

**MOCK – FMS**

ANSWERS & EXPLANATIONS

1. (C)	2. (A)	3. (B)	4. (D)	5. (B)	6. (C)	7. (C)	8. (C)
9. (D)	10. (B)	11. (C)	12. (B)	13. (C)	14. (D)	15. (A)	16. (B)
17. (C)	18. (C)	19. (D)	20. (B)	21. (D)	22. (C)	23. (D)	24. (A)
25. (C)	26. (B)	27. (C)	28. (C)	29. (B)	30. (C)	31. (C)	32. (C)
33. (B)	34. (C)	35. (A)	36. (A)	37. (B)	38. (A)	39. (A)	40. (A)
41. (C)	42. (D)	43. (D)	44. (B)	45. (C)	46. (D)	47. (C)	48. (D)
49. (A)	50. (A)	51. (B)	52. (A)	53. (B)	54. (A)	55. (A)	56. (D)
57. (B)	58. (A)	59. (B)	60. (B)	61. (A)	62. (B)	63. (A)	64. (C)
65. (A)	66. (D)	67. (B)	68. (A)	69. (A)	70. (A)	71. (B)	72. (D)
73. (D)	74. (B)	75. (C)	76. (D)	77. (A)	78. (B)	79. (C)	80. (D)
81. (A)	82. (C)	83. (A)	84. (A)	85. (A)	86. (C)	87. (B)	88. (A)
89. (D)	90. (A)	91. (D)	92. (C)	93. (B)	94. (D)	95. (B)	96. (C)
97. (A)	98. (C)	99. (D)	100. (B)	101. (B)	102. (B)	103. (D)	104. (C)
105. (B)	106. (D)	107. (A)	108. (C)	109. (A)	110. (C)	111. (C)	112. (D)
113. (D)	114. (A)	115. (D)	116. (A)	117. (D)	118. (A)	119. (A)	120. (B)
121. (A)	122. (C)	123. (C)	124. (C)	125. (A)	126. (A)	127. (C)	128. (D)
129. (C)	130. (C)	131. (D)	132. (A)	133. (C)	134. (B)	135. (B)	136. (D)
137. (C)	138. (B)	139. (C)	140. (D)	141. (A)	142. (B)	143. (D)	144. (C)
145. (C)	146. (D)	147. (B)	148. (A)	149. (D)	150. (A)	151. (C)	152. (C)
153. (D)	154. (A)	155. (B)	156. (D)	157. (B)	158. (D)	159. (C)	160. (A)
161. (B)	162. (B)	163. (A)	164. (A)	165. (B)	166. (D)	167. (D)	168. (C)
169. (D)	170. (A)	171. (C)	172. (A)	173. (A)	174. (B)	175. (C)	

1. If  $\alpha$  and  $\beta$  are roots of an equation then the equation is  $(x - \alpha)(x - \beta) = x^2 - (\alpha + \beta)x + \alpha\beta = 0$ . The given equation can be written in the form  $\frac{x^2 - (b - 2a)}{2} - \frac{ab}{2} = 0$ . Thus comparing we get  $\alpha + \beta = \frac{b - 2a}{2}$ .

**Answer: (C)**

2. The graph of a function will cut the x-axis if for some value of x, the function takes value zero. Thus from the given options, all except the function  $y = x^2 + 1$  takes value zero since for any value of x,  $x^2 + 1$  is always  $> 0$ .

**Answer: (A)**

3. a, b, c are in geometric progression

$$\Rightarrow b^2 = ac$$

$$\frac{a}{bc} \times \frac{2b}{a} = \frac{2}{c} \text{ and } \frac{2}{c} \times \frac{2b}{a} = \frac{4b}{ac} = \frac{3b}{b^2} = \frac{4}{b}$$

Thus  $\frac{a}{bc}, \frac{2}{c}, \frac{2}{b}$  are in geometric progression. **Answer: (B)**

4. As 'X' increases, obviously 'X - 1' increases, also as X increases  $X^X$  increases. Hence '-X' and '1/X<sup>X</sup>' both decreases.

Therefore  $1 - X^X$  also decreases.

**Answer: (D)**

5. Consider the equations

$$ax + by = c_1 \quad \dots\dots (i) \text{ and}$$

$$cx + dy = c_2 \quad \dots\dots (ii)$$

Multiplying 1<sup>st</sup> equation by c and second by a, we get:

$$acx + bcy = cc_1 \quad \dots\dots(iii) \text{ and}$$

$$acx + ady = ac_2 \quad \dots\dots (iv)$$

Now subtracting equation (iii) from (iv) we get:

$$(ad - bc)y = ac_2 - cc_1.$$

Thus this is solvable if and only if  $ad - bc \neq 0$ . **Answer: (B)**

6. Let L ≡ liters of water; & L ∝ H.P.

$$L_1 = 765, H.P._1 = 2.7; L_2 = 3060; H.P._2 = ?$$

$$L_1/H.P._1 = L_2/H.P._2$$

$$\therefore H.P._2 = 3060 \times 2.7 / 765 = 10.8 \quad \text{Answer: (C)}$$

7. Case I When  $x \in Q$  :

$$f \circ f(x) = f(f(x)) = x \quad [ \because f(x) = x, \text{ when } x \in Q ]$$

Case II When  $x \notin Q$

$$f \circ f(x) = f(f(x)) = f(1 - x) = 1 - (1 - x) = x$$

Thus,  $f \circ f(x) = x$  for all  $x \in [0, 1]$ . **Answer: (C)**

8. Length of the shadow of an object varies directly with its height. Let L ≡ Length of the shadow;

H = height of the object.  $L \propto H$

$$L_{\text{pole}} = 2\text{m}, L_{\text{tower}} = 7\text{m}, H_{\text{pole}} = 5\text{m}$$

$$H_{\text{pole}} / L_{\text{pole}} = H_{\text{tower}} / L_{\text{tower}}$$

$$\therefore H_{\text{tower}} = \frac{5}{2} \times 7 = 17.5\text{m}. \quad \text{Answer: (C)}$$

9.  $(36 \times 5\frac{1}{2}) = (36 \times 11/2) = [36 \times (10 + 1)/2]$

$$= (36 \times \frac{1}{2}) + [(30 + 6) \times 5] = (36 \times \frac{1}{2}) + (30 \times 5) + (6 \times 5)$$

**Answer: (D)**

10. The number must be negative and of the as maximum absolute as possible. Hence is integer from -1 to -5 must be selected. Since the least product is required -5 must be selected. Other  $10 \times 9 \times 8 \times (-5) = -3600$ . **Answer: (B)**

11. At the beginning, Y has 20 litres of water and Z has 30 litres of wine. X is filled with water from Y therefore Y has 10 litres of water to which 10 litres of wine are added from Z so that the ratio of wine to water in y is now 1:1. Adding 10 litres of water from X to Z makes the wine to water ratio in Z as 1 : 2. When this is repeated, X will contain 5 litres of wine and 5 litres of water taken from Y and 10 litres of mixture from Z is added to Y of which  $1/3^{\text{rd}}$  is water and  $2/3^{\text{rd}}$  is wine. Thus Z now contains  $10 - 10/3 = 20/3$  litres of water and  $20 - 20/3 = 40/3$  litres of wine to which the mixture containing 5 litres of water and 5 litres of wine is added from X. Thus Z contains now  $35/3$  litres of water and  $55/3$  litres of wine i.e.  $55/90$  or about 61%. **Answer: (C)**

12. The first person can take a seat in 6 ways, the second person in 5, the third in 4, and the fourth in 3 ways.  $\therefore$  number of ways in which four can take their places =  $6 \times 5 \times 4 \times 3 = 360$ . Alternatively, we can solve directly as the no of ways =  ${}^6P_4 = 360$ . **Answer: (B)**

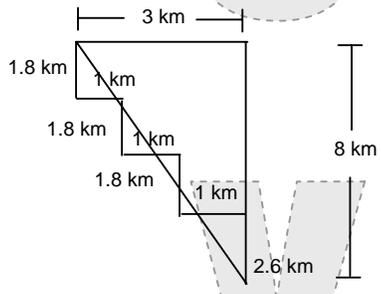
13.  $ab = \frac{1}{4} \left( \frac{a+b}{2} \right) = \frac{a+b}{8}$ . Thus  $8ab = a+b$  or  $a = \frac{b}{8b-1}$ . Thus **Answer: (C)**.

14. Suppose the total no. of students in the class is  $x$ . Then the total collection would be  $35x$  paise. When 20 more children join, then total children are now  $x + 20$  and if each pays 21 paise then the total amount collected would be  $21(x + 20) = 21x + 420$ . Thus  $35x = 21x + 420$  or  $x = 30$ . Thus **Answer: (D)**.

15. The dealer can divide the coins into 3 groups of 3 coins each and place 2 of the groups in each pan of the balance. If there is the faulty coin in either of the two groups then the balance will not show equal weight and the pan that contains the lighter coin will be raised. If the balance shows equal weight in each pan then the third group contains the faulty coin. Thus we can find the group that contains the lighter coin. Then again we divide this group of 3 coins in 3 parts of one coin each and repeating the above procedure we can find the faulty coin. Thus the minimum no of weightings required is 2. **Answer: (A)**

16. The Thousand's place can be filled in 6 ways, Hundred's place can be filled in 5 ways, Ten's place can be filled in 4 ways, Unit's place can be filled in 3 ways. Number of ways of making 4 digit numbers =  $6 \times 5 \times 4 \times 3 = 360$ . Alternatively,  ${}^6P_4 = 360$ . Numbers greater than 4000 : Thousand's place can be filled in 4 ways (4, 5, 6, 7), Hundred's place can be filled in 5 ways (remaining three digits and 2, 3), Ten's place can be filled in 4 ways and Unit's place can be filled in 3 ways. Total number of ways =  $4 \times 5 \times 4 \times 3 = 240$ . **Answer: (B)**

17. The path that the woman follows will look as follows:



Thus the distance from the starting point is  $\sqrt{8^2 + 3^2} = \sqrt{64+9} = \sqrt{73} \approx 8.5$  km. **Answer: (C)**

18. The total tax evasion by the 10 MPs is 750 lakhs. When the 3 MPs pay, the average tax evasion of the rest i.e. 7 people is 1 crore or 100 lakhs. Thus their total tax evasion is 700 lakhs i.e. the tax evasion of the 3 conscientious MPs will be 50 lakhs or on an average  $16 \frac{2}{3}$  lakhs. **Answer: (C)**

19. Each of these except (D) evaluates to 244. **Answer: (D)**

20. The ratio of the capacities of A : B : C is 2 : 1 : 3.  $\frac{1}{2}$  of A +  $\frac{1}{3}$ rd of B is  $\frac{4}{3}$ . Thus fraction is C's capacity that is filled will be  $\frac{4/3}{3} = \frac{4}{9}$ . **Answer: (B)**

21. There are 1C's, 3O's, 2 R's, 1M's,1I's,1T's, 1W's, 1 S, 1F and 1 D. the total number of consonants is 9 and the total number of vowels is 4. Four vowels and a group of consonants can be arranged in  $(5!) / (3!)$  Ways. The 9 consonants can be arranged among themselves in  $(9!) / (2!)$  ways.

Therefore, the total required number of ways are  $\frac{5!}{3!} \times \frac{9!}{2!}$  **Answer: (D)**

22. Had the man paid the entire amount at 8% levied half yearly i.e. 4% per six month then the total interest for 1 yr would have been  $100(1 + 4/100)^2 - 100 = 1081/100 - 100 = \text{Rs.}8.16$ . If after 6 months he pays at the rate of 5% pa i.e. 5/4% per quarter then the total would be;  $\text{Rs.}4 + 100(1 + 5/400)^2 - 100 \approx \text{Rs.} 6.516$ . Thus he pays  $\text{Rs.}8.16 - 6.516 \approx \text{Rs.} 1.6$  less. Thus he gains  $\text{Rs.} 1.6$ . **Answer: (C)**

23. The ratio of the three investments is 1: 2: 4. Since the total investment is 10000, the respective investments will be  $10000/7$  in 5% stock at Rs. 70,  $20000/7$  in 8% stock at Rs. 98 and  $40000/7$  in 9% at Rs. 70. Thus the total income is:

$$\frac{5 \times 10000}{7 \times 70} + \frac{7 \times 20000}{7 \times 98} + \frac{9 \times 40000}{7 \times 70} = \frac{51000}{49} \approx 1041. \text{ Answer: (D)}$$

24. To find all the numbers that are multiples of 3 but not of 6, we consider all the odd multiples of 3 that are less than 1000. i.e.  $3 \times 1, 3 \times 3, 3 \times 5, 3 \times 7, 3 \times 9, 3 \times 11, 3 \times 13, \dots, 3 \times 333$ .

Thus the sum of all these is  $3(1 + 3 + 5 + \dots + 333) = 3 \times 167^2 = 3 \times 27889 = 83667$ . **Answer: (A)**

25. **Answer: (C)**

26. Fifteen friends, where 3 are always together can be arranged in  $13!13!$  ways. Now say the two friends who don't want to stand together, if they stand together, then the possible ways are  $12!3!2!$ . So if the two friends never stand together then the required arrangement =  $13!13! - 12!3!2! = 12!3![13 - 2] = 12!13! \times 11$ . **Answer: (B)**

27. Distance covered by train in first 5 minutes is  $668 + 127 + 208 + 312 + 535 = 1850\text{m}$ .

For next 5 minutes speed is 36 km/h. Hence distance covered in the next 5 minutes is  $36 \times 5/60 = 3 \text{ km}$ .

Hence total distance covered in 10 minutes is  $3000 + 1850 = 4850\text{m} = 4.85 \text{ km}$ .

Average speed = total distance/total time =  $\frac{4.85}{\frac{1}{6}} = 29.1 \text{ km/hr}$ . **Answer: (C)**

28. Since the sum of ages is 100 and there are 10 boys, the average age is 10. Since each of them differs from the average age i.e. from 10 by 4, each has an age of either 6 or 14. Thus the deviation is either 4 or -4. Let x be the number of boys having age greater than 10 (i.e. age = 14). Then the total deviation is  $-4x + 4(10 - x) = 0$ . Thus  $x = 5$ . **Answer: (C)**

29. If  $U_i$ , were the observations then x is the mean  $\Rightarrow \sum_{i=1}^{10n} U_i = nx$ .

The new sum is  $\sum_{i=1}^{10n} (aU_i - c) = anx - nc$ . Thus the average is  $(anx - nc)/n = ax - c$ . **Answer: (B)**

30.  $A/Q = (1 - q/Q)^n$  where A : amount of the original liquid (wine) left in the mixture at the end of the transaction. ; Q : total volume of the mixture = 60 lit. ; q : quantity taken away in each transaction = 4 lit. ; n : number of times the transaction performed = 2. Hence  $A/Q = (1 - 4/60)^2 = 14^2/15^2 = 196/225$ . Thus the ratio of wine in the mixture is  $196/225$ . Hence the ratio of water in the mixture is  $1 - 196/225 = 29/225$  i.e. the ratio of wine to water is  $196 : 29$ . **Answer: (C)**

31. The thief is already  $\frac{1}{2}$  hour ahead, and at 40 kmph is 20 km ahead. When the owner starts at 2.00 p.m. at a speed of 50 kmph, the relative speed is 10 kmph. So he will cover up the gap of 20 km in 2 hours, i.e. at 4.00 p.m.

**Answer: (C)**

32. Area of triangle with base X = area of square with side X

Let altitude of triangle = H

$$\frac{1}{2} (X) \times (H) = X^2$$

$$H = 2X \quad \text{Answer: (C)}$$



33.  $[(2/3) \frac{2}{3}]^3 \times (1/3)^{-4} \times 3^{-1} \times 1/6$

$$= 4/9 \times 3^4 \times 1/3 \times 1/6$$

$$= \frac{4 \times 4 \times 4}{9 \times 9 \times 9} \times \frac{3 \times 3 \times 3 \times 3}{3 \times 6} = \frac{32}{81} \quad \text{Answer: (B)}$$

34. If sparrows, pigeons and doves each amounts to 0, the minimum number of birds is 6. **Answer: (C)**

35.  $= (\sqrt{2} - 1) / (\sqrt{2} + 1)$

$$= [(\sqrt{2} - 1) / (\sqrt{2} + 1)] \times [(\sqrt{2} - 1) / (\sqrt{2} - 1)]$$

$$= [(\sqrt{2} - 1)^2] / [(\sqrt{2}^2) - (1)^2]$$

$$= (2 + 1 - 2\sqrt{2}) / (2 - 1)$$

$$= (3 - 2\sqrt{2}) / 1$$

$$= (3 - 2\sqrt{2}). \quad \text{Answer: (A)}$$



36. h = 125 cm, r = 35 cm area of the surface

$$= 2\pi r h + \pi r^2$$

$$= 2\pi r (h + r)$$

$$= 2 \times 22/7 \times 35 (125 + 35)$$

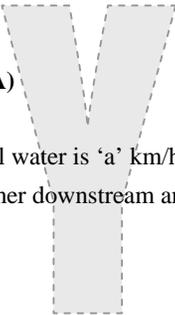
$$= 220 \times 160 \text{ sq cm.}$$

$$= 35200 \text{ sq cm.}$$

$$= 32500/10000 \text{ sq m} = 3.52$$

$\therefore$  Cost of the material used

$$= 80 \times 3.52 = \text{Rs. } 281.60. \quad \text{Answer: (A)}$$



37. Suppose the speed of the steamer in still water is 'a' km/hr. Speed of the stream = 2 km/hour.

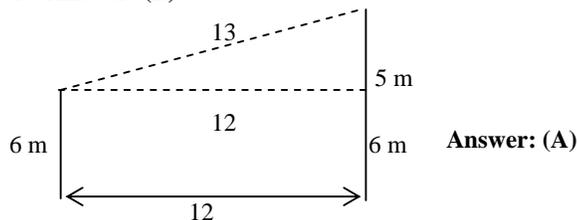
$\therefore$  (a + 2) km/hr is the speed of the steamer downstream and (a - 2) km/hr is the speed for the steamer upstream.

$$\therefore 4(a + 2) = 5(a - 2)$$

$$\text{i.e. } 4a + 8 = 5a - 10$$

$$a = 18. \quad \text{Answer: (B)}$$

- 38.



39. Let the rational number be P/Q

$$\therefore P = Q - 3 \quad \dots\dots\dots(1)$$

$$3P / (Q + 20) = 1/8$$

$$24p - Q = 20 \quad \dots\dots\dots(2)$$

Solving (1) and (2), we get P = 1, Q = 4

$$\therefore \text{Original number} = \frac{1}{4} \quad \text{Answer: (A)}$$

40. Let 7 occur in the unit digit. So the unit digit can be placed by 1 way.

The tenth digit can be placed by the rest of 9 numbers.

The hundredth digit can be placed by 6 only i.e., one way. As the numbers are between 600 and 700.

$$\therefore \text{The number of ways} = 1 \times 9 \times 1 = 9.$$

Now, Let 7 occur in the tenth place. The unit digit place can be filled by any of the numbers from 0-9 except 7.

The hundredth place can be filled in one way (by only 6). So, total 9 ways. 7 can't occur in the hundredth place.

$$\therefore \text{The total number which can be formed} = 9 + 9 = 18. \quad \text{Answer: (A)}$$

$$41. L = B + 9 \quad \dots\dots\dots(1)$$

$$(L + 3)(B + 3) = LB + 84$$

$$LB + 3L + 3B + 9 = LB + 84$$

$$= L + B = 25 \quad \dots\dots\dots(2)$$

$$(1) \& (2) \text{ give } L = 17, B = 8. \quad \text{Answer: (C)}$$

42. Since  $\triangle BCD$  is an equilateral triangle, the measure of  $\angle BCD$  is  $60^\circ$ . Also,  $\triangle ABC$  is right triangle.

$$\text{It follows that } AB = \sqrt{3}. \quad \text{Answer: (D)}$$

43. Observe that  $a \times [a] = 17$  implies  $4 < a < 5$ . Hence,  $[a] = 4$ . Now,  $a \times [a] = 17$  implies  $a = \frac{17}{4}$ .

$$\text{Similarly, } b \times [b] = 11 \text{ implies } b = 11/3. \text{ Therefore, } a - b = (17/4) - (11/3) = \frac{7}{12}. \quad \text{Answer: (D)}$$

44. Area of the surface of the cone =  $2\pi I$

$$= \frac{22}{7} \times 5 \times 6.3 = 99 \text{ sq. m.}$$

= Area of the canvas used

$\therefore$  Length of the canvas

$$= \text{Area}/\text{width} = 99/1.5 = 66\text{m}$$

$$\therefore \text{Total cost} = 66 \times \text{Rs. } 20 = \text{Rs. } 1320. \quad \text{Answer: (B)}$$

45. Total number of ticket-less travelers in February =  $4000 + 5\% = 4200$

$$\text{March} = 4200 - 5\% = 3900$$

$$\text{April} = 3900 - 10\% = 3591. \quad \text{Answer: (C)}$$

46. Let the two digit number be  $10x + y$

$$\therefore 7(10x + y) = 4(10y + x) \text{ and } y - x = 3$$

$$= 66x = 33y = y = 2x$$

$$\therefore y - x = 3$$

$$x = 3, y = 6. \quad \text{Answer: (D)}$$

47. For the number to be an odd number, the units digit must be 5 or 7.  
The tens and the hundreds digits can be chosen from among three digits in 3 ways each.  
So, there are  $3 \times 3 \times 2 = 18$  such numbers. **Answer: (C)**
48.  $S < A < J < H, S < A < P$   
 $S < A < C, N < H$   
S or N could be is the smallest town.  
Since data is inadequate, we can't comment. **Answer: (D)**
49.  $\sqrt{[(150)^2 + (200)^2]} = 250$  m. **Answer: (A)**
50. Area of the field over which the earth dug is spread =  $80 \times 50 - 10 \times 8$   
=  $4000 - 80 = 3920$  sq m  
Volume of the dug spread  
=  $10 \times 8 \times 9.8 = 784$  cu. m.  
 $\therefore$  Level of the field risen by spreading the dug over 3920 sq m field  
 $\frac{784}{3920} = 0.2$  m = 20 cm. **Answer: (A)**
51. First few lines of first paragraph, 'In the new millennium the only good HR will be heresy. The only good HR strategy will be the one that aims to make managers believe as much. And the only good HR company will be the one that uses its heterodoxy to attract and retain the best human resources' implies that the new HR of the new millennium would be doing away with the orthodoxy. 'Heresy' means any opinion (in philosophy, politics, etc.) opposed to official or established views or doctrines, therefore 'retaining the heresy' in option (A) would be incorrect. **Answer: (B)**
52. In the passage, the author has methodically put forth points and elaborated them to explain his perspective of new heretic approach being adopted by the companies in the new millennium. Hence, 'analytical' in option (A) is the answer. **Answer: (A)**
53. Option (B) is the answer as explicit from this line, 'A recent epochal survey conducted has yielded a shortlist of twelve critical parameters, which can be stacked up to create a hierarchy of needs on four distinct levels' in fifth paragraph. **Answer: (B)**
54. These lines in sixth paragraph, '.....jobs become over-operationalised. This roboticising (to make automatic) of the human minds builds little self-worth and-self-confidence in them and dramatically impairs quality input' explicate option (A) as the answer. **Answer: (A)**
55. These lines in ninth paragraph, 'Talent is the pattern one cannot turn on or off at will. Great managers realise that while talent is the differentiating factor excellent performance, it can also neither be created nor altered' explicate option (A) as the answer. **Answer: (A)**

56. These lines from eleventh paragraph, 'Employees do not leave companies, they leave managers and supervisors. The new HR tactic asks you to treat each individual as one as a unique bundle of needs wants insecurities, ambitions, desires spirits, and genius. Great managers have great talents and this talent includes getting a true sense of satisfaction from seeing his employees grow and succeed even if they surpass their managers' implies that the great manager should take into account all the 12 parameters (referred to in fifth paragraph) and last paragraph validate options (A) and (B). Hence, option (D) is the answer. **Answer: (D)**
57. First line of third last paragraph, 'Human beings are social animals and work is a social institution' explicates option (B) as the answer. **Answer: (B)**
58. Last line from fifth last paragraph, '.....the company's mission relates directly to the work the employees do' explicates option (A) as the answer. **Answer: (A)**
59. These lines from twelfth paragraph, 'The millennium's HR says there is nothing complicated about development. Development involves holding up a mirror to employees and encouraging them to know themselves' explicate option (B) as the answer. **Answer: (B)**
60. Option (B) is the answer as explicit from this line in tenth paragraph, 'Positive recognition is often thought of as coming from the superiors or managers but employees cherish praise and recognition from peers'. **Answer: (B)**
61. Last line of the passage, 'There is always a slight tension about finding more effective and efficient ways to work' explicate option (A) as the answer. **Answer: (A)**
62. 'Sleepy village' and 'fluid prose' provide the clue, which implies a short poem or prose work describing a simple, peaceful scene of rural or pastoral life. Hence, 'idyllic' (pleasing and simple; pastoral or picturesque) fits our prediction. Hence, option (B) is the answer. **Answer: (B)**
63. Of all the options, 'icons' (representation) and 'idols' (A venerated person) seem to fit the first blank. But 'recommended' in option (B) would not be appropriate to replace the second blank as it is irrelevant whereas 'thriving' would give a cogent meaning to the sentence. Hence, option (A) is the answer. **Answer: (A)**
64. A very simple question. One would leave one's country of birth for a new land, hence, option (C) is the answer. **Answer: (C)**
65. Of all the options, 'chronicle' (to tell or write the history of ) and 'list' would replace the first blank. 'Expunge' in option (C) is to erase or remove completely and would not erase the literature or essay once written whereas 'analyze' gives a cogent meaning to the sentence. Hence, option (A) is the answer. **Answer: (A)**
66. 'Trabant' was a famous automobile brand produced by East German auto maker and was most popular vehicle in former socialist countries as it was a cheap. The sentence suggest that the people wanted to purchase expensive cars instead of driving in these inexpensive cars, which resulted in the collapse of communism (any economic theory or system based on the ownership of all property by the community as a whole) in Eastern Europe. Hence, option (D) is the answer. **Answer: (D)**
67. 'Good sense to leave some of the century's most' in the sentence implies that we must leave behind at least some of the extreme negative ideas. Of all the options, 'poisonous' in option (B) fits our prediction. Hence, (B) is the answer. **Answer: (B)**

68. 'And' after herbal medicine implies that both the parts of the sentence convey the similar meaning. Options (B) and (C) are ruled out as 'possible unlikely' and 'plausible unlikely' do not convey any sense. But 'unequally' in option (D) would be inappropriate for the first blank whereas 'unlikely' in (A) conveys the cogent meaning to the sentence. Hence, option (A) is the answer. **Answer: (A)**
69. From our common sense, we know that a difference would lead into deficit, which implies that 'disparity' (inequality or difference, as in rank, amount, quality, etc) would fit our prediction. Hence, option (A) is the answer. **Answer: (A)**
70. The latter part of the sentence suggests that anthropological survey of India has put forth some of their results, which has been possible after a decade of continuous effort in field research. Therefore, of all the options, 'painstaking' in option (A) fits our prediction. Hence, (A) is the answer. **Answer: (A)**
71. 'Obsequies' are funeral rites or ceremonies, only if they are in accordance with the scriptures, you would not have any time for personal homage. Hence, option (B) is the answer. **Answer: (B)**
72. 'In area' in the question implies around or about. Therefore, option (D) is the answer as per the first paragraph, 'More than 20,000 people are shot to death and more than 200,000 are injured or maimed by firearms each year'. **Answer: (D)**
73. Last line of paragraph 4, 'Guns were works of art, things of beauty, sources of power and symbols of manliness' explicates option (D) as the answer. **Answer: (D)**
74. Last line of third last paragraph, 'Most of the pistols imported are inexpensive and so poorly constructed that they are dangerous to the user as well as to anyone in the general direction they may point' explicates option (B) as the answer. **Answer: (B)**
75. First line of sixth paragraph, 'We have failed to control firearms because history and habit have more powerful influences on human conduct than reason and regent experience' explicates option (C) as the answer. **Answer: (C)**
76. First line of third last paragraph, 'Two million firearms are manufactured in the United States annually for private ownership - 70 percent are rifles and shotguns' explicates option (D) as the answer. **Answer: (D)**
77. First line of para 7, 'If government is incapable of keeping guns from the potential criminal while permitting them to the law-abiding citizen, then government is inadequate to the times' explicates option (A) as the answer. **Answer: (A)**
78. 'Pioneer' in this line in second last paragraph, 'Australia still pioneer country herself, had 57 gun murders among its 11 million people in 1965' implies that part of a settled, civilized country which lies next to an unexplored or undeveloped region; the developing, often still uncivilized or lawless, region of a country. Hence, option (B) is the answer. **Answer: (B)**
79. This line in last paragraph, 'Surveys indicate 34 per cent of the households in the Eastern parts of the United States contain guns, compared to 53 percent in the West, 55 percent in the Midwest and 64 percent in the South' explicates option (C) as the answer. **Answer: (C)**

80. Last few lines of the passage, 'Not only the percent of murders committed by firearms higher in areas where there are more guns and weaker laws-the overall murder rate is higher, too. Rhode Island, New York and Massachusetts have strong gun control laws. Arizona, Texas and Mississippi-have more guns per capita, and very weak gun control laws' suggest that strong laws mean overall lower murder rate. As statement I also implies the same meaning, hence option (D) is the answer. **Answer: (D)**
81. As the passage highlights the high rate of gun crimes in US and the necessity to control it, therefore option (A) would form the appropriate answer to this question. **Answer: (A)**
82. 'Prudent' means cautious or discreet in conduct; circumspect; not rash, therefore its antonym would be 'rash'. Hence, option (C) is the answer. **Answer: (C)**
83. 'Quibble' is a petty objection or criticism, therefore its antonym would be 'concur' i.e. to agree (*with*); be in accord (*in* an opinion, etc.). Hence, option (A) is the answer. **Answer: (A)**
84. 'Invincible' is that cannot be overcome; unconquerable, therefore its antonym would be 'frail', which means slender and delicate; not robust; weak, somebody who could be conquered easily. Hence, option (A) is the answer. **Answer: (A)**
85. 'Innocuous' means that does not injure or harm; harmless. Therefore, 'virulent' (extremely poisonous or injurious; deadly) would be its antonym. Hence, option (A) is the answer. **Answer: (A)**
86. Last line of second last paragraph, 'And she is a perfect example of how fact and fantasy can coexist in today's Japan' explicates option (C) as the answer.  
Last line of first paragraph, 'The books sell but they do not have any answers and the cult steps in and generates followers on mere sensationalism' negates the validity of option (B). Hence, (C) is the answer. **Answer: (C)**
87. This line finds mention in second last paragraph, where the author sarcastically comments on Inoue's use of Nostradamus' name in marketing her creation. Hence, option (B) is the answer. **Answer: (B)**
88. This line in first paragraph, 'But a lot of un-nutty Japanese take it seriously and its influence has persisted for nearly three decades' validates option (A). Rest of the options is not supported by the passage. Hence, option (A) is the answer. **Answer: (A)**
89. Statement 1 would be incorrect as per this line in first paragraph, 'But a lot of un-nutty Japanese take it seriously and its influence has persisted for nearly three decades'. Statement 2 is correct as per this line in the same paragraph, 'Aum which allegedly masterminded the deadly sarin gas attacks in the to attract followers already bitten by the Nostradamus bug'. Statement 3 is not supported anywhere in the passage. Statement 4 is true to an extent as per, 'The books sell but they do not have any answers and the cult steps in and generates followers on mere sensationalism' this line in first paragraph. As 2 and 4 are not given as one of the options, therefore, option (D) is the answer. **Answer: (D)**
90. 'Apocalyptic' exists in second paragraph, which implies violent or destructive event or a revelation about the end of the world. Therefore, of all the options, 'doomed' is to be destined to a tragic fate. Hence, option (A) is the answer. **Answer: (A)**

91. Of all the options, 'Inoue' is the odd one out as she has used Nostradamus' name to promote her range of products. Hence, option (D) is the answer. **Answer: (D)**
92. 'Cranked' exists in last line of the passage where it implies a device for revolving a shaft. Hence, option (C) is the answer. **Answer: (C)**
93. 'Suffice' exists in last line of second paragraph, where it means to be enough or be sufficient. Hence, its antonym would be to 'become scarce' in (B). Hence, option (B) is the answer. **Answer: (B)**
94. As the passage suggests Japanese belief in Nostradamus, therefore, option (D) would serve as the most suitable title. **Answer: (D)**
95. 'Skew' exists in first line of third paragraph, where it implies distort or pervert. Hence, option (B) is the answer. **Answer: (B)**
96. As the entire passage suggests the obstacles in the growth and subsequent expression of new ideas, therefore, option (C) is the answer. **Answer: (C)**
97. Option (A) seems to be the most probable answer of all the choices. 'Theologian' is a student of or specialist in theology or a theology, hence (C) is ruled out. **Answer: (C)**
98. Option (C) is the answer as per the last few lines of first paragraph. **Answer: (C)**
99. First line of second paragraph, 'One fact which emerges from these considerations is that no obstacle should be placed in the way of thought and its expression, nor yet in the way of statements of fact' explicates option (D) as the answer. **Answer: (D)**
100. First few lines of second paragraph, 'One fact which emerges from these considerations is that no obstacle should be placed in the way of thought and its expression, nor yet in the way of statements of fact. This was formerly common ground among liberal thinkers, though it was never quite realised in the practice of civilised countries. But it has recently become, throughout Europe, a dangerous paradox, on account of which men suffer imprisonment or starvation' explicate option (B) as the answer. **Answer: (B)**
101. Last few lines of second paragraph, 'On any matter of general interest, there is usually, in any given community at any given time, a received opinion, which is accepted as a matter of course, by all who give no special thought to the matter. Any questioning of the received opinion arouses hostility, for a number of reasons. The most important of these is the instinct of conventionality, which exists in all gregarious animals and often leads them to put to death any markedly peculiar member of the herd' validates statements II and III. Hence, option (B) is the answer. **Answer: (B)**
102. Last line of third paragraph, 'And it is even harder to think of a new idea than to get it accepted: most people might spend a lifetime in reflection without ever making a genuinely original discovery' negates the validity of option (B). Hence, option (B) is the answer. **Answer: (B)**

103. These lines in second last paragraph, 'There should be an attempt, therefore, to encourage, rather than discourage the expression of new beliefs and the dissemination of knowledge tending to support them. But the very opposite is, in fact, the case. From childhood upward, everything is done to make the minds of men and women conventional and sterile' validate options (A) and (B). Hence, option (D) is the answer. **Answer: (D)**
104. This line of second last paragraph, 'Least of all is this likely in a modern civilised society, where the conditions of life are in constant rapid change, and demand, for successful adaptation, an equally rapid change in intellectual outlook' explicates option (C) as the answer. **Answer: (C)**
105. Last paragraph supports statements II and III. Hence, option (B) is the answer. **Answer: (B)**
106. Last line of first paragraph, '.....something sound and trustworthy about a man of bulk. Now this may, of course, be merely an optical illusion' explicates option (D) as the answer. **Answer: (D)**
107. 'Ramblings' exist in first line of third paragraph where it implies to talk or write aimlessly, without connection of ideas. Hence, option (A) is the answer. **Answer: (A)**
108. This line in third paragraph, 'Let us disregard the disembodied ones, the out-of-vision narrators, those known in the trade as "voice-overs"' explicates option (C) as the answer. **Answer: (C)**
109. This line in paragraph 4, 'It is not a market place, nor a Speaker's Corner. And, as in those two public arenas.....' explicate option (A) as the answer. **Answer: (A)**
110. This line in paragraph 4, 'And, as in those two public arenas, the louder the voice, the more strident the appeal, the more dubious appear the goods for sale' explicates option (C) as the answer. **Answer: (C)**
111. Last line of second last paragraph, 'Often what follows falls flat on its face, despite the bolstering of audience reaction, for the viewer at home is solitary before his set' explicates option (C) as the answer. 'The bolstering of audience reaction' is 'rabble-rousing' and as is not one of the effects, therefore option (A) is ruled out. **Answer: (C)**
112. Last paragraph supports options (A) and (B), hence, option (D) is the answer. Option (C) highlights only Cliff Michelmore, hence is ruled out. **Answer: (D)**
113. Last line of the passage, 'It can be allowed to grow so that it fills the screen, allowing only a peep over the shoulder of the famous front man at what the programme's really about' explicates option (B) as the answer. **Answer: (B)**
114. 'Spurious' exists in second last paragraph where it means not true or genuine; false. Hence, option (A) is the answer. **Answer: (A)**
115. It could either be a newspaper article or a magazine article, hence option (D) is the answer. **Answer: (D)**
116. 'Proscribe' is to deprive of the protection of the law; to banish; hence, option (A) is the answer. **Answer: (A)**
117. 'Swathe' is to wrap or bind up in a long strip or bandage; hence, option (D) is the answer. **Answer: (D)**

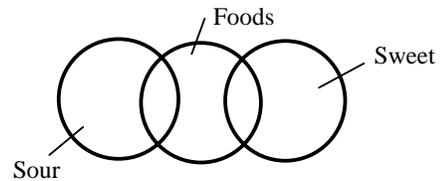
118. 'Impious' is not pious; hence, option (A) is the answer. **Answer: (A)**
119. 'Archaic' is antiquated; old-fashioned; hence, option (A) is the answer. **Answer: (A)**
120. As the best book on history has been written by Mohar, which implies that if Mohar has not written the book (B), then it is not the best book on history (C); Hence, option (B) is the answer. **Answer: (B)**
121. if A is true, then D must not be true. **Answer: (A)**
122. SHOPPERS' PARADISE makes him buy a pair of shoes. If he didn't buy a pair of shoes, then he would have not gone to the SHOPPERS' PARADISE. **Answer: (C)**
123. A causes B. He ate bananas, he caught cold. **Answer: (C)**
124. same as in question 122. **Answer: (C)**
125. (A) is the answer. Communism is any economic theory or system (not political theory) based on the ownership of all property by the community as a whole; hence ruled out. **Answer: (A)**

126. **Answer: (A)**

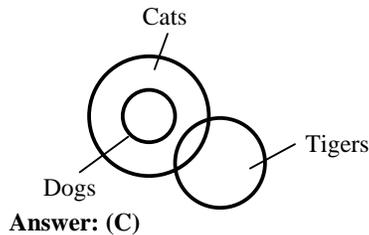
127. **Answer: (C)**

128. **Answer: (D)**

129. (i) It is clear that all foods are neither sweet nor sour.  
 (ii) Sour is a total separate category from sweet. **Answer: (C)**

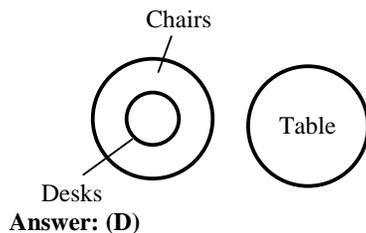


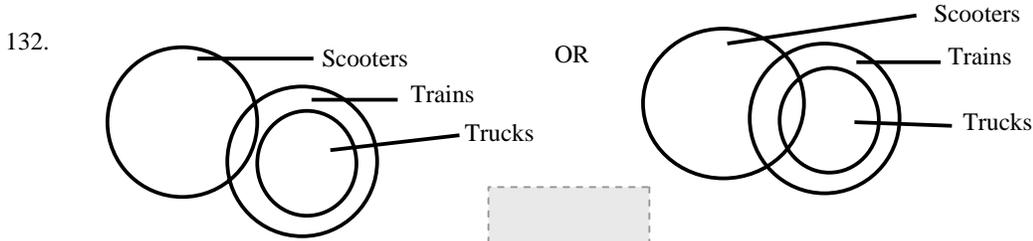
130.



There are two possibilities as indicated by the venn diagram. The conclusions must be drawn from the diagrams and not by single one, hence (C) is the answer.

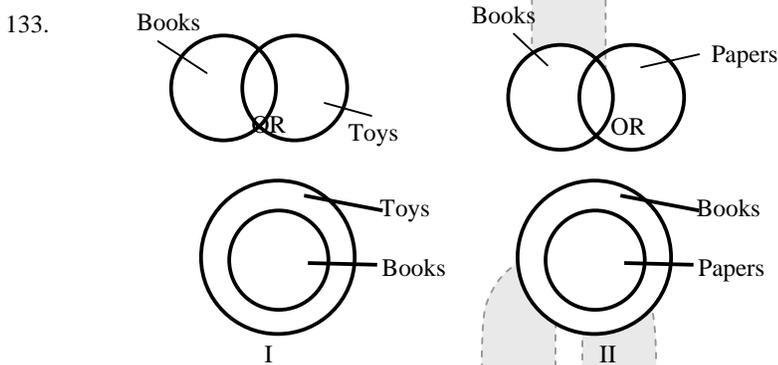
131.





As only conclusion I follows from both the diagrams, therefore (A) is the answer.

**Answer: (A)**



**Answer: (C)**

There are two possibilities that can be drawn from each statement, as indicated by the venn diagrams. conclusion I doesn't logically follow from both the diagrams in set (a). Same is the case with conclusion II as can be seen from the set (b). Hence, option (C) is the answer.

**Solutions 134 – 138:**

134. Savings & House Rent. **Answer: (B)**

135. **Answer: (B)**

136. Rs.  $1380 \times 12 =$  Rs. 16560. **Answer: (D)**

137.  $10\% = 500 \Rightarrow 100\% = 5000$ . **Answer: (C)**

138. **Answer: (B)**

**Solutions 139 – 143:**

End of cycle	x	y	z
1	3.75	2	-7
2	5.25	10	-39
3	6.75	22	-118
4	8.25	38	-262

All the answer now follow.

139. (C) 140. (D) 141. (A) 142. (B) 143. (D)

144. Suppose house number is a multiple of 3. Then, it is either 51, 54, or 57. But, it cannot be any of these numbers because none is a multiple of 4. So number is not a multiple of 3.

Then number is not a multiple of 6 because a multiple of 6 is a multiple of 3. So, it is a number from 70 through 79. Then, because it is not a multiple of 3, it is either 70, 71, 73, 74, 76, 77 or 79.

Then, it cannot be "not a multiple of 4," so it is a multiple of 4. Then house number is 76, because it is either 70, 71, 73, 74, 76, 77, or 79, and of these only 76 is a multiple of 4. **Answer: (C)**

156.  $1 \rightarrow 9, 2 \rightarrow 8, 3 \rightarrow 7, 4 \rightarrow 6, 5 \rightarrow 5, 6 \rightarrow 4$  and so on. **Answer: (D)**

157.  $S = 5, U = 6, R = 3, H = 8$ , so RUSH = 3658. **Answer: (B)**

158. The word DIAMOND contains 4<sup>th</sup>, 9<sup>th</sup>, 1<sup>st</sup>, 13<sup>th</sup>, 15<sup>th</sup>, 14<sup>th</sup> letters of the English alphabet from the beginning. Code of Diamond, i.e. VQYMKLV contains 5<sup>th</sup>, 10<sup>th</sup>, 2<sup>nd</sup>, 14<sup>th</sup>, 16<sup>th</sup>, 15<sup>th</sup>, 5<sup>th</sup> letters from the end.

Similarly, WEALTH  $\rightarrow$  CUYNFR. **Answer: (D)**

159. The letters in the word COLD moved 2, 3, 4, 5 steps backwards respectively to code it as ALHY.

Similarly IRON  $\rightarrow$  GOKI. **Answer: (C)**

160. **Answer: (A)**

161. The number of ways in which 2 cards can be picked up from 6 cards is  ${}^6C_2 = 15$  ways. Of these exactly one king can be picked in  ${}^2C_1 = 2$  ways. The other card must not be a king therefore it has to be picked up from the other 4 cards, which can be done in  ${}^4C_1 = 4$  ways. Thus the probability is 8/15. **Answer: (B)**

**Solutions 167 – 168:**

Since there are 3 men among the six people, the other 3 will be women. One among A and E is a woman and since B is A's daughter while F is a widow. Thus the women are A or E, B and F. Thus the men are C, D and one of A and E.

167. Since C and D are men, they cannot be brother and sister. **Answer: (D)**

168. F is A's mother in law while B is the daughter of A and E therefore A or E cannot be the uncle neither can C be the uncle since he is married to B. Thus the only person left is D. **Answer: (C)**

**Solutions 169 – 170:**

169. Meena and Orchid will sit next to Peter thus we see that Nikhil cannot sit next to Peter.

**Answer: (D)**

170. Ralph sits to the right of Orchid therefore Peter sits to Orchid's left and Meena then has no option but to sit to the left of Peter. Nikhil cannot sit next to Meena therefore only Quazim can sit to Meena's left so that Nikhil sits to the left of Quazim. Thus there is only one arrangement possible. **Answer: (A)**