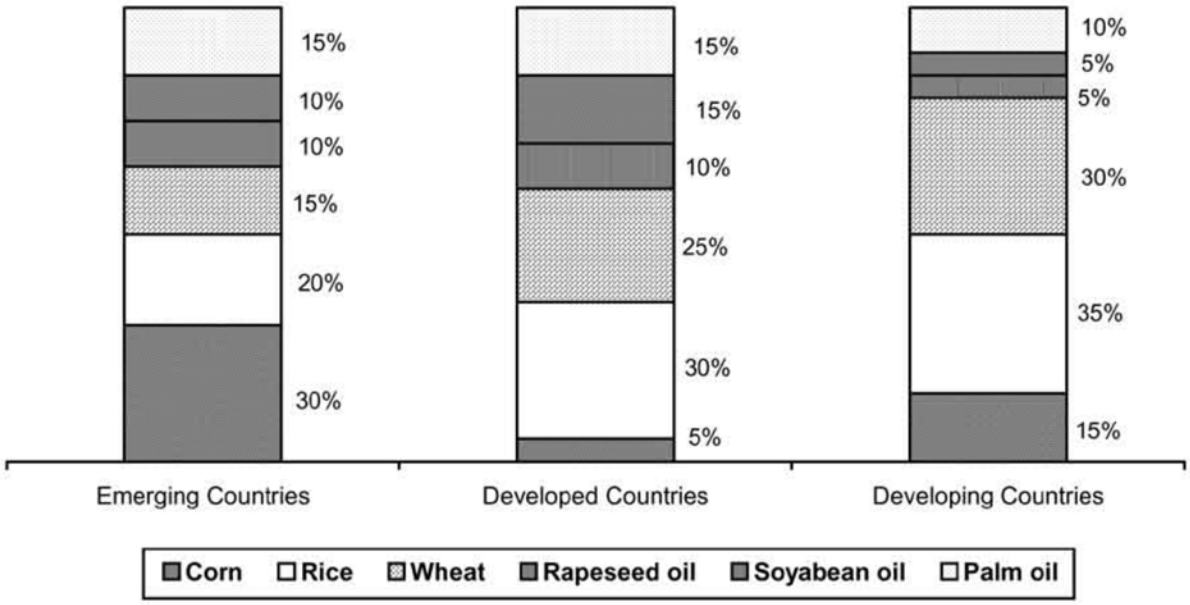
Basket value = $\sum_{i=1}^{6} P_i W_i$

where P_i and W_i are the average price (in Rs./kg) and the weight (in kg) of the ith commodity respectively.

During the study, it was observed that from 2008-09 to 2009-10, the basket value showed an increase of 40%, 24% and 32% in emerging, developing and developed countries respectively.

The bar graph below shows the contribution (in %) of each commodity to the actual increase (in Rs.) in the basket value of each region.

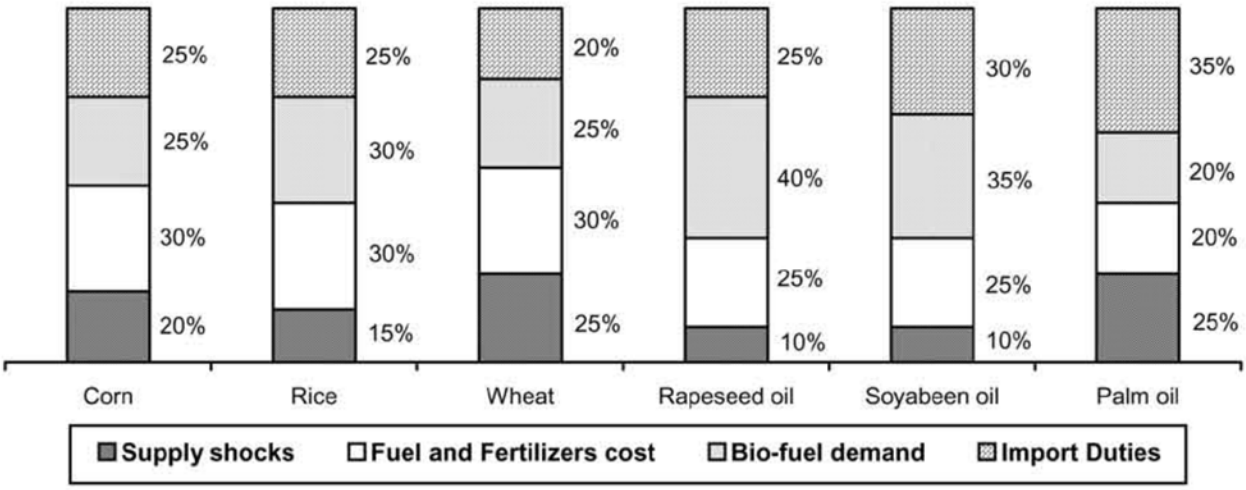
Commidity-wise contribution to increase in basket value from 2008-09 to 2009-10



FAO also analysed the reasons for increase in the basket value in case of emerging countries and identified four major factors–Supply shocks, Fuel and Fertilizer cost, Bio-Fuel demand, and import duties, for the price increase.

The bar graph below shows the contribution (in %) of each factor to the increase in the price of 5 kg of each commodity in emerging Countries.

Factor-wise contribution to increase in basket value in emerging countries from 2008-09 to 2009-10



For the questions that follow, it may be assumed that the price paid for purchasing 1 kg of a food commodity in a particular country belonging to a given region in a certain year is equal to the average price (in Rs./kg) of the commodity in the region in that year.

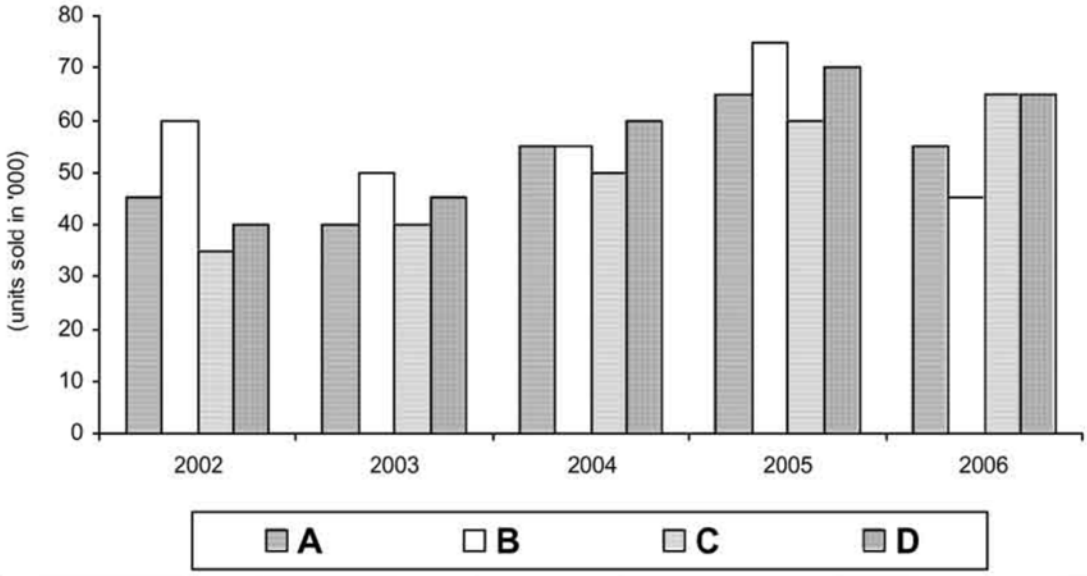
49. The price increase in corn in emerging countries caused due to supply shocks is what percentage of the price increase in emerging countries due to supply shocks?
(1) 34.1% (2) 32.4% (3) 31.6% (4) 30.4%

50. Benazir, a resident of Bahrain, an emerging country, bought 8 kg of rice in 2008-09 and 10 kg of rice in 2009-10. How much more did Benazir have to pay for her purchases in 2009-10 as compared to that in 2008-09?
(1) Rs.70 (2) Rs.160 (3) Rs.170 (4) Rs.230

51. Kwazul is an ambitious man of 25 years of age and resides in Somalia, an emerging country. In 2009-10, unhappy with the quality of food commodities in his country, he decides to order two samples – each containing 2 kg each of corn, rice and wheat – one from India, a developing country and the other from France, a developed country. If the cost of importing a sample constitutes 40% and 50% of the cost of the sample from India and France respectively, how much more/less does Kwazul incur in importing the sample from France as compared to India?
(1) Rs.72.48 less (2) Rs.84.56 less
(3) Rs.84.56 more (4) Rs.72.48 more

52. After the increase in prices of all commodities in 2009-10 from 2008-09, import duties on all types of oil are lifted in all the emerging countries as the governments perceive no shortage in stocks of oils in the domestic market. Find the percentage decrease in the average price of Palm oil in emerging countries in 2009-10, on account of the lifting of import duties.
(1) 10.29% (2) 6.13% (3) 17.76% (4) 7.68%

DIRECTIONS *for questions 53 and 54:* The following graph shows the sales (in terms of units sold) of automobiles of four companies over the last five years from 2002 to 2006.



53. Which of following companies showed the maximum percentage increase in the units sold in the given period?
(1) A (2) B (3) C (4) D

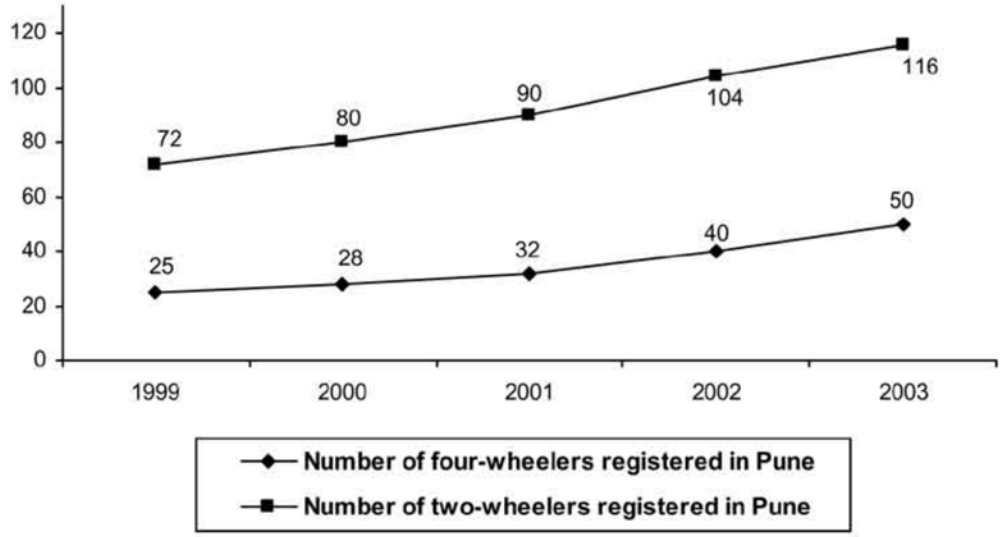
54. In which year did the company B show the maximum percentage change in its sales over the previous year?
(1) 2003
(2) 2004
(3) 2005
(4) 2006

DIRECTIONS *for question 55:* Select the correct alternative from the given choices.

55. Eight people belonging to different professions among teacher, doctor, engineer, lawyer, typist, driver, pilot and scientist are standing in a row, not necessarily in the same order. It is known that the lawyer is five places away to the left of the pilot. The typist is the only person in between the teacher and the driver. The doctor and the engineer are adjacent to each other. The lawyer is not at any of the extreme ends. If 'D' is the number of persons between the doctor and the teacher, then how many distinct values of D are possible?
(1) Two (2) Three (3) Four (4) Five

DIRECTIONS *for questions 56 and 57:* These questions are based on the following information.

Distribution of two-wheelers and four-wheelers (in thousands of units) registered in Pune (1999-2003)



56. Find the percentage increase in the total number of registered two-wheelers and four-wheelers in Pune from 2000 to 2002.
(1) 36% (2) 30% (3) 42.85% (4) 33.33%

57. In Pune, in 2000, the number of registered four-wheelers were 80% of those in Nashik and in 2001, the number of registered four-wheelers were 57.14% of those in Nashik. Find the percentage increase/decrease in the number of four-wheelers registered in Nashik from 2000 to 2001.
(1) 60% increase (2) 18.37% decrease
(3) 60% decrease (4) 18.37% increase

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

In a locality, there are 91 families, each of which reads at least one of telugu, tamil and english newspapers. It is known that 41 families read a telugu newspaper and an equal number of families read a tamil newspaper. The number of families who read an english newspaper is 7 more than those who read a telugu newspaper. Also, 31 families read at least two newspapers, while a total of 36 families read exactly one of tamil and telugu newspapers. The number of families which read only tamil newspaper is 20% less than those who read only a telugu newspaper.

58. If native tamil families read only a tamil newspaper while both tamil and telugu newspapers are read only by migrant families from Andhra, the difference between number of native tamil families and the number of families which read all three newspapers is
(1) 12 (2) 8
(3) 10 (4) Cannot be determined

59. What is the difference in the number of families who read only telugu and english newspapers and those who do not read both tamil and english newspapers?
(1) 72 (2) 75 (3) 59 (4) 67

60. What proportion of those who read both english and tamil newspapers also read telugu newspapers?
(1) $\frac{4}{5}$ (2) $\frac{4}{9}$ (3) $\frac{6}{7}$ (4) $\frac{7}{10}$