# NMAT FLT - 1
# Answers and Explanations

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 2 | **2** | 5 | **3** | 5 | **4** | 2 | **5** | 2 | **6** | 3 | **7** | 4 | **8** | 3 | **9** | 2 | **10** | 5 |
| **11** | 3 | **12** | 1 | **13** | 3 | **14** | 2 | **15** | 5 | **16** | 3 | **17** | 4 | **18** | 2 | **19** | 4 | **20** | 1 |
| **21** | 2 | **22** | 1 | **23** | 5 | **24** | 4 | **25** | 3 | **26** | 5 | **27** | 2 | **28** | 4 | **29** | 3 | **30** | 5 |
| **31** | 5 | **32** | 3 | **33** | 5 | **34** | 1 | **35** | 5 | **36** | 2 | **37** | 3 | **38** | 2 | **39** | 4 | **40** | 1 |
| **41** | 3 | **42** | 1 | **43** | 2 | **44** | 2 | **45** | 2 | **46** | 1 | **47** | 3 | **48** | 5 | **49** | 2 | **50** | 5 |
| **51** | 1 | **52** | 2 | **53** | 3 | **54** | 3 | **55** | 4 | **56** | 3 | **57** | 5 | **58** | 1 | **59** | 3 | **60** | 5 |
| **61** | 4 | **62** | 4 | **63** | 2 | **64** | 2 | **65** | 3 | **66** | 5 | **67** | 2 | **68** | 1 | **69** | 4 | **70** | 3 |
| **71** | 1 | **72** | 2 | **73** | 5 | **74** | 3 | **75** | 5 | **76** | 5 | **77** | 5 | **78** | 2 | **79** | 2 | **80** | 2 |
| **81** | 4 | **82** | 1 | **83** | 4 | **84** | 1 | **85** | 4 | **86** | 3 | **87** | 2 | **88** | 2 | **89** | 5 | **90** | 1 |
| **91** | 5 | **92** | 5 | **93** | 3 | **94** | 5 | **95** | 1 | **96** | 3 | **97** | 5 | **98** | 1 | **99** | 3 | **100** | 3 |
| **101** | 5 | **102** | 5 | **103** | 1 | **104** | 3 | **105** | 4 | **106** | 4 | **107** | 5 | **108** | 1 | **109** | 2 | **110** | 4 |
| **111** | 2 | **112** | 5 | **113** | 3 | **114** | 1 | **115** | 2 | **116** | 1 | **117** | 5 | **118** | 2 | **119** | 1 | **120** | 1 |

1. B ‘Cavil’ and ‘Signify’ share a synonymous relationship with each other. They both mean to disagree over something or to find fault with. Similarly, ‘docile’ and ‘amenable’ are also synonyms of each other as they both refer to being easily managed or taught.

2. A Leonine means like a lion, similarly lupine means like a wolf.

3. E Just as ‘allay’ meaning to soothe is the opposite of ‘worsen’, ‘pan’ which means to criticize is the opposite of praise.

4. B ‘Exult’ which means to express extreme joy is a synonym of ‘rejoice’. Similarly, ‘complicate’ which means to make intricate or involve is a synonym of ‘Perplex’.

5. B The given relationship is that of worker and workplace; a ‘miner’ works in a ‘mine’; similarly, an ‘artist’ works in an ‘atelier’.

6. C Statement A aptly introduces the subject. D continues the idea as it talks of ‘a major step towards regulating systematic risks’ which is related to ‘reforming the basic architecture of the financial markets’. C follows D as it describes the benefits of the “super-tax” mentioned in D. CB form a mandatory pair as ‘it’ in B refers to “the move” in C.

7. D B aptly introduces the subject- ‘the mistake made by the Centre’. D carries the idea forward as it gives the reason why ‘the Centre has made a serious mistake by not identifying the Maoist factor’. DC form a mandatory pair as ‘them’ and ‘their’ in C refer to the ‘ultras’ mentioned in D. A continues the discussion further as it talks of the shallowness of the unemployed politicians’ rhetoric vis-à-vis the people’s verdict.

8. C A introduces the topic by probing into the definition of spirituality. B continues with an alternative definition. C summarizes the idea behind the definitions. D rephrases the summary.

9. B A starts the discussion by comparing the works of the two greatest 19th century poets. A continues the discussion further as it introduces the first of these two great poets- Walt Whitman. C forms a mandatory pair with A as ‘His magnum opus’ in C refers to Walt Whitman’s work. D carries forward the idea mentioned in C.

10. E B is the obvious opener. A elaborates on the comment made in B. D follows A as ‘some’ in A is aptly complemented by ‘others’ in D. DC form a mandatory pair as ‘they’ in C refers to ‘others’ in D.

11. C The sentence talks of a positive event- Mr. Obama receiving the Nobel peace prize; however the sentence has a tinge of irony as Obama openly accepts that he was a ‘war president’. The situation for Mr. Obama is shameful and his acknowledgement on receiving the peace prize and at the same time escalating US presence in Afghanistan would have to be ‘apologetic’. Thus option (C) fits in best here.

12. A The sentence talks of a negative habit brewing up because of the failure of the managers to enforce rules. Only ‘procrastination’ fits the bill.

13. C The clue to solve the riddle lies in the ‘indistinct focus’ of the director. ‘Vagueness’ comes the closest in describing the ‘indistinct focus’.

14. B Only ‘clientele’ fits the bill as the sentence talks of Anita expanding her business.

15. E The clue to solve this question lies in the words ‘qualities which the words cannot express’; ‘ineffable’ which means incapable of being expressed in words fits the bill appropriately.

16. C “The number” is considered as singular. Hence, “has exceeded” is the correct usage. Option (E) is incorrect because we need the adjective form of the word “estimate” here to modify the noun “figure”. Hence, “estimation” cannot be used.

17. D The correct phrasal verb to be used here is “rattled off” which means to quote figures rapidly.

18. B There is an error of parallelism in the given sentence. As per the rule of parallelism, the later part of the sentence needs to be modified as per the initial structure. Hence, option (B) is the correct answer.

19. B ‘Knock out’ means to render (a person) unconscious. Therefore, the correct sentence is “Those sleeping pills knocked me out for ten hours”.

20. A Since the action has been recently completed, the present perfect tense should be used. The phrase “Many a” is also taken as singular. Hence, “has been” should be used instead of “have been”.

21. B Option (B) is correct and derivable from the second paragraph of the passage. Option (A) cannot be chosen as an answer as the passage does not inform us about how Alexander died. Option (C) is incorrect in saying that Pott’s disease causes weight loss. Options (D) and (E) may be true but cannot be supported by the information given in the passage.

22. A Option (A) is correct.

23. E From the given information about “The Rape of the

Lock", it cannot be determined what was the reason (or inspiration) behind writing it.

24. D Option (D) is correct and be evidenced from the third paragraph of the passage.

25. C In the given context 'grotto' refers to a construction in the form of a cave, esp as in landscaped gardens during the 18th century.

26. E All except option (E) find a mention in the passage.

27. B Refer to the last line of the second paragraph.

28. D Refer to the lines of the sixth paragraph, "Fortunately for us, gratitude is something which is useful for an adult, ...". "In adulthood, we cannot expect other people to help us out all the time.....As adults, we cannot get pieces of cake by threatening to hold our breath until we pass out. We must learn some gratitude..." All expect option (D) are true and well-supported by the passage.

29. C Refer to the lines, "The most efficient way to be is probably to have an ability to learn gratitude quickly, but to suppress the actual learning of gratitude until the moment when ingratitude stops being beneficial." All the other options except option (C) are either vague or inappropriate.

30. E Options (A) and (D) can be negated as 'arrogance' which is mentioned in the fourth paragraph, has not been hinted in the first paragraph of the passage. Option (B) is objectionable; 'a surreal experience' is marked by strangeness and intense irrationality which has not been hinted in the first paragraph, moreover, to say that these children are pretentious in their conduct would be incorrect as per passage. Option (C) is also negated as it does not deal accurately with the drift of views expressed in the first passage. Option (E) is evident in the third and last three lines of the first paragraph of the passage.

31. E The author at various portion of the passage uses conversational style and in a thoughtful and cognizant way explains why and how children develop ingratitude.

32. C Read the lines, "children benefit most consistently from a general policy of expecting gifts, demanding gifts, being self-centred, stubbornness, and threatening to throw tantrums ...." Only option (C) voices a conclusive cause which can be well- supported by the information given in the fourth paragraph. It is a child's self-centredness and unreasonable/obstinate attitude caused by a perception that the world will and ought to supply the him with an endless stream of goodies, that hinders growth of emotions like humbleness, consideration for others, and the actual feeling of gratitude itself. The passage nowhere mentions oneness, friendliness, diligence and cuteness as emotions conducive for gratitude.

33. E $$\text{LHS} = \frac{14 \div \frac{1}{3}\text{ of }15}{7 \times (?)\text{ of}2} \div \frac{\overline{7+8} \div 3}{\frac{1}{2}\text{ of }4 \div \frac{1}{4}}$$

$$= \frac{14 \div 5}{7 \times (?)\text{ of }2} \div \frac{15 \div 3}{\frac{1}{2}\text{ of }16}$$

$$= \frac{\left(\frac{14}{5}\right)}{7 \times (?)\text{ of }2} \div \frac{5}{8} = \frac{\left(\frac{14}{5}\right)}{7 \times (?)\text{ of }2} \times \frac{8}{5} = 1 = \text{RHS}$$

Hence, $7 \times (?)\text{ of }2 = \frac{14 \times 8}{25}$

or $(?)\text{ of }2 = \frac{16}{25}$

$\Rightarrow '?' = \frac{8}{25}$

34. A $$\sqrt{\frac{7}{5}} \div \sqrt{\frac{8}{3}} = \sqrt{\frac{7}{5}} \times \sqrt{\frac{3}{8}} = \frac{\sqrt{35}}{5} \times \frac{3}{\sqrt{24}}$$

$$= \frac{3\sqrt{35}}{10\sqrt{6}} = \frac{3 \times 5.92}{10 \times 2.45} = 0.725$$

35. E $3136 \div 16\text{ of }28 - \sqrt[4]{81}$

$= 3136 \div 448 - \sqrt[4]{81}$

$= 7 - \sqrt[4]{81} = 7 - 3 = 4$

36. B $p = 7 \times (-9) \times (-5) \Rightarrow 7 \times (45) \Rightarrow 7 \times 5 \Rightarrow 35 \Rightarrow 15$

$r = (-3)(1)(-5) \Rightarrow 15 \Rightarrow 5$

p when divided by r will leave a remainder zero

**Alternative solution:**

$27 \times 31 \times 35$ will have a unit digit of 5 and hence when divided by 20 will leave either 15 or 5 as remainder.
So, p = 5 or 15
$17 \times 21 \times 25$ will have a unit digit of 5 and hence when divided by 10 will leave 5 as remainder.
So, r = 5
Hence p must be divisible by r

37. B Let N be 'ab' such that 'a' is the digit at ten's place while 'b' is the digit at unit place.
So P must be 'ba'.
Numerically, N = 10a + b and P = 10b + a
It is also given that -

2N +10 = P
or 20a + 2b +10 = 10b + a
or 19a + 10 = 8b

or $b = \frac{(19a + 10)}{8}$

possible values of (a,b) which satisfies above = (2, 6)
or N = 26 is the only possible solution.

38. B Let the initial volume be 11V (in ml) such that individual volume of A and B in the mixture becomes 5V and 6V respectively.
If 110 ml of this mixture is taken out then the volume of A and B taken out must be 50 ml and 60 ml. So volume of A and B in the mixture left will be '5V – 50' ml and '6V – 60' ml respectively.
If 100 ml of A is added to this then the volume of A will become '5V + 50' ml.
New ratio of A : B = (5V + 50) : (6V – 60) = 6 : 5
Hence, 25V + 250 = 36V – 360 or 11V = 610 ml.

39. D Area of wall painted black by A and C together on

Day 1 $= \left(\frac{1}{5}\right) + \left(\frac{1}{15}\right) = \frac{4}{15}$

Area of wall painted back to white by B on Day 2

$= \frac{1}{10}$

Area of wall painted black on Day 1 and Day 2

$= \frac{4}{15} - \frac{1}{10} = \frac{25}{150} = \frac{1}{6}$

So after 8 days the wall would be painted

$\left(\frac{4}{6}\right)$th black.

So after 9 days it will be painted

$\frac{4}{6} + \frac{4}{15} = \frac{84}{90}$ part black

After 10 days it will be $\frac{5}{6}$th painted black

The next day A and C will come and paint the

remaining part black $\left(\text{as } \frac{5}{6} + \frac{4}{15} > 1\right)$

40. A A man takes 120 days to finish the job.
Hence, 10 men will take 12 days to finish the job.
Also 15 women will take 12 days to finish the job.

Amount of work done by a man in a day $= \frac{1}{120}$

Amount of work done by a woman in a day $= \frac{1}{180}$

Amount of work done by 5 men in a day

$= \frac{5}{120} = \frac{1}{24}$

Amount of work done by 5 women in a day

$= \frac{5}{180} = \frac{1}{36}$

Total amount of work done in a day

$= \frac{1}{24} + \frac{1}{36} = \frac{5}{72}$

Total number of days required by 5 men and 5 women

to complete the job $= \frac{72}{5}$ = 14 days 4 hrs

41. C Area of square = 81 $cm^2$
Side of the square = 9 cm
Initial length of the cable = 36 cm
Length of half of the cable = 18 cm
This half is used to form a circle
Hence, circumference of the circle formed
$= 2\pi r = 18$

Hence radius $= \frac{63}{22} = 2.86$ cm approximately

42. A Let 'r' be the radius of spherical ball.
Let 'R' be the radius of the vessel.

$\therefore$ Volume of sphere $= \frac{4}{3}\pi r^3$

$\therefore$ Volume of 15 balls = Increase in volume of vessel

$= 15 \times \frac{4}{3}\pi\left(\frac{20}{100}\right)^3 = \frac{16\pi}{100} m^3$

Increase in height $= \frac{2 \times 50}{100} = 1$ m

$\therefore$ Increase in volume $= \pi R^2 \times$ Increase in height

$\Rightarrow \pi R^2 \times 1 = \frac{16\pi}{100}$

$\Rightarrow$ R = 0.4 and diameter = 0.8 m.

43. B **When leftmost ball is red -**
R _ R _ R _ R _ R _
The black ball can occupy any of the five blank spaces
So number of ways = 5

**When leftmost ball is not red -**
_ R _ R _ R _ R _ R
The black ball can occupy any of the five blank spaces

So number of ways = 5
**Total ways = 10**

44. B Let the savings of Ramesh and Varun be 3x and 2x and the expenditures be 3y and 4y respectively. Now as per the conditions in the question, we have

$$\frac{(3x + 3y)}{(2x + 4y)} = \frac{4}{5} \quad \text{... (i)}$$

Now dividing the numerator and denominator of L.H.S by y, we get $\frac{3\left(\frac{x}{y}\right) + 3}{\left\{2\left(\frac{x}{y}\right) + 4\right\}} = \frac{4}{5}$

$$\Rightarrow \frac{x}{y} = \frac{1}{3}$$

Hence, the required ratio is 1:3.

45. B Given that the current age of Romila and Ranjan are in the ratio 3 : 2. If the after 5 years, the ratio of their ages becomes 4 : 3, then we have the following equation to solve.

$$\frac{(3x + 5)}{(2x + 5)} = \frac{4}{3}$$

which gives x = 5.
Therefore, the current age of Ranjan will be 10 years.
Hence, option (B) is the correct choice.

46. A Rohan's cost price = 1.2x.
Ravi's purchase price = (1.2)(0.9)x
Also the purchasing price of article by Ravi is Rs. 100, so we can write
(1.2)(0.9)x = 100
$\Rightarrow$ x = Rs.92.59

47. C Let the selling price and cost price of each article be 'S' and 'C'.
According to the question, the equation we have is as follows
9S – 9C = 3C

$$\Rightarrow \frac{(S - C)}{C} = \frac{1}{3}$$

The required profit percentage = 33.33%.

48. E Let the sum be 'P'. The simple interest at 10% per annum for 2 years will be

$$\text{Simple interest} = \frac{(P \times 10 \times 2)}{100} \quad \text{...(i)}$$

$$\text{Compound interest} = P\left(1 + \frac{10}{100}\right)^2 - P \quad \text{...(ii)}$$

Since the difference between (ii) and (i) is 90, therefore we have

$$(0.21)\,P - (0.2)\,P = 90 \Rightarrow P = \frac{90}{0.01} = \text{Rs.9,000.}$$

49. B Let the circle with center O be inscribed in an equilateral triangle ABC.
Now in triangle OBD where D is the midpoint of side BC, we have

$$OD = \text{Radius} = 3\tan 30° = \sqrt{3}$$

$$\text{Area of the required circle} = \pi\left(\sqrt{3}\right)^2 = 3\pi \text{ sq.cm.}$$

50. E Area of rectangle = (AB)(BC)
Area of triangle PAB

$$= \text{Area of triangle QAB} = \frac{1}{2}(AB)(BC)$$, since BC is the height of both the triangles.
Hence sum of area of both the given triangles
= 10 sq.cm

51. A {[2 – (3 × 4 (4 × 2 – 7 ÷ 14)) ÷ 5]}
= {[2 – (3 × 4 (4 × 2 – 0.5)) ÷5]}
= {[2 – (3 × 4 × 7.5) ÷ 5]}
= {[2 – 90 ÷ 5]}
= {[2 – 18]}
= – 16

52. B Let a = 1021 and b = 2734.
Now apply $a^3 - b^3 = (a - b)(a^2 + ab + b^2)$

53. C 100 + 100 – (100 + 100) ÷ (100 × 100) – 1
= 200 – 200 ÷ 10000 – 1

$$= 200 - \frac{1}{50} - 1 = 200 - \left(\frac{51}{50}\right) = \frac{(10000 - 51)}{50}$$

$$= \frac{9949}{50}$$

54. C When the same train crosses a platform, the distance covered by the train is equal to the length of the train plus the length of the platform.

Now, length of the platform = (speed of train) × (extra time taken to cross the platform)
Length of platform = 90 kmph × 22 seconds

$$\text{Now, we get 90 kmph} = \left(\frac{5}{18}\right) \times 90 = 25 \text{ m/sec}$$

Hence, length of the platform = 25 × 22 = 550 meters.

55. D P is the set of those who opted for Cricket

$$= \frac{130}{2} = 65$$

Q is the set of those who opted for Football

$$= \frac{130}{5} = 26$$

R is the set of those who opted for Hockey

$= \frac{130}{7} = 18.$

Therefore, PUQUR = 65 + 26 + 18 – (13 + 9 + 3) + 1 = 85.

Number of players who opted for none of the three sports = 130 – 85 = 45.

**Note:**

$P \cup Q \cup R = P + Q + R - (P \cup Q + Q \cup R + P \cup R) + P \cap Q \cap R$

56. C As per the conditions given in the question, it means that Randhir takes 15 seconds to run 100m. Therefore, Randhir will take 150 seconds to run the stretch of 1000 metres.
As Sudhir gives Randhir a start of 15 seconds, Sudhir obviously takes 15 seconds less than Randhir to complete the race. Hence, Sudhir will take 135 seconds to run the 1000 m.

57. E **From Statement II:**
Either both A and B are negative or both A and B are positive.
e.g A = 1 and B = 2 or A = – 1 and B = – 2 etc.
The statement alone is not sufficient to answer

**From Statement I:**
C – B is greater than A. So nothing can be said on the basis of this statement alone.

**Combining the two statements:**
C will be definitely greater than A when A + B < C and both A and B are positive.
But, C may not be greater than A when A + B < C and both A and B are negative.
e.g. A = – 1 and B = – 2
AB = 2 > 0
A + B = – 3.
So, both C = – 1.5 and C = 0 satisfies it.

Hence, the question cannot be answered using both the statements together.

58. A **From Statement I:**
Area of the square = $CP^2 = 16\ cm^2$
So, CP = 4 cm

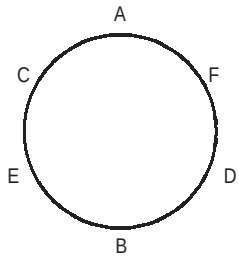
Area of the circle $= \pi r^2 = 16\pi\ cm^2$

Statement I alone is sufficient to answer.

**From Statement II:**
the length of CP cannot be determined.

59. C **From Statement I:**
The position of D and C cannot be decided
**From Statement II:**
Only the position of A and B can be decided.

**Combining the two statements:**
The following arrangement can be concluded:



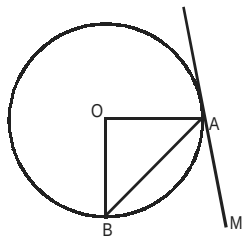

So, we can conclude that B is sitting to the immediate left of D.

60. E **From Statement I:**
Either Mohan (who is taller than both Raja and Ram) or Roy (about whom no information is given) is the tallest

**From Statement II:**
The tallest friend cannot be decided from statement II as it gives partial information.

**Combining the two statements:**
The statements do not go along with each other and hence cannot be combined.

61. D **From Statement I:**




$\angle MAB = 30°$

$\angle OAB = 90 - \angle BAM = 60°$

$\angle AOB = 180 - \angle OBA - \angle OAB = 180 - 2\angle OAB = 60°$
So statement I is sufficient alone to answer.

**From Statement II:**

Given that $\angle APB = 150°$

Angle made in the major arc by AB = 180 – 150 = 30°
Angle made at the centre = 2 × 30 = 60°
So statement II is sufficient alone to answer.

So, the question can be answered using either statement I or statement II alone

62. D Analysing the common difference for the series-

1 3 6 13 29 63

2 3 7 16 34

1 4 9 18

Clearly in the third series' common term is a perfect square except the 4th term which should have been 16 instead of 18. If we make it 16 then we'll get a series -

1 3 6 13 29 61 118

2 3 7 16 32 57

1 4 9 16 25

The 6th number must be 61.

63. B From the third term onwards -
$3^{rd}$ term = (1 + $1^{st}$ term) × ($2^{nd}$ term – 1)
4th term = (1 + $2^{nd}$ term) × ($3^{rd}$ term – 1)
5th term = (1 + $3^{rd}$ term) × ($4^{th}$ term – 1)
6th term = (1 + $4^{th}$ term) × ($5^{th}$ term – 1) and so on
Correct sequence should have been 1, 3, 4, 12, 55, 702, 39256

64. B The common term of the series is given as
Tn = (nth prime number)$^2$ + (nth prime number)
So the series must be
$2^2 + 2$, $3^2 + 3$, $5^2 + 5$, $7^2 + 7$, $11^2 + 11$.
or 6, 12, 30, 56, 132..

65. C From the 3rd term onwards -
3rd term = (1st term)(2nd term) – 1
4th term = (2nd term)(3rd term) – 1 and so on
Correct sequence should have been
1, 3, 2, 5, 9, 44, 395

66. E All three years are productive
Year 2003 – B, C and E met the demand
Year 2004 – A, B and C met the demand
Year 2005 – A, B, D and E met the demand

67. B Total number of units (demand) in 2003 = 4800
Total number of units (demand) in 2004 = 5000
Total number of units (demand) in 2005 = 4300

$$\text{Percentage change for 2003-04} = \frac{200}{4800}\times 100\%$$

$$\text{Percentage change for 2004-05} = \frac{700}{5000}\times 100\%$$

(absolute value)

$$\text{Ratio} = \frac{200}{4800}\times\frac{5000}{700} = 25:84$$

68. A Total number of units (supply) in year 2003 = 4700
Total amount invested = 15 × 4700 = Rs. 70500
Total revenue made from selling in year 2003
= 800 × 40 + 1400 × 20 + 900 × 15 + 800 × 5 + 800 × 10 = Rs. 85500
∴ Percentage profit = 21.28%

69. D Total revenue made from sales in 2004
= 1400 × 25 + 1200 × 25 + 1200 × 15 + 800 × 7 + 550 × 11 = Rs. 94650
Total revenue made from sales in 2005
= 1100 × 30 + 1100 × 15 + 650 × 20 + 950 × 9 + 700 × 9 = Rs. 77350
Absolute difference = Rs.17300

70. C Only A and D saw a continuous decrease in the demand-supply ratio
All other products did not show any continuous decrease or increase.

| Product | 2003-04 | 2004-05 |
|---|---|---|
| A | Decrease | Decrease |
| B | Increase | Decrease |
| C | Decrease | Increase |
| D | Decrease | Decrease |
| E | Increase | Decrease |

71. A Market share of E in European market = 100000
It is given that the market share of B is the least in European market, therefore, the market share of B cannot be more than E.
Out of the given options, all values are acceptable except 1,10000. Hence option (A) is the correct choice.

72. B Sum of market share of C and E taken together = 40,000
Total market share in South Asian market = 265000

$$\text{Required percentage} = \frac{40{,}000}{265000}\times 100 = 15.09\ \%$$

73. E The only information we have is C has the maximum market share and A has the minimum when both the markets are taken together. We are not sure about the order among B, D and E.

74. C Given that the minimum market share is for B and maximum for D and also we know that the number of products is 5.
Market size of European market will be the sum of the market share of all the given five products.
Hence, the market share

$$= \frac{(250{,}000 + 50{,}000)}{2}\times 5 = 750000$$

75. E Since we do not know the market share of E and D in Asian market, we cannot find their market share in terms of percentages.
Hence option (E) is the correct choice.

76. E It can be visually seen that A will spend the maximum.
Hence, option (E) is the correct choice.

77. E If C spends one-third of his income, then two-third of his income is saved, which is 66.6%.
Hence option (E) is the correct choice.

78. B Incomes of A, B, C, D, E and F are Rs. 6,40,000, Rs. 2,35,000, Rs. 3,33,000, Rs. 1,95,000, Rs. 1,20,000 and Rs. 4,50,000.
Their ratio = 128 : 47 : 66.6 : 39 : 24 : 90
Hence, option (B) is the correct choice.

79. B Total Income = Rs. (6,40,000 + 2,35,000 + 3,33,000 + 1,95,000 + 1,20,000 + 4,50,000) = Rs.19,73,000
Income of C and D = Rs.5,28,000
Required percentage

$$= \frac{5,28000}{19,73,000} \times 100 = 26.76\%$$

Hence, option (B) is the correct choice

80. B The required increment in the percentage

$$= \left(\frac{190}{450}\right) \times 100 = 42.2\%$$

Hence, option (B) is the correct choice.

81. D **Option (A):**

$$\frac{\{1 @ 2\}}{\{2 \$ 1\}} = \frac{\frac{1}{2}}{1} = \frac{1}{2}$$

**Option (B):**
$\{1 @ \{2 \$ 1\}\} = 1 @ 1 = 0$

**Option (C):**
$\{1 \$ 3\} @ \{1 \$ 3\} = \{-2\} @ \{-2\} = 0$

**Option (D):**

$$\{1 @ 2\} \$ \{1 @ 3\} = \left\{\frac{1}{2}\right\} \$ \left\{\frac{2}{3}\right\} = -6$$

Hence, this option does not give a correct equation.

**Option (E):**

$$\{2 \$ \{4 @ 1\} = \left\{2 \$ \left(-\frac{3}{4}\right)\right\} = \frac{4}{11}$$

82. A $$2 \# 6 = \frac{1}{(2 @ 6)} = \frac{1}{\left(\frac{1}{2} - \frac{1}{6}\right)} = 3$$

$$3 @ 7 = \frac{1}{3} - \frac{1}{7} = \frac{4}{21}$$

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

$$9 \$ 2 = \frac{1}{(9-2)} = \frac{1}{7}$$

$$10 @ 1 = \frac{1}{10} - \frac{1}{1} = -\frac{9}{10}$$

The absolute value of the first expression is the maximum among the five.

83. D $$4 \& 5 = \frac{(4+5)}{(4-5)} = -9$$

So, $\{1 @ \{2 \# \{3 \$ \{4 \& 5\}\}\}\}$
$= \{1 @ \{2 \# \{3 \$ -9\}\}\}$

$$3 \$ -9 = \frac{1}{(3+9)} = \frac{1}{12}$$

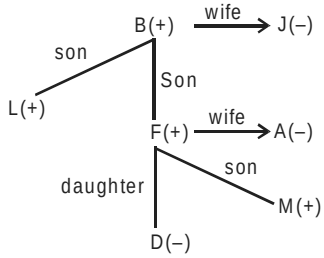
$$\text{So, } \{1 @ \{2 \# \{3 \$ -9\}\}\} = \left\{1 @ \left\{2 \# \frac{1}{12}\right\}\right\}$$

$$2 \# \frac{1}{12} = \frac{1}{\left(\frac{1}{2} - 12\right)} = -\frac{2}{23}$$

$$\text{So, } \left\{1 @ \{2 \# \frac{1}{12}\right\}\} = 1 @ -\frac{2}{23}$$

$$= \frac{1}{1} + \frac{23}{2} = \frac{25}{2}$$

**For questions 84 to 86:**
Let (+) denote male and (-) denote female:
Following diagram represents the family -

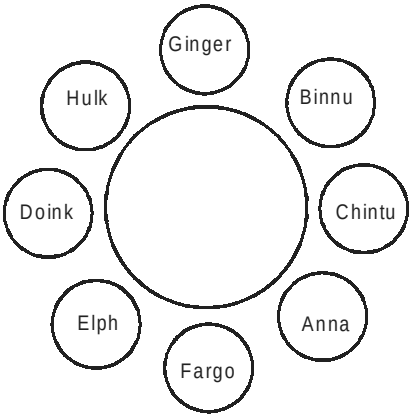



84. A

85. D

86. C

**For question 87 to 89:**
The correct arrangement must be -




87. B

88. B

89. E

**For questions 90 to 93:**
**From Statement 4:**
Daman must have bough the item of cost Rs. 4,000.
Cost of item A must be Rs. 1,000.

**From Statement 3:**
Chaman must have bought item A (from the above conclusion)

**From Statement 2:**
Baman must have bought item C and hence Aman must have bought item D.

It cannot be decided between D and C which item's cost was Rs. 2,000 and which item's cost was Rs. 3,000.

Correct arrangement will be:

| **Name of the person** | Aman | Baman | Chaman | Daman |
|---|---|---|---|---|
| **Item Cost (in Rs.)** | 2000/3000 | 3000/2000 | 1000 | 4000 |
| **Item Name** | D | C | A | B |

90. A

91. E

92. E
93. C

94. E **From Statement I:**
We cannot conclude any thing about the age of Sita. Therefore this statement is not sufficient to answer the question.

**From Statement II:**
We cannot answer the question. Therefore, this statement is also not sufficient to answer the question.

**Even combining both the statements:**
We cannot find out the age of Sita.
Hence, option (E) is the correct choice.

95. C **From Statement I:**
We cannot answer the question as one of the three persons can be immediate left of Chander.

**From Statement II:**
We cannot answer the question as Chander can be at the first position or the last position.

**From both the Statements:**
Rahim – Amit – Sonal – Chander
or
Amit – Rahim – Sonal – Chander
Hence, Sonal is immediate left of Chander.

96. C **From Statement I:**
We cannot say that Shreye has more number of coins than Kunal. Therefore, statement I is not sufficient to answer the question.

**Even from Statement II:**
We cannot say that Shreye has more number of coins than Kunal.

**Combining both the statements:**
We can say that Shreya has number of coins more than Rajinder only. Therefore, Shreye has coins less than Kunal
Hence, option (C) is the correct choice.

97. E **From Statement I:**
C sits on the seat numbered 3 and D can sit on the seats numbered 2 or 4.Therefore, statement I is not sufficient to answer the question.

**From Statement II:**
D can sit on 4 and A can sit on 5 or D can sit on 2 and A can sit on seat number 1.Therefore, we cannot say who sits on seat number 4.Therefore, this statement is not sufficient to answer the question.

**Combining both the statements:**
We can infer that either D or B sit on the seat number 4.
Therefore, we cannot answer the question.
Hence, option (E) is the correct choice

98. A Resultant of Row I = 44 × 3 = 132, 132 × 3 = 396
Resultant of Row II = 18 × 13 = 234, 234 + 14 = 248
The product of the resultant = 98208
Hence, option (A) is the correct choice.

99. C Resultant of Row I = 24 × 3 = 72, 72 + 54 = 126
Resultant of Row II = 108 + 12 = 120, 120 + 14 = 134
The absolute difference of the resultant = 8
Hence, option (C) is the correct choice.

100. C Resultant of Row I = 66 ÷ 33 = 2, 2 × 7 = 14
Resultant of Row II = 18 + 14 = 32, 32 + 14 = 46
The sum of the resultant = 60
Hence, option (C) is the correct choice.

101. E Resultant of Row I = 21 + 529 = 550, 550 ÷ 55 = 10
Resultant of Row II = 15 – 10 = 5, 5 – 2 = 3
The sum of the square of the resultant of the two rows = 109.
Hence, option (E) is the correct choice.

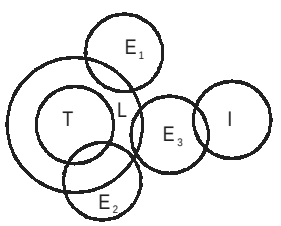
102. E Resultant of Row I = 100 + 32 = 132, 132 ÷ 33 = 4
Resultant of Row II = 11 – 10 = 1, 1 + 1089 = 1090
The sum of the resultant = 1094.
Hence, option (E) is the correct choice.

103. A Every third letter in the position is chosen in coding of the given word.
So, for TVXZB, the coding will be VXZBD. Hence, option (A) is the correct choice

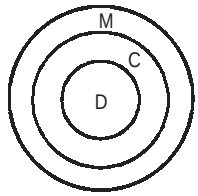
104. C The position for B, D, F, H and J in the alphabetical order are 2,4,6,8 and 10. Now these positions are divided by 2, we get 1, 2, 3, 4, 5.
The position for N, P, R, T and V in the alphabetical order are 14,16,18,20 and 22. These positions when divided by 2, we get 7, 8, 9, 10, 11.
Hence, option (C) is the correct choice.

105. D The positions for A and B in alphabetical order are 1 and 2 and $1^2 + 2^2 = 5$. Same concept will be applied to $E^2 + G^2$ which will be equal to $5^2 + 7^2 = 74$.
Hence, option (D) is the correct choice.

106. A

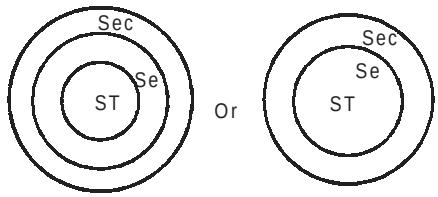



107. E



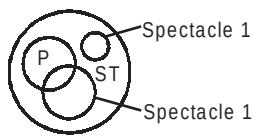

None of the conclusion follows.

108. B

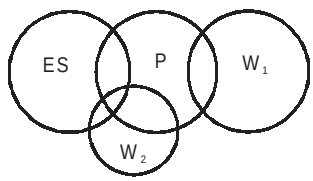



Only second conclusion follows.

109. B




110. D




111. B Lalita's case has to be rejected because she has got less than 76% marks in Post-graduation and does not fulfil the basic criterion.

112. E The data given is inadequate because we dont know whether Monica has cleared her Post-graduation or not and what is her percentage of marks in Post-graduation.

113. C Shruti's case has to be referred to the Director Of "The High School Board".

114. A Since Jatin fulfils all the basic criteria, he can be selected as the Principal of St. Paul's High School.

115. B Ritika's case has to be rejected because she does not have the required experience of teaching in a high school.

116. A Only the first course of action logically follows as it provides a valid answer to the problem of productivity in university education. The second course of action is more of an opinion rather than a concrete solution to the given problem.

117. E Neither of the course of action logically follow because both discuss points that are not stated in the main statement.

118. B The first course of action is invalid from the point of view of the main statement given. Only the second course of action follows.

119. A The first course of action is more viable because it provides justifiable alternatives which can be considered by people who cannot join gyms because of time constraints. The second course of action is very vague.

120. A Only the first course of action logically follows from the main statement. The second course of action is nowhere related to the main statement.