

NMAT Mock Test 1 (Memory Based)

Section 1: Language Skills

36 questions | Time: 28 minutes

Directions for Questions 1–4: Read the passage below and answer the questions that follow.

Passage I

Criminal identification by means of fingerprints is one of the most potent factors in obtaining the apprehension of fugitives who might otherwise escape arrest and continue their criminal activities indefinitely. This type of identification also makes possible an accurate determination of the number of previous arrests and convictions, which of course results in the imposition of more equitable sentences by the judiciary, in as much as the individual who repeatedly violates the law finds it impossible to pose successfully as a first or minor offender. In addition, this system of identification enables the prosecutor to present his case in the light of the offender's previous record. It also provides the probation officers, parole board and the governor with definite information upon which to base their judgement in dealing with criminals in their jurisdictions.

From earliest times, fingerprinting, because of its peculiar adaptability to the field, has been associated in the lay mind with criminal identification to the detriment of the other useful phases of the science. However, the Civil File of the Identification Division of the Federal Bureau of Investigation contains three times as many fingerprints as the Criminal File. These civil fingerprints are an invaluable aid in identifying amnesia victims, missing persons and unknown deceased. In the latter category, the victims of major disasters may be quickly and positively identified if their fingerprints are on file, thus providing a humanitarian benefit not usually associated with fingerprint records.

The use of fingerprints for identification purposes is based upon distinctive ridge outlines which appear on the bulbs on the inside of the end joints of the fingers and thumbs. These ridges have definite contours and appear in several general pattern types, each with general and specific variations of the pattern, dependent on the shape and relationship of the ridges. The outlines of the ridges appear most clearly when inked impressions are taken upon paper, so that the ridges are black against a white background. This result is achieved by the ink adhering to the friction ridges. Impressions may be made with blood, dirt, grease or any other foreign matter present on the ridges, or the saline substance emitted by the glands through the ducts or pores which constitute their outlets. The background or medium may be paper, glass, porcelain, wood, cloth, wax, putty, silverware or any smooth, non-porous material.

1. In the second paragraph, what is the function of the sentence 'However, the Civil File of the Identification Division of the Federal Bureau of Investigation contains three times as many fingerprints as the Criminal File'?
- (A) To explain how fingerprints can have humanitarian uses such as helping to identify victims of natural disasters.
- (B) To illustrate the importance of fingerprints in different fields.
- (C) To state that the Civil File of the FBI has more fingerprints than does the Criminal File.
- (D) To point out that fingerprints have another more important use that is different from the one that is commonly perceived by the people.
- (E) To conclude that fingerprints play an important secondary role in the civil society as well.

2. From the information in the passage, which of the following can be most properly inferred?
- (A) Fingerprint impressions obtained with the use of ink are better than those obtained using substances such as dirt or grease.
 - (B) Fingerprints have many more uses in criminal investigation than they do in civil cases.
 - (C) The matching of fingerprints is the most foolproof way of apprehending hardened criminals.
 - (D) The use of fingerprint records helps the justice system deliver more equitable sentences.
 - (E) The presence of saline substances on the ridges of fingertips makes it difficult to get a definite fingerprint impression.
3. What is the main purpose of the author in writing the passage?
- (A) To explain the need for collecting fingerprints.
 - (B) To advocate the study of civil fingerprints to assist the judiciary.
 - (C) To analyse the implications of maintaining a database of fingerprints.
 - (D) To praise the advocates for bringing to justice the repeat offenders.
 - (E) To discuss the history, usefulness and mode of collecting fingerprints.
4. According to the information in the passage, the impressions of the fingerprints can be obtained from all of the following, EXCEPT:
- (A) Saline substances
 - (B) Ink
 - (C) Grease
 - (D) Wax
 - (E) Perspiration

Directions for Questions 5–8: Choose the most logical order of sentences from among the given choices to construct a coherent paragraph.

5. (a) Hydraulic fracturing occurs when the effective stress is reduced sufficiently by an increase in the pressure of fluids within the rock, such that the minimum principal stress becomes tensile and exceeds the tensile strength of the material.
- (b) This is particularly so in the case of “tensile” fractures, which require the walls of the fracture to move apart, working against this confining pressure.
- (c) Fracturing in rocks at depth tends to be suppressed by the confining pressure due to the load caused by the overlying rock strata.
- (d) Fractures formed in this way will be oriented in a plane perpendicular to the minimum principal stress, and for this reason induced hydraulic fractures in wellbores are sometimes used to determine the orientation of stresses.
- (A) cbad
 - (B) cabd
 - (C) cadb
 - (D) abcd
 - (E) acdb

6. (a) The band stretches from the Tropic of Cancer to the Tropic of Capricorn, though there are occasional reefs at higher latitudes—near Bermuda, for instance.
(b) Reefs can be hundreds of feet tall and thousands of acres in area.
(c) The world's largest reef, or really reef system, is the Great Barrier Reef, along the east coast of Australia.
(d) Coral reefs are found in a band that circles the globe like a cummerbund.
(e) Unlike the Great Wall of China, the Great Barrier Reef, which extends more than fourteen hundred miles, is actually visible from space.
(A) acdeb
(B) dacbe
(C) aedbc
(D) dbcea
(E) cdaeb
7. (a) The fork is held with the left hand and the knife is held with the right.
(b) When no knife is being used, the fork can be held with the tines up.
(c) The fork is held generally with the tines down using the knife to cut food or help guide food on to the fork.
(d) With the tines up, the fork balances on the side of the index finger, held in place with the thumb and index finger.
(A) acbd
(B) abdc
(C) bdac
(D) bdca
(E) dcab
8. (a) Most of these places are high up on mountains.
(b) This hardened ice is what comprises the glacier.
(c) Repeated snowfalls compress the lower layers of snow.
(d) Glaciers form in extremely cold places.
(e) Finally, the lowest layer hardens and turns into ice.
(A) abedc
(B) dceba
(C) cadeb
(D) cbdae
(E) daceb

Directions for Questions 9–12: Read the passage below and answer the questions that follow.

Passage II

As an author of short stories, plays and novels, Charles Dickens became known the world over for endearing characterisation, vivid narration of ordinary lives, and depiction of the social and moral values of his time. For years, Dickens thrilled the readers with his simple stories about simple people forced into real situations.

Although Dickens wanted to make a lot of money from his writings, his works invariably aimed to influence the consciousness of his readers even though it seemed like he knew what his readers wanted.

To some critics, Dickens was an entertainer and his novels lacked intellectual challenge, but the London Times described the British author as the greatest instructor of the nineteenth century in his obituary. The unparalleled sentimentality, rage, plight and bitterness in his novels established Dickens as a spokesman for the downtrodden.

Dickens was born on February 7, 1812 into a poor family in Portsmouth on the southern coast of England. He was the second of eight children. In 1822, the Dickens family moved to Camden Town, a poor neighbourhood in London. The extravagance of his father often brought financial embarrassment to the family and eventually imprisonment for him in 1824. This brought an abrupt end to Dickens' childhood. He had to discontinue his schooling and support his family by doing manual work at a factory. Young Dickens was rudely introduced to long hours of harsh working conditions and poor pay. He felt orphaned and betrayed by his parents who he believed should have taken care of him in his childhood. These feelings later became a recurring theme of many of his novels. Characters like Oliver Twist and David Copperfield developed from the harsh experiences of Dickens' early life.

Dickens' literary journey started in 1833 when he submitted sketches to various magazines and newspapers under the nickname "Boz". In 1836, he published *The Posthumous Papers of the Pickwick Club*, which became widely popular with magazine readers. Soon, his first novel, *Oliver Twist*, depicting the life of an orphan and inspired by Dickens' own experience as an impoverished child, hit the stands. The overwhelming success of *Oliver Twist* turned Dickens into a celebrity and over the next few years he had to struggle to match the literary and commercial standard the book had set.

In 1842, Dickens and his wife, Kate, went on a tour of the United States, where people went crazy listening to him. Upon his return, Dickens wrote *American Notes for General Circulation*, a sarcastic travelogue criticising American culture and materialism.

Over the next couple of years, Dickens published two Christmas stories including the classic *A Christmas Carol*. From 1849 to 1850, Dickens worked passionately on his favourite novel *David Copperfield*, a sort of autobiography and probably the first work of its kind.

The death of his daughter and father and separation from his wife in the 1850s cast a dark shadow on Dickens' writing during this period. He returned to his original style with *A Tale of Two Cities* in 1859, a historical novel, followed by *Great Expectations* in 1861, widely considered his greatest literary feat.

On June 9, 1870, Dickens suffered a stroke and died at his country home in Kent, England.

9. The author most likely agrees with all of the following statements EXCEPT:
- (A) Dickens blamed his parents for enduring a harsh childhood.
 - (B) Dickens was not impressed by the materialism of the American society.
 - (C) Dickens' novels portrayed the attitude of the society towards the downtrodden.
 - (D) To some of his critics Dickens was an entertainer and his writing was not intellectually challenging.
 - (E) *David Copperfield*, a biographical account of Dickens' life, is often cited as his best literary achievement.
10. The passage is primarily concerned with:
- (A) Dickens' novels and his characters.
 - (B) Dickens' success as a writer.
 - (C) Dickens' harsh childhood.
 - (D) Dickens' life story.
 - (E) Dickens' writing.
11. Which of the following statements is best taken to be true in the context of the passage?
- (A) Dickens played the role of an instructor through his writings.
 - (B) Dickens was the best British author of the nineteenth century.
 - (C) No other Dickens' novel could ever match the standard set by *Oliver Twist*.
 - (D) Dickens' writing became sarcastic after the death of his daughter and father.
 - (E) All of Dickens' novels were based on the personal experiences of his childhood.

12. Which of the following statements, if true, would most weaken the author's argument?
- (A) Dickens' parents were responsible for his harsh childhood.
 - (B) Dickens sympathised with his characters who often survived a life of struggle.
 - (C) Dickens' writing emphasised how simple people got forced into real situations.
 - (D) Characterisation of David Copperfield and Oliver Twist are suggestive of Dickens' harsh life.
 - (E) Dickens wrote his classics during the period of shock that he experienced after the deaths of his daughter and father.

Directions for Questions 13–17: Each sentence has four underlined words or phrases. Identify the one underlined part that must be changed to make the sentence correct. Mark (E) if there is no error.

13. Each of the eyewitnesses have a different story to narrate about the crime.
- (A) Each of the
 - (B) have a
 - (C) narrate
 - (D) about the crime
 - (E) No error
14. The child loves both dancing and singing and refuses to conform by the wishes of his parents.
- (A) both dancing and singing
 - (B) refuses
 - (C) conform by
 - (D) wishes of
 - (E) No error
15. A major contribution of Maratha sculptors during the medieval age were the creation of the Buddha's images in different human forms.
- (A) A major
 - (B) Maratha sculptors
 - (C) were the creation
 - (D) the Buddha's
 - (E) No error
16. Either of these stuffed toys are suitable for your little four-year-old.
- (A) these
 - (B) stuffed
 - (C) are
 - (D) little
 - (E) No error
17. Please ask your sister to unthaw all the vegetables as I plan to have a smorgasbord of cheese, vegetables and soups.
- (A) ask your
 - (B) to unthaw
 - (C) as I plan
 - (D) have a smorgasbord
 - (E) No error

Directions for Questions 18–22: Choose the set of prepositions whose meaning and sequence best fit the three given sentences.

18. 1. Following the registration of the two complaints, police placed Saeed _____ house arrest on Sunday.
2. The news channel reported that he had been selected _____ the seat.
3. The jail authorities stopped serving non-vegetarian food _____ inmates.
(a) to (b) for (c) after (d) under (e) inside (f) besides
(A) bfc
(B) fbc
(C) dba
(D) abc
(E) dce
19. 1. The official refused to comply _____ my request.
2. He could not go for a holiday for want _____ money.
3. He managed to gain insight _____ the working of the company barely within days of joining.
(a) to (b) of (c) in (d) into (e) with (f) off
(A) dbf
(B) ebd
(C) adb
(D) fad
(E) efb
20. 1. I want to buy that dress but I don't have my wallet _____ me.
2. He managed to get off _____ a light punishment.
3. There were at least five hundred people _____ the luxury yacht.
(a) to (b) aboard (c) with (d) of (e) into (f) on
(A) fad
(B) bac
(C) dab
(D) dea
(E) fcb
21. 1. He is so transparent, it is possible to see _____ every ploy.
2. Paintings should be done in bright shades so that they may stand _____ more vividly.
3. She ran _____ all of the main points of her presentation in a few hours.
(a) into (b) through (c) behind (d) up (e) out (f) across
(A) adb
(B) aeb
(C) bdb
(D) beb
(E) feb

22. 1. The first credible signs _____ the presence of the snow leopard have been found in Uttarakhand.
2. The role of two senior bureaucrats came _____ the scanner.
3. Subsequent _____ the Court's orders, hearing on the issue has been initiated.
(a) of (b) to (c) off (d) under (e) towards (f) beneath
(A) adb
(B) adc
(C) bdc
(D) fcd
(E) cda

Directions for Questions 23–26: Read the passage below and answer the questions that follow.

Passage III

Almost every regulatory policy is created to achieve some desirable social goal. When more than 10,000 people are killed annually in industrial accidents, who would disagree with the goal of a safer workplace? Who would dissent from greater highway safety, when more than 50,000 perish each year in automobile accidents? Who would disagree with policies to promote equality in hiring, when the history of opportunities for women and minorities is one of discrimination? Who would disagree with policies to reduce industrial pollution, when pollution threatens health and lives? However, there may be more than one way to achieve these—and many other—desirable social goals.

Charles L. Schultze, chair of former President Carter's Council of Economic Advisors, is a critic of the current state of federal regulation. Schultze reviewed the regulatory activities of the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA). Neither agency's policies, he concluded, had worked very well. He described the existing system as command and control policy. The government tells business how to reach certain goals, checks that these commands are followed, and punishes offenders.

Schultze advocates an incentive system. He argues that instead of telling construction businesses how their ladders must be constructed, measuring the ladders, and charging a small fine for violators, it would be more efficient and effective to levy a high tax on firms with excessive worker injuries. Instead of trying to develop standards for 62,000 pollution sources, as the EPA now does, it would be easier and more effective to levy a high tax on those who cause pollution. The government could even provide incentives in the form of rewards for such socially valuable behaviour as developing technology to reduce pollution. Incentives, Schultze argues, use market-like strategies to regulate industry. They are, he claims, more effective and efficient than command-and-control regulation.

Not everyone is as keen on the use of incentives as Schultze. Defenders of the command-and-control system of regulation compare the present system to preventive medicine—it is designed to minimise pollution or workplace accidents before they become too severe. Defenders of the system argue, too, that penalties for excessive pollution or excessive workplace accidents would be imposed only after substantial damage had been done. They also add that if taxes on pollution or unsafe work environments were merely externalised (that is, passed along to the consumer as higher prices), they would not be much of a deterrent.

Moreover, it would take a large bureaucracy to monitor carefully the level of pollution discharged, and it would require a complex calculation to determine the level of tax necessary to encourage businesses not to pollute.

23. What is the central idea of the passage?
- (A) Regulatory activities of government exist at different levels.
 - (B) The pros and cons of using the incentive system were proposed by Schultze.
 - (C) The old policies framed for workplaces could not be successful for several reasons.
 - (D) An overview of the regulatory policies for achieving social goals and how the incentive system can be helpful.
 - (E) How different regulatory policies that encourage specific social behaviours in different set-ups have failed miserably.
24. In Charles Schultze's argument, the claim is that:
- (A) the use of the incentive policy is limited to just a few situations.
 - (B) the EPA and OSHA should not tell businesses how to regulate themselves.
 - (C) regulatory policies should be created to achieve certain desirable social goals.
 - (D) the government should minimise pollution and workplace accidents before they become too severe.
 - (E) an incentive system would be more effective and efficient than the command-and-control regulation.
25. According to the author, what can be concluded from the passage?
- (A) Goals leading to safer workplaces were not achieved.
 - (B) If incentives are provided, social goals can be achieved.
 - (C) Socially desirable behaviours need to be achieved to fulfill social goals.
 - (D) There are several ways in which socially desirable goals can be achieved.
 - (E) Schultze's incentive system has received acceptance as well as criticism from people.
26. According to the passage, the author most likely agrees with all of the following statements EXCEPT:
- (A) Incentives, in the form of rewards, could be given for socially valuable behaviours.
 - (B) An incentive system would reward businesses that develop technology to reduce pollution.
 - (C) An incentive system would involve developing standards for thousands of pollution sources.
 - (D) Regulatory policies have been created to address workplace and highway safety, discrimination and pollution.
 - (E) The command-and-control system punishes businesses that do not reach certain goals set by the government.

Directions for Questions 27–31: Each of the sentences below has one, two or three blanks. Choose the word or set of words that best fits the meaning of the sentence as a whole.

27. It is rather _____ of him to feel that he knows more about the topic than his teacher.
- (A) discourteous
 - (B) uncouth
 - (C) presumptuous
 - (D) peremptory
 - (E) arbitrary
28. The police officer cornered the _____ man to see if he was _____.
- (A) startled, restrained
 - (B) staggering, inebriated
 - (C) wobbly, despondent
 - (D) rickety, intoxicated
 - (E) fragile, sober

29. The new evidence will, in all likelihood, _____ the _____ of the murder charge.
- (A) vindicate, defendant
 - (B) exonerate, gullible
 - (C) castigate, criminal
 - (D) censure, wrongdoer
 - (E) acquit, reprobate
30. The southern tip of Africa is more _____ than many give it credit for: a spectacular blend of game-spotting safaris, _____ of ancient cultures and _____ landscapes ranging from widescreen dusty plains to thundering waterfalls.
- (A) distinct, traces, multitude
 - (B) disparate, vestige, profuse
 - (C) diverse, echoes, myriad
 - (D) distinguishable, memento, excessive
 - (E) different, reminder, riot
31. One requirement of a good book is that it deepens and extends our knowledge, not that it merely _____ what we already know.
- (A) enhance
 - (B) confirm
 - (C) modify
 - (D) reduce
 - (E) vilify

Directions for Question 32: Choose the pair of words that best completes the relationship to the given pair.

32. Captain : Ship
- (A) Teacher : School
 - (B) Manager : Office
 - (C) Guide : Tourist
 - (D) Doctor : Hospital
 - (E) Hotel : Concierge

Directions for Questions 33–34: Choose the pair of words that does NOT share the same relationship as the given pair.

33. Tepid: Boiling
- (A) Careful: Punctilious
 - (B) Drizzle: Downpour
 - (C) Like: Dote
 - (D) Avaricious: Rapacious
 - (E) Vain: Vainglorious
34. Quiver: Cobras
- (A) Congregation: Pigeons
 - (B) School: Fish
 - (C) Herd: Antelopes
 - (D) Army: Caterpillars
 - (E) Float: Crocodiles

Directions for Questions 35–36: Find the pair of words that has the same relationship as the given pair.

- 35.** Disheveled: Tidy
- (A) Disdain : Contempt
 - (B) Discrepancy: Affront
 - (C) Kindle: Ignite
 - (D) Dispel: Dissipate
 - (E) Exasperate: Please
- 36.** Trickle: Gush
- (A) Plunder: Pillage
 - (B) Quash: Revoke
 - (C) Breeze: Gale
 - (D) Acorn: Oak tree
 - (E) Tide: Ebb

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Section 2: Quantitative Skills

36 questions | Time: 52 minutes

Directions for Questions 1–24: Solve each problem and choose the best of the answer choices given.

1. The production of rice increased by 75% from 1990 to 1995. From 1995 to 2000, there was a 100% increase. What is the percentage increase in the production of rice from 1990 to 2000?
(A) 250%
(B) 280%
(C) 285%
(D) 290%
(E) 295%
2. What is the digit in the unit place of $(98^{43} \times 122^{22}) + 729^{59} + 2^{543}$?
(A) 5
(B) 6
(C) 7
(D) 8
(E) 9
3. Three people sit down to eat 14 pieces of cake. If two of the people eat the same number of pieces, and the third person eats two more pieces than each of the other two, how many pieces are eaten by the third person?
(A) 3
(B) 4
(C) 5
(D) 6
(E) 7
4. Yalda sold two MP3 players using two different online sites. She sold one for Rs. 1,710 at a loss of 5% and the other for Rs. 2,520 at a profit of 20%. What is her total profit or loss percentage?
(A) gain of 4.8%
(B) loss of 5.1%
(C) loss of 6.4%
(D) gain of 8.5%
(E) loss of 9.2%
5. A certain number of teams participated in a charity Rugby tournament. Each team played with every other team participating in the tournament exactly once. If the number of matches played in the tournament is 120, then how many teams participated in the tournament?
(A) 8
(B) 10
(C) 14
(D) 15
(E) 16

6. In a college dramatics team, the ratio of boys to girls is 6 : 7. If there are 2 more girls than boys in the team, how many boys are in the team?
 - (A) 12
 - (B) 18
 - (C) 24
 - (D) 30
 - (E) 36
7. What is the remainder when $1! + 2! + \dots + 600!$ is divided by 6 ?
 - (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
 - (E) 5
8. Two apples and five bananas are defective out of 10 apples and 20 bananas contained in a fruit basket. If Sanjeev takes out two fruits at random, what is the probability that either both are bananas, or both are good?
 - (A) $\frac{119}{435}$
 - (B) $\frac{338}{435}$
 - (C) $\frac{841}{870}$
 - (D) $\frac{217}{870}$
 - (E) None of these
9. Arvind sells clothes at a roadside market for which he pays Rs. 150 per day to rent a table plus Rs. 10 per hour to his salesman. He sells an average of Rs. 78 worth of clothes per hour. Assuming no other costs, which of the functions below best represents profit per day P in terms of hours h that Arvind works for?
 - (A) $P(h) = 238 - 10h$
 - (B) $P(h) = 72 - 10h$
 - (C) $P(h) = 68h - 150$
 - (D) $P(h) = 78h - 160$
 - (E) $P(h) = -160h + 78$
10. If Rs. 23,579 triples itself in 3 years when invested in a bond for which the investment interest rate is compounded annually, then in how many years will it become 27 times of itself?
 - (A) 6
 - (B) 9
 - (C) 18
 - (D) 27
 - (E) 81
11. What is the probability that the month of May will have five Tuesdays?
 - (A) $\frac{2}{3}$
 - (B) $\frac{2}{5}$
 - (C) $\frac{3}{5}$
 - (D) $\frac{3}{7}$
 - (E) $\frac{3}{8}$

12. If a and b are positive integers such that $a^2 + 2b = b^2 + 2a + 5$, find the value of b .
 (A) 0
 (B) 1
 (C) 2
 (D) 3
 (E) Cannot be determined
13. 'p' is five times as large as 'q'. By what percent is q less than p ?
 (A) $16\frac{2}{3}\%$
 (B) 37.5%
 (C) 60%
 (D) 80%
 (E) 90%
14. Nishit works twice as fast as Pradeep. Nishit and Pradeep together can work three times faster than Bhuvan. If Nishit, Pradeep and Bhuvan together work on a job, in what ratio should they share the earnings? Note: The ratio of individual share of earnings for all 3 workers is the same as the ratio of their relative efficiencies.
 (A) 2:1:1
 (B) 2:3:1
 (C) 4:2:1
 (D) 4:2:3
 (E) 4:3:2
15. Find the smallest 4-digit number which, when increased by 8, is divisible by 12, 18, 30 and 45.
 (A) 1,072
 (B) 1,080
 (C) 1,088
 (D) 1,096
 (E) 1,120
16. Five friends, Akshita, Binod, Chetan, Dravid, and Eshan are to be arranged in a line. How many such arrangements are possible if Binod is not allowed to stand next to Dravid?
 (A) 24
 (B) 48
 (C) 72
 (D) 96
 (E) 120
17. How much tea selling at Rs. 10.40 per kg should be mixed with tea selling at Rs. 8.80 per kg to get a resulting mixture of 15 kg for Rs. 146.40?
 (A) 6 kg
 (B) 7 kg
 (C) 8 kg
 (D) 9 kg
 (E) 10 kg

18. If $\log_{30} 3 = x$ and $\log_{30} 5 = y$, then find the value of $\log_8 30$.
- (A) $3(1 - x - y)$
(B) $1/[3(1 - x - y)]$
(C) $3/(1 - x - y)$
(D) $(1 - x - y)/3$
(E) None of these
19. The roll numbers of students in the class are in the range from 100 to 199 (both inclusive). If the teacher selects one student at random, what is the probability that his/her roll number is divisible by 3?
- (A) $1/5$
(B) $32/99$
(C) $33/100$
(D) $2/3$
(E) None of these
20. A shopkeeper claims a loss of 4% on his goods, but uses weight equal to 840 gm instead of 1 kg. The shopkeeper actually makes a:
- (A) $11 \frac{1}{7}\%$ gain
(B) $14 \frac{2}{7}\%$ gain
(C) 4% loss
(D) 4% gain
(E) 2% loss
21. On January 1, Ajit put Re 1 in his piggy bank. Every day, he put in Rs. 2 more than the total amount of money already in the piggy bank. Which of the following expressions gives the total amount of money in Ajit's piggy bank at the end of January?
- (A) 2^{30}
(B) 2^{31}
(C) $3(2^{30}) - 2$
(D) $3(2^{31}) - 2$
(E) $3(2^{30})$
22. Sanya, Babli and Jhanvi started a new business. Sanya's capital was invested for a period which was equal to four times Jhanvi's period of investment whereas Sanya and Babli invested for the same period. Also, twice Sanya's investment is equal to Jhanvi's investment, and Babli's investment is equal to $1/2$ of Sanya's investment. If the total year-end profit from this business yielded Rs. 4,40,000, then what was the total share of Sanya and Babli in this profit?
- (A) Rs. 2,40,000
(B) Rs. 2,50,000
(C) Rs. 2,55,000
(D) Rs. 2,60,000
(E) Rs. 3,30,000
23. What is the probability that a card drawn at random from a pack of cards is either black or a jack?
- (A) $17/52$
(B) $7/13$
(C) $27/52$
(D) $3/13$
(E) $5/9$

24. In a class of 40 students, exactly 90% had lower marks than Varun's marks. 60 new students join Varun's class. If Varun's marks were higher than those of 80% of the new arrivals, what percent of the combined class now had higher marks than Varun's marks?

- (A) 86%
(B) 85%
(C) 16%
(D) 15%
(E) 14%

Directions for Questions 25–28: Table 1 shows the number of Science and Engineering doctorates from different countries between 1989 and 1993. Table 2 shows the number of only Engineering doctorates from the same countries for the same period of time. Go through the given tables and solve the questions based on them.

Table 1: Science and Engineering Doctorates

Field / Year of Doctorate	Asia	China	India	Japan	South Korea	Taiwan
1989	10,035	1,024	4,209	3,561	984	257
1991	10,871	1,198	4,294	3,874	1,135	370
1993	12,587	1,895	4,320	4,438	1,421	513

Table 2: Engineering Doctorates

Field / Year of Doctorate	Asia	China	India	Japan	South Korea	Taiwan
1989	3,621	726	586	1,774	415	120
1991	4,100	767	629	2,029	466	209
1993	4,700	1,069	323	2,362	659	287

25. What was the approximate percentage increase in the number of Science doctorates from India between 1989 and 1991?

- (A) 1.16%
(B) 2.00%
(C) 7.33%
(D) 42.00%
(E) 43.00%

26. In 1993, what percentage of the Science doctorates from Asia were from India?

- (A) 6.87%
(B) 34.32%
(C) 37.34%
(D) 50.67%
(E) 62.65%

27. The table below shows the number of only Engineering doctorates from the same countries in 2003.

Field / Year of Doctorate	Asia	China	India	Japan	South Korea	Taiwan
2003	NA	6,573	779	3,921	1,868	656

Which country recorded the least percentage increase in the number of engineering doctorates from 1989 to 2003?

- (A) India
- (B) China
- (C) Japan
- (D) Taiwan
- (E) South Korea

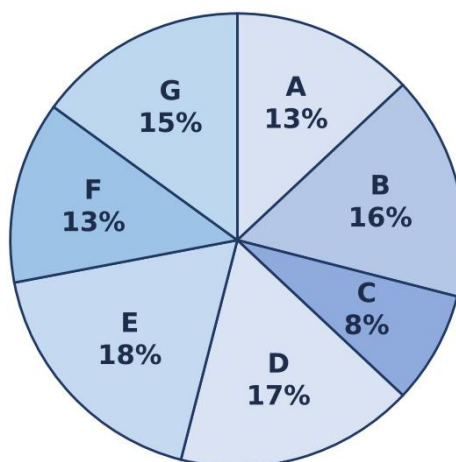
28. From 1989 to 1993, approximately what percentage of Engineering doctorates from Asia were from countries other than India?

- (A) 12.39%
- (B) 16.18%
- (C) 50.36%
- (D) 61.71%
- (E) 88.91%

Directions for Questions 29–32: Study the following table and chart to answer the questions given below.

Percentage of the population below the poverty line, 2005

Town	A	B	C	D	E	F	G
% of population below the poverty line	45	52	38	58	46	49	51



Percentage distribution of the population of seven towns of the state in 2005

29. In 2006, the populations of Town A and Town B each increased by 10% as compared to 2005. If the population of Town A in 2005 was 5000 and the percentage of the population living below the poverty line for all seven towns in 2006 remains the same as in 2005, which of the following is the approximate population of Town B below the poverty line in 2006?

- (A) 2500
- (B) 3000
- (C) 3500
- (D) 4000
- (E) 4500

30. In 2007, the population of Town D increased by 10% as compared to 2005 and the population of Town G reduced by 5% as compared to 2005. If the population of Town G in 2005 was 9000, what is the total population of Towns D and G in 2007?
- (A) 19200
(B) 19770
(C) 19870
(D) 19970
(E) None of these
31. If in 2005 the total population of the seven towns together was approximately 55,000, what will be the approximate population of Town F in that year below the poverty line?
- (A) 2500
(B) 3000
(C) 3500
(D) 4000
(E) 4500
32. The population of Town C is 2000 in 2005. What will be the ratio of the population of Town C below the poverty line to that of Town E below the poverty line in that year?
- (A) 207 : 76
(B) 76 : 207
(C) 152 : 207
(D) 76 : 307
(E) 87 : 207

Directions for Questions 33–36: Each question is followed by two statements, numbered (1) and (2). Using the information provided and general knowledge, decide whether the information given is sufficient to solve the problem.

- (A) Statement (1) ALONE is sufficient, but statement (2) ALONE is not sufficient.
(B) Statement (2) ALONE is sufficient, but statement (1) ALONE is not sufficient.
(C) BOTH statements TOGETHER are sufficient, but NEITHER statement ALONE is sufficient.
(D) EACH statement ALONE is sufficient.
(E) Statements (1) and (2) TOGETHER are NOT sufficient.
33. Are the integers A and B co-primes?
- (1) The numbers A and B are the squares of two successive even numbers.
(2) Both A and B are distinct primes.
34. What is Mr Kashyap's salary?
- (1) Mr Kashyap bought 50 kg rice with one-fourth of his salary.
(2) Had the rice been 20% cheaper than its current price, Mr Kashyap could have bought 50 kg rice for \$100 more than one-tenth of his salary.
35. Pipe A can fill a tank in 'a' hours and pipe B can fill the same tank in 'b' hours. If both the pipes are opened together for 2 hours, then what is the volume (in cc) of water in the tank after 2 hours?
- (1) $a = 6$ and $b = 8$
(2) Volume of the tank is 100 cc
36. Is $z > 1$?
- (1) $\log(z^x) > \log(z^{x^2})$, where x is an integer
(2) $z^2 < z$

Section 3: Logical Reasoning

36 questions | Time: 40 minutes

Directions for Questions 1–4: Read the information below and answer the questions that follow.

Six friends — S, R, P, D, M and K — are sitting around a circular sofa. S is sitting opposite to R. P is sitting to the right of R but left of D. M is sitting to the left of R. K is sitting to the right of S and left of M. Now, D and K interchange their positions and so do M and R.

1. Who will be sitting second to the right of D?
 - (A) S
 - (B) M
 - (C) R
 - (D) P
 - (E) K
2. Four of the following five pairs are alike in a certain way based on their positions in the above arrangement and so form a group. Which of the following pairs do not belong to the group?
 - (A) SR
 - (B) DM
 - (C) PS
 - (D) KM
 - (E) RP
3. Who will be sitting opposite to S?
 - (A) R
 - (B) M
 - (C) K
 - (D) D
 - (E) P
4. Who will be sitting to the immediate left of K?
 - (A) P
 - (B) D
 - (C) R
 - (D) S
 - (E) None of these

Directions for Questions 5–9: Read each passage and answer the question that follows it.

5. Statement: A very reputed non-banking finance company has launched a loan scheme for buying new agricultural tools. The farmers have responded well to the scheme and it has become successful as it has brought prosperity among the farmers.
Which of the following assumptions is implicit in the above statements?
 - (A) The prosperity of farmers is the only measure of the success of a loan scheme.
 - (B) Only tools are important for farmers to enhance farm activities.
 - (C) Earlier there was no such loan scheme available for farmers.
 - (D) Farmers do not prefer taking loans for buying agricultural tools on their own.
 - (E) The prosperity of farmers is an important indicator for the success of a loan scheme.

6. Man has reached Mars but is still unable to feed everyone on Earth.

Which of the following is implied in the above statement?

- (A) Food is scarce on Earth.
- (B) Mars is a good source of food.
- (C) Man went to Mars to explore agricultural possibilities.
- (D) Advancements in space, science and agriculture are not at par with each other.
- (E) Despite immense advancement in science, the basic need of all people on Earth is unfulfilled.

7. With an active mass media people have now become aware of their rights and are willing to fight for them.

Which of the following, if true, will support/strengthen the claim made in the argument above?

- (A) According to recent data collated by the Consumer forum there is a 150% rise in complaints against poor services.
- (B) Most discussions in mass media are celebrity-centric.
- (C) People got to know about the existence of the Citizen charter for each department only through the websites of those departments.
- (D) Both (A) and (C)
- (E) People have always been very aware of their civil rights.

8. A popular talk show host has been regularly making fun of a new movie on his programme for the past few days. The director of the movie attributes the poor performance of the movie to this fact.

Which of the following options most seriously weakens the above argument?

- (A) Several other film makers have also accused the talk show host of talking poorly about their movies.
- (B) There has been no change in the ticket prices at movie theatres in the past few months.
- (C) The talk show host has also made fun of several other movies and TV programmes on his talk show during this period.
- (D) The talk show host makes fun of only those movies that perform poorly at the box office.
- (E) The movie has been criticised by some sections of the media too for being overly long and having a clichéd storyline.

9. As Peter Parker's Uncle Ben says to him: 'With great power comes great responsibility.'

The argument above assumes that:

- (A) Uncle Ben is always right.
- (B) At least some people follow Uncle Ben.
- (C) Peter Parker has got some great powers.
- (D) Peter Parker listens to what his uncle says.
- (E) Uncle Ben sometimes lends his words of wisdom to Peter Parker.

Directions for Questions 10–11: In each question below, a statement or argument is followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. Decide which of the assumptions is implicit.

- (A) Only assumption I is implicit
- (B) Only assumption II is implicit
- (C) Either assumption I or II is implicit
- (D) Neither assumption I nor II is implicit
- (E) Both assumptions I and II are implicit

10. Statement: Children less than five years of age need to be continually kept mentally stimulated.

Assumptions:

- I. A large part of the development of intelligence and other social skills takes place in the early years of a child.
- II. 40 percent of a person's intelligence at the age of 22 can be predicted by the age of five.

11. Argument: Madhu cleaned her room in two days whereas Sapna, who is her elder sister, cleaned her room in three days. It is evident that Madhu cleans rooms quicker than Sapna does.

Assumptions:

- I. Madhu's and Sapna's rooms are of the same size.
- II. Sapna loves to clean whereas Madhu loves to play games.

Directions for Question 12: Read the statement and the two conclusions that follow it, and decide which of the conclusions can be inferred.

12. Statement: Aluminium manufactured in India is of a much better quality than the aluminium manufactured in other countries across the world.

Conclusion I: Indian aluminium manufacturers make huge profits on the sale of their aluminium.

Conclusion II: The manufacturing process employed by aluminium manufacturers in India contributes to its better quality.

- (A) Only I can be inferred.
- (B) Only II can be inferred.
- (C) Either I or II can be inferred
- (D) Neither I nor II can be inferred
- (E) Both I and II can be inferred

Directions for Questions 13–16: A word and number arrangement machine, when given an input line of words and numbers, rearranges them based on a certain rule. The following arrangement illustrates the pattern of steps that the machine follows.

Input: team 40 member appeared 15 all 30 power 25 sentences borings

Step I: all team member appeared 15 30 power 25 sentences borings 40

Step II: all team power member appeared 15 25 sentences borings 40 30

Step III: all team power member borings appeared 15 sentences 40 30 25

Step IV: all team power member borings appeared sentences 40 30 25 15

Step IV is the final output of the above input.

Answer the questions that follow, assuming that the new input given below is processed by the machine in the same manner.

Input: Procedures 80 doctors 50 would operation 75 45 American review

13. What is the position of 'American' in Step V?
- (A) Fourth from the right
 - (B) Fourth from the left
 - (C) Sixth from the right
 - (D) Fifth from the right
 - (E) None of these
14. How many steps will be required to complete the arrangement?
- (A) Three
 - (B) Four
 - (C) Five
 - (D) Six
 - (E) None of these
15. In a certain way in Step III, 'doctors' is related to '80' and 'review' is related to '75'. In the same way 'would' is related to which of the following?
- (A) American
 - (B) 45
 - (C) 50
 - (D) operation
 - (E) None of these
16. How many words/numbers are there in between 'procedures' and '50' in step IV?
- (A) Three
 - (B) Four
 - (C) Five
 - (D) Six
 - (E) Seven

Directions for Questions 17–21: Read each passage and answer the question that follows it.

17. I think that evil begets stupidity. An organisation that wins by exercising power starts to lose the ability to win by doing better work. And it's not fun for a smart person to work in a place where the best ideas aren't the ones that win, and so evil organisations start losing their smartest employees. I think the reason Google embraced the motto 'Don't be evil' so eagerly was not so much to impress the outside world as to inoculate themselves against arrogance.

Which of the following is a basic assumption made in this argument?

- (A) Google is not an evil organisation.
- (B) An organisation that abuses its power is an evil one.
- (C) Smart employees prefer not to work in evil organisations.
- (D) Stupid employees do not mind working in evil organisations.
- (E) Adopting mottos helps an organisation avoid being evil.

18. In a recently conducted survey on the quality of life among the citizens of a city, surveyors spoke to 980 citizens, a majority of whom said that they were satisfied with their quality of life. Thus, it can be concluded that the citizens of this city are satisfied with their quality of life.

Which of the following options most seriously weakens the above argument?

- (A) The surveyors spoke to people from only a particular economic strata.
- (B) Some of the respondents said that they were extremely dissatisfied with their quality of life.
- (C) The survey results are different from what have been reported from other neighbouring cities.
- (D) The survey sample was representative of the entire population of the city.
- (E) The governing body of the city is not very different from the governing bodies of other neighbouring cities.

19. Kavita is going to appear for an aptitude test in two months. To successfully clear this test, a person needs to do two things—take 20 practice tests and also attend 15 coaching sessions by a popular teacher. Nobody who has failed to meet the previous two criteria has ever cleared this test. If Kavita takes the 15 coaching sessions, she will only have enough time to attempt 15 practice tests and if she attempts 20 practice tests, she will only have enough time to take 10 coaching sessions.

The claims above, if true, most strongly support which of the following conclusions?

- (A) Kavita should take all 15 coaching sessions and then take as many tests as she can since tutoring is more important than practising.
- (B) As long as Kavita takes the 20 practice tests, she will most likely be able to clear the aptitude test.
- (C) Kavita will retake the aptitude test if she is not able to successfully clear it the first time.
- (D) Kavita will most likely not be able to clear the aptitude test.
- (E) If Kavita attends the 15 coaching sessions, she will most likely be able to clear the aptitude test.

20. The sale of badminton racquets in Chennai has tripled in the last year. Thus, it can be concluded that more and more people in Chennai have started playing badminton.

Which of the following options most strengthens the above argument?

- (A) Chennai is famous for its badminton racquets and tourists often buy these racquets when they visit Chennai.
- (B) The sales of badminton racquets in other cities have not shown a similar increase.
- (C) The majority of the badminton racquets sold in Chennai were sold to residents of Chennai.
- (D) The sales of cricket bats and golf clubs have also shown an increasing trend in Chennai.
- (E) Badminton racquets are a popular gift item when residents of Chennai visit their relatives in other cities.

21. India has decided to step up exports of various consumer goods to China.

Which of the following statements strengthens India's decision?

- (A) China is the third largest market in the world for these consumer goods.
- (B) The process of getting approval for trade in China is tedious and takes a long time.
- (C) China is known for manufacturing these products at comparatively economical prices.
- (D) The tax paid to the Chinese government on the total turnover in China has increased by 8%.
- (E) Market barriers and cost competitiveness restrict the entry and growth of companies in China.

Directions for Questions 22–23: Each question consists of a statement followed by two arguments numbered I and II. Decide which of the arguments is a 'strong' argument and which is a 'weak' argument.

- (A) Only argument I is strong
- (B) Only argument II is strong
- (C) Either argument I or II is strong
- (D) Neither argument I nor II is strong
- (E) Both arguments I and II are strong

22. Statement: Should more new universities be set up in India?

Arguments:

- I. No, the government will have to spend a lot of money in setting up new universities.
- II. Yes, setting up more universities will boost foreign interest in the country's education system.

23. Statement: Should the government shut down all loss-making public-sector enterprises?

Arguments:

- I. No. This will result in a loss of employment for hundreds of people.
- II. Yes. The government should minimise its loss and spend the amount on creating alternative employment opportunities

Directions for Question 24: The statement below is followed by three arguments numbered I, II and III. Decide which of the given arguments are strong.

24. Statement: Should CBSE continue with the new grading system which is based upon the teacher's informal evaluation of pupils rather than pupil examination?

Arguments:

- I. Yes. Informal evaluation reduces the pressure felt by students.
- II. No. The pressure of examinations prepares pupils for the pressures they will face in later life.
- III. No. Exams improve a student's manners and etiquettes.

- (A) Only I is strong.
- (B) Only II is strong.
- (C) Only III is strong.
- (D) Both I and II are strong.
- (E) Neither of them are strong.

Directions for Questions 25–27: In each question, a situation is given followed by two suggested courses of action. A course of action is a step or administrative decision taken for improvement or follow-up action. Decide which of the given courses of action follows.

- (A) If only course of action I follows
- (B) If only course of action II follows
- (C) If either I or II follows
- (D) If neither course of action follows
- (E) If both courses of action follow

- 25.** Statement: A popular news channel is concerned about the quality of its programmes, particularly in light of losing business to its competition.

Courses of Action:

- I. It should plan to revise its fee structure for the artists and take various other measures to attract talent for its programmes.
- II. It should take stringent action against people involved in the programmes which lost their popularity and led to a loss in business.

- 26.** Statement: The companies producing fuel in India have been found lacking in both quality and quantity of their supplies to bulk consumers, especially the thermal power stations. This has resulted not only in low volume of power production but also in increased cost of production especially to the thermal power stations.

Courses of Action:

- I. The Government should slap legally enforceable penalties on the fuel producing companies defaulting on the quality and quantity of supplies.
- II. The Government should force the fuel producing companies to introduce welfare measures for their employees so that they don't show laxity.

- 27.** Statement: The influx of apples imported from California in Indian stores has considerably reduced the demand for indigenous apples, which tend to be of an inferior quality.

Courses of Action:

- I. The government should force Indian stores to stop selling the imported apples and incentivise them to sell Indian apples.
- II. To help indigenous apple growers, the government should impose high import duties on imported apples.

Directions for Questions 28–29: Read each situation and choose the most appropriate decision.

- 28.** Several incidents of ragging have been reported from medical colleges in the state. The situation has turned serious as a lot of suicides have been committed due to these incidents.

Which of the following will be an appropriate decision that should be adopted by the government in this scenario?

- (A) The government should ignore these incidents as ragging helps build a bond between senior and junior students.
- (B) The government should issue strong guidelines and ensure that colleges take strict action against those found guilty of ragging.
- (C) These matters are not that important and are a result of the media-hype generated by over-sensitive parents.
- (D) The medical colleges where the cases of ragging have been reported should be shut down and an inquiry should be conducted.
- (E) The government has no role in this matter as this issue falls within the purview of college authorities.

29. A team leader has left the company and the manager urgently needs to put a replacement in place. A precious amount of time in the project has already been lost and the product launch has already been announced by the client. Stakes are high and time is at a premium. Besides, the team which comprises of very highly skilled individuals is becoming edgy due to the sheer pressure.

What decision should the manager take if they have to choose between a person with very high people management and interpersonal skills and a person known to be short-tempered but highly skilled in multiple domains to be used in the project?

- (A) Choose the person with multiple domain expertise – different team members would need support in different domains to complete the work.
- (B) Choose the person with people management skills – both the team and the client would need high levels of engagement.
- (C) Choose the person with multiple domain expertise – the team would need such a person, should anyone else leave.
- (D) Choose the person with multiple domain expertise – a lot of time has already been lost and time is at a premium.
- (E) Choose neither – you need to seek HR intervention, advertise and get someone else recruited at the earliest.

Directions for Question 30: Given below are a few facts. Based on these facts, select from among the given statements the statement that can be concluded to be a fact.

30. Facts:

Fact 1: A is B's sister.

Fact 2: A's son is C.

Fact 3: C's aunt is B.

Statements:

I. A has no brother.

II. B's nephew is C.

III. B is unmarried.

- (A) Only I can be concluded to be a fact.
- (B) Only II can be concluded to be a fact.
- (C) Both I and III can be concluded to be facts.
- (D) Both II and III can be concluded to be facts.
- (E) None of the statements can be concluded to be a fact.

Directions for Question 31: The statements below are followed by two conclusions. Assume the statements to be true even if they seem to be at variance with commonly known facts, and decide which of the conclusions logically follows.

- (A) If only conclusion I follows
- (B) If only conclusion II follows
- (C) If either conclusion I or II follows
- (D) If neither conclusion I nor II follows
- (E) If both conclusions I and II follow

31. Statements:

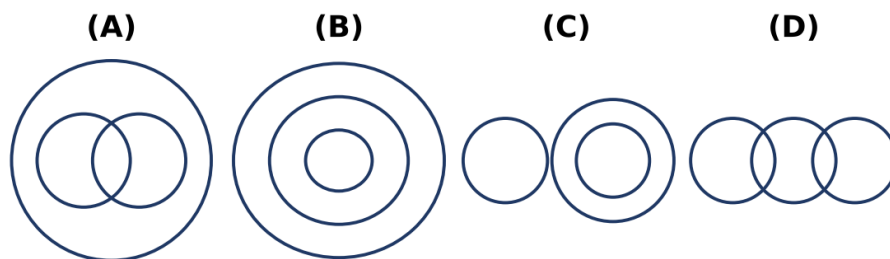
- (1) Some grapes are strawberries.
- (2) All strawberries are oranges.
- (3) Some oranges are apples.

Conclusion I: All strawberries are apples.

Conclusion II: Some grapes are not strawberries.

Directions for Question 32: The three given words are related in one of the ways shown in the diagrams below. Choose the diagram that depicts the exact relation among them.

32. Grandmother, Mother, Girls



- (E) None of these

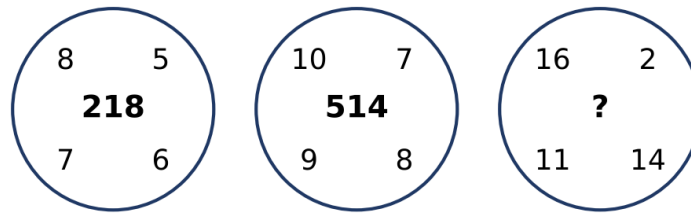
Directions for Questions 33–36: Answer each question independently.

33. Out of 140 mechanics, 10% can repair all three devices – Air Conditioner (AC), Television (TV) and Refrigerator. The number of mechanics who can repair exactly 2 of 3 electronic devices is 50. The number of mechanics who can repair only TVs is 22. The number of mechanics who can repair only ACs is equal to the number of mechanics who can repair only Refrigerators.

How many mechanics can repair only ACs, if each mechanic can repair at least 1 of the 3 electronic devices?

- (A) 22
- (B) 24
- (C) 26
- (D) 27
- (E) 29

34. Which number should replace the question mark?



- (A) 286
- (B) 296
- (C) 304
- (D) 324
- (E) 356

35. How many pairs of letters in the word 'STAIRS' have as many letters between them (in either direction) in the word as in the English alphabet?

- (A) None
- (B) 1
- (C) 2
- (D) 3
- (E) More than 3

36. Five stations, P, Q, R, S and T, are located on a highway but not necessarily in the same order. Q is the middle station which is towards the immediate left of R. S is not the first station but is towards the left of Q. T is towards the right of S. Which station is located to the immediate left of S?

- (A) P
- (B) R
- (C) T
- (D) Either P or T
- (E) Either P or R

Answer Key

** Real NMAT Question (as marked in the NMAT by GMAC™ Official Guide 2021)*

Section 1: Language Skills

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	D*	7	A	13	B	19	B	25	D*	31	B
2	D*	8	E*	14	C	20	E	26	C*	32	B
3	E*	9	E*	15	C*	21	D*	27	C	33	D
4	D*	10	E*	16	C*	22	A*	28	B	34	A
5	A*	11	A*	17	B	23	D*	29	A	35	E
6	B	12	E*	18	C*	24	E*	30	C	36	C

Section 2: Quantitative Skills

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A*	7	C*	13	D	19	C	25	A*	31	C
2	A*	8	B	14	A*	20	B	26	D*	32	B*
3	D	9	C	15	A*	21	C*	27	A*	33	D*
4	D*	10	B*	16	C	22	E*	28	E*	34	C*
5	E*	11	D	17	D*	23	B	29	C	35	C
6	A	12	D*	18	B	24	D	30	B	36	D*

Section 3: Logical Reasoning

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	7	D	13	B	19	D	25	A	31	D
2	D	8	D	14	C	20	C	26	A	32	B
3	B	9	E*	15	C	21	A*	27	D	33	D*
4	A	10	A	16	A*	22	B	28	B	34	D*
5	E	11	A	17	B	23	E	29	B*	35	C
6	E*	12	D	18	A	24	D*	30	B*	36	A*

Solutions

Section 1: Language Skills

Q1. Answer: D *Real NMAT Question*

The sentence opens with 'However', so it sets up a contrast with the previous sentence, which says the lay mind links fingerprints only with crime. By pointing out that the Civil File holds three times as many prints, the author shows fingerprints have another, possibly more important, use. A and B describe the whole paragraph; C only restates the sentence.

Q2. Answer: D *Real NMAT Question*

The first paragraph says fingerprint records result in 'the imposition of more equitable sentences by the judiciary'. D restates this. A is not supported, B contradicts paragraph 2, C is extreme and E contradicts paragraph 3.

Q3. Answer: E *Real NMAT Question*

The passage covers how fingerprints have been associated with crime since earliest times (history), their criminal and civil uses (usefulness) and how impressions are taken (mode of collection). Only E covers all three; the other options are either too narrow or not discussed.

Q4. Answer: D *Real NMAT Question*

Paragraph 3 lists ink, blood, dirt, grease and the saline substance from the glands (perspiration) as substances that form impressions. Wax is listed as a background or medium on which an impression is made, not as a substance on the fingers.

Q5. Answer: A *Real NMAT Question*

(c) introduces the confining pressure that suppresses fracturing, and (b) — 'This is particularly so...' — continues it. (a) explains how hydraulic fracturing occurs and (d) — 'Fractures formed in this way' — follows it. The mandatory pairs cb and ad appear together only in cbad.

Q6. Answer: B

(d) introduces the band of coral reefs and (a) — 'The band stretches...' — must follow it. (c) introduces the Great Barrier Reef, which (e) describes further, with the general remark in (b) fitting before (e). Only dacbe keeps da together and places c before e.

Q7. Answer: A

(a) introduces how the fork and knife are held. (c) describes how they are used together. (b) moves to holding the fork alone with the tines up, and (d) explains how it balances in that position. Hence acbd.

Q8. Answer: E *Real NMAT Question*

(d) opens the topic: glaciers form in extremely cold places. (a) describes 'these places'. (c) and (e) give the process — snowfalls compress the lower layers, and finally the lowest layer turns to ice — and (b) concludes that this hardened ice is the glacier. Hence daceb.

Q9. Answer: E *Real NMAT Question*

The passage says Great Expectations is 'widely considered his greatest literary feat'; David Copperfield is only called his favourite novel. So E contradicts the passage. A, B, C and D are all stated or directly supported.

Q10. Answer: E *Real NMAT Question*

The passage focuses on Dickens' writing — the influences on it, his motives, his style and his major works. His characters, success and childhood are discussed only as parts of this, and it is not a full life story.

Q11. Answer: A *Real NMAT Question*

The passage says his works 'invariably aimed to influence the consciousness of his readers' and quotes the London Times calling him the greatest instructor of the century. B misreads that phrase, C contradicts the passage (Great Expectations), and D and E are not supported.

Q12. Answer: E *Real NMAT Question*

The author says the deaths and separation of the 1850s 'cast a dark shadow' on his writing and that his greatest works came after he returned to his original style. If he had written his classics during that period of shock, the author's account would be undermined. A–D are consistent with the passage.

Q13. Answer: B

'Each of the...' takes a singular verb, so 'have a' should be 'has a'.

Q14. Answer: C

The correct phrase is 'conform to' (comply with), not 'conform by'.

Q15. Answer: C *Real NMAT Question*

The subject is the singular 'A major contribution', so the verb should be 'was', not 'were'.

Q16. Answer: C *Real NMAT Question*

'Either of these...' takes a singular verb: 'Either of these stuffed toys **is** suitable...'.
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Q17. Answer: B

'Unthaw' is incorrect diction; the word needed is 'thaw' (to unfreeze).

Q18. Answer: C *Real NMAT Question*

1. placed under house arrest (d); 2. selected for the seat (b); 3. serving food to inmates (a). Hence dba.

Q19. Answer: B

1. comply with (e); 2. for want of (b); 3. insight into (d). Hence ebd.

Q20. Answer: E

1. have my wallet on me (f); 2. get off with a light punishment (c); 3. aboard the yacht (b). Hence fcb.

Q21. Answer: D *Real NMAT Question*

1. see through every ploy (b); 2. stand out (e); 3. ran through the main points (b). Hence beb.

Q22. Answer: A *Real NMAT Question*

1. signs of the presence (a); 2. came under the scanner (d); 3. subsequent to (b). Hence adb.

Q23. Answer: D *Real NMAT Question*

The passage opens with the social goals behind regulatory policy and then presents Schultze's case for an incentive system, along with the views of its critics. D captures this overview. A covers only the opening, B is wrong because Schultze does not list cons, and C and E are not discussed.

Q24. Answer: E *Real NMAT Question*

Schultze argues that incentives 'are more effective and efficient than command-and-control regulation'. This is the crux of his claim. D is the view of the defenders of command-and-control, and A, B and C are not his claims.

Q25. Answer: D *Real NMAT Question*

The author states that 'there may be more than one way to achieve these — and many other — desirable social goals', and then compares two approaches. B is Schultze's opinion, not the author's; acceptance (E) is not mentioned.

Q26. Answer: C *Real NMAT Question*

Developing standards for 62,000 pollution sources is what the EPA does now under command-and-control; Schultze's incentive system would replace this with a pollution tax. So the author would not agree with C. A, B, D and E are all stated in the passage.

Q27. Answer: C

The keyword 'he knows more... than his teacher' points to overconfidence. 'Presumptuous' means overstepping what is appropriate. 'Peremptory' means insisting on obedience, and the other words do not fit.

Q28. Answer: B

A police officer would check whether an unsteady man was drunk. 'Staggering' (walking unsteadily) and 'inebriated' (drunk) fit both blanks. D's 'rickety' cannot describe a person's walk.

Q29. Answer: A

New evidence would 'vindicate' (clear of blame) the 'defendant' (the accused). In B, 'gullible' does not fit; C and D reverse the meaning; in E, 'reprobate' (an unprincipled person) does not fit an accused who is being cleared.

Q30. Answer: C

The list of safaris, ancient cultures and varied landscapes shows variety: 'diverse'. 'Echoes' of ancient cultures and 'myriad' landscapes complete the sense; 'multitude', 'memento' and 'excessive' do not fit grammatically or in meaning.

Q31. Answer: B

The connector 'not that it merely' sets up a contrast with 'deepens and extends our knowledge'. The blank needs a word like 'restate' or 'reiterate'; 'confirm' fits best.

Q32. Answer: B

A captain is in command of a ship, just as a manager is in command of an office. A teacher does not command a school; the other pairs do not show command.

Q33. Answer: D

'Tepid' is a milder degree of 'boiling'. Careful–punctilious, drizzle–downpour, like–dote and vain–vainglorious all show a lower and higher degree. Avaricious and rapacious both mean extremely greedy — synonyms, not degrees.

Q34. Answer: A

A quiver is a group of cobras. A school of fish, a herd of antelopes, an army of caterpillars and a float of crocodiles are collective nouns. A group of pigeons is a flock; 'congregation' refers to people.

Q35. Answer: E

'Dishevelled' (untidy) is the opposite of 'tidy'. Exasperate (make angry) and please are also antonyms. A, C and D are synonym pairs; B is unrelated.

Q36. Answer: C

A trickle is a mild form of a gush, just as a breeze is a mild form of a gale. A and B are synonyms, D is fruit and tree, and E is a part of the tide's movement.

Section 2: Quantitative Skills

Q1. Answer: A *Real NMAT Question*

Let production in 1990 = 100. In 1995 it is 175 and in 2000 it is $175 \times 2 = 350$. Increase = 250%.

Q2. Answer: A *Real NMAT Question*

Unit digits of powers of 8 and 2 repeat every 4; powers of 9 every 2. 98^{43} : $43 = 4 \times 10 + 3$, so the unit digit is that of $8^3 = 2$. 122^{22} : $22 = 4 \times 5 + 2$, unit digit of $2^2 = 4$. 729^{59} : odd power of 9, unit digit 9. 2^{543} : $543 = 4 \times 135 + 3$, unit digit 8. Total: $(2 \times 4) + 9 + 8 = 25$, so the unit digit is 5.

Q3. Answer: D

Let each of the two people eat P pieces; the third eats P + 2. Then $3P + 2 = 14$, so P = 4 and the third person eats 6.

Q4. Answer: D *Real NMAT Question*

CP of the first player = $1,710 \div 0.95 = \text{Rs. } 1,800$. CP of the second = $2,520 \div 1.20 = \text{Rs. } 2,100$. Total CP = 3,900; total SP = 4,230. Gain = 330, and $330/3,900 \times 100 \approx 8.5\%$.

Q5. Answer: E *Real NMAT Question*

With n teams each playing every other team once, matches = ${}^nC_2 = n(n-1)/2 = 120$. So $n^2 - n - 240 = 0$, i.e. $(n-16)(n+15) = 0$, giving n = 16.

Q6. Answer: A

Boys = $6x$ and girls = $7x$. Then $7x - 6x = 2$ gives $x = 2$, so there are 12 boys.

Q7. Answer: C *Real NMAT Question*

From $3! = 6$ onwards, every factorial is divisible by 6. So the remainder comes only from $1! + 2! = 3$.

Q8. Answer: B

Total ways = ${}^{30}C_2 = 435$. Both bananas: ${}^{20}C_2 = 190$. Both good (23 good fruits): ${}^{23}C_2 = 253$. Both good bananas (15): ${}^{15}C_2 = 105$. Required = $(190 + 253 - 105)/435 = 338/435$.

Q9. Answer: C

Revenue = $78h$ and the salesman costs $10h$, so the hourly margin is Rs. 68. Subtracting the fixed table rent of Rs. 150 gives $P(h) = 68h - 150$.

Q10. Answer: B *Real NMAT Question*

If $(1 + r)^3 = 3$, then $27 = 3^3 = [(1 + r)^3]^3 = (1 + r)^9$. The amount becomes 27 times in 9 years.

Q11. Answer: D

May has 31 days = 4 weeks + 3 extra days. The 3 extra consecutive days can be any of 7 combinations (Mon–Wed, Tue–Thu, ... Sun–Tue), and Tuesday appears in 3 of them. Probability = $3/7$.

Q12. Answer: D *Real NMAT Question*

Rearranging: $a^2 - 2a + 1 = b^2 - 2b + 1 + 5$, so $(a - 1)^2 - (b - 1)^2 = 5$, i.e. $(a - b)(a + b - 2) = 5$. For positive integers, $a - b = 1$ and $a + b - 2 = 5$, giving $a = 4$ and $b = 3$.

Q13. Answer: D

$p = 5q$, so q is less than p by $(5q - q)/5q \times 100 = 80\%$.

Q14. Answer: A *Real NMAT Question*

Let Pradeep's efficiency be x ; Nishit's is $2x$. Together they are $3x$, which is three times Bhuvan's rate, so Bhuvan's efficiency is x . Earnings are shared as $2x : x : x = 2 : 1 : 1$.

Q15. Answer: A *Real NMAT Question*

LCM of 12, 18, 30 and 45 is 180. The number + 8 must be a multiple of 180 and the number must have 4 digits. The first such multiple is 1,080, so the number is $1,080 - 8 = 1,072$.

Q16. Answer: C

All arrangements = $5! = 120$. With Binod and Dravid together (treated as one unit, which can be ordered 2 ways): $4! \times 2 = 48$. Required = $120 - 48 = 72$.

Q17. Answer: D *Real NMAT Question*

Let x kg be at Rs. 10.40; then $(15 - x)$ kg is at Rs. 8.80. $10.40x + 8.80(15 - x) = 146.40$, so $1.6x = 14.40$ and $x = 9$ kg.

Q18. Answer: B

$\log_{30} 2 + \log_{30} 3 + \log_{30} 5 = \log_{30} 30 = 1$, so $\log_{30} 2 = 1 - x - y$ and $\log_{30} 8 = 3(1 - x - y)$. Hence $\log_8 30 = 1/[3(1 - x - y)]$.

Q19. Answer: C

There are 100 roll numbers. Multiples of 3 run from 102 to 198: $(198 - 102)/3 + 1 = 33$. Probability = $33/100$.

Q20. Answer: B

Let 1 kg cost Rs. 100, so he sells at Rs. 96 (a 4% loss). He actually gives only 840 g, which costs him Rs. 84. Gain = $12/84 \times 100 = 14 \frac{2}{7}\%$.

Q21. Answer: C *Real NMAT Question*

Deposits are 1, 3, 6, 12, 24, ...: after day 1, each deposit doubles. Total = $1 + [3 + 6 + \dots \text{for 30 days}] = 1 + 3(2^{30} - 1) = 3(2^{30}) - 2$. Check: totals after days 1, 2, 3 are 1, 4 and 10, matching $3(2^{n-1}) - 2$.

Q22. Answer: E *Real NMAT Question*

Take Sanya = 100 for 12 months, Jhanvi = 200 for 3 months and Babli = 50 for 12 months. Capital $\times$ time = 1,200 : 600 : 600 = 2 : 1 : 1 (Sanya : Jhanvi : Babli). Sanya + Babli = $\frac{3}{4} \times 4,40,000 = \text{Rs. } 3,30,000$.

Q23. Answer: B

There are 26 black cards and 4 jacks, of which 2 jacks are black. Favourable cards = $26 + 4 - 2 = 28$. Probability = $28/52 = 7/13$.

Q24. Answer: D

90% of 40 = 36 students scored below Varun, and 80% of 60 = 48 new students also did. So 84 of the 100 students are below him. The remaining 16 include Varun, so 15 students (15%) scored higher.

Q25. Answer: A *Real NMAT Question*

India Science doctorates = Science and Engineering – Engineering. 1989: $4,209 - 586 = 3,623$. 1991: $4,294 - 629 = 3,665$. Increase = $42/3,623 \times 100 \approx 1.16\%$.

Q26. Answer: D *Real NMAT Question*

Asia Science doctorates in 1993 = $12,587 - 4,700 = 7,887$. India = $4,320 - 323 = 3,997$. Share = $3,997/7,887 \times 100 \approx 50.67\%$.

Q27. Answer: A *Real NMAT Question*

Increase from 1989 to 2003: India $586 \rightarrow 779$ (about 33%); Japan $1,774 \rightarrow 3,921$ (about 121%); South Korea $415 \rightarrow 1,868$ (about 350%); Taiwan $120 \rightarrow 656$ (about 447%); China $726 \rightarrow 6,573$ (about 805%). Every country except India more than doubled, so India recorded the least increase.

Q28. Answer: E *Real NMAT Question*

Asia, 1989–1993: $3,621 + 4,100 + 4,700 = 12,421$. India: $586 + 629 + 323 = 1,538$. Others: 10,883, i.e. $10,883/12,421 \times 100 \approx 87.6\%$. The closest option is 88.91%.

Q29. Answer: C

Town A (13%) = 5,000, so the total = $5,000 \div 0.13 \approx 38,462$ and Town B (16%) $\approx 6,154$. In 2006, $B \approx 6,154 \times 1.1 \approx 6,769$. Below the poverty line (52%) $\approx 3,520$, i.e. about 3,500.

Q30. Answer: B

Town G (15%) = 9,000, so the total = 60,000 and Town D (17%) = 10,200. In 2007: $D = 10,200 \times 1.1 = 11,220$ and $G = 9,000 \times 0.95 = 8,550$. Total = 19,770.

Q31. Answer: C

Town F = 13% of 55,000 = 7,150. Below the poverty line = 49% of 7,150 $\approx 3,504$, i.e. about 3,500.

Q32. Answer: B *Real NMAT Question*

C = 2,000 is 8% of the total, so the total = 25,000 and E (18%) = 4,500. C below the poverty line = 38% of 2,000 = 760; E = 46% of 4,500 = 2,070. Ratio = $760 : 2,070 = 76 : 207$. (Directly: $(8 \times 38) : (18 \times 46) = 76 : 207$.)

Q33. Answer: D *Real NMAT Question*

Statement (1): squares of even numbers are both divisible by 4, so A and B are not co-prime — sufficient. Statement (2): two distinct primes have HCF 1, so they are co-prime — sufficient. Each alone is sufficient.

Q34. Answer: C *Real NMAT Question*

Let the salary be S. (1) gives the cost of 50 kg = $S/4$, but S stays unknown. (2) alone has two unknowns. Together: $0.8 \times S/4 = S/10 + 100$, so $0.2S - 0.1S = 100$ and $S = 1,000$. Both together are needed.

Q35. Answer: C

(1) gives the fraction filled in 2 hours, $2(1/6 + 1/8) = 7/12$, but not the volume. (2) gives only the capacity. Together, the volume = $7/12 \times 100 \approx 58.3$ cc. Both are needed.

Q36. Answer: D *Real NMAT Question*

(1): $x \log z > x^2 \log z$, i.e. $(x - x^2) \log z > 0$. For any integer x , $x - x^2 \leq 0$, and it cannot be 0 here, so $\log z < 0$, i.e. $0 < z < 1$ — sufficient (No). (2): $z^2 < z$ holds only for $0 < z < 1$ — sufficient (No). Each alone is sufficient.

Section 3: Logical Reasoning

Q1. Answer: B

Reading round the sofa towards the right, the initial order is S, K, M, R, P, D — this satisfies every condition, with S opposite R. After D and K swap and M and R swap, the order becomes S, D, R, M, P, K. Going two places to the right of D: $D \rightarrow R \rightarrow M$. So M is second to the right of D.

Q2. Answer: D

Final order: S, D, R, M, P, K. In SR, DM, PS and RP, the second person sits two places to the right of the first. In KM, M is two places to the left of K, so KM does not belong.

Q3. Answer: B

In the final order S, D, R, M, P, K (six seats), the person opposite S is three seats away: M.

Q4. Answer: A

In the final order S, D, R, M, P, K, the person immediately to the left of K (one seat back) is P.

Q5. Answer: E

The statement treats the farmers' prosperity as evidence of the scheme's success, so it assumes prosperity is an important indicator of success (E). A and B use the extreme word 'only', C cannot be assumed, and D contradicts the scheme's success.

Q6. Answer: E *Real NMAT Question*

The statement contrasts a great scientific achievement (reaching Mars) with an unmet basic need (feeding everyone). E captures this. A goes too far — food may exist but be poorly distributed — and B, C and D are not implied.

Q7. Answer: D

The claim is that active media has made people aware of their rights and willing to fight for them. A gives data showing people are fighting for their rights (more complaints). C shows awareness spreading through a media channel. Both strengthen the claim. B and E weaken it.

Q8. Answer: D

The director says the host's jokes caused the film to do badly. D reverses the cause: the host mocks only films that are already doing poorly, so the jokes did not cause the failure. E offers another possible cause, but D undermines the argument most directly.

Q9. Answer: E *Real NMAT Question*

The statement presents Uncle Ben saying something to Peter Parker, so it assumes that he does share such advice with him (E). Whether he is always right, followed or listened to, or whether Peter has powers, is not assumed.

Q10. Answer: A

I is implicit: the most plausible reason for stimulating young children is that much of their intellectual and social development happens early. II introduces a specific statistic that the statement neither needs nor implies.

Q11. Answer: A

Comparing who cleans faster from the time taken is valid only if the rooms are comparable, so I is implicit. II is irrelevant to the conclusion.

Q12. Answer: D

Nothing is said about profits, so I does not follow. The statement gives no reason for the better quality — it could be the process, the ore or something else — so II does not follow either.

Q13. Answer: B

Rule: in each step, the next word in increasing order of length moves into place from the left, and the next number in decreasing order moves to the right end. Step I: would Procedures doctors 50 operation 75 45 American review 80. Step II: would review Procedures doctors 50 operation 45 American 80 75. Step III: would review doctors Procedures operation 45 American 80 75 50. Step IV: would review doctors American Procedures operation 80 75 50 45. Step V: would review doctors American operation Procedures 80 75 50 45 (final). In Step V, 'American' is fourth from the left.

Q14. Answer: C

Following the rule (see the solution to Q13), the arrangement is complete at Step V, so five steps are required.

Q15. Answer: C

In Step III (would review doctors Procedures operation 45 American 80 75 50), 'doctors' is third from the left and '80' third from the right; 'review' is second from the left and '75' second from the right. 'Would' is first from the left, so it pairs with the first from the right: 50.

Q16. Answer: A *Real NMAT Question*

Step IV: would review doctors American Procedures operation 80 75 50 45. Between 'Procedures' and '50' are operation, 80 and 75 — three elements.

Q17. Answer: B

The argument calls organisations that 'win by exercising power' evil without saying so explicitly; this link is assumed (B). C is stated in the passage, not assumed; A, D and E are outside the argument.

Q18. Answer: A

The conclusion about all citizens rests on the survey being representative. If the surveyors spoke to only one economic stratum, the sample is biased and the conclusion is weakened. B does not affect a majority result, C and E are irrelevant, and D strengthens the argument.

Q19. Answer: D

Clearing the test requires both 20 practice tests and 15 coaching sessions, and Kavita can do only one of the two in full. So she will most likely not clear it (D). B and E meet only one requirement; A and C are unsupported.

Q20. Answer: C

The conclusion assumes the racquets are being used by people in Chennai. C confirms that most buyers were residents, which strengthens it. A and E suggest the racquets leave the city (weakening), and B and D are irrelevant.

Q21. Answer: A *Real NMAT Question*

A large market for these goods in China makes stepping up exports a sound decision. B and E are obstacles, C makes exporting to China pointless, and D is unrelated.

Q22. Answer: B

I is weak: opposing a beneficial step only because it costs the government money is not a strong argument. II is strong: greater foreign interest in the education system is a desirable, directly related outcome.

Q23. Answer: E

I is strong: large-scale job losses are a serious, directly related consequence. II is also strong: it gives a logical reason for the step and offers an alternative that benefits the public. Both are strong.

Q24. Answer: D *Real NMAT Question*

I is strong: reducing pressure on students is a valid, directly related benefit. II is strong: exam pressure prepares pupils for later life. III is weak: exams have no clear link with manners and etiquette.

Q25. Answer: A

I follows: improving the fee structure to attract talent directly addresses the drop in programme quality. II does not: punishing people is a negative, reactive step that does not solve the problem.

Q26. Answer: A

I follows: enforceable penalties would deter companies from defaulting on supplies. II does not: there is no clear link between employee welfare measures and the supply shortfall.

Q27. Answer: D

The core problem is the inferior quality of Indian apples. I is a forceful, undesirable step, and II protects growers without addressing quality. Neither follows; the growers should improve their quality.

Q28. Answer: B

The ragging has led to suicides, so the government must act, but proportionately. B sets clear guidelines and ensures action against the guilty. A and C trivialise the issue, D is extreme, and E ignores how serious it has become.

Q29. Answer: B *Real NMAT Question*

The team is highly skilled but edgy, and the client is waiting on a launch, so the replacement must manage people and engage the client. B addresses this. A, C and D overlook the team's state, and E delays a decision that is urgent.

Q30. Answer: B *Real NMAT Question*

B is A's sister and C is A's son, so C is B's nephew (II). Nothing tells us whether A has a brother (I) or whether B is married (III).

Q31. Answer: D

All strawberries are oranges and only some oranges are apples, so strawberries may or may not be apples — I does not follow. 'Some grapes are strawberries' does not rule out all grapes being strawberries, so II does not follow either.

Q32. Answer: B

Every grandmother is a mother, and every mother is a girl (a female). So the three sets are nested one inside another — diagram (B).

Q33. Answer: D *Real NMAT Question*

10% of 140 = 14 can repair all three; 50 can repair exactly two; 22 only TVs. The rest repair only ACs or only refrigerators: $140 - (14 + 50 + 22) = 54 = 2x$, so $x = 27$.

Q34. Answer: D *Real NMAT Question*

In each circle, (top right) $\times$ (bottom right) $\times$ (bottom left) + (top left) = centre: $5 \times 6 \times 7 + 8 = 218$ and $7 \times 8 \times 9 + 10 = 514$. So $2 \times 14 \times 11 + 16 = 324$.

Q35. Answer: C

In STAIRS, the letters S–T (positions 1–2) are adjacent in the word and in the alphabet, and so are R–S (positions 5–6). No other pair qualifies, so there are 2 pairs.

Q36. Answer: A *Real NMAT Question*

Q is the third (middle) station and R is fourth. S is left of Q but not first, so S is second. T is right of S, so T is fifth, leaving P first: P S Q R T. P is immediately to the left of S.