MOCK TEST

Section – A

1. (a)	2. (c)	3. (d)	4. (c)	5. (c)	6. (c)	7. (d)	8. (b)
9. (a)	10. (d)	11. (c)	12. (a)	13. (b)	14. (d)	15. (c)	16. (b)
17. (d)	18. (a)	19. (a)	20. (a)	21. (d)	22. (a)	23. (a)	24. (d)
25. (b)							

Section – B

26. (d)	27. (a)	28. (d)	29. (b)	30. (a)	31. (b)	32. (c)	33. (b)
34. (d)	35. (a)	36. (d)	37. (c)	38. (b)	39. (a)	40. (d)	41. (c)
42. (a)	43. (c)	44. (d)	45. (a)	46. (b)	47. (c)	48. (b)	49. (b)
50. (a)	51. (b)	52. (d)	53. (c)	54. (c)	55. (c)	56. (b)	57. (d)
58. (a)	59. (b)	60. (b)	61. (d)	62. (c)	63. (c)	64. (d)	65. (a)
66. (a)	67. (b)	68. (a)	69. (a)	70. (d)	71. (d)	72. (c)	73. (d)
74. (c)	75. (b)						

Section – C

76. (b)	77. (a)	78. (b)	79. (b)	80. (c)	81. (d)	82. (b)	83. (c)
84. (b)	85. (c)	86. (d)	87. (b)	88. (b)	89. (d)	90. (c)	91. (d)
92. (a)	93. (c)	94. (d)	95. (b)				

Section – D

96. (d)	97. (b)	98. (a)	99. (b)	100. (a)	101. (d)	102. (a)	103. (c)
104. (b)	105. (d)	106. (c)	107. (d)	108. (c)	109. (d)	110. (a)	111. (c)
112. (b)	113. (d)	114. (c)	115. (b)	116. (d)	117. (d)	118. (d)	119. (b)
120. (a)	121. (d)	122. (b)	123. (b)	124. (c)	125. (b)		

Section – E

126. (a)	127. (b)	128. (a)	129. (d)	130. (a)	131. (c)	132. (a)	133. (a)
134. (c)	135. (b)	136. (b)	137. (c)	138. (a)	139. (b)	140. (c)	141. (b)
142. (d)	143. (a)	144. (c)	145. (a)	146. (c)	147. (c)	148. (d)	149. (b)
150. (b)	151. (d)	152. (e)	153. (d)	154. (a)	155. (c)	156. (a)	157. (c)
158. (b)	159. (c)	160. (a)	161. (b)	162. (b)	163. (d)	164. (a)	165. (d)
166. (a)	167. (a)	168. (c)	169. (d)	170. (c)	171. (a)	172. (b)	173. (c)
174. (c)	175. (c)						

26. All the other options make use of superfluous prepositions. **Answer: (d)**

27. **Answer: (A)**

28. Completed. All the other options are superfluously used and will make the sentence nonsensical.
Answer: (d)

29. The correct expression here is 'dust of' as we are talking about the dust lying on the road. "Dust off" will completely alter the meaning conveyed by the original sentence. "Dust off" means to dust away. Both (c) and (d) options are superfluous. **Answer: (b)**

30. All the other options change the actual meaning conveyed by the sentence. **Answer: (a)**

31. 'rendezvous' means a meeting place. Mc donald's served as a popular meeting place for the young and upwardly. All other options make the sentence non- sensical. **Answer: (b)**

32. **Answer: (c)**

33. The relationship given between the key words is that of antonyms and the same relationship is best maintain in the (b) option. 'Amorphousness' means having no definite type; vague. Whereas 'definition' means being definite and clear. **Answer: (b)**

34. A 'numismatist' is a person who collects and studies coins. Similarly. 'Philatelist' is a person who collects and studies postage stamps. On the other hand a cartographer makes maps, astrologer makes predictions and geneticist studies chromosomes. **Answer: (d)**

35. (Person and action performed); A 'prodigal' is a person who 'squanders' i.e. spends or uses wastefully or extravagantly. Since- early, 'proctor' is a person who supervises students. None of the other options makes the similar analogy. **Answer: (a)**

36. (Branch of science and the object it studies). "Ichthyology" is the branch of zoology dealing with fish. Similarly, 'zoology' is the branch of science dealing with animals. All the other options do not make the similar analogy. **Answer: (d)**

37. (object and action). An 'alarm' triggers. Similarly a 'trap' strings. No other options makes the similar analogy. **Answer: (c)**

38. (Thing and ingredient). 'Road' is made up of 'tar'. Similarly, 'building' is made up of 'bricks'. No other option makes the similar analogy. **Answer: (b)**

39. (Action and the object on which it is performed). 'Chase' is to ornament 'metal' by engraving, embossing, etc. Similarly, 'embroider' is to ornament 'cloth' with a design in needlework. No other option makes the similar analogy. **Answer: (a)**

40. (effect and cause). 'Exhaustion' is cured by taking 'rest'. 'Hunger' is cured by having 'food'. No other option makes the similar analogy. **Answer: (d)**

41. (Defining characteristic). A 'teacher' cures 'ignorance'. Similarly, a 'doctor' cures 'disease'.
All the other options do not make the similar analogy. **Answer: (c)**

42. **Answer: (a)**

43. To abbreviate a 'word' is to 'shorten' it. Similarly, to abbreviate a syllable is to 'elision'. No other option makes the similar analogy. **Answer: (c)**

44. (Person and object). 'Painter' works on a canvas. Similarly, a 'sculptor' works on stones. You might get confused with (a) option, but an essayist uses words, he does not works on it. **Answer: (d)**

45. A 'correspondent' is a person who writes a report. Similarly, a 'Detective' is a person who solves criminal cases. No other option makes a similar kind of analogy. **Answer: (a)**

46. (Defining characteristic). 'Eulogy' is a speech or writing praising a person, event or thing. Similarly, 'tirade' is a long speech or writing reprimanding (criticizing) a person, event or thing. No other option makes a similar kind of analogy. **Answer: (b)**

47. 'Rust' is a reddish brown coating formed on 'iron' by oxidation. Similarly, 'Patina' is the greenish-blue coating formed on 'bronze' by natural oxidation. None of the other options make the similar analogy. **Answer: (c)**

48. (Antonyms): 'Denounce' means to accuse publicly whereas, 'condone' means to overlook or to excuse. Similarly, 'antithetical' means to oppose whereas 'supportive' means to encourage. No other options makes a similar analogy. **Answer: (b)**

49. (Antonyms): 'Salubrious' is something promoting welfare whereas 'Baneful' is something promoting 'distress'. Similarly, 'alleviate' means to reduce or decrease. Whereas, 'exacerbate' means to increase or to intensify. None of the other options makes the similar relationship. **Answer: (b)**

50. A mass of loosened 'pebbles' result in a landslide. Similarly, a collection of many 'droplets' result in a 'deluge'. No other option makes a similar analogy. **Answer: (a)**

51. Outline of a 'circle' is 'perimeter', whereas, outline of a 'property' is 'boundary'. No other option makes a similar analogy. **Answer: (b)**

52. (Expression and Situation). You 'blush' when faced with 'discomfiture' (meaning an embarrassing situation). Similarly, you 'wince' i.e. to shrink back when in pain. All the other options are not making the same relationship. **Answer: (d)**

53. The correct expression is "intellectual prowess", which means "intellectual ability". All the other options make the sentence nonsensical. **Answer: (c)**

54. Since we are talking about an activity. So, (a) option is wrong, as an activity cannot be perplexed (confused), and (d) is also wrong as infuriated means to get very angry. Both (b) and (c) seem correct. But (c) is a better option as it states how the activity has been affected. **Answer: (c)**

55. The correct idiom to be used in the sentence is 'flying colours' which means triumphantly. On account of the word 'inspite of' we had to choose an option giving a positive expression. **Answer: (c)**

56. (a), (c) and (d) options make the sentence nonsensical. Option (b) is the best. 'Big do' means a 'big party'. **Answer: (b)**

57. 'Misogynist' is a man who hates women. Since Mr. phatte advices his son to pick a whip on seeing any women, it seems that he dislikes women. Misogamist is a person who hates marriage, misanthrope hates mankind and a lunatic who is idiotic. **Answer: (d)**

58. The correct expression is 'divine intervention' which means divine interference in the day to day life. Hence, (a) best completes the meaning of the sentence. **Answer: (a)**

59. (a) option is wrong as 'ergonomic' is the study of the problems of people in adjusting to their environment. It makes the sentence completely non-senseical. (c) Economical is also wrong since a 'strategy' cannot be economical and not scientific reference is given in the sentence so, even (d) 'scientific' is also wrong. The only option which best completes the sentence is (b) anachronistic meaning 'wrong'. A policy and strategy to be proved or made wrong. **Answer: (b)**

60. On account of the word 'not only' present in the sentence, we know that we need to chose a word giving a similar implication as the word 'irrelevant'. (a), (c) and (d) options all give positive connotation. It is only (b) option: counterproductive meaning useless which best goes with the word 'irrelevant'. **Answer: (b)**

61. invasion can only be of a region or area. So, (d) realm (meaning domain and area) is the best answer. **Answer: (d)**

62. **Answer: (c)**

63. **Answer: (c)**

64. 'Cataclysm' meaning a great upheaval or disturbance best fits in the blank. All the other options make the sentence nonsensical. **Answer: (d)**

65. **Answer: (a)**

66. 'Circumstances' meaning situations best fits the blank. The correct expression is 'trying circumstances' meaning difficult situations. All the other options are making the sentence nonsensical. **Answer: (a)**

67. Augmented means to became great. The impatience of the crew became great as Columbus approached the wanted place. All other options alter the original meaning of the sentence. Impatience cannot be degenerated. **Answer: (b)**

68. A strict military disciplinarian is known as a martinet. **Answer: (a)**

69. 'Nugatory' means something which is trivial and worthless. **Answer: (a)**

70. legatee means one to whom a legacy is bequeathed. Trustee might also seem the correct option but trustee is a person to whom the management and not the ownership of another's property is entrusted. **Answer: (d)**

71. The word 'amiable' means having a pleasant and friendly disposition. **Answer: (d)**

72. Expiation means amends, sacrifice etc. So, option (c) is the best as oblation also means an offering of a sacrifice to God. **Answer: (c)**

76. Refer to the beginning lines of the 2nd paragraph. "Under our existing system, -----------. Without contributing anything to the wealth of the community." **Answer: (b)**

77. In the entire passage, the author states his anger and displeasure at the various concepts of capitalism. **Answer: (a)**

78. It has been clearly mentioned in the 3rd line of the 1st para that these areas are rich in gold and diamond mines and they require huge labour to work in these mines. **Answer: (b)**

79. All the other statements are mentioned in the passage except (b) one. The line in the passage states that the healthy and vigorous, southern Europeans. Vitality is reduced in America but they do not actually die. **Answer: (b)**

80. Refer to lines 7 to 10 of the 2nd paragraph. "As these are the men--------- the most fortunate but also the most respected. **Answer: (c)**

81. Refer to the ending lines of the 2nd para. "It is much more ---------- skill in exploiting or circumventing others." **Answer: (d)**

82. It has nowhere been mentioned in the passage that capitalism led to an increase in idle rich though the idle rich are people who have taken the maximum benefit of 'capitalism'. **Answer: (b)**

83. The line "I believe this theory to be wholly mistaken" tells us that according to the author this theory is completely invalid. **Answer: (c)**

84. Refer to the 8th and 9th line of the last paragraph. **Answer: (b)**

85. The author mentions in the last para that though a radical change in our economic system is difficult but this does not reduces the desirability of such a change. **Answer: (c)**

86. None of the above. **Answer: (d)**

87. The Chinese government announced that it would ban his star-TV satellite network but it actually did not as Murdoch in order to placate China, removed the BBC world service from star. **Answer: (b)**

88. The entire passage explains the kinds of obstacles that have been obstructing the free flow of information on the net. **Answer: (b)**

89. No mention has been made as to for what reasons Rupert Murdock took such a decision. **Answer: (d)**

90. **Answer: (c)**

91. The action has against the set rules and regulations. Hence, was unethical. **Answer: (d)**

92. All the other countries are mentioned as monitoring access to the internet. **Answer: (a)**

93. **Answer: (c)**

94. None of the statements given in options (a), (b) and (c) are stated as being mentioned by Murdock in the passage. **Answer: (d)**

95. **Answer: (b)**

101. No mention about the reputation of each company servicing the computer it sells has been made in the passage. **Answer: (d)**

102. (a) option can be inferred as the answer by referring to the line "Each Himcules XC ---------- limit his ability to buy periphimal equipment such as printers". **Answer: (a)**

103. It has been mentioned in the beginning lines of the passage that he plans to buy these computer for his business. So, he makes a major assumption that by buying them the performance of his business will improve, as no information regarding the same has been given in the passage. **Answer: (c)**

104. Since a lot of emphasis has been laid on the cost of various computers to see if enough funds are left to purchase other equipment so, (b) can be easily inferred as the answer. **Answer: (b)**

105. We cannot decide on the type of computer that Bharat should buy, as the passage does not give enough details on the requirements of Bahrat's business. **Answer: (d)**

113. Statement I does not answer the question as it does not tell whether the angle by hands is decreasing or increasing. Statement II also does not address the question. Even by combining the two we wont be able to find an answer. **Answer: (d)**

114. Statement I tolls us that (– p) and (– r) are negative from which we cannot answer the question. Statement II tells us that $(- p)^q$ is positive whereas $(- r)^s$ is negative which alone is also not enough to answer thee question. But combining the two statements we can find out the answer. **Answer: (c)**

Solutions 115 – 116:

Given is ♥ (2n + 1) = 2 ♥(n) + 1

Also ♥(0) = 5

So ♥ (2* 0 + 1) = (1) = 2 ♥(0) + 1 = 2 * 5 + 1 =11

Similarly ♥ (2 * 1 + 1) = ♥(3) = 2 ♥(1) + 1 = 2*11 + 1= 23

And so ♥(2 * 3 + 1) = ♥ (7) = 2 ♥(3) + 1 = 2.23 + 1 = 47

So ♥(2 * 7 + 1) = ♥ (15) = 2♥(7) + 1 = 2*47 + 1 = 95

So ♥(2 * 15 + 1) = (31) = 2 ♥(15) + 1 = 2*95 + 1 = 191

So ♥(2 * 31 + 1) = ♥ (63) = 2 ♥(31) + 1= 2 * 191 + 1 = 383

115. (63) = 383 **Answer: (b)**

116. ♥(63) / (7) = 383/47 = 8.1 (approx.) = p

So the correct choice has to be $64 < P^2 < 70$. **Answer: (d)**

117. In the given series all the numbers are prime numbers except 21. **Answer: (d)**

118.   FLOW

    + WOLF

      HAHHH

W = 8

H = 1 (addition of two numbers will never give carry more than 1)
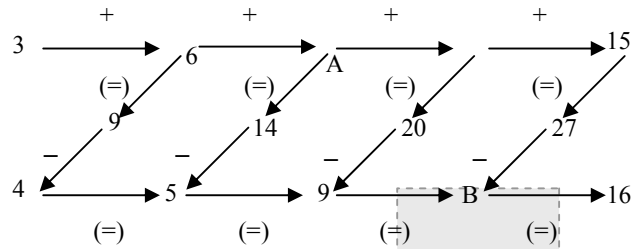
Now since W + F is ending in H

W + F = 11

So F = 3

Now F+ W + 1 = HA, as there must be a carry

So A = 2 ∴ the final no. HAHHH = 12111 which is divisible by 3 and 11. **Answer: (d)**

119.

6 + A = 14 also A + 12 = 20 ∴ A = 8

20 – 9 = B also 27 – B = 16 ∴ B = 11 **Answer: (b)**

120. The series is 2 + 7 + 14 + 23 + 34 +.....

First term of this series is = 2

Second term of this series = 2 + 5

Third term of the series is = 2 + 5 + 7

Fourth term or the series is = 2 + 5 + 7 + 9

Fifth term of the series is = 2 + 5 + 7 + 9 + 11

If we follow the obvious pattern here

Sixth term of the series should be = 2 + 5 + 7 + 9 + 11+ 13 (total 6 terms)

∴ 99th term of the series should be 2 + 5 + 7 + ... (total 99 terms) = X (say) then since the above is 2 + an arithmetic progression with first term as 5, comm. diff. as 2

X = 2 + 98/2* [2 * 5 + (98 – 1)* 2)]

[Since sum of an AP is = n/2* [2a + (n – 1)*d]]

X = 2 + 49 [10 + 194]

X = 2 + 49 * 204

X = 2 + 9996

X = 9998 **Answer: (a)**

121. The numbers are 2^0, 2^1, 2^3, 2^6, 2^{10} ......

We see the powers of 2 are following a pattern i.e. the difference of these powers (1, 2, 3, 4) is following an AP whereby the next power of 2 must be 10 + 5 = 15. So 2^{15} = 32768 must be the next time term. **Answer: (d)**

122. The numbers are 1, 7, 12, ? 19

We see that the differences are 6 and 5, Now if the missing term is 16 we will get the difference as 6, 5, 4 ad 3 which follow a distinct pattern. So the missing no. must be 16. **Answer: (b)**

126. The required ratio is 300/400 x 100 = 75%. **Answer: (a)**

127. Total export in 96-97 = 1.25 (100 + 300) + 1.1 (175 + 125) = 500 + 330 = 830. **Answer: (b)**

128. Total export from given EPZ's in 97 – 98 = 125 + 200 + 150 + 340 = 815.

Hence export from other sources = 900 – 815 = 85. **Answer: (a)**

129. Total export in 95 – 96 = 700, which is 80% of the actual target. Hence actual target is 875.

Since NOIDA and CHENNAI has achieved their targets (175 + 125 = 300).

It means KANDLA and MUMBAI were short of their targets = 875 – 300 – 400 = 175.

Hence required percentage is (175 / 575) × 100 = 30%. **Answer: (d)**

130. The required ratio is 125/500 = 25%. **Answer: (a)**

131. The viewers of Star TV have increased from 28,000 to 111,000 i.e. by 300 % approx., whereas the viewers of Sony TV have decreased from 74,000 to 38,000 i.e. by 48% approx. So the difference is 300 – 48 i.e. 252. **Answer: (c)**

132. In July total number of viewers = 1,68,000. So the number of viewers who did not watch any of the three was 1,68,000 – 56,000 – 42,000 – 36,0000 = 34,000. Hence the ratio of the viewers of Zee TV to those who watched none will be 42,000/34,000 i.e. 21 : 17. **Answer: (a)**

133. The viewers of Star TV have increased from 56,000 to 111,000 from July to August i.e. by 100% (approx.). Similarly the viewers of Zee TV have decreased from 42,000 to 28,000 i.e. by 33%. So the difference in percent is 66.66. %. So the difference in percent is 66.66. **Answer: (a)**

134. Let r and n be the revenue and the number of viewer's respectively.
    $r \propto n^2$ or $r_1 / r_2 = (n_1/n_2)^2$. Since numbers of viewers are in ratio 1 : 2, hence the revenues will be in ratio 1 : 4. **Answer: (c)**

135. From the figure, closer the two values saving is more compared to earnings.
    Hence in 96 he saved maximum compared to his earning. Greater the difference between two values, the saving is lesser compared to earnings. Hence he saved minimum in 96 compared to his earnings in that year. **Answer: (b)**

136. His total earning from 91 to 96 is Rs. 213 thousands. His total saving in this period is Rs. 170 thousands.
    Hence the required percent is (170/213) × 100 = 80%. **Answer: (b)**

137. The expenditure in 91 is 5000 and earning in 92 is 35000. The difference is 30000.
    The saving in 93 is 28000 and earning in 94 is 38000. The difference is 10000.
    So the required ratio is 30000/10000 = 3/1. **Answer: (c)**

138. The percentage increase in earning over the years is (42 – 30) / 30 × 100 = 40%. The percentage increase in saving over the years is (29 – 25) / 25 × 100 = 16%. So the required percentage is (40% – 16%) 16% × 100 = 150%. **Answer: (a)**

139. The difference between average monthly expenditure of 91 and 95 is Rs. (5000/12) – (2000/12) = 250. **Answer: (b)**

140. $18 = 2 \times 3^2$. We don't need to calculate the number of 2s as it is anyway higher than number of 3s. The number of 3s upto 75 are 25 + 8 + 2 i.e. 35 (For the powers of 3, 3^2 and 3^3). So the number of 3^2 will be 35/2 i.e. 17. So we have 17 3^2 s. Hence highest power of 18 which can divide 75! exactly is 17. **Answer: (c)**

141. By the comparison of the two cases it can bee easily understood that the difference of 6 minutes is occurring in the span of 12 kms. So a snag of 6 min occurs in 12 kms, the distance for which a snag of 15 min is occurring is 30 kms. Hence the total distance becomes 60 km. **Answer: (b)**

142. The total number of balls can be broken into 3 sets of 8 balls each. Any two sets can now be kept on the two pans. If they are equal, then the third set contains the odd ball, which will be known in the second weighing, i.e. if the third set is heavy, the odd ball is heavy and if it is light, odd ball is light. Any way, if the first two sets are not equal, then also, the second weighing will decide the set with the odd ball and its nature i.e. heavy or light. Now the set of 8 balls can be broken into 3 sets of 3, 3 and 2 balls. The weighing of the two sets of 3 balls each will decide the set containing the odd ball. If it is the set of 3 balls containing the odd ball, it can be broken into 3 sets of 1 ball each and if it is the set of two balls, it can be broken into 2 sets of 1 ball each, which will sort out the odd ball. So the total number of weighings required is 4. **Answer: (d)**

143. The' cost price of candy was Rs. 150 and the shopkeeper gave him Rs. 10 back. So the loss of shopkeeper was Rs. whereas he got Rs. 35 for one dollar. Hence the total loss to the shopkeeper was Rs. 125. **Answer: (a)**

144. The ratio between the amount got by Reena and Teena is 5 : 4 and that between Teena and Sheena is 3 : 4. Bringing them to common ratio scale their amounts come in ratio 15 : 12 : 16. Now their shares can be easily calculated which comes out to be 360, 288 and 384 respectively. **Answer: (c)**

145. Let time by leak to empty full tank = t
Let time to fill full tank = f = 24 hrs,
Given total time = 30 hrs
So $(1 / f) - (1 / t) = 1/30$
∴ $(1 / 24) - 1/t = 1/30$
∴ t = 120. **Answer: (a)**

146. Let the distances raveled by him at 4 km/h and 5 km/h be x and y respectively in the first case.
So $x/4 + y/5 = t_1$
And $y/4 + x/5 = t_1 + 1$
$x + y = 40$
On solving these two equations x and y come out to be 10 and 30.
So the distances traveled in first case are 10 and 30 km respectively. **Answer: (c)**

147. As the rate of interest in the first case and second case are to the ratio 1 : 2 and the times are also in the ratio 1 : 2, for simple interests to be the same, the two principals have to be in the ratio 4 : 1. Hence the first part is 4/5 × 625 = Rs. 500. **Answer: (c)**

148. The diameter of the in circle is the side of the square white the diameter of the circumcircle is the diagonal, of the square. This essentially means the two radii are in the ratio 1: √2. So the two areas will be in the ratio 1 : 2. **Answer: (d)**

149. The only difference after taking out the cylindrical part will be on the length of the cylinder, which will reduce by, 14 cm to become 21 cm. So for the maximum volume of any cylinder taken out from the remaining cylinder = 22 / 7 × $(10)^2$ × 21 = 6600 cm³. **Answer: (b)**

150. The number of ways in which one card can be drawn from a pack of cards is 52. The number of ways in which it is a heart is 13. Further, the number of ways in which it is an ace is 3. So the probability of either ace or heart is = (13 + 3) / 52 = 4/13. So the probability that neither heart nor ace is drawn = 1 – 4/13 = 9/13. **Answer: (b)**

151. Time including stoppages = 150/30 = 5 hrs, time excluding stoppages = 150/50 = 3 hrs.
Stoppage = 2 hrs. **Answer: (d)**

152. If a, b, c are in GP then b^2 = ac. If you check all the answer options none of them satisfies this condition.
Hence answer is (e). **Answer: (e)**

153. Buses are late in $1/4^{th}$ of the cases. Trains are late in $1/5^{th}$ of the cases.
The probability of being late by bus is ¼ * 3/5 = 3/20.
The probability of being late by train is 1/5 * 2/5 = 2/25.
So, the required probability is equal to (3/20) / [3/20 + 2/25] = 15/23. **Answer: (d)**

154. Distance (car – 419) = Distance (car – 421)
11 × 5   = a + a + x + a + 2x + a + 3x +..............+ a + 10x where a = initial speed
55   = this is an AP with first term a and common difference x
            Sum = n/2(2a + (n – 1)d) where n = 11, d = x, a = first term
            Hence possible value for x is 1 only. **Answer: (a)**

155. Since Chinmay is faster than Girish he will finish the work in less than 20 days.
So find the number of days required considering Chinmay taking 20 days to finish that task.
Hence 1/10 + 1/20 + 1/20 = 4/20 = 1/5 which means maximum 5 days. **Answer: (c)**

156. Let cost price = CP, selling price = SP, and volume of sale = V.
∴ Initial profits = V(SP – CP).
New profits = V/2(2SP – CP) = V(SP – CP) + (V)(CP/2), which is greater. **Answer: (a)**

157. Let s be the speed of train in kmph. Hence (s – 2)5/18 = L/9 and (s – 4)5/18 = L/10.
Where L is the length of he train. Solving two equations L = 50 m. **Answer: (c)**

158. The rule for squaring the numbers of the type 9, 99, 999 and so on is that the square has one less number of nines in the beginning followed by one eight and then same number of zeros as nines followed by 1.
This rule decides the square root of the given number as 99999999. **Answer: (b)**

159. If all dimensions increase in a proportion x, volume or weight increases in the proportion x^3. **Answer: (c)**

160. 16 × 8 M-days = 12 × 24 B-days or 4M ≡ 9B.
Converting the number of men to number of boys for both the cases the number of boys in the first case is 30 and in the second case the number is 135.
Now using N × R = V approach the number of days comes out to be 8. **Answer: (a)**

161. Use the given conditions to form two simultaneous equations in x and y where x is the total marks an y is the passing marks. The equations are as under:
Y – 0.32x = 40   &   0.37x – y = 20.
Solving we have the value of x = 1200. **Answer: (b)**

162. Angle ABC = 60 deg. ∴ AC = √3/2. ∴ Length of rectangle = √3.
∴ Area = √3. **Answer: (b)**

163. All the smaller cubes on the outer side will be painted.
The central four cubes of each face will have only one face painted.
∴ In all, $(4 \times 6) = 24$ faces will have only one face painted. **Answer: (d)**

164. $\sin \theta + \cos \theta = \sqrt{2} \,(1/\sqrt{2} \sin \theta + 1/\sqrt{2} \cos \theta) = \sqrt{2}(\cos 45^o \sin \theta + \sin 45^o \cos \theta) = \sqrt{} \sin (45^o + \theta)$.
Now $\sin A$ is maximum when $A = 90^o$.
Therefore at $\theta = 45^o$, $\sin (45^o + \theta)$ will be maximum and the maximum value will be $= 1$.
So, the maximum value of the given expression is $\sqrt{2}$. **Answer: (a)**

165. Distance of a point, $P(x1, y1)$, from a line given by : $ax + by + c = 0$, is given by:
$d = |\, ax1 + by1 + c \,| / \sqrt{(a^2 + b^2)}$.
When the equation of the line is converted to the required form, it becomes.
$4x - 3y + 9 = 0$.
Now, putting the actual values, we get
$D = (4*3 - 3*1 + 9) / \sqrt{(4^2 + 3^2)} = 18/5 = 3.6$. **Answer: (d)**

166. Given $3x^2 - 5x > 2 \Rightarrow 3x^2 - 5x - 2 > 0$, which on factorizing gives:
$(x - 2) (x + 1/3) > 0$ which is possible only when $x > 2$ or $x < - 1/3$. **Answer: (a)**

167. The LCM of 2, 3, 4, and 5 is 60. Hence any number of the form $(60n + 1)$ will satisfy the first condition.
For the second condition, $(60n + 1) = 7k$.
Separating the number into two parts $\{(56n) + (3n + 1)\}$, where one of the parts is divisible by 7, we get that $(4n + 1)$ too has to be divisible by 7. Now, the problem is to find the smallest +ve integral value of 'n' that satisfies the condition, which happens to be 5. Hence, the required number is $60*5 + 1 = 301$. **Answer: (a)**

168. The differences are 2, 6, 10, i.e., odd multiples of 2.
Hence, the next difference will be 14, and the next number will be 34. **Answer: (c)**

169. In fact, any number with the sum of digits as 7 will be divisible by 9 when 20 is added to that number.
Hence, not determinable. **Answer: (d)**

170. If the original radius is 'r', the new value of 0.91r, and the reduction in area becomes:
$(\pi r^2 - \pi (0.91)^2 r^2)$. And the %age reduction comes to $\pi r^2 (1 - 0.8281)/\pi r^2 = 17.2\%$. **Answer: (c)**

171. $y = (x - 4) (4 - x)$. The sum of the two factors is constant, hence the product will be maximum when they are equal, i.e., $4 - x = x - 4$
$\Rightarrow x = 4$ and $7 (max) = 0$.
Alternately, $y = - (x - 4)^2$, which is always –ive; the highest possible value being '0'. **Answer: (a)**

172. D's weight is 66, but becomes 62 on being averaged, which means that 4 kilos are being donated to B and C to make them 62 each. This implies that within themselves, their average is 60 kg.
Then A's weight has to be 60 too to keep the average 60. **Answer: (b)**

173. The closest value is 9.2. **Answer: (c)**

174.   B's speed is 0.9 times A's speed. And, C's speed is 0.9 times B's speed.

Hence, C's speed will be 0.81 times A's speed, and when A completes 1000 m, C will complete only 810m, and will be beaten by 190 m. **Answer: (c)**

175.   The ratio of time would be the opposite that of speeds.

So, on the ratio scale time for walking and cycling are in the ratio 2 : 1

⇒ difference is 1, which actually is 13 min.

Hence, time taken by cycling is 13 min. The office opens 8 min after he reaches by cycle, i.e., at 9 : 21.

Answer: (c)