

SBI Junior Associates Preliminary Paper 3

TEST - I: ENGLISH LANGUAGE (Ques : 30 Marks : 30 Time : 20 M)

Directions (Qs. 1-10) : Read the following passage divided into number of paragraphs carefully and answer the questions that follow it. Certain words are given in bold to help you locate them while answering some of the questions.

Sugarcane leaves, millions of tonnes of which go waste in India every year, can be used to generate power, save diesel and produce enough heat to run jaggery units and even burn small animals in a crematorium.

"Production of power via loose leafy biomass is a unique technology and it is believed that in gasification of sugarcane leaves we are the first in the world", report scientists from the Nimbkar Agricultural Research Institute, at Phaltan in Maharashtra.

They presented their findings at an International conference in Switzerland in May 1999 and have also submitted them to the Department of Non-Conventional Energy Sources. In view of the pressing need in India to identify **indigenous** and renewable sources of energy, NARI initiated the project to gasify loose sugarcane leaves to generate electricity in the ten-fifteen kilowatts range. Besides, producing power, the scientists have successfully used the sugarcane leaves to generate heat for jaggery-making units and specially-designed furnaces to **incinerate** small dead animal like sheep. Test on a 15 kilovolt ampere diesel genset powered by sugarcane leaves gasifier showed that 70-90 percent diesel substitution could be achieved with a five KW load. The NARI gasifier, which is non-polluting and safe, also produces char which is 15-28 percent of the fuel.

The char boosts the overall efficiency of the system to 80-85 percent and when mixed with a suitable binder it forms an excellent briquetting fuel for cooking purposes. In India alone, about 430 million tonnes of crop residues are produced every year, out of which 330 million tonnes are used as feed or fodder and the remaining 100 million tonnes simply **disposed** off by burning in open fields.

"This is a colossal waste of potentially useful source of energy", says the report by the NARI director, Anil K Rajvanshi, and his colleague Rajiv Jorapur. Most of the residues are in a loose leafy form such as sugarcane leaves, wheat husk, rice husk and safflower straw. The residues usually have high amounts of ash and are, therefore, difficult to gasify. In their studies, the NARI scientists used sugarcane leaves that have been chopped into one-to-five cm long pieces and sun dried.

- As opposed to use of wood or charcoal in biomass gasification in the west, developing countries should use
(1) only coal (2) char (3) agriculture residues (4) only sugarcane leaves
(5) None of these.
- Power from the sugarcane leaves can be used for
(i) incinerating small dead animals
(ii) generating electricity up to 10-15 kilowatts per hour
(iii) generating heat for jaggery - making units
(1) (i) and (ii) (2) (ii) and (iii) (3) (i), (ii) and (iii) (4) None of these (5) All of these
- Producing power from burning sugarcane leaves can be listed under which of the sources of energy
(1) Oil (2) Coal (3) Water (4) Non-Conventional Energy Sources
(5) All of these
- Which of following is not an advantage of production of power via gasification of agricultural residue in the developing countries?
(1) a 70-90 percent diesel substitution rate can be achieved with a five KW load
(2) the indigenous gasifier is non-polluting and safe (3) the gasifier also produces char which is 15-20 percent of the fuel
(4) the residues usually have high amount of ash (5) All of the above.
- Which of the questions cannot be answered after reading the passage?
(1) What is the quantity of sugarcane leaves available in India after being used as fodder?
(2) What are the other agricultural residues available in India besides sugarcane leaves?
(3) What amount of crop-residues is used as fodder every year?
(4) What can be done with the char after gasifying?
(5) All of the above
- It can be inferred that such power as can be generated from sugarcane leaves will be of great use in
(i) industrial areas (ii) agricultural areas (iii) cities (iv) villages
(1) (i) and (ii) (2) (ii) and (iii) (3) (ii) and (iv) (4) (iii) and (iv) (5) (i) and (iv)
- Which of the following is not a valid assumption on the basis of above paragraph?
(1) wood cannot be a source of biomass gasification in India (2) bulk of the crop residue gets used as feed and fodder
(3) nearly 1/3 of the crop residue is burnt off in open fields (4) char is a good cooking fuel
(5) None of the above
- Choose the word which is most **similar** in meaning to the word printed in bold as used in passage : **Indigenous**
(1) Native (2) Primitive (3) Primeval (4) Migrant (5) Ancient
- Choose the word which is most **opposite** in meaning to the word printed in bold as used in passage : **Incinerate**
(1) Destroy (2) Cremate (3) Burn (4) Rehabilitate (5) Carbonize
- Choose the word which is most **opposite** in meaning to the word printed in bold as used in passage : **Dispose**
(1) Abandon (2) Reject (3) Unload (4) Dump (5) Retain

Directions (Qs. 11-15) : There are two different sentences with a blank space in each question. Choose the word from the given options which fits into both the blanks appropriately adding a proper and logical meaning to the sentences.

11. (1) A sense of dignity and self-respect goes missing in the national trait of _____ some so-called 'celebrity'.
(2) When we reached the summit, we could hear the magpies calling out, but, to do them justice, they were not _____ us then.
(1) mobbing (2) retreating (3) inserting (4) shunned (5) compressing
12. (1) Gender stereotyping in the classroom particularly among younger children, has an adverse impact on the learning abilities and _____ of both boys and girls.
(2) Social institutions and mores were adapted to reflect the preferences, inclinations, values, goals and _____ of the new elite.
(1) intention (2) regulation (3) worldview (4) authority (5) protection
13. (1) The _____ of cryptocurrencies has been growing rapidly in India due to benefits in terms of anonymity, accessibility, speed, and cost.
(2) His _____ with the people was unbounded, but in the midst of it all he begged to be removed to London.
(1) confidence (2) popularity (3) practice (4) consideration (5) custom
14. (1) The Supreme Court rightly notes that the tribunal's view ignores the basic principle _____ to drinking water.
(2) It was a list of questions, all of them apparently _____ to her mental health.
(1) assessing (2) reckon (3) concerned (4) contemplating (5) pertaining
15. (1) With the hype surrounding cryptocurrencies continuing to grow, more people are hearing about the _____ technology known as blockchain.
(2) Although the architecture of the blockchain is far more complex than these aggregators, the _____ principle is not that different.
(1) subtle (2) apparent (3) Underlying (4) ample (5) substantial

Directions (Qs. 16-20) : The sentences given below consists of an idiom given in bold. From the given five alternatives identify the most suitable option reflecting the meaning of the idiom.

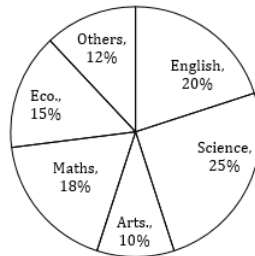
16. By working part-time and looking after her kids two days a week she managed to get the **best of both worlds**.
(1) to be at two places (2) to cheat someone
(3) to gain all the advantages (4) to make the next decision (5) to fight justice
17. I am still too early in the process to get up on my soapbox and proclaim that intermittent fasting is the **best thing since sliced bread** when it comes to weight management.
(1) best part of the world (2) best food tasted in a while
(3) being happy with a person (4) A good invention or innovation
(5) something good that isn't recognized at first
18. Failing to do your research before pursuing a form of credit or a lending option can lead to you **biting off more than you can chew** financially.
(1) to spend more than you earn (2) to take on a task that is way to big
(3) to take multiple tasks to perform (4) to buy something very expensive
(5) to complain about a loss from the past
19. When our galaxy collides with Andromeda in about 4 billion years, there will be no **crying over spilt milk**.
(1) to fail in something (2) to be happy when a person leaves
(3) to face additional losses (4) to complain about a loss from the past
(5) to compensate the earlier losses
20. When he started asking too many questions of his neighbours about their whereabouts during the weekend, they warned him that **curiosity killed the cat**.
(1) when something is done badly (2) to present a counter argument
(3) believe someone's statement without proof (4) to go to bed
(5) to be inquisitive leading you into an unpleasant situation.

Directions (Qs. 21-30) : Read each sentence to find out whether there is any grammatical error in it. The error, if any, will be one part of the sentence. The number of that part is the answer. If there is no error, the answer is (5). (ignore the errors of punctuation, if any.)

21. The survey gives us (1)/ much knowledge of the (2)/ public's opinion on the (3)/ matter of terrorism. (4)/. No error (5)
22. Sometimes they may also show you (1)/ a fake flight ticket they booked just to meet you (2)/ but had to cancel because(3)/ of an urgent work or health issue(4)/. No error (5)
23. The idea of (1)/ introducing genes to correct (2)/ heritable and other disorders (3)/ are revolutionary. (4)/ No error (5)
24. It is appearing (1)/ to me that you (2)/ are plotting against (3)/ your friends and their parents. (4)/ No error(5).
25. In spite of (1)/ facing much problems, (2)/ he did not desert the (3)/ path of honesty(4)/. Bo error (5).
26. He does nothing (1)/ but to find faults (2)/ in others and (3)/ laugh at them.(4) No error(5)
27. The students requested their (1)/ Principal to be enough kind to (2)/ grant them five thousand rupees for (3)/ the reconstruction of the tennis court. (4)/ No error (5)
28. I don't know (1)/ if any of the members (2)/ of the party is conspiring (3)/ against the President or not. (4)/ No error (5)
29. The Reserve Bank of India (RBI) (1)/ did not monitor banks properly (2)/ and created opacity (3)/ with new financial instruments. (4)/ No error(5)
30. The issue of crony capitalism (1)/ that was much criticised during (2)/ the United Progressive Alliance government (3)/ is alive and well under this government. (4). No error (5)

TEST - II: NUMERICAL ABILITY (Ques : 35 Marks : 35 Time : 20 M)**Directions (Qs. 31-35) : What should come in place of question mark (?) in the following questions?**

31. $7\frac{4}{3} + 3\frac{1}{2} + 5\frac{2}{3} = ? + 4\frac{3}{5} - 7\frac{1}{2} + 11\frac{2}{5}$
(1) 10 (2) 9 (3) 95 (4) 105 (5) 11
32. $\frac{473}{903} \times 63^2 - 27 \times 52 = ?$
(1) 615 (2) 625 (3) 650 (4) 675 (5) 685
33. $3\frac{7}{9} \times 1\frac{10}{17} + 5 = ?$
(1) 6 (2) 15 (3) 11 (4) 9 (5) None of these
34. $\frac{3}{5}$ of $\frac{5}{9}$ of $\frac{2}{7}$ of 9450 = ?
(1) 960 (2) 480 (3) 450 (4) 900 (5) None of these
35. $66\% \text{ of } 350 + ? = \frac{5}{8} \text{ of } 1256$
(1) 521 (2) 496 (3) 554 (4) 568 (5) 544
36. Find the probability of forming a 8 member committee from a group of 7 men and 5 women such that no even number of women are selected in the committee?
(1) $1/2$ (2) $47/99$ (3) $50/99$ (4) $14/33$ (5) $49/99$
37. In how many different ways can the words be formed using letters of word CAREER such that no consonant occupy even position?
(1) 36 (2) 9 (3) 5 (4) 18 (5) 12
38. A sphere of radius 8 cm is melted to form 8 cylinder of radius 4 cm. find height of cylinder?
(1) $16/3$ cm (2) 16 cm (3) 14 cm (4) $14/3$ cm (5) 18 cm
39. A sum of money of Rs. 8000 is invested at rate of 40% p.a. for 1 year. Find CI if rate is compounded quarterly.
(1) Rs. 3600 (2) Rs. 3712.8 (3) Rs. 3625.18 (4) Rs. 3576.8 (5) Rs. 4200
40. A boat can row 20 km upstream in the same time as the boy covers 10 km distance between home and office and then return home with an average speed of 4 km/hr. If the downstream speed of boat is four times speed of current, find speed of boat in still water (in km/hr) ?
(1) 4 (2) 5 (3) 6 (4) 3 (5) 8

Directions (Qs. 41-45) : The percentage distribution of students studying various subjects in a college is given below in the pie-graph. Answer the following question based on given data-

41. Find the ratio between no. of students studying 'Science' and 'English' together to number of students studying 'Eco' and 'Others' together?
(1) 2:5 (2) 5:2 (3) 3:5 (4) 7:5 (5) 5:3
42. If the difference between students studying 'Maths' and 'Arts' is 512, then find the number of students studying science?
(1) 1600 (2) 1500 (3) 1800 (4) 1400 (5) 1700
43. Total number of students studying 'English' is what percent more than total number of students studying 'Eco'?
(1) $133\frac{1}{3}\%$ (2) $33\frac{1}{3}\%$ (3) $66\frac{2}{3}\%$ (4) $120\frac{1}{3}\%$ (5) $20\frac{1}{3}\%$
44. Find the average of number of student studying 'Eco', 'Others' and Maths if number of students studying 'Science' is 20 more than number of students studying 'English'?
(1) 62 (2) 65 (3) 70 (4) 60 (5) 57
45. Find the number of students studying 'Eco' and 'Others' together, if total number of students studying in college is 1800?
(1) 412 (2) 560 (3) 486 (4) 350 (5) 520
46. Bhavya is 25% more efficient than Satish while Aman is 40% less efficient than Bhavya. If Satish alone can complete the work in 15 days then in how many days Bhavya and Aman together can complete the work.

- (1) 8 days (2) 7.5 days (3) 6 days (4) 5 days (5) 9 days
47. Three natural numbers are given. If sum of average of any two numbers and the remaining third number is 56, 46 and 50 respectively, then find the sum of given three numbers.
- (1) 70 (2) 72 (3) 74 (4) 76 (5) 78
48. Find the probability of choosing a team of 11 players from 8 batsmen and 8 bowler if it is given that number of batsman should always be greater the number of bowlers.
- (1) $1/2$ (2) $4/9$ (3) $2/3$ (4) $11/16$ (5) $1/3$
49. How many 6 letter words can be formed using the word "MATTER" in which no T's comes together?
- (1) 600 (2) 300 (3) 340 (4) 260 (5) 240
50. Find the ratio of volume of cylinder 'A' to volume of cylinder 'B', if ratio of radius of cylinders 'A' to cylinder 'B' is 1 : 2 while the ratio of height of cylinder 'A' to cylinder 'B' is 2 : 1.
- (1) 1 : 1 (2) 1 : 2 (3) 2 : 1 (4) 1 : 4 (5) 1 : 8

Directions (Qs. 51-55) : What will come in the place of the question mark (?) in the following number series?

51. 5, 7, 11, 19, ?, 67
(1) 38 (2) 35 (3) 30 (4) 34 (5) 28
52. 1089, 360, 117, 36, 9, ?
(1) 2 (2) 1 (3) 0 (4) 3 (5) 4
53. ?, 9, 64, 25, 216, 49
(1) 8 (2) 4 (3) 1 (4) 3 (5) 2
54. 60, 83, ?, 198, 290, 405
(1) 166 (2) 150 (3) 129 (4) 145 (5) 139
55. 2, 4, 12, ?, 420, 4620
(1) 48 (2) 36 (3) 52 (4) 120 (5) 60

Directions (Qs. 56-60) : What should come in place of question mark (?) in the following questions?

56. $\frac{34 \times 4 - 12 \times 8 + 61}{6^2 + \sqrt{2025} + (11)^2} = ?$
(1) 1 (2) 0.5 (3) 0.45 (4) 0.25 (5) 1.5
57. $464 \div (16 \times 2.32) + 4\frac{1}{2} = ?$
(1) 15 (2) 16 (3) 20 (4) 17 (5) 10
58. $(5863 - \sqrt{2704}) \times 0.5 = ? + (51)^2$
(1) 304.5 (2) 303.75 (3) 302 (4) 305 (5) 305.5
59. $1231 - ?\% \text{ of } 500 = 145\% \text{ of } 780$
(1) 15 (2) 18 (3) 20 (4) 25 (5) 30
60. $5\frac{1}{8} \text{ of } 208 + 786 = 2000 - ?$
(1) 126 (2) 138 (3) 135 (4) 156 (5) 148
61. The average of 9 numbers is recorded as 54. If three numbers 36, 55, and 47 were misread as 63, 52 and 41. Find the correct average?
(1) 50 (2) 45.5 (3) 57 (4) 52 (5) 48
62. A thief robbed a shop and ran in a car at a speed of 60 km/h at 11:00 am. The Police located the position of thief and ran after him at 11:15 a.m. from shop in a car at 65 km/h. Find the time at which the thief will be caught?
(1) 2 : 00 p.m (2) 3 :15 p.m (3) 3 : 30 p.m (4) 2 : 30 p.m (5) 2 : 15 p.m
63. A boat travels 28 km downstream and 24 km upstream in 5 hrs. The same boat travels 56 km, downstream and 16 km upstream in 6 hrs. Find the ratio between speed of boat in still water and speed of current?
(1) 3 : 11 (2) 4 : 5 (3) 5 : 4 (4) 11 : 3 (5) 7 : 11
64. A, B and C can complete a work in 24 days, 15 days and 20 days respectively. If they all work together till the completion of work, find the share of B's wage if total wage earned by three of them is Rs. 950?
(1) Rs. 480 (2) Rs. 300 (3) Rs. 400 (4) Rs. 450 (5) Rs. 360
65. A and B started a business with Rs. 10,000 and Rs. 12000 respectively. If A withdrew Rs 4000 after 3 months, B added Rs. 3000 more after 5 months and C invested Rs. 51000 for last two months, find the share of B at the end of a year if the difference b/w A's and C's share of profit after a year is Rs. 3600?
(1) Rs. 55000 (2) Rs. 33000 (3) Rs. 45000 (4) Rs. 42000 (5) Rs. 28000

TEST - III: REASONING ABILITY (Ques : 35 Marks : 35 Time : 20 M)

Directions (Qs. 66–70) : In the following questions, the symbols @, &, %, \$ and * are used with the following meaning as illustrated below-

'P&Q' means 'P is neither greater than nor equal to Q'
 'P*Q' means 'P is neither equal to nor smaller than Q'
 'P\$Q' means 'P is neither smaller than nor greater than Q'
 'P%Q' means 'P is not smaller than Q'
 'P@Q' means 'P is not greater than Q'

Now in each of the following questions assuming the given statement to be true, find which of the two conclusions I and II given below them is/are definitely true and give your answer accordingly.

66. **Statements:** R\$S, S*L, L\$Q
 (1) None is true (2) Only I is true
 (3) Only II is true (4) Either I or II are true
Conclusions: I. R*Q II. S\$Q
67. **Statements:** B%J, J&M, M@V
 (1) Only I is true (2) Only II is true
 (3) Either I and II are true (4) Both are true (5) None is true
Conclusions: I. J@V II. B*M
68. **Statements:** C*X, G\$X, Y%G
 (1) None is true (2) Only I is true
 (3) Only II is true (4) Both II and I are true
Conclusions: I. Y*X II. Y\$X
69. **Statements:** A\$D, D%V, V*Z
 (1) None is true (2) Only I is true
 (3) Only II is true (4) Either I or III is true
Conclusions: I. D*Z II. V@A
70. **Statements:** Q@T, T&K, K%E
 (1) Either I or II are true (2) Only I is true
 (3) Both I and II are true (4) Only II true (5) None is true
Conclusions: I. T\$E II. T*E

Directions (Qs. 71–75) : Study the following information carefully to answer these questions.

There is a group of friends namely M, R, V, S, N, X, U, J, T, K. There are 4 females and 6 males. They are going to a picnic in 4 different cars namely Santro, I10, Alto, Wagon R, such that each car has one female.

M travels with only one more person but not in santro. U travels in santro with only one of her friends. R&V travel in wagon R. N does not travel with R and not in I10. N, J, T are the females in the group. J&K travel together but not with V.

71. Which of the following represents the person travelling in wagon R?
 (1) X, S, T (2) M, N, V (3) X, V (4) R, V, T (5) None of the above
72. If Four of the following five are alike in a certain way and thus form a group. Which is the one that does not belong to that group?
 (1) R (2) K (3) U (4) V (5) M
73. X travels in which of the following car?
 (1) Santro (2) Alto (3) I10 (4) Wagon R (5) Either (1) or (3)
74. Which of the following combination is correct?
 (1) M-santro (2) R-wagonR (3) V-i10 (4) K-alto (5) None of these
75. Which one travels with K?
 (1) R (2) M (3) V (4) T (5) J & either X or S

Directions (Qs. 76–80) : Study the following information carefully and answer the questions given below.

Seven persons D, F, G, H, J, K, L participate in three different games viz. Cricket, Football, Tennis on different days of a week starting from Monday to Sunday but not necessarily in the same order. Not more than three persons participate in a single game. L participate in Tennis with only that person, who participate on Thursday. F participate in Cricket on Saturday. Only two persons participate in between L and K. Only two persons participate in between F and D, who participate in Cricket. Only two persons participate in Football. K does not participate on Tuesday. As many as person participate between G and J as between H and J. G and K does not participate in Cricket. G does not participate on Sunday.

76. How many persons participate in between J and H?
 (1) None (2) One (3) Two (4) Three (5) More than three
77. G participate in which of the following game?
 (1) Tennis (2) Football (3) Cricket (4) Either (1) or (2) (5) None of these
78. Who among the following person participate on Wednesday?
 (1) K (2) F (3) D (4) H (5) None of these
79. Which of the following game is played on Sunday?
 (1) Tennis (2) Football (3) Cricket (4) Either (1) or (2) (5) None of these
80. Which of the following combination is not true?
 (1) J-Tennis (2) K-Football (3) G-Football (4) H-Cricket (5) D-Football

Directions (Qs. 81–84) : Study the following questions and answering the questions referring to the word sequence given below:

- | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|
| | TOOL | FROG | WILD | WOLF | BEAR |
|--|-------------|-------------|-------------|-------------|-------------|
81. If each letter is arranged according to alphabetical series within each of the word, then which is the second letter of the word, which is third from the right end?
 (1) G (2) D (3) O (4) I (5) None of these
82. If each consonant is changed to previous letter according the alphabetical series and each vowel is changed to next letter according to the alphabetical series of each word, then How many words thus formed contain vowel?
 (1) Two (2) Three (3) Four (4) One (5) None of these
83. If each letter is arranged in reverse alphabetical order within each of the word, then how many words thus formed remains the same as the previous one?

- (1) Five (2) Two (3) Three (4) One (5) None of these
84. If words are arranged according to the alphabetical series from right to left, then which word is fourth from the right end?
(1) FROG (2) WOLF (3) BEAR (4) WILD (5) None of these
85. Pointing to a woman, Swati said, "She is the mother of the only son of my brother's father". How is woman related to Swati?
(1) Sister (2) Aunt (3) Mother (4) Can't be determined
(5) None of these
86. How many words can be made from 1st, 3rd, 5th, 7th and 8th letter of the word 'Ambitious'?
(1) None (2) One (3) Two (4) Three (5) More than three
87. If '÷' means '+', '+' means '-', '-' means 'x' and 'x' means '÷', then what is the value of $25 \times 5 - 3 \div 8 + 6 = ?$
(1) 19 (2) 17 (3) 25 (4) 28 (5) None of these

Directions (Qs. 88–90) : In the following questions, the symbols #, &, @, and % are used with the following meanings as illustrated below. Study the following information and answer the given questions:

- K%T- K is the brother of T. K&T- K is the mother of T.
K#T- K is the father of T. K@T- K is the sister of T.
88. If A#B&C%D is true then how A is related to D?
(1) Maternal grandfather (2) Mother (3) Father (4) Grandson (5) None of these
89. If P@Q#R%S@T&U is true, then how is P related to T?
(1) Daughter (2) Mother (3) Father (4) Aunt (5) None of these
90. How many such pairs of letters are there in the word 'CANDIDATE' each of which has as many letters between them in the word as in the English alphabet?
(1) None (2) One (3) Two (4) Three (5) More than three

Directions (Qs. 91–95) : Read all the information carefully and answer the given questions:

Eight persons P, Q, R, S, T, U, V, W are sitting around a circular table. Some of them are facing towards the center while some are facing outside the center of the table. Not more than two persons sitting together are facing same direction. U sits third to the left of P. T sits third to the right of S, who is an immediate neighbour of P. Both S and P are facing in same direction to each other. As many as person sit between S and W, as between W and V. R sits second to the left of U. T does not sit opposite to P. Both R and Q face same direction to each other. T and W faces opposite direction to each other. W face outside the center.

91. Who among the following person sits opposite to U?
(1) Q (2) W (3) R (4) V (5) None of these
92. Who among the following person sits immediately left of Q?
(1) U (2) S (3) T (4) V (5) None of these
93. Who among the following person sits third to the left of R?
(1) W (2) U (3) Q (4) S (5) None of these
94. Who among the following person sits second to the left of T?
(1) S (2) Q (3) P (4) R (5) None of these
95. Four of the following are alike in a certain way so form a group, which among the following does not belong to that group?
(1) V (2) R (3) Q (4) W (5) S

Directions (Qs. 96–100) : Study the following information carefully to answer these questions.

There are seven friends namely P, Q, S, T, U, R, V, who belong to different places namely indore, puri, itanagar, delhi, nagpur, chennai, ranchi but not necessarily in the same order. They also use different pens i.e reynolds, pilot, parker. Not less than 2 persons use a particular pen.

R is not from ranchi. Person from puri and nagpur use same pen. V belongs to delhi & uses parker pen with persons belong to ranchi and indore. Person from chennai does not use pilot pen. U uses reynolds and does not belong to chennai. T does not use the same pen as V. P is from nagpur & uses same pen as S.

96. Which of the following represents the pair of friend who use parker pen?
(1) U, V, T (2) V, Q, R (3) S, R, T (4) V, Q, P (5) None of these
97. U belongs to which place?
(1) Nagpur (2) Puri (3) Ranchi (4) Indore (5) Itanagar
98. Which pair represents person from ranchi and puri?
(1) R, S (2) T, S (3) V, U (4) Q, S (5) None of these
99. Which of the following is not true regarding R?
(1) He belongs to indore (2) He uses same pen as V
(3) He uses same pen as the one from chennai (4) He uses same pen as Q (5) R uses parker pen
100. Which of the following pair is correct?
(1) U-itanagar-pilot (2) T-ranchi-parker (3) V-reynolds -nagpur (4) S-puri-pilot (5) None of these

SBI Jr. Associates Preliminary Paper 3 - HINTS & SOLUTIONS

ANSWER KEY

1. (3)	21. (3)	41. (5)	61. (4)	81. (4)
2. (3)	22. (4)	42. (1)	62. (5)	82. (2)
3. (4)	23. (4)	43. (2)	63. (4)	83. (2)
4. (4)	24. (1)	44. (4)	64. (3)	84. (4)
5. (4)	25. (2)	45. (3)	65. (2)	85. (3)
6. (4)	26. (2)	46. (2)	66. (2)	86. (2)
7. (3)	27. (2)	47. (4)	67. (5)	87. (2)
8. (1)	28. (2)	48. (1)	68. (5)	88. (1)
9. (4)	29. (5)	49. (5)	69. (5)	89. (4)
10. (5)	30. (5)	50. (2)	70. (5)	90. (3)
11. (1)	31. (2)	51. (2)	71. (4)	91. (4)
12. (3)	32. (4)	52. (3)	72. (3)	92. (2)
13. (2)	33. (3)	53. (1)	73. (5)	93. (3)
14. (5)	34. (4)	54. (3)	74. (2)	94. (3)
15. (3)	35. (3)	55. (5)	75. (5)	95. (5)
16. (3)	36. (3)	56. (2)	76. (3)	96. (2)
17. (4)	37. (2)	57. (4)	77. (2)	97. (5)
18. (2)	38. (1)	58. (1)	78. (3)	98. (4)
19. (4)	39. (2)	59. (3)	79. (3)	99. (3)
20. (5)	40. (3)	60. (5)	80. (5)	100. (4)

HINTS & SOLUTIONS

1. (3) Though the passage concentrates on sugarcane leaves, towards the end it covers all sorts of agricultural residues.
2. (3) Refer to the first sentence of the first paragraph "Sugarcane leaves, millions of tonnes of which go waste in India every year, can be used to generate power, save diesel and produce enough heat to run jaggery units and even burn small animals in a crematorium." For statement (ii) refer second sentence of the second paragraph, ". In view of the pressing need in India to identify indigenous and renewable sources of energy, NARI initiated the project to gasify loose sugarcane leaves to generate electricity in the ten-fifteen kilowatts range." Therefore, option (c) is the correct choice.
3. (4) Refer to the first few lines of the second paragraph, "they presented their findings...kilowatt range." The findings have been submitted to the department of the non-conventional energy sources hence, option (s) is the correct choice.
4. (4) Refer to the last sentence of the passage "The residues usually have high amounts of ash and are, therefore, difficult to gasify." Therefore, option (d) is the correct choice.
5. (4) Option (d) is the correct choice. For questions (a) and (c) refer to the first sentence of the third paragraph "In India alone, about 430s million tonnes of crop residues are

produced every year, out of which 330 million tonnes are used as feed or fodder and the remaining 100 million tonnes simply disposed of by burning in open fields." For question (b) refer last second sentence of the last paragraph "Most of the residues are in a loose leafy form such as sugarcane leaves, wheat husk, rice husk and safflower straw." Therefore, only question of option (d) can't be answered with the given passage.

6. (4) Option (d) is the correct choice. With the hint of the statement "even burn small animals in a crematorium" we can relate that it to the villages. Moreover, industrial areas are already a part of cities.
7. (3) Option (c) is the correct choice. Refer last second sentence of the last paragraph "In India alone, about 430s million tonnes of crop residues are produced every year, out of which 330 million tonnes are used as feed or fodder and the remaining 100 million tonnes simply disposed off by burning in open fields." Which indicates that nearly 1/4th of the crop residues are burnt off in open fields.
8. (1) **Indigenous** means originating or occurring naturally in a particular place; native hence **native** is the word which is most similar in meaning.
9. (4) **Incinerate** means to destroy (something, especially waste material) by burning hence **rehabilitate** is the word which is most opposite in meaning.
10. (5) **Dispose** means get rid of by throwing away or giving or selling to someone else.
Retain means continue to have (something); keep possession of. Hence both are opposite in meanings.
11. (1) The word "**mobbing**" means **crowding round (someone) or into (a place) in an unruly way**. Thus, the word fits perfectly into both the blanks and gives a meaningful sense to both the sentences which is not the case with the other given words. Hence option (a) is the correct choice.
Retreat means move back or withdraw.
Insert means place, fit, or push (something) into something else.
Shun means persistently avoid, ignore, or reject (someone or something) through antipathy or caution.
12. (3) The word "**worldview**" means **a particular philosophy of life or conception of the world**. Thus, the word fits perfectly into both the blanks and gives a meaningful sense to both the sentences which is not the case with the other given words. Hence option (c) is the correct choice.
Intention means a thing intended; an aim or plan.
Regulation means a rule or directive made and maintained by an authority.
13. (2) The word "**popularity**" means **the state or condition of being liked, admired, or supported by many people**. Thus, the word fits perfectly into both the blanks and gives a meaningful sense to both the sentences which is not the case with the other given words. Hence option (b) is the correct choice.
Confidence means the feeling or belief that one can have faith in or rely on someone or something.
Consideration means careful thought, typically over a period of time.
Custom means a thing that one does habitually.
14. (5) Option (e) is the correct choice for the given question.
Pertaining to means having to do with; belonging to

- Reckon** means establish by calculation.
15. (3) Option (c) is the correct choice for the given sentences. Underlying is a present participle of underlie. It means real but not immediately obvious. Ample means enough or more than enough; plentiful. Substantial means of considerable importance, size, or worth.
16. (3) "To get the best of both worlds" means a win-win situation. A situation in which one can get the advantages of two different or contrasting things at the same time. A situation where one can enjoy the benefit of two different opportunities. Hence, option (c) becomes the most viable answer choice.
17. (4) "Best thing since sliced bread" means something that is too fine; an excellent person or thing; a new invention that is likely to improve people's lives significantly; something that is thought to be very good. Hence, option (d) is the most suitable answer choice.
18. (2) "Biting off more than you can chew" means to try to do too much; to take on or attempt more than one is capable of doing. Hence, option (b) expresses the most suitable meaning of the given idiom.
19. (4) "To cry over spilt milk" means to be upset about things that have already been done; to cry about past events that cannot be undone; to dwell pointlessly about a mistake that can no longer be changed; to be upset about past misfortunes; to feel sorry about something that has already happened. Hence, option (d) perfectly satisfies the meaning of the idiom.
20. (5) "curiosity killed the cat" means too much curiosity can lead to dangerous situations; being too inquisitive can get you into trouble; a prying behaviour can be harmful; used to warn someone not to ask too many questions about something. Hence, option (e) best substitutes the meaning for the given idiom.
21. (3) Use public opinion in place of 'public's opinion' as public/hostel/city are used both as noun and as adjective and the use of 's with it is incorrect.
22. (4) Here 'work' is used as an uncountable noun. The use of 'an' before 'urgent' is incorrect. Use 'some' in place of 'an' or we can use it like this "a piece of urgent work"
23. (4) The error is in part (d) of the sentence. Use 'is' in place of 'are' as the subject of the sentence is 'the idea' which is singular.
24. (1) The error is in part (a) of the sentence. Use 'it appears' in place of 'It is appearing' as when 'appear' is used to mean 'seem' then it is used in simple tense and not in continuous tense.
25. (2) The error is in part (b) of the sentence. Use 'many' in place of 'much' because 'much' is a quantitative adjective after which uncountable noun is used.
26. (2) Remove 'to' after but as after any form of 'do' if but is used to mean 'except' and if a verb is used after it then the verb is used without 'to'.
27. (2) 'Enough' will be used after 'kind' as when enough is used as adverb of quantity then enough is always used after the adjective or adverb.
28. (2) 'Whether' will be used after 'if' which can be figured out by the use of 'or' that construction is based on 'whether.....or'.
29. (5) There is no error in the given statement.
30. (5) There is no error in the given statement
31. (2) $7\frac{4}{3} + 3\frac{1}{2} + 5\frac{2}{3} = ? + 4\frac{3}{5} - 7\frac{1}{2} + 11\frac{2}{5}$
 $? = (7 + 3 + 5) + \frac{4}{3} + \frac{1}{2} + \frac{2}{3} - 4 + 7 - 11 - \frac{3}{5} - \frac{2}{5} + \frac{2}{5}$
 $? = 9$
32. (4) $? = \frac{473}{903} \times 63^2 - 27 \times 52$
 $= \frac{11}{21} \times 63 \times 63 - 27 \times 52$
 $= 27 \times 77 - 27 \times 52$
 $= 27 \times (77 - 52) = 27 \times 25 = 675$
33. (3) $? = \frac{34}{9} \times \frac{27}{17} + 5 = 6 + 5 = 11$
34. (4) $? = \frac{3}{5} \text{ of } \frac{5}{9} \text{ of } \frac{2}{7} \text{ of } 9450$
 $= \frac{3}{5} \times \frac{5}{9} \times \frac{2}{7} \times 9450 = 900$
35. (3) $\frac{66}{100} \text{ of } 350 + ? = \frac{5}{8} \text{ of } 1256$
 $\Rightarrow 231 + ? = 785$
 $\therefore ? = 785 - 231 = 554$
36. (3) Possible cases = (7M 1W) (5M 3W) (3M 5W)
 $= {}^7C_7 \cdot {}^5C_1 + {}^7C_5 \cdot {}^5C_3 + {}^7C_3 \cdot {}^5C_5$
 $= 5 + 210 + 35$
 $= 250$
Required probability = $\frac{250}{{}^{12}C_8} = \frac{250}{495} = \frac{50}{99}$
37. (2) $\frac{1}{3} - \frac{1}{3} - \frac{1}{3} - \frac{1}{3}$
Required ways = $\frac{{}^3P_3}{2!} \times \frac{3!}{2!}$
 $= 9$
38. (1) ATQ,
Volume of sphere = Volume of 8 cylinders
 $\frac{4}{3}\pi(8)^3 = 8 \times \pi(4)^2 \times h$
 $h = \frac{16}{3} \text{ cm}$
39. (2) Since interest is compounded quarterly,
 $R = \frac{40}{4}\% = 10\%$
 $T = 1 \times 4 = 4 \text{ years.}$
C.I. = $8000 \left(1 + \frac{10}{100}\right)^4 - 8000$
 $= \text{Rs. } 3712.8$
40. (3) Let speed of boat in still water = x kmph
and speed of current = y kmph
ATQ,
 $x + y = 4y$
 $x = 3y$
Now, $\frac{20}{x-y} = \frac{20}{4}$
 $\frac{20}{2y} = 5 \Rightarrow y = 2 \text{ km/hr}$
Speed of boat in still water = x = 6 km/hr
41. (5) Let total no. Of students, be 100.
 $\therefore \text{Required Ratio} = \frac{25+20}{15+12} = \frac{45}{27} = 5:3.$
42. (1) ATQ,
8% \rightarrow 512
1% \rightarrow 64
25% \rightarrow 64 \times 25 = 1600
Number of students studying science = 1600.
43. (2) Required % = $\frac{(20-15)}{15} \times 100$
 $= \frac{5}{15} \times 100 = 33\frac{1}{3}\%$
44. (4) ATQ,
5% \rightarrow 20
1% \rightarrow 4
100% \rightarrow 400
 $\therefore \text{Required average} = \frac{15\% \times 400 + 12\% \times 400 + 18\% \times 400}{3}$
 $= \frac{60+48+72}{3} = \frac{180}{3} = 60$

45. (3) Required number of students

$$= \frac{15}{100} \times 1800 + \frac{12}{100} \times 1800$$

$$= 270 + 216$$

$$= 486$$

46. (2) Bhavya can complete work in = $15 \times \frac{100}{125} = 12$ days

Aman can complete work in = $12 \times \frac{100}{60} = 20$ days

$$\text{Required days} = \frac{12 \times 20}{12+20} = \frac{240}{32}$$

$$= 7.5 \text{ days}$$

47. (4) Let three numbers are a, b and c

ATQ,

$$\frac{a+b}{2} + c = 56$$

$$\Rightarrow a + b + 2c = 112 \quad \dots(i)$$

$$\frac{b+c}{2} + a = 46$$

$$\Rightarrow b + c + 2a = 92 \quad \dots(ii)$$

$$\frac{c+a}{2} + b = 50$$

$$\Rightarrow c + a + 2b = 100 \quad \dots(iii)$$

Add (i), (ii) and (iii)

$$4(a + b + c) = 304$$

$$\Rightarrow a + b + c = \frac{304}{4} = 76$$

48. (1) Required probability = $\frac{{}^8C_6 {}^8C_5 + {}^8C_7 {}^8C_4 + {}^8C_8 {}^8C_3}{{}^{16}C_{11}} = \frac{28 \times 56 + 8 \times 70 + 1 \times 56}{4368}$

$$= \frac{1568 + 560 + 56}{4368} = \frac{2184}{4368}$$

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

49. (5) Required number of ways = $\frac{6!}{2!} - 5!$

$$= 360 - 120 = 240$$

50. (2) Let

$r_A \rightarrow$ radius of cylinders 'A'

$r_B \rightarrow$ radius of cylinders 'B'

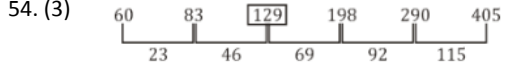
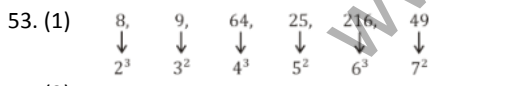
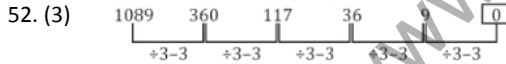
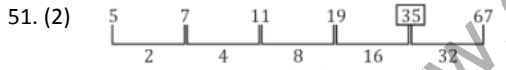
$h_A \rightarrow$ height of cylinder 'A'

$h_B \rightarrow$ height of cylinder 'B'

ATQ,

$$\frac{r_A}{r_B} = \frac{1}{2} \text{ \& } \frac{h_A}{h_B} = \frac{2}{1}$$

$$\text{Required ratio} = \frac{\pi r_A^2 h_A}{\pi r_B^2 h_B} = \left(\frac{1}{2}\right)^2 \times \frac{2}{1} = \frac{1}{2}$$



56. (2) $?$ = $\frac{136 - 96 + 61}{36 + 45 + 121} = \frac{101}{202} = 0.5$

57. (4) $464 \times \frac{1}{16 \times 2.32} + 4.5 = ?$

$$\frac{100}{8} + 4.5 = ?$$

$$? = 12.5 + 4.5$$

$$? = 17$$

58. (1) $(5863 - 52) \times 0.5 = ? + 2601$

$$5811 \times 0.5 - 2601 = ?$$

$$? = 2905.5 - 2601$$

$$? = 304.5$$

59. (3) $1231 - \frac{?}{100} \times 500 = \frac{145}{100} \times 780$

$$1231 - 5 \times ? = 1131$$

$$? = 100 \times \frac{1}{5}$$

$$? = 20$$

60. (5) $\frac{41}{8} \times 208 + 786 = 2000 - ?$

$$41 \times 26 + 786 = 2000 - ?$$

$$? = 2000 - 1066 - 786$$

$$? = 148$$

61. (4) Sum of numbers = $9 \times 54 = 486$

$$\text{Correct average} = \frac{486 - 63 - 52 - 41 + 36 + 55 + 47}{9}$$

$$= \frac{468}{9} = 52$$

62. (5) Distance travelled by thief in 15 min = $60 \times \frac{15}{60} = 15$ km

$$\text{Time taken by police to catch thief after 11:15 pm} = \frac{15}{65-60} = 3 \text{ hr}$$

So, the police will catch the thief at = 2:15 p.m

63. (4) Let speed of boat in still water = x kmph. and speed of current = y kmph.

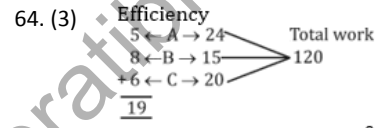
$$\frac{28}{x+y} + \frac{24}{x-y} = 5 \dots\dots(1)$$

$$\frac{56}{x+y} + \frac{16}{x-y} = 6 \dots\dots(2)$$

Solving (1) & (2)

$$X = 11 \text{ km/h } y = 3 \text{ km/h}$$

required ratio = 11: 3



$$\text{Share of B in total wage} = \frac{8}{19} \times 950 = 400$$

65. (2) Let total profit be x.

$$A - 10,000 \times 3 + 6000 \times 9$$

$$B - 12,000 \times 5 + 15000 \times 7 = 28 : 55 : 34$$

$$C - 51000 \times 2$$

$$\text{ATQ, } \frac{6}{117} \times x = 3600$$

$$x = 70200$$

$$B's \text{ share} = \frac{55}{117} \times 70200$$

$$= \text{Rs. } 33000$$

66-70. & $\rightarrow <$

* $\rightarrow >$

\$ $\rightarrow =$

% $\rightarrow \geq$

@ $\rightarrow \leq$

66. (2)

67. (5)

68. (5)

69. (5)

70. (5)

71-75.

Cars	Persons
Santro	X/S (+), U(-)
WagonR	R(+), V(+), T(-)
Alto	M(+), N (-)
110	K(+), X/S(+), J(-)

71. (4)

72. (3)

73. (5)

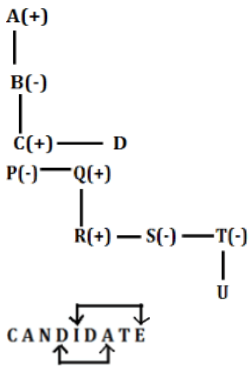
74. (2)

75. (5)

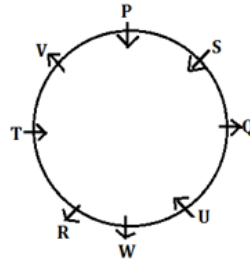
76-80.

Days	Person	Game
Monday	G	Football
Tuesday	L	Tennis
Wednesday	D	Cricket
Thursday	J	Tennis
Friday	K	Football
Saturday	F	Cricket
Sunday	H	Cricket

- 76. (3)
- 77. (2)
- 78. (3)
- 79. (3)
- 80. (5)
- 81. (4)
- 82. (2)
- 83. (2)
- 84. (4)
- 85. (3)
- 86. (2)
- 87. (2)
- 88. (1)



91-95.



- 91. (4)
- 92. (2)
- 93. (3)
- 94. (3)
- 95. (5)

96-100.

Person	Place	Pen Brand
P	Nagpur	Pilot
Q	Ranchi	Parker
R	Indore	Parker
S	Puri	Pilot
T	Chennai	Reynolds
U	Itanagar	Reynolds
V	delhi	Parker

- 96. (2)
- 97. (5)
- 98. (4)
- 99. (3)
- 100. (4)

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