



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

## IBPS SO Model Paper 2016

Q1. Study the following information to answer the given questions.

Company X- one of the largest automobile manufacturing companies of the country has started its own dedicated Colour Design Department which decides which colour will be given to winch model of car.

Which of the following may not be a reason for starting this colour dedicated department by the said company ?

- (1) Although people usually come with a clear idea about the basic features in a car within a stipulated budget, colour is the trial factor which influences their decision prior to purchase.
- (2) It has been recently suggested by experts that the depth and brightness of colour can be used to accelerate the shape and size of a car so that it appeals to prospective customers.
- (3) Two years ago a similar department was started by company R, one of the biggest competitors of company X.
- (4) As per market research done by the company many customers have chosen cars of competitor companies only because the colour of the cars of company X did not match their expectations.
- (5) As per recent research the colour of the car is an important aspect in the customer is likely to choose a car looking at its colour at first sight.

Q2. Study the following information and answer the given question.

Some pre-schools in city Y have recently discontinued the physical safety training for toddlers which was compulsorily provided 10 staff members for three months after joining.

Which of the following may be a reason for the decision taken by some of the schools in city Y ?

- (1) Even after employing trained staff members and providing further training to them, a few parents in city Y do not send their children to preschools as they are worried about the safety of their children.
- (2) A manual of safety is followed by all preschools of city Y.
- (3) Some teachers, who have been associated with these preschools for long, have suggested that the training which was provided to the institute was a little different as compared to the training provided.
- (4) All preschools in city Y have recently started employing only those people who have a certification in physical safety of toddlers and providing additional training simply leads to duplication of what they have already learnt.
- (5) There is no authority in city Y to regulate whether the staff members of schools are provided training.

\$\$\$ (3-7) : Study the following information to answer the given questions. When a word and number arrangement machine is given an input line of words and numbers, it arranges them following a particular rule. The following is an illustration of input and rearrangement.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

**(All the numbers are two-digit numbers)**

**Input** : 46 span role 62 79 into main 13 39 deal

**Step I** : 79 46 role 62 into main 13 39 deal span

**Step II** : 62 79 46 into main 13 39 deal span role

**Step III**: 46 62 79 into 13 39 deal span role main

**Step IV** : 39 46 62 79 13 deal span role main into

**Step V** : 13 39 46 62 79 span role main into deal

Step V is the last step of the above arrangement as the intended arrangement is obtained.

As per the rules followed in the given steps, find the appropriate steps for the given input.

**Input : 11 east 54 vent kind 35 over 27 71 bowl**

\$\$\$

Q3. How many elements are there between '35' and 'kind' in the last step ?

- (1) two
- (2) four
- (3) one
- (4) three
- (5) none

Q4. What is the position of 'bowl' from the right of '71' in the second step ?

- (1) seventh
- (2) fifth
- (3) sixth
- (4) second
- (5) third

Q5. Which of the following represents the two consecutive elements to the immediate right of 'over' in the second last step?

- (1) bowl, vent
- (2) 11, bowl
- (3) vent, kind
- (4) 71, 11
- (5) kind, cast

Q6. Which is the third element to the left of the sixth element from the left element in the first step ?

- (1) over
- (2) 35
- (3) bowl
- (4) east
- (5) 27



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q7. In step II, which element appears exactly between '27' and 'over' ?

- (1) Only 11
- (2) Only 71
- (3) Both kind and 71
- (4) Only kind
- (5) Both bowl and vent

\$\$\$ (8-13) : Study the following information to answer the questions.

Seven friends namely, M, N, O, P, Q, R and S attend different language classes namely, French, English, Spanish, Sanskrit, Chinese, German and Japanese, not necessarily in the same order, from Monday to Sunday (of the same week).

M attends a class on Friday. Only two people attend classes between M and the one who is learning Sanskrit. R attends a class immediately before P. Neither R nor P is learning Sanskrit. Only one person attends a class between R and the one who is learning Spanish. The one who is learning Spanish does not have a class on Monday. N attends a class immediately before the one who is learning French. M is not learning French. Only one person has a class between R and Q. O is learning German. Only two people have classes between O and the one who is learning Chinese. Q is not learning Japanese.

\$\$\$

Q8. Which of the following represent those who have language classes immediately before and immediately after N ?

- (1) P, M
- (2) Q, M
- (3) Q, R
- (4) Other than those given as options
- (5) R, P

Q9. Which of the following language is Q learning ?

- (1) Other than those given as options
- (2) Chinese
- (3) English
- (4) Spanish
- (5) Sanskrit

Q10. As per the given arrangement Q is related to Chinese and R is related to Japanese in a certain way. To which of the following is P related to in the same way ?

- (1) Sanskrit
- (2) Other than those given as options
- (3) Spanish
- (4) English



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

(5) French

Q11. Four of the following five form a group as per the given arrangement. Which of the following that does not belong to that group ?

- (1) Q - Tuesday
- (2) N - Thursday
- (3) S - Sunday
- (4) M - Saturday
- (5) P - Friday

Q12. On which of the following days does P have a class ?

- (1) Monday
- (2) Thursday
- (3) Wednesday
- (4) Tuesday
- (5) Sunday

Q13. Who amongst the following is learning Japanese ?

- (1) N
- (2) M
- (3) S
- (4) R
- (5) Cannot be determined

Q14. Study the following information to answer the given question.

The agriculture experts of country X experimented the usage of genetically-modified cotton plants to manufacture clothes. After the post-manufacture analysis, it was decided to discontinue the use of such modified plants and grow only the natural ones.

Which of the following statements (if taken to be true) best supports the decision of the agricultural exports?

- (1) The trend of Polyester clothes has dominated the markets of country X since the past two years but now the demand for cotton clothes has gone up again.
- (2) The weather conditions of country X is such that the residents of the country have to resort to only woollen clothes.
- (3) The high rate of pest attack in chemically grown plants as compared to the natural plants makes it unfeasible and uneconomic to grow.
- (4) Other few genetically grown plants have proved to be, successful in country X.
- (5) Growing of genetically modified plants does not necessitate the use of humus-rich soil and hence is easy to grow.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

\$\$\$ (15-17) Study the following information and the sentences (A), (B), (C), (D), (E) and (F) given below it to answer the questions.

Town ABC has seen very few takers. 48% flats are lying unsold ever since its construction. Prices should be cut by 20% per sq. feet in order to match the ongoing market price of Rs. 6800 per sq. feet. This would bring the buyers back and ideal with this slump in sales.

- (A) Market price of the flats are controlled by the government which cannot be altered by independent authorities.
- (B) All present flats are being sold at more than more Rs.8000 per sq. feet.
- (C) The township ABC is located far from the main city and has poor transport facilities for the same.
- (D) In order to recover the investments made by the builders, they must make a profit of minimum Rs.10,000 per sq. feet per flat sold.
- (E) No buyer is willing to pay a price more than the ongoing market rate.
- (F) There have been numerous complaints about poor construction material and apathy of builders towards the same by people already residing in the township.

\$\$\$

Q15. Which of the given statements weakens the promise that lack of buyers is only because of the price of the flats ?

- (1) Only D
- (2) Both A and B
- (3) Only A
- (4) Both A and E
- (5) Both C and F

Q16. Which of the following may prove that 30% price cut may not be a feasible step to be taken by the builders ?

- (1) Only D
- (2) Both A and B
- (3) Only E
- (4) Both E and B
- (5) Only B

Q17. Which of the given statements can be concluded from the facts/information given in the statement ?

- (1) E
- (2) D
- (3) C
- (4) A
- (5) B



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

\$\$\$ (18-19) : Study the following information to answer the given questions.

Anupama starts from point K which is 8m to the east of point B. From point K, she walks 10 m to the north, takes a right turn and then walks for 5m. She then takes a right turn, walks for 3m and stops at point M.

Animesh starts from point P which is 4m to the north of point B. From point P he walks 5m to the west, takes a right turn and walks for 3m. He then again takes a right turn and walks for 13m and stops at point X.

\$\$\$

Q18. What is the distance between point M and point X ?

- (1) 3m
- (2) 10m
- (3) 5 m
- (4) 11m
- (5) 8 m

Q19. In what direction is point K with respect to point P ?

- (1) South-East
- (2) North-West
- (3) West
- (4) North
- (5) South-West

\$\$\$ (20-24) : Study the following information to answer the given questions.

Eight people A, B, C, D, E, F, G and H live on separate floors of an 8-floor building but not necessarily in the same order. Ground floor is numbered 1, first floor is numbered 2 and so on until the topmost floor is numbered eight. Only two people live below the floor on which G lives. Only one person lives between G and A, H lives on an odd numbered floor but not on floor no. 7. Only two people live between H and B. B does not live on the topmost floor. A does not live on the lowermost floor.

C lives immediately below D. Neither C nor E lives on floor no. 6.

\$\$\$

Q20. How many people live between the floors on which A and D live ?

- (1) Three
- (2) More than three
- (3) None
- (4) Two
- (5) One

Q21. Who lives on the floor immediately below G ?

- (1) F
- (2) E



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) D
- (4) B
- (5) C

Q22. On which of the following floor numbers does D live ?

- (1) 4
- (2) 1
- (3) 8
- (4) 5
- (5) 7

Q23. Which of the following is true with respect to F as per the given arrangement ?

- (1) Only three people live between F and B.
- (2) Only three people live above F.
- (3) F lives on the floor no. 6.
- (4) None of the given options is true.
- (5) F lives immediately above D.

Q24. Who among the following lives on floor no. 5 ?

- (1) D
- (2) C
- (3) E
- (4) B
- (5) A

\$\$\$ (25-29) : In these questions, relationship between different elements is shown in the statements. The statements are followed by conclusions. Study the conclusions based on the given statement and

**Give answer:**

- (1) If **either** conclusion I or II is true
- (2) If **neither** conclusion I nor II is true
- (3) If **both** conclusions I and II are true
- (4) If **only** conclusion I is true
- (5) If **only** conclusion II is true

\$\$\$

Q25. **Statements** :  $N < A = T \geq Z$ ;  $R \geq T$ ;  $Z < S$

**Conclusions** : I.  $R > N$                       II.  $S > Z$

- (1) 1
- (2) 2
- (3) 3



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (4) 4
- (5) 5

**Q26. Statements :**  $N < A = T \geq Z$ ;  $R \geq T$ ;  $Z < S$

**Conclusions :** I.  $R = Z$                       II.  $Z < R$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

**Q27. Statements :**  $L \leq E = A > P$ ;  $Y > E > R$

**Conclusions :** I.  $Y \geq L$                       II.  $A > R$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

**Q28. Statements :**  $L \leq E = A > P$ ;  $Y > E > R$

**Conclusions :** I.  $P \geq R$                       II.  $A \leq Y$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

**Q29. Statements :**  $D < S \geq L > U$ ;  $Q < S$

**Conclusions :** I.  $Q < D$                       II.  $U > Q$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

\$\$\$ (30-35) : In these questions, two/three statements followed by two conclusions numbered I and II have been given. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

**Give answer:**



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) If **either** conclusion I **or** II is true
  - (2) If **neither** conclusion I **nor** II is true
  - (3) If **both** conclusions I and II are true
  - (4) If **only** conclusion I is true
  - (5) If **only** conclusion II is true
- \$\$\$

Q30. **Statements:** All apartments are houses. No apartment is a motel.  
**Conclusions :** I. Some houses being motels is a possibility. II. No house is a motel.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q31. **Statements :** All plants are trees. Some trees are weeds. All weeds are shrubs.  
**Conclusions :** I. No shrub is a plant. II. All weeds being trees is a possibility.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q32. **Statements :** All plants are trees. Some trees are weeds. All weeds are shrubs.  
**Conclusions :** I. At least some trees are shrubs. II. All plants being shrubs is a possibility.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q33. **Statements :** Some drinks are juices. All juices are beverages. No beverage is a solid.  
**Conclusions:** I. No juice is a solid. II. No drink is a solid.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q34. **Statements :** Some drinks are juices. All juices are beverages. No beverage is a solid.  
**Conclusions:** I. Some drinks are beverages. II. All drinks are beverages.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q35. **Statements :** All snakes are reptiles. Some reptiles are turtles. No turtle is a bird.

I. All reptiles being birds is a possibility. II. No snake is a turtle.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

\$\$\$ (36-38) : Study the following information to answer the given questions.

Y is the sister of J. L is the wife of J. L has only one son R. K is the mother of L. K is married to

D. D has only one son and only one daughter.

\$\$\$

Q36. As per the given information, how is J related to K ?

- (1) Son
- (2) Son-in-law
- (3) Niece
- (4) Nephew
- (5) Daughter-in-law

Q37. As per the given information, how is R related to Y ?

- (1) Nephew
- (2) Cannot be determined
- (3) Uncle
- (4) Niece
- (5) Aunt

Q38. If L is the sister of B, then how is B related to J ?

- (1) Sister-in-law
- (2) Cannot be determined
- (3) Brother
- (4) Brother-in-law
- (5) Uncle



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

\$\$\$ (39-44) : Study the following information to answer the given questions.

P, Q, R, S, T, U, V and W are seated in a straight line but not necessarily in the same order. Some of them are facing South while some are facing North.

(Note : Same direction means that if one person facing North then the other also faces North and vice-versa. Opposite direction means that if one person is facing North then the other faces South and vice-versa.)

T faces South. Only three people sit to the left of T. Only two people sit between T and Q. U sits third to the right of W. W is neither an immediate neighbour of T nor Q.

W does not sit at any of the extreme ends of the line. Both the immediate neighbours of S face north. S is not an immediate neighbour of W. Only one person sits between S and P.

P faces same direction as W. Immediate neighbours of Q face opposite directions (i.e. if one neighbour faces north then the other south and vice-versa).

Persons sitting at extreme ends face opposite directions. R faces a direction opposite to S.

\$\$\$

Q39. How many persons are seated between T and P ?

- (1) Four
- (2) More than four
- (3) One
- (4) Three
- (5) Two

Q40. Which of the following pairs represents persons seated at the two extreme ends of the line ?

- (1) R, T
- (2) P, V
- (3) P, U
- (4) Q, R
- (5) R, S

Q41. Which of the following is true about V with respect to the given arrangement ?

- (1) Only two people sit between V and Q
- (2) Only one person sits to the right of V
- (3) None of the given options is true
- (4) U is one of the immediate neighbours of V
- (5) R sits second to the right of V

Q42. Who amongst the following sits to the immediate left of R ?

- (1) T
- (2) P
- (3) W



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (4) Q
- (5) S

Q43. Four of the following five are alike in a certain way based on the given arrangement and so form a group. Which is the one that does not belong to that group ?

- (1) R
- (2) U
- (3) P
- (4) W
- (5) T

Q44. What is the position of U with respect to Q ?

- (1) Second to the right
- (2) Fifth to the left
- (3) Second to the left
- (4) Fourth to the right
- (5) Third to the left

\$\$\$ (45-50) : Study the following information to answer the given questions.

L, M, N, O, P, Q, R and S are sitting around a circular table at equal distances between each other, but not necessarily in the same order. Some of the people are facing the centre while some face outside (i.e. in a direction opposite to the centre).

(Note: Facing the same direction means if one person faces the centre then the other person also faces the centre and vice-versa. Facing the opposite directions means if one person faces the centre then the other person faces outside and vice-versa.)

Immediate neighbours face the same direction means if one neighbour faces the centre then the other neighbour also faces the centre and vice-versa.)

Immediate neighbours face the opposite directions means if one neighbour faces the centre then the other neighbour faces the outside and vice-versa.

O sits third to the right of L. Both O and L face the same direction. Only three people sit between P and M. P is neither an immediate neighbour of L nor O. M faces outside. R sits to the immediate left of M. Q sits to the immediate right of N. Neither L nor O is an immediate neighbour of N. Both the immediate neighbours of M face the opposite directions. S sits second to the right of R. Both R and Q face the same direction as S. P faces a direction opposite to that of N.

\$\$\$

Q45. How many people in the given arrangement face the centre ?

- (1) One
- (2) Four



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) Five
- (4) Three
- (5) Two

Q46. What is N's position with respect to P ?

- (1) Immediate left
- (2) Third to the right
- (3) Fourth to the right
- (4) Second to the left
- (5) Immediate right

Q47. Four of the following five are alike in a certain way based on the given seating arrangement and so form a group. Which is the one that does not belong to that group ?

- (1) L
- (2) S
- (3) N
- (4) Q
- (5) R

Q48. Which of the following is true regarding Q as per the given arrangement ?

- (1) Only three people sit between Q and R.
- (2) Q sits second to the right of O.
- (3) Q faces outside.
- (4) None of the given statements is true.
- (5) Q sits second to the left of P.

Q49. Who amongst the following sits exactly between M and the one who sits second to the left of P?

- (1) L
- (2) N
- (3) R
- (4) Q
- (5) O

Q50. Who is sitting to the immediate left of S ?

- (1) L
- (2) Q
- (3) P
- (4) N
- (5) O



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q51. In a primary school the average weight of male students is 65.9 kg and the average weight of female students is 57 kg. If the average weight of all the students (Both male and female) is 60.3 kg and the number of male students in the school is 66. What is the number of female students in the school ?

- (1) 112
- (2) 162
- (3) 168
- (4) 180
- (5) 182

\$\$\$ (52-56) : What approximate value will come in place of question mark (?) in the given questions ? (Note : You are not expected to calculate the exact value)

\$\$\$

Q52.  $27\%$  of 1200.11 +  $11.80\%$  of 2360.85 -  $21.99\%$  of = 1420.99

- (1) 500
- (2) 240
- (3) 310
- (4) 550
- (5) 960

Q53.  $7000.001 \div 699.983 \times 4.020 = ?$

- (1) 58
- (2) 32
- (3) 60
- (4) 40
- (5) 25

Q54.  $(41.99^2 - 18.04^2) \div ? = 13.11^2 - 138.99$

- (1) 48
- (2) 12
- (3) 72
- (4) 84
- (5) 128

Q55.  $24.96^2 - (34.11 + 20.05) + 67.96 - 89.11 = ?$

- (1) 884
- (2) 546
- (3) 252
- (4) 424



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

(5) 366

Q56.  $\sqrt{(2025.11)} \times \sqrt{(256.04)} + \sqrt{399.95} \times \sqrt{(?)} = 33.98 \times 40.11$

- (1) 1682
- (2) 1024
- (3) 1582
- (4) 678
- (5) 1884

\$\$\$ (57-61) : Study the following information to answer these questions :

An Institute having 450 employees has sent all its employees for training in one or more areas out of HRM, Computer Skills and Financial Skills. The employees are classified into two categories-Officers and Clerks, who are in the ratio of 4 : 5. 10% of the Officers take training only in Computer Skills, 16% of the Clerks take training only in HRM which is equal to the number of total Officers taking training only in Financial Skills and 40% of the number of total Officers taking training in HRM and Financial Skills. 6% of the total employees take training in all the three, of which two-thirds are officers. 10% of the total employees take training in HRM and Computer Skills both, which is five times the number of Clerks taking training in Computer Skills and Financial Skills. 10% of the Clerks take training in HRM and Computer Skills both. The number of officers taking training only in HRM is 25% of the number of Clerks taking training only in HRM. 20% of the total number of employees take training only in Computer Skills. Number of clerks taking training in HRM and Financial Skills both is 20% of the total number of Clerks.

\$\$\$

Q57. Total how many Officers take training in HRM ?

- (1) 110
- (2) 128
- (3) 118
- (4) 98
- (5) None of these

Q58. Total how many Clerks take training in Computer Skills but not in HRM ?

- (1) 113
- (2) 104
- (3) 88
- (4) 79
- (5) None of these

Q59. Total how many employees take training in Financial skill but not in HRM ?

- (1) 106



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (2) 135
- (3) 127
- (4) 134
- (5) None of these

Q60. Total how many clerks take training in Financial Skills ?

- (1) 115
- (2) 106
- (3) 47
- (4) 97
- (5) None of these

Q61. Total how many Officers take training in Computer Skills ?

- (1) 70
- (2) 65
- (3) 60
- (4) 75
- (5) None of these

Q62. Shashi had a sum of money.  $\frac{2}{3}$ rd of the total money he invested in scheme A for 6 years and rest of the money he invested in scheme B for 2 years. Scheme A offers simple interest at a rate of 12% p.a. and scheme B offers compound interest (compounded annually) at a rate of 10% p.a. If the total number obtained from both the schemes is Rs. 1,035/-, what was the total amount invested by him in scheme A and scheme B together ?

- (1) Rs.1,882/-
- (2) Rs.1,200/-
- (3) Rs.1,000/-
- (4) Rs.2,000/-
- (5) Rs.1,464/-

Q63. The radius of a cylinder is 5m more than its height. If the curved surface area of the cylinder is  $792\text{m}^2$ . What is the volume of the cylinder ? (in  $\text{m}^3$ )

- (1) 5712
- (2) 5244
- (3) 5544
- (4) 5306
- (5) 5462

\$\$\$ (64-68) : Refer to the table and answer the given questions.

Total exports of six countries over five years (in Rs. crores)



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Year	1998	1999	2000	2001	2002
Country P	20	40	60	45	90
Country Q	30	25	15	50	100
Country R	50	55	70	90	65
Country S	45	60	20	15	25
Country T	60	50	55	100	110
Country U	24	40	60	75	120

**Note :** Profit = Exports – Imports

\$\$\$

Q64. What was the profit of all countries together in year 2002 if the total imports of all the countries together was Rs.385 crores ?

- (1) 125
- (2) 160
- (3) 280
- (4) 240
- (5) 200

Q65. If the respective ratio of export to import in country S and country U is 1 : 2 and 4 : 1 in the year 1998, then what is the total imports of country U and S together in that particular year ? (in Rs. crores)

- (1) 52
- (2) 96
- (3) 35
- (4) 64
- (5) 44

Q66. If the export of country P in the year 2003 is 20% more than the total exports of country Q in 2001 and export of country T in 2000 together, then what was the profit of P in the year 2003 if its imports were Rs.92 crores for that year ? (in Rs. crores)

- (1) 10
- (2) 58
- (3) 22
- (4) 46
- (5) 34

Q67. By what percent the average export of country T over all the given years more than the average export of country R over all the given years ?

- (1)  $13 \frac{7}{11}\%$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (2)  $9\frac{1}{11}\%$
- (3)  $13\frac{5}{7}\%$
- (4)  $4\frac{7}{11}\%$
- (5)  $12\frac{1}{7}\%$

Q68. What is the percent increase in the exports of all the countries together in the year 1999 to 2001 ? (rounded off to two digits after decimal)

- (1) 88.99%
- (2) 72.39%
- (3) 38.89%
- (4) 62.89%
- (5) 40.60%

Q69. A started business with an investment of Rs. 28,000/-. After 2 months. B joins with Rs. 20,000/- and after another two months C joins with Rs.18,000/-. At the end of 10th month from start of the business, if B withdraws Rs.2,000 - and C withdraws Rs. 2,000/-, what is the respective ratio in which profit should be distributed among A, B and C at the end of the year ?

- (1) 12 : 7 : 5
- (2) 12 : 9 : 5
- (3) 12 : 6 : 3
- (4) 14 : 7 : 5
- (5) 11 : 9 : 7

Q70. A dealer marked the price of an item 40% above the cost price. Once he gave successive discounts of 20% and 25% to a particular customer. As a result he incurred a loss of Rs. 448/-. At what price did he sell the item to the mentioned customer ?

- (1) Rs.2,416/-
- (2) Rs.2,352/-
- (3) Rs.2,268/-
- (4) Rs.2,152/-
- (5) Rs.2,578/-

\$\$\$ (71-75) : In these questions, what should come in place of question mark (?) in the following number series ?

\$\$\$

Q71. 13, 13, 19, 43, 103, ?

- (1) 221
- (2) 227
- (3) 223
- (4) 217
- (5) 239



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q72. 27, 13, 12, 16.5, ?, 75

- (1) 31
- (2) 29
- (3) 37
- (4) 33
- (5) 35

Q73. 17, 19, 42, 132, ?, 2690

- (1) 532
- (2) 544
- (3) 528
- (4) 536
- (5) 512

Q74. 25, 29, 67, 217, ?, 4501

- (1) 927
- (2) 877
- (3) 885
- (4) 911
- (5) 893

Q75. 21, 38, 59, 84, 113, ?

- (1) 138
- (2) 152
- (3) 134
- (4) 146
- (5) 148

Q76. The respective ratio between Parul's present age and Rohit's present age is 7 : 5. The sum of their ages 5 year from now will be 94. After how many years, Rohit's age will be equal to Parul's present age ?

- (1) 21 years
- (2) 7 years
- (3) 14 years
- (4) 18 year
- (5) 24 years

Q77. 35 kg of a type of sandal powder (type A) which costs Rs.614 per kg was mixed with certain amount of another type of sandal powder (type B), which costs Rs.695 per kg. Then the mixture was sold at Rs.767 per kg and 18% profit was gained What was the amount of type B sandal powder in the mixture ? (in kg)

- (1) 24
- (2) 28



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) 32
- (4) 36
- (5) 20

\$\$\$ (78-82) : In these questions, two equations numbered I and II are given. You have to solve both the equations and

**Give answer :**

- (1) If  $x > y$
- (2) If  $x \geq y$
- (3) If  $x < y$
- (4) If relationship between  $x$  and  $y$  cannot be determined
- (5) If  $x \leq y$

\$\$\$

Q78. I.  $6x^2 + 25x + 24 = 0$       II.  $12y^2 + 13y + 3 = 0$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q79. I.  $12x^2 - x - 1 = 0$       II.  $20y^2 - 41y + 20 = 0$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q80. I.  $10x^2 + 33x + 27 = 0$       II.  $5y^2 + 19y + 18 = 0$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q81. I.  $15x^2 - 29x - 14 = 0$       II.  $6y^2 - 5y - 25 = 0$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5



# SHAKTHII ACADEMY

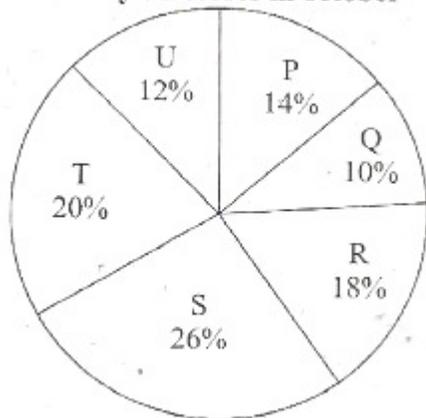
Increasing Confidence ; Reaching Goals

Q82. I.  $3x^2 - 22x + 7 = 0$     II.  $y^2 - 20y + 91 = 0$

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

\$\$\$ (83-87) : Refer to the pie-chart and the table and answer the given questions.

**Distribution of total number of cellular phones (both Nokia and Samsung) sold by six stores in october**



**Total number = 11200**

Store	Respective ratio of number of Nokia cellular phones sold to the number of Samsung cellular phones sold
P	4 : 3
Q	3 : 1
R	5 : 4
S	7 : 6
T	1 : 4
U	11 : 10

\$\$\$

Q83. What is the average number of Nokia cellular phones sold by stores P, R, S and T together ?



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) 1008
- (2) 1048
- (3) 984
- (4) 1006
- (5) 996

Q84. Number of Nokia cellular phones sold by store R is what percent more than the total number of Samsung cellular phones sold by stores P and Q together ?

- (1)  $23 \frac{1}{17}\%$
- (2)  $19 \frac{5}{17}\%$
- (3)  $20 \frac{3}{17}\%$
- (4)  $17 \frac{11}{17}\%$
- (5)  $15 \frac{13}{17}\%$

Q85. What is the central angle corresponding to total number of cellular phones (both Nokia and Samsung) sold by store S ?

- (1)  $99.2^\circ$
- (2)  $93.6^\circ$
- (3)  $105.6^\circ$
- (4)  $97.4^\circ$
- (5)  $101.2^\circ$

Q86. What is the respective ratio between number of Nokia cellular phones sold by store S and total number of Samsung cellular phones sold by stores T and U together ?

- (1) 43 : 72
- (2) 49 : 76
- (3) 43 : 76
- (4) 49 : 72
- (5) 35 : 66

Q87. Total number of cellular phones (both Nokia and Samsung) sold by stores Q increased by 15% from October to November and total number of cellular phones (both Nokia and Samsung) sold by store T increased by 5% from October to November. What was the total number of cellular phones sold by stores Q and T together in November ?

- (1) 3540
- (2) 3720
- (3) 3640
- (4) 3420
- (5) 3880

Q88. Ashok left from place A (towards place B) at 8 a.m. and Rahul left from place B (towards place A) at 10.00 a.m. The distance between place A and place B is 637 km. If Ashok and Rahul are travelling at a uniform speed of 39 kmph and 47 kmph respectively, at what time will they



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

meet ?

- (1) 5:30 p.m
- (2) 4:30 p.m
- (3) 5 p.m
- (4) 4 p.m
- (5) 3:30 p.m

\$\$\$ (89-93) : Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and

**Give answer :**

- (1) If the data in statement **I alone** are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
- (2) If the data in statement **II alone** are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
- (3) If the data **either** in statement I alone **or** in statement II alone are sufficient to answer the question.
- (4) If the data in both statements I and II together are **not sufficient** to answer the question.
- (5) If the data in **both** the statements I and II together **are necessary** to answer the question.

\$\$\$

Q89. By how many years, is Rashika younger than her brother Sunil?

I. Ratio between Rashika's present age and Sunil's age after four years is 5 : 7 respectively.

II. Ratio between Rashika's age four years ago and Sunil's present age is 2 : 3 respectively.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q90. What is the quantity of milk in 80 litres of mixture of milk and water ?

I. If 8 litres of mixture is replaced by equal quantity of water, the ratio of milk and water in the mixture becomes 27 : 13 respectively.

II. If 16 litres of mixture is replaced by equal quantity of milk, the ratio of milk and water in the mixture becomes 4 : 1 respectively.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q91. Neeraj invested certain amount in schemes A and B for 2 years in the ratio of 3 : 5 respectively. The schemes A and B offer compound interest compounded annually and simple interest respectively. What is the amount invested in scheme A ?

I. Rate of interest offered by scheme A is 20% p.c.p.a. and the rate of interest offered by scheme B is 25% less than that offered by scheme A.

II. Amount of interest accrued from scheme B is more than the amount of interest accrued from scheme A by Rs. 900/-

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q92. Two friends X and Y start running towards each other at the same time from points A and B respectively and meet after 135 minutes. At what speed is X running ?

I. Point B is 45 kms away from point A and speed of X is 150% of the speed of Y.

II. Distance covered by Y was 18 kms.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q93. What is the cost of painting two adjacent walls of a hall having no door or window at Rs. 450 per  $m^2$  ?

I. Length and breadth are in the ratio of 3 : 2 respectively.

II. Perimeter of the hall is 50 m and height is one-fourth of the perimeter.

- (1) 1
- (2) 2
- (3) 3
- (4) 4
- (5) 5

Q94. The speed of the boat in still water is 5 times the speed of the current. It takes 1.1 hours to row to point B from point A downstream. The distance between point A and point B is 13.2 km. How much distance will it cover in 312 minutes upstream ? (in km)

- (1) 43.2
- (2) 48
- (3) 41.6
- (4) 44.8
- (5) 40

Q95. 24 men can complete a piece of work in 15 days. 2 days after 24 men started working, 4



# SHAKTHII ACADEMY

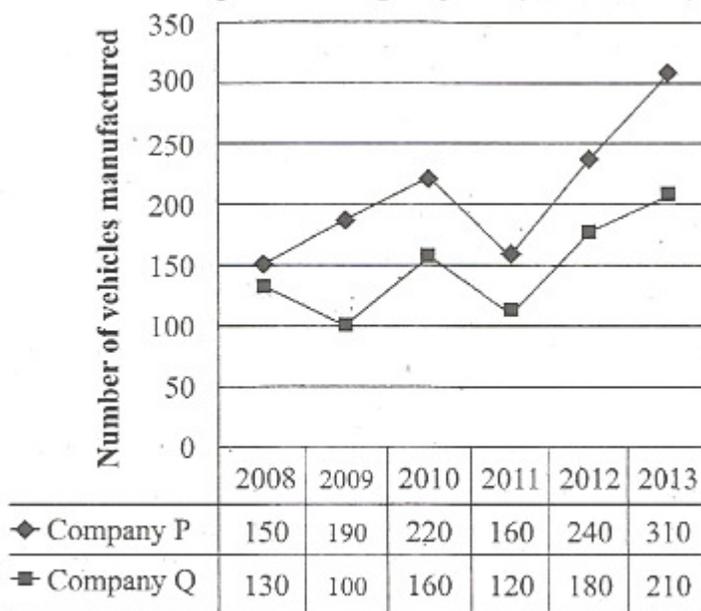
Increasing Confidence ; Reaching Goals

men left the work. How many more days will the remaining men now take to complete the remaining work ?

- (1)  $15 \frac{3}{5}$  days
- (2)  $16 \frac{4}{5}$  days
- (3)  $11 \frac{2}{5}$  days
- (4)  $10 \frac{4}{5}$  days
- (5)  $14 \frac{1}{5}$  days

\$\$\$ (96-100) : Refer to the graph and answer the given questions.

**Number of Vehicles Manufactured by Two Companies during six years (In thousands)**



\$\$\$

Q96. What is the difference between total number of vehicles manufactured by company P in 2010, 2011 and 2013 together and company Q in 2011, 2012 and 2013 together ? (in thousands)

- (1) 120
- (2) 210
- (3) 100
- (4) 270
- (5) 180

Q97. What is the average number of vehicles manufactured by company Q over six years ? (in thousands)

- (1) 170
- (2) 150



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) 90
- (4) 60
- (5) 130

Q98. What is the percentage decrease in number of vehicles manufactured by companies P and Q from 2010 to 2011 ?

- (1) 45 3/11%
- (2) 33 3/11%
- (3) 26 6/19%
- (4) 27 3/11%
- (5) 33 4/11%

Q99. Out of the number of vehicles manufactured by company P in 2012, 15000 pieces were found defective and put of the number of vehicles manufactured by company Q in 2013 10000 pieces were found defective. What is the respective ratio of non-defective vehicles manufactured by company P in 2012 and Q in the 2013?

- (1) 9 : 8
- (2) 11 : 4
- (3) 3 : 8
- (4) 5 : 8
- (5) 7 : 4

Q100. In year 2014 there was an increase of 30% in number of vehicles manufactured by company P as compared to vehicles manufactured by same company in the year 2009. What is the total number of vehicles manufactured by the same company in the year 2014 ?

- (1) 247
- (2) 297
- (3) 211
- (4) 310
- (5) 283

\$\$\$ (101-110) : Read the following passage carefully and answer the questions given below. Certain words/phrases have been given in **bold** to help you locate them while answering some of the questions.

As the government prepare to empty its filling candidates and heads for the hot and dusty plans to solicit votes. It is visibly **exuding** optimism about the economy. According to its non elected representatives, all the lead indicators seem to be showing signs of a revival with the first glimmer of some incipient growth pushing through the enveloping gloom. Steel, cement , auto, fast moving consumer goods (such as soaps and detergents), food items, beverages, volume of goods moved by the railways have all shown some improvement in January after having shrunk in the previous two months.

But before we start congratulating the government for its excellent economic management,



# SHAKTHII ACADEMY

## Increasing Confidence ; Reaching Goals

let's hit the pause button for a moment. How much of the Indian economy's resilience is owed to governmental intervention ? OK, is there a strategy at all?

One of the economy's mainstays for over a decade has been services. This contributes to over 50% of the country's GDP and has been providing enormous growth impulse over the past few years. If you were to listen to the government representatives, it would seem as if they had foreseen the coming age of services and had designed that structure.

The truth is somewhat different. There are many reasons behind the extraordinary growth of services. One of the reasons is the kind of elaborate rent-seeking structures erected by the government in the manufacturing sector. Any person wanting to set up a manufacturing facility in India still has to fill a large number of outstretched palms, making the operations costly from day one.

Here's another unique aspect of the economy for which politicians routinely take credit. One of the saving graces for the Indian economy during this episode of the downturn is the safety net expected to be provided by Indian consumers, even as the international economy winds down and **eschews** consumption of goods made in India.

This has had a **deleterious** impact on Indian exports, leading many exporters to scale down their operations and restructure their businesses. Fortunately, for the planners and the administrators, the impact of the global slowdown is likely to be cushioned, to a large extent, by the gigantic Indian domestic market, which will continue consuming and providing the growth push to the economy. Again, it's not as if some wise person in the government woke up one morning and presciently decreed that henceforth the Country would focus only on the domestic markets. The government has always felt that exports should be the **opposite** strategy for economic growth, just like some of the other emerging countries.

Guess what? Exporters also have to manufacture and that is quite an endurance test in India. Plus, the intricate structure built around promoting exports also worked as a huge deterrent. The government also did not quite see exports as an alternative, viable economic growth model till the Southeast Asian success story burst on to the scene. Hence, till then exports did not quite get the required push. So, no grand design here too.

Unlike in USA and various other European economies, where the government provides unemployment benefits as part of their social contract, Indians have to fend for themselves. In the current downturn, for example, many Indians especially in the urban and semi-urban settlements are wary of spending because of uncertainties surrounding their jobs. This has impacted consumption but, conversely is bound to improve the savings rate.

The credit, therefore should go to the Indian citizen who, despite the various hurdles and inconveniences, is using his ingenuity to improve his lot at all times. This collective strength has not been forged by some steely policy push, but has developed by default, almost in line with Charles Darwin's theory of survival.

\$\$\$

Q101. According to the author, one of the reasons behind services flourishing in our country is

- (1) Financial support provided by the government
- (2) Funding by theeel



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) Availability of a pool of experts from developed countries in this sector
- (4) Availability of young working population
- (5) Other than those given as Options

Q102. Which of the following is most nearly the **OPPOSITE** in meaning to the word **EXUDING** as used in the passage ?

- (1) Excluding
- (2) Displaying
- (3) Percolating
- (4) Closing
- (5) Concealing

Q103. Which of the following is most nearly the **SAME** meaning to the word **'APPOSITE'** as used in the passage

- (1) Appropriate
- (2) Opposite
- (3) Further
- (4) Soft
- (5) Believable

Q104. According to the author, one of the reasons why India's economy managed to sail through the economic downturn was. (A) There was demand for Indian goods from domestic consumers even when internationally it had declined. (B) The politicians had foreseen the trouble and could prepare the country to efficiently deal with it. (C) It was least affected by the economic downturn.

- (1) Only B
- (2) Only C
- (3) Both A and B
- (4) Only A
- (5) Both A and C

Q105. Which of the following is the central theme of the passage ?

- (1) Social Contract-A must in every country
- (2) Hurdles created by the Government for the common man
- (3) Government's campaign to once again regain confidence of the masses
- (4) Economic Growth-A result of natural forces rather than the Government
- (5) Service Industry-The Backbone of every economy across the Globe

Q106. The author attributes the improvement (or maintenance) of the economic condition of the country to

- (A) The Government, as it could foresee a dwindle in the economy and could take suitable measures to tackle it. (B) Appropriate policies to push people to spend more. (C) The Economy for it is surviving on its own either through consumption or saving.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) Only B
- (2) Only C
- (3) Both A and B
- (4) Only A
- (5) Both A and C

Q107. Which of the following is most nearly the **SAME** meaning to the word '**ESCHEWS**' as used in the passage

- (1) Faces
- (2) Avoids
- (3) Accepts
- (4) Bestows
- (5) Ridicules

Q108. Which of the following is most nearly the **OPPOSITE** in meaning to the word '**DELETERIOUS**' as used in the passage ?

- (1) Positive
- (2) Harmful
- (3) Disastrous
- (4) Zilch
- (5) Additional

Q109. Which of the following correctly explains the phrase 'Wary of' as used in the passage regarding spending behaviour of citizens ?

- (1) Careless
- (2) Miserly
- (3) Upset about
- (4) Cautious about
- (5) Fearless in

Q110. Which of the following is **NOT TRUE** in the context of the passage ?

- (1) Traditionally the Government did not believe exports to be providing a boost to the economy.
- (2) Most unemployed Indians today reap the benefits provided under social contracts.
- (3) The author is a firm believer of the fact that the government has played the smallest role in supporting the economy of the country.
- (4) The Government is portraying a rosy picture of the economy to gain people's confidence.
- (5) All the given statements are true.

\$\$\$ (111-115) : Which of the phrases given below the sentence should replace the word/phrase given in bold in the sentence to make it grammatically correct? If the sentence is correct as it is given and no correction is required, select 'No correction required' as your answer.

\$\$\$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q111. People with persistent headaches are hence as likely to develop bed's palsy even as research **amount to** other factors which could increase the risk of conditions like diabetes.

- (1) accounting at
- (2) accounting towards
- (3) accounts for
- (4) accounted at
- (5) No correction required

Q112. The actor and the producer has part ways due to differences over communication.

- (1) have parted ways
- (2) have been way parting
- (3) have parting away
- (4) have part ways
- (5) No correction required

Q113. The State is reeled from the impact of acute financial around the world.

- (1) reeled at
- (2) reeling away
- (3) reel for
- (4) reeling from
- (5) No correction required

Q114. The reading club soon becoming a moving part for literature enthusiasts.

- (1) soon became
- (2) becoming soon
- (3) was became soon
- (4) soon is become
- (5) No correction required

Q115. Having been confined to their homes for a week after a leopard was sighted, the villagers grew restless and frustrated.

- (1) As confine to
- (2) Have being confining at
- (3) Been confining at
- (4) Being confined for
- (5) No correction required

\$\$\$ (116-125): Read the following sentences to find out whether there is any grammatical mistake/error in it. The error, if any, will be in one part of the sentence. Mark the part with the error as your answer. If there is no error, mark 'No error' as your answer. (Ignore the error of punctuation, if any)

\$\$\$



# SHAKTHII ACADEMY

## Increasing Confidence ; Reaching Goals

Q116. The beautician listed out/ a few quick tips that/ one needs keep in mind/ in order to get that perfect holiday radiant.

- (1) The beautician listed out
- (2) a few quick tips that
- (3) one needs to keep in mind
- (4) in order to get that perfect holiday radiant
- (5) No error

Q117. After weeks of talks,/ the two parties failed to resolving/ their differences and the makers eventually/ decided to look for an alternative.

- (1) After weeks of talks,
- (2) the two parties failed to resolving
- (3) their differences and the makers eventually
- (4) decided to look for an alternative.
- (5) No error

Q118. The Minister said that the State was facing/an acute financial crunch and feared that/the Government might be compelled to take/loans to pay the salaries of its employees

- (1) The Minister said that the State was facing
- (2) an acute financial crunch and feared that
- (3) the Government might be compelled to take
- (4) loans to pay the salaries of its employees
- (5) No error

Q119. States dependent on oil and gas revenues/are growing increasingly anxious about/the ripple effect that fading of prices/may have on their local economies.

- (1) States dependent on oil and gas revenues
- (2) are growing increasingly anxious about
- (3) the ripple effect that fading of prices
- (4) may have on their local economies.
- (5) No error

Q120. Though the year witnessed/' a rise in crimes against women/the police claimed that their changed images has given/ confidence to women to come forward and lodge complaints.

- (1) Though the year witnessed
- (2) a rise in crimes against women
- (3) the police claimed that their changed images has given
- (4) confidence to women to come forward and lodge complaints
- (5) No error

Q121. Although ghost pepper is no longer/ the most hottest chilli in the world,/ as India's speciest export/ it packs quite a punch.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) Although ghost pepper is no longer
- (2) the most hottest chilli in the world
- (3) as India's speciest export
- (4) it packs quite a punch
- (5) No error

Q122. Migraines may doubles/ the risk of a/ nervous system condition that/ causes facial paralysis.

- (1) Migraines may doubles
- (2) the risk of a
- (3) nervous system condition that
- (4) causes facial paralysis.
- (5) No error

Q123. The police tactfully handed/ the farmers' agitation for/ higher prices which is created/ law and order problem in the district every year.

- (1) The police tactfully handed
- (2) the farmers' agitation for
- (3) higher prices which is created
- (4) law and order problem in the district every year
- (5) No error

Q124. For the past one week,/ people had stop working/ out of their houses,/ fearing a sudden attack.

- (1) For the past one week
- (2) people had stop working
- (3) out of their houses
- (4) fearing a sudden attack
- (5) No error

Q125. Mock drills were/ carried out .by/ security agencies at/ various locations in the city.

- (1) Mock drills were
- (2) carried out by
- (3) security agencies at
- (4) various locations in the city
- (5) No error

\$\$\$ (126-130) : Rearrange the following six sentences (A), (B), (C), (D), (E) and (F) in the sequence to form a meaningful paragraph, then answer the given questions.

(A) For the balance of power and for the staggered development of the world, it is very important to stop the phenomena of brain-drain.

(B) For this purpose, developed nations should help developing countries with necessary money and resources.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

(C) Ultimately, this will also ensure that each and every nation will have the ability to introduce itself as a developed nation.

(D) This will help a particular country to use all skilled citizens for development and proliferation.

(E) This will ensure that each and every individual on this planet can have a good standard of living.

(F) But to build these skilled workers at their native places, it is also important to provide them enough work opportunities and living facilities.

\$\$\$

Q126. Which of the following should be the **THIRD** sentence after the rearrangement ?

- (1) A
- (2) B
- (3) F
- (4) D
- (5) E

Q127. Which of the following should be the **SECOND** sentence after the rearrangement ?

- (1) A
- (2) B
- (3) C
- (4) D
- (5) F

Q128. Which of the following should be the **FIRST** sentence after the rearrangement ?

- (1) A
- (2) B
- (3) C
- (4) D
- (5) E

Q129. Which of the following should be the **FOURTH** Sentence after the rearrangement ?

- (1) A
- (2) B
- (3) C
- (4) E
- (5) D

Q130. Which of the following should be die **LAST (SIXTH)** sentence after the rearrangement ?

- (1) A
- (2) F
- (3) D
- (4) C



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

(5) B

\$\$\$ (131-135) : In these questions, the sentence has two blanks. Each blank indicates that something has been omitted. Choose the words that best fit the meaning of a sentence as a whole.

\$\$\$

Q131. After a \_\_\_\_\_ review, it was found that many financial institutions don't have proper \_\_\_\_\_ in place and could unwillingly be financing illegal activities.

- (1) routine, checks
- (2) periodic, space
- (3) schedule, standard
- (4) custom, timing
- (5) suddenly, system

Q132. The main reason youth unemployment has \_\_\_\_\_ in this region is the depth of the recession in these countries and the chances of improvement are \_\_\_\_\_ unless governments kick-start their economics.

- (1) fallen, negligible
- (2) risen, visible
- (3) grown, create
- (4) soared, remote
- (5) collapsed, much

Q133. It is \_\_\_\_\_ for every tax-payer to \_\_\_\_\_ the tax returns to the Income tax department.

- (1) necessary, lodge
- (2) binding, pay
- (3) obligatory, submit
- (4) possible, remit
- (5) None of these

Q134. It is \_\_\_\_\_ that 400 Indian passengers will want to fly in or out of the country by the 2050 and unless the airport facility is improved it/will be \_\_\_\_\_ to handle this traffic.

- (1) though, easier
- (2) assume, worrisome
- (3) estimated, difficult
- (4) typical, perfect
- (5) expected, able

Q135. Reform is set to gain \_\_\_\_\_ as much of the spadework for a vibrant economy such as \_\_\_\_\_ laws on taxes and banking are underway.



# SHAKTHII ACADEMY

## Increasing Confidence ; Reaching Goals

- (1) steam, specialising
- (2) advantage, fix
- (3) pace, amending
- (4) tame, modify
- (5) weight, compensating

\$\$\$ (136-140) : In these questions, there are two statements which can be combined into a single statement in a number of different ways without changing their meaning. Below them are given three probable starters (A), (B) and (C) of such a combined sentence. One, two, three or none of them may be correct. Decide upon which is/are correct, if any and mark the option which denotes your answer. If none of three starters is suitable, mark 'None' as your answer.

\$\$\$

Q136. The landowners who ruled and made the country rich were not to be bothered about educated citizens. Without a good education system, the country has once struggled to create competitive industries. (A) Since the landowners. (B) Despite making the country. (C) While the landowners struggled

- (1) Only (A)
- (2) Only (B)
- (3) All (A), (B) and (C)
- (4) Only (A) and (B)
- (5) Only (B) and (C)

Q137. The mineral rich economy has done extremely well over the past few decades in exporting coal and mineral ores to China and India. Officials argue that the country now has to shift into innovation and technology to keep the economy growing. (A) Though the mineral rich. (B) Following officials arguing. (C) To shifting into more

- (1) Only (A)
- (2) Only (C)
- (3) Only (A) and (C)
- (4) Only (A) and (B)
- (5) All (A), (B) and (C)

Q138. Continued modernization means access to new ideas and influences as well as social and economic freedom. Youth today can tweet, blog and talk freely about the most sensitive topics. (A) Though continued modernization. (B) While youth today can. (C) If access to new ideas

- (1) Only (O)
- (2) Only (A)
- (3) Only (B) and (C)
- (4) Only (A) and (C)
- (5) None



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q139. The finance ministers and central bankers of G20 countries will meet in Sydney next month. The discussion will centre on the fact that the rich world's banks are wrong to ignore the side effects of their policies on other countries. (A) In order to discuss. (B) Ignoring the side effects. (C) Next month the G20 countries

- (1) Only (A)
- (2) Only (C)
- (3) Only (A) and (C)
- (4) Only (B)
- (5) All (A), (B) and (C)

Q140. The city Government was of the view that some schools were undersized and that cleaning these would save money which could be reinvested. This money has been invested in providing better facilities as other Government schools that took in children from these closed citizens. (A) Although closing. (B) The money saved. (C) When the money has been invested

- (1) Only (A) and (B)
- (2) Only (B) and (C)
- (3) All (A), (B) and (C)
- (4) Only (B)
- (5) None

\$\$\$ (141-150) : In the given passage, there are blanks, each of which has been numbered. Against each five words are suggested, one of which fits the blank appropriately. Find the appropriate word in each case.

Scientists have long known how to convert various kinds of organic materials into liquid form. Trees, shrubs, grasses, weeds, fungi, seaweed and animal fats have all been turned into biofuels to ...141... cars, ships and even planes. As well as being available to countries ...142... for sands shale fields or gushers, biofuels can help reduce greenhouse gas emissions by ...143... an alternative to releasing total fossil fuel carbon into the atmosphere. Frustratingly however ...144... biofuels in large quantities have always been more expensive and .less ...145... than simply drilling a little dipper for oil. Ethanol is an alcoholic biofuel easily ...146... from sugary or starchy plants. It has been used to run cars and has been blended into ...147... petrol. It constitutes about 10% of the fuel ...148... by America's vehicles today. Biodiesel from vegetable fats is similarly mixed into diesel in Europe. But these first generation biofuels have ...149.... They are made from plants rich in sugar, starch or oil that might otherwise be eaten by people or live stock. Ethanol and biodiesel also have limitations as vehicle tunnels-performing poorly in cold weather and capable of ...150... unmodified engines. In an effort to overcome these limitations dozens of start-up companies emerged over the past decade with the aim of developing second generation biofuels from agricultural waste with no nutritional value and which can be used to replace fossil fuels.

\$\$\$

Q141. I

- (1) fuelling



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (2) moving
- (3) power
- (4) silent
- (5) invent

Q142. II

- (1) have
- (2) efforts
- (3) without
- (4) explore
- (5) replacing

Q143. III

- (1) researching
- (2) precaution
- (3) supporting
- (4) providing
- (5) arriving

Q144. IV

- (1) produce
- (3) offering
- (5) making
- (2) manufacture
- (4) transport

Q145. V

- (1) trouble
- (2) worried
- (3) opportunity
- (4) advantage
- (5) convenient

Q146. VI

- (1) disabled
- (2) create
- (3) installed
- (4) acquire
- (5) formulate

Q147. VII

- (1) originally



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (2) conventional
- (3) purely
- (4) normally
- (5) free

Q148. VIII

- (1) use
- (2) waste
- (3) fill
- (4) burned
- (5) exploit

Q149. IX

- (1) discouragement
- (2) benefits
- (3) drawbacks
- (4) flaw
- (5) weak

Q150. X

- (1) dreadful
- (2) harm
- (3) injure
- (4) demanding
- (5) damaging

Q151. The CMM level at which measurable goals for quality and productivity are established in :

- (1) Level 1
- (2) Level 3
- (3) Level 5
- (4) Level 4
- (5) Level 2

Q152. When you visit websites spyware may be substantially downloaded. This is called a

- (1) Logic bomb
- (2) Drive-by download
- (3) Virus
- (4) Drive-in download
- (5) Spyt



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q153. Malicious software is known as \_\_\_\_\_

- (1) Disasterware
- (2) Badware
- (3) Illegalware
- (4) Malware
- (5) Maliciousware

Q154. A data structure where elements can be added or removed at either end but not in the middle is called :

- (1) Requeue
- (2) Queues
- (3) Dequeue
- (4) Linked lists
- (5) Stacks

Q155. Which of the following are placeholders for literal values in a SQL query being sent to the database?

- (1) Reduction and Resolution variables
- (2) Resolution variables
- (3) Reduction variables
- (4) Assimilation variables
- (5) Bind variables

Q156. In TPS systems, an output that signifies that a specific transaction has taken place is called a(n) \_\_\_\_\_

- (1) detail report
- (2) action document
- (3) inception report
- (4) exception report
- (5) summary report

Q157. \_\_\_\_\_ is the process whereby media files such as a video start playing as they are

- Downloading
- (1) Streaming
  - (2) Pushing
  - (3) Dragging
  - (4) Flashing
  - (5) Pulling

Q158. Which of the following statements about stacks is incorrect ?

- (1) New nodes can only be added to the top of the stack.
- (2) Stacks can be implemented using linked lists.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) Stacks are first-in, first-out data structures.
- (4) The last node (at the bottom) of a stack has a null (0) link.
- (5) Stacks are very useful.

Q159. The UML designation for a public class member is :

- (1) The symbol @
- (2) The symbol #
- (3) The minus symbol (-)
- (4) The plus symbol (+)
- (5) The word public

Q160. What type of join is needed when you wish to include rows that do not have matching values ?

- (1) Equi-join
- (2) Indefinite join
- (3) Intermediate join
- (4) Natural join
- (5) Outer join

Q161. A homepage is \_\_\_\_\_

- (1) the web page that identifies a website
- (2) a web page you eventually reach by clicking a series of hyperlinks
- (3) a web page created by an individual home user, as opposed to the one created by a corporation
- (4) the last page of the web site
- (5) the web page you like to visit the most

Q162. A network covering a large geographic area is usually referred to as a(n)

- (1) huge area network
- (2) wide area network
- (3) inter network
- (4) local area network
- (5) intranet

Q163. Frame relay

- (1) does not use error correction routines
- (2) is used by facsimile machines
- (3) uses error-correction routines
- (4) does not work well on the internet
- (5) is an outdated technology

Q164. The design tool used to illustrate the logic of a new computer software logic diagram that uses symbols to represent program elements is called a (n)



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) data logic chart
- (2) dataflow diagram
- (3) software logic diagram
- (4) system flowchart
- (5) entity relationship illustration

Q165. A web facility that helps to find sites with the information and/or services that is desired is

- (1) A hyperlink
- (2) The top inner domain
- (3) A search engine
- (4) A network access point
- (5) A blog

Q166. Non-positive data structures are those which define set of

- (1) Desirable elements
- (2) Dedicated elements
- (3) Derived elements
- (4) Static elements
- (5) Primitive elements

Q167. A \_\_\_\_\_ is an acyclic diagram, which has only node with in-degree 0, and other nodes have in-degree 1.

- (1) Dis-joint tree
- (2) Direction oriented tree
- (3) Directed tree
- (4) Diagonalised tree
- (5) Undirected tree

Q168. Which of the following are true of XML ?

- (1) XML is too complicated
- (2) XML is difficult to learn
- (3) XML is a set of tags designed to tell browsers how to display text on a web page
- (4) XML is a set of rules for creating tags to describe data
- (5) XML is a set of tags designed to tell browsers how to display images on a web page

Q169. Which of the following forms does not describe parallel ATA devices ?

- (1) SCSI
- (2) IOE and DOE
- (3) IOE
- (4) DOE
- (5) ATA



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q170. \_\_\_\_\_ maps domain name to their IP addresses.

- (1) Wi-Fi
- (2) DNS
- (3) HTML
- (4) XML
- (5) Java

Q171. Every host computer on the internet has a(n)

- (1) similar IP address
- (2) unique 10-digit number
- (3) common name and number
- (4) unique IP address
- (5) unique 15-digit number

Q172. Which of the following are five built-in functions provided by SQL ?

- (1) SUM, AVG, MIN, MAX, NAME
- (2) MIN, MAX, MULT, DIV, NAME
- (3) SUM, AVG, MULT, DIV, MIN
- (4) SUM, AVG, MIN, MAX, MULT
- (5) COUNT, SUM, AVG; MAX, MIN

Q173. Common Gateway Interface (CGI) is which of the following ?

- (1) An interface that accepts and returns data that may be written in SQL
- (2) A small program that executes within other application and is stored on the server
- (3) A small program that executes within other application and is stored on the client
- (4) A small program that executes within other application and is stored on the client or the server.
- (5) An interface that accepts and returns data that may be written in any language that produces executable file

Q174. Which of the following wildcard masks is most useful for matching all IP packets in subnet 10. 1. 128. 0, mask 255.255.255.0?

- (1) 0.0.0.0
- (2) 0.0.0.255
- (3) 0.0.0.240
- (4) 0.0.0. 31
- (5) 0.0.15.0

Q175. Which of the following is not a testable Web App security element ?

- (1) Encryption
- (2) Authentication and Encryption
- (3) Firewalls
- (4) Authentication



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

(5) Penetration

Q176. \_\_\_\_\_ are two important technologies for developing the Semantic web.

- (1) XML and RDF
- (2) XML and HTML
- (3) RDF and HTML
- (4) Wi-Fi and RDF
- (5) Wi-Fi and XML

Q177. In what kind of storage, we can easily insert, delete, concatenate and rearrange substrings?

- (1) Stack
- (2) Linked list
- (3) Dedicated list
- (4) Queue
- (5) Array

Q178. Web pages can be created using

- (1) only Web Authoring Software
- (2) only Macromedia Dreamwaver
- (3) any Word Processor
- (4) only Microsoft Products
- (5) only Microsoft Frontpage

Q179. Which of the following techniques provides redundancy by using two disks and two controllers ?

- (1) Disk striping
- (2) Disk striping with parity
- (3) Drive mirroring
- (4) Drive mirroring and disk striping
- (5) Drive duplexing

Q180. \_\_\_\_\_ is the term for the use of deception to get someone's sensitive information.

- (1) Identity theft
- (2) Personal engineering
- (3) Spoofing
- (4) Social engineering
- (5) Hacking

Q181. In addition to an internet connection, which of the following is needed to ?

- (1) Telnet client
- (2) Scanner



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (3) Mail client
- (4) Hp client
- (5) Web browser

Q182. A DBMS performs several important functions that guarantee the integrity and consistency of the data in the database. Which of the following is not one of those functions ?

- (1) Data integrity management
- (2) Data reports
- (3) Security and storage management
- (4) Data storage management
- (5) Security management

Q183. A procedural program stores' \_\_\_\_\_ in a collection variables and a set of \_\_\_\_\_ perform operations on it.

- (1) parameters, arguments
- (2) data, functions
- (3) assets, actions
- (4) strings, operators
- (5) numbers, arguments

Q184. Which of the following is the phase of SDLC in which the identified requirements are incorporated into the new system's design ?

- (1) Maintenance
- (2) Physical layout
- (3) Requirement design
- (4) Systems design
- (5) Systems blueprint

Q185. What does DLCI stand for ?

- (1) Data Link Circuit Identifier
- (2) Data Link Connection Interrupt
- (3) Data Link Connection Indicator
- (4) Data Link Circuit Indicator
- (5) Data Link Connection Identifier

Q186. What standard Java package is used to move the cursors ?

- (1) Javax swing
- (2) Java fcio
- (3) Java lo
- (4) Java facio
- (5) Java awt event

Q187. A communications medium where data are transformed into light pulses is



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

- (1) coaxial cable
- (2) optical fibre
- (3) satellite
- (4) twisted-pair cable
- (5) copper cable

Q188. \_\_\_\_\_ is a standard for security that is inclined at the network or packet processing layer of network communications, as opposed to the application layer.

- (1) Passive FTP
- (2) TCP
- (3) SSL
- (4) S-HTTP
- (5) IP sec

Q189. Locking may cause which of the following problems ?

- (1) Deadlock
- (2) Versioning
- (3) Versioning and deadlock
- (4) Erroneous updates
- (5) Erroneous updates and deadlock

Q190. Which of the following is not a WebApp Interface mechanism ?

- (1) Links
- (2) Cookies
- (3) Browser
- (4) Cookies and Links
- (5) Forms

Q191. \_\_\_\_\_ is one of the older and slowest methods an intruder might use to scan a network to determine which of a range of IP addresses map to live hosts.

- (1) Ping sweep
- (2) Phreaking
- (3) Smurfing
- (4) War driving
- (5) Brute force cracking

Q192. Which of the following is used to create and delete views and relations within tables ?

- (1) SQL Data Identification Language
- (2) SQL Data Identification and Manipulation Languages
- (3) SQL Data Relational Language
- (4) SQL Data Definition Language
- (5) SQL Data Manipulation Language



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q193. Criminal hacking is called

- (1) cracking
- (2) a virus
- (3) a Trojan horse
- (4) a worm
- (5) blasting

Q194. Backward recovery is which of the following ?

- (1) Where the before-images are applied to the database
- (2) Where the after-images and the before-images are applied to the database
- (3) Where the after-images are applied to the database
- (4) Continuing without any recovery
- (5) Switching to an existing copy of the database

Q195. \_\_\_\_\_ is the integration of economic, social, cultural and ecological facets of life, enabled by information technologies.

- (1) Business environment
- (2) Neutralization
- (3) Nationalisation
- (4) Regionalisation
- (5) Globalization

Q196. \_\_\_\_\_ is the process used by managers to get more detailed information.

- (1) Detailing
- (2) Wagering
- (3) Drilling down
- (4) Probing
- (5) Blasting

Q197. A cross life-cycle activity of system development

- (1) data modelling
- (2) fact finding
- (3) prototyping
- (4) data flow diagram modelling
- (5) object modelling

Q198. The result of a SQL SELECT statement is a(n)

- (1) report
- (2) file
- (3) page
- (4) table
- (5) form



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Q199. Web App performance tests are designed to :

- (1) assess WebApp usability
- (2) test network performance
- (3) test network connectivity
- (4) evaluate page loading times
- (5) simulate real-world loading situations

Q200. A CASE SQL statement is which of the following ?

- (1) A way to establish a data definition in SQL or establish a loop in SQL
- (2) A way to establish an IF-THEN-ELSE in SQL
- (3) A way to establish a loop in SQL
- (4) A way to establish a data definition in SQL
- (5) Establish a loop in SQL and establish an IF-THEN-ELSE in SQL

---Answer---

A1.2	A25.3	A49.5
A2.4	A26.5	A50.1
A3.2	A27.2	A51.1
A4.3	A28.5	A52.4
A5.5	A29.1	A53.4
A6.4	A30.4	A54.1
A7.5	A31.5	A55.2
A8.3	A32.4	A56.2
A9.3	A33.4	A57.2
A10.2	A34.3	A58.4
A11.2	A35.4	A59.5
A12.2	A36.2	A60.1
A13.3	A37.1	A61.1
A14.4	A38.4	A62.1
A15.5	A39.4	A63.3
A16.1	A40.2	A64.1
A17.1	A41.3	A65.2
A18.3	A42.3	A66.5
A19.1	A43.2	A67.1
A20.4	A44.1	A68.3
A21.2	A45.2	A69.1
A22.3	A46.1	A70.2
A23.3	A47.1	A71.3
A24.5	A48.5	A72.1



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

A73.4	A111.3	A150.5
A74.5	A112.1	A151.4
A75.4	A113.4	A152.2
A76.3	A114.1	A153.4
A77.2	A115.5	A154.3
A78.3	A116.3	A155.5
A79.3	A117.2	A156.2
A80.2	A118.4	A157.1
A81.4	A119.2	A158.4
A82.5	A120.3	A159.4
A83.1	A121.1	A160.5
A84.4	A122.1	A161.1
A85.2	A123.3	A162.2
A86.2	A124.2	A163.1
A87.3	A125.5	A164.4
A88.2	A126.4	A165.3
A89.5	A127.2	A166.2
A90.3	A128.1	A167.3
A91.5	A129.4	A168.4
A92.1	A130.2	A169.1
A93.5	A131.1	A170.2
A94.3	A132.4	A171.4
A95.1	A133.3	A172.5
A96.5	A134.3	A173.5
A97.2	A135.3	A174.2
A98.3	A136.1	A175.5
A99.1	A137.1	A176.1
A100.1	A138.5	A177.2
A101.1	A139.1	A178.3
A102.5	A140.5	A179.5
A103.1	A141.3	A180.4
A104.1	A142.4	A181.5
A105.4	A143.4	A182.2
A106.2	A144.5	A183.2
A107.2	A145.5	A184.3
A108.1	A146.4	A185.5
A109.4	A147.2	A186.5
A110.2	A148.4	A187.2
	A149.3	A188.5
		A189.1
		A190.3
		A191.1
		A192.4



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

A193.1  
A194.1  
A195.5

A196.1  
A197.2  
A198.4

A199.5  
A200.2  
---Answer---

---Explanation---

E3. Input : 11 east 54 vent kind 35 over 27 71 bowl  
Step I : 71 11 east 54 kind 35 over 27 bowl vent  
Step II : 54 71 11 east kind 35 27 bowl vent over  
Step III : 35 54 71 11 east 27 bowl vent over kind  
Step IV : 27 35 54 71 11 bowl vent over kind east  
Step V : 11 27 35 54 71 vent over kind east bowl

E8.

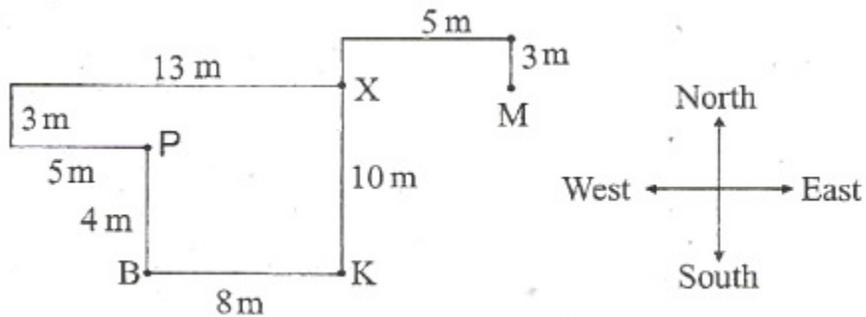
Day	Friend	Language
Monday	Q	English
Tuesday	N	Sanskrit
Wednesday	R	French
Thursday	P	Chinese
Friday	M	Spanish
Saturday	S	Japanese
Sunday	O	German

E18.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals



E20.

Floor	People
8	D
7	C
6	F
5	A
4	B
3	G
2	E
1	H

E25. Conclusions : I.  $R > N \rightarrow$  True

II.  $S > Z \rightarrow$  True

E26. Conclusions : I.  $Y \geq L \rightarrow$  False

II.  $A > R \rightarrow$  True

E27. Conclusions : I.  $Q < D \rightarrow$  False

II.  $U > Q \rightarrow$  False

E28. Conclusions : I.  $P \geq K \rightarrow$  False

II.  $A \leq Y \rightarrow$  True

E29. Conclusions : I.  $R = Z$  Either I or II

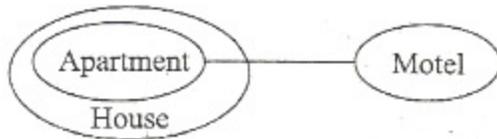
II.  $Z < R$



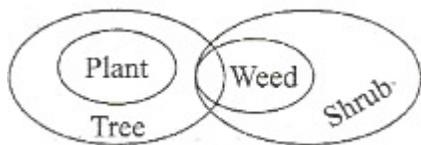
# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

E30.



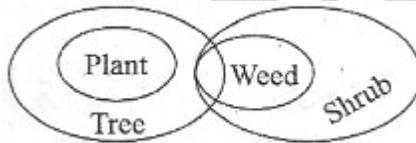
E31.



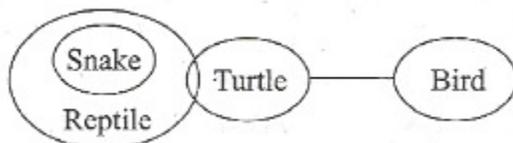
E32.



E34.



E35.

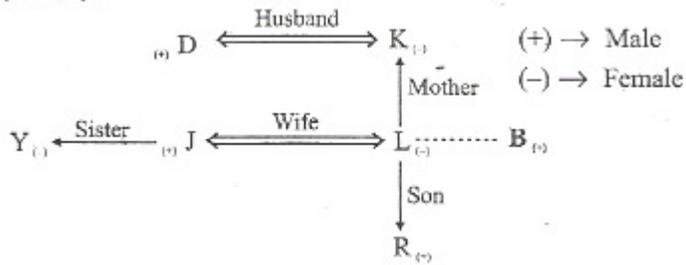


E36.

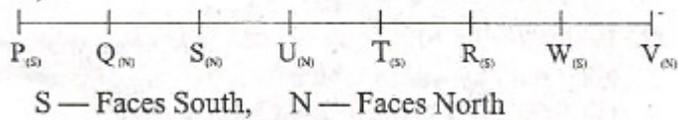


# SHAKTHII ACADEMY

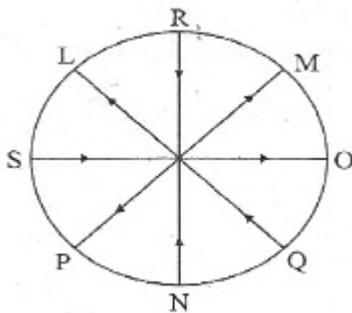
Increasing Confidence ; Reaching Goals



E39.



E45.



E51. Let the number of female students be  $x$ .

Average weight of female students = 57 kg

$\therefore$  Total weight of female students =  $57x$  kg

Number of male students = 66

Average weight of male students = 65.9 kg

$\therefore$  Total weight of male students

=  $65.9 \times 66$

= 4349.4 kg

Average weight of total students = 60.3 kg

Total weight of all students =  $60.3 \times (66 + x)$

$\therefore 60.3 \times (66 + x) = 4349.4 + 57x$

$3979.8 + 60.3x = 4349.4 + 57x$

$3.3x = 369.6$

$\Rightarrow x = 369.6/3.3 = 112$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

$$\begin{aligned} \text{E52. } 105/100 \times 1200 + 12/100 \times 2360 - 22/100 \times ? &= 1420.99 \\ 1260 + 283.2 - 22/100 \times ? &= 1420.99 \\ 1260 + 283.2 - 1420.99 &= 22/100 \times ? \\ 122.21 &= 22/100 \times ? \\ 122.21 \times 100/22 &= ? \\ ? &= 555.5 \approx 550 \end{aligned}$$

$$\begin{aligned} \text{E53. } 7000 \times 1/700 \times 4 &= ? \\ \therefore ? &= 40 \end{aligned}$$

$$\begin{aligned} \text{E54. } [(42)^2 - (18)^2] \div ? &= 13^2 - 139 \\ (1764 - 324) \div ? &= 169 - 139 \\ 1440/? \div ? &= 30 \\ ? &= 48 \end{aligned}$$

$$\begin{aligned} \text{E55. } 25^2 - (34 + 20) + 68 - 89 &= ? \\ 625 - 54 + 68 - 89 &= ? \\ ? &= 550 \\ ? &\approx 546 \end{aligned}$$

$$\begin{aligned} \text{E56. } \sqrt{2025} \times \sqrt{256} + \sqrt{400} \times \sqrt{?} &= 34 \times 40 \\ 45 \times 16 + 20 \times \sqrt{?} &= 1360 \\ 720 + 20 \times \sqrt{?} &= 1360 \\ 20 \times \sqrt{?} &= 1360 - 720 \\ \sqrt{?} &= 640/20 = 32 \\ ? &= (32)^2 = 1024 \end{aligned}$$

E57. Employees having only one skill

Skill	Officer (200)	Clerk (250)
HRM	10	40



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Computer	20	70
Financial	40	47

Employees having multiple skills :

Skill	Officer	Clerk
HRM + Finance	80	50
HRM + Computer	20	25
Computer + Finance	12	9
HRM + Finance + Computer	18	9

E57. Officers take training in HRM =  $10 + 80 + 18 + 20 = 128$

E58. Required number of clerks =  $70 + 9 = 79$

E59. Required number of employees =  $(40 + 47) + (12 + 9) = 108$

E60. Total number of clerks take training in financial skills =  $47 + 50 + 9 + 9 = 115$

E61. Required officers in computer skills =  $20 + 20 + 12 + 18 = 70$

E62. Let the sum of money be Rs x.

$\therefore$  SI at 12% p.a. for 6 years =  $\frac{2}{3}x \times \frac{12}{100} \times 6$

and CI at 10% p.a. for 2 years

=  $\frac{x}{3} [(1 + \frac{10}{100})^2 - 1]$

$\therefore \frac{2}{3}x \times \frac{12}{100} \times 6 + \frac{x}{3} [(1 + \frac{10}{100})^2 - 1] = 1035$

$\frac{12}{25}x + \frac{21}{300}x = 1035$

$144x + 21x = 1035 \times 300$

$169x = 310500$

$x = \frac{310500}{169} = 1882$

E63. Let the height of cylinder be x metre.

$\therefore$  Radius of cylinder =  $(x + 5)$  m

Curved surface area of cylinder =  $2\pi rh$

$\therefore 2 \times \frac{22}{7} \times (x + 5) \times x = 792$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

$$\begin{aligned}(x + 5) \times x &= 126 \\ x^2 + 5x - 126 &= 0 \\ x^2 + 14x - 9x - 126 &= 0 \\ x(x + 14) - 9(x + 14) &= 0 \\ (x - 9)(x + 14) &= 0 \\ \therefore x &= 9\text{m} \\ \therefore \text{Volume of cylinder} &= \pi r^2 h \\ &= 22/7 \times 14 \times 14 \times 9 = 5544\text{m}^3\end{aligned}$$

E64. Profit = Export - Import  
 $\therefore$  Export in 2002  
 $= (90 + 100 + 65 + 25 + 110 + 120)\text{crore}$   
 $= \text{Rs } 510\text{crore}$   
 $\therefore$  Profit =  $510 - 385 = 125$  crore

E65. For country S, import =  $45 \times 2/1 = \text{Rs } 90$  crore  
For country U, import =  $24 \times 1/4 = \text{Rs } 6$  crore  
Thus, the total import of country U and S together =  $90 + 6 = \text{Rs } 96$  crore

E66. Export of country Q in 2001 = Rs 50 crore  
Export of country T in 2000 = Rs 55 crore  
Total export of country Q and T = Rs 105 crore  
Export of country P in 2003  
 $= 120/100 \times 105 = \text{Rs } 126$  crore  
Import of country P in 2003 = Rs 92 crore  
 $\therefore$  Required profit =  $126 - 92 = \text{Rs } 34$  crore

E67. Export of T over all the years =  $60 + 50 + 55 + 100 + 110$   
 $= \text{Rs } 375$  crore  
 $\therefore$  Average =  $375/5 = \text{Rs } 75$  crore  
Export of R over all the years  
 $= 50 + 55 + 70 + 90 + 65 = \text{Rs } 330\text{crore}$   
 $\therefore$  Average =  $330/5 = \text{Rs } 66$  crore  
 $\therefore$  Required percentage =  $[(75 - 66)/66 \times 100]\%$   
 $= (9/66 \times 100)\% = 13 \frac{7}{11}\%$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

E68. Export of all countries in 1999 = Rs 270 crore

Export of all countries in 2001 = Rs 375 crore

Increase =  $375 - 270 = 105$  crore

Increased percentage =  $(105/270 \times 100) \% = 38.89\%$

E69. Required ratio =  $28000 \times 12 : 20000 \times 8 + 18000 \times 2 : 18000 \times 6 + 16000 \times 2$

=  $28 \times 12 : 20 \times 8 + 18 \times 2 : 18 \times 6 + 16 \times 2$

=  $14 \times 12 : 10 \times 8 + 9 \times 2 : 9 \times 6 + 8 \times 2$

=  $7 \times 12 : 5 \times 8 + 9 \times 1 : 9 \times 3 + 4 \times 2$

=  $84 : 49 : 35$

=  $12 : 7 : 5$

E70. Let the cost price be Rs  $x$ .

$\therefore$  Marked price =  $140/100 \times x = 7/5 x$

SP =  $7/5 x \times 80/100 \times 75/100 = 21/25 x$

We know, Loss = CP - SP

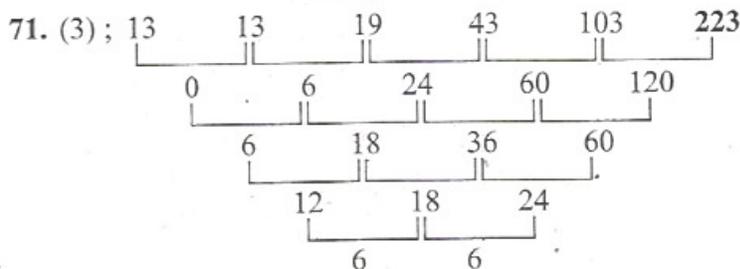
$\therefore 448 = x - 7/5 x \times 80/100 \times 75/100$

$448 = x - 21/25 x \Rightarrow 448 = 4/25 x$

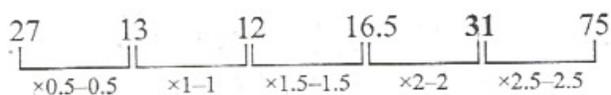
$x = \text{Rs } 2800/-$

$\therefore \text{SP} = \text{CP} - \text{Loss} = 2800 - 448 = \text{Rs } 2,352/-$

E71.



E72.

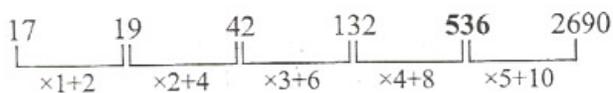




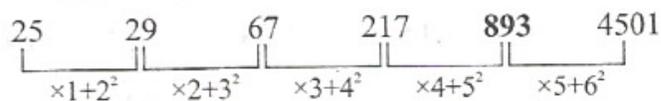
# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

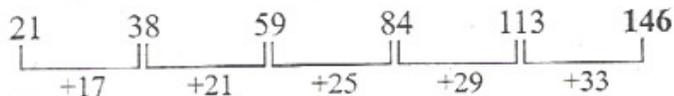
E73.



E74.



E75.



E76. Let present age of Parul and Rohit be  $7x$  and  $5x$  years respectively.

After 5 years,

Parul's age =  $7x + 5$  years

and Rohit's age =  $5x + 5$  years

∴ According to question,

$$7x + 5 + 5x + 5 = 94$$

$$12x = 84$$

$$x = 7 \text{ years}$$

∴ Parul's present age =  $7 \times 7 = 49$  years

and Rohit's present age =  $5 \times 7 = 35$  years

Hence, Rohit's age will be equal to Parul's present age after 14 years.

E77. Let the amount of another type of sandal powder be  $x$  kg.

Cost price =  $767 \times 100/110 = \text{Rs } 650/-$

By Alligation method,





# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

$$(5y - 4)(4y - 5) = 0$$

$$(5y - 4) = 0$$

$$(4y - 5) = 0$$

$$y = 4/5, 5/4$$

Hence,  $y > x$

$$\text{E80. I. } 10x^2 + 33x + 27 = 0$$

$$10x^2 + 18x + 15x + 27 = 0$$

$$2x(5x + 9) + 3(5x + 9) = 0$$

$$(2x + 3)(5x + 9) = 0$$

$$(2x + 3) = 0$$

$$(5x + 9) = 0$$

$$\therefore x = -3/2, -9/5$$

$$\text{II. } 5y^2 + 19y + 18 = 0$$

$$5y^2 + 10y + 9y + 18 = 0$$

$$5y(y + 2) + 9(y + 2) = 0$$

$$(5y + 9)(y + 2) = 0$$

$$(5y + 9) = 0$$

$$(y + 2) = 0$$

$$\therefore y = -9/5, -2$$

Hence,  $x \geq y$

$$\text{E81. I. } 15x^2 - 29x - 14 = 0$$

$$15x^2 - 35x + 6x - 14 = 0$$

$$5x(3x - 7) + 2(3x - 7) = 0$$

$$(5x + 2)(3x - 7) = 0$$

$$(5x + 2) = 0$$

$$(3x - 7) = 0$$

$$\therefore x = -2/5, 7/3$$

$$\text{II. } 6y^2 - 5y - 25 = 0$$

$$6y^2 - 15y + 10y - 25 = 0$$

$$3y(2y - 5) + 5(2y - 5) = 0$$

$$(3y + 5)(2y - 5) = 0$$

$$(3y + 5) = 0$$

$$(2y - 5) = 0$$

$$\therefore y = -5/3, 5/2$$

Hence, relationship cannot be determined.



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

E82. I.  $3x^2 - 22x + 7 = 0$

$$3x^2 - 21x - x + 7 = 0$$

$$3x(x - 7) - 1(x - 7) = 0$$

$$(3x - 1)(x - 7) = 0$$

$$(x - 7) = 0$$

$$\therefore x = 1/3, 7$$

II.  $y^2 - 20y + 91 = 0$

$$y^2 - 13y - 7y + 91 = 0$$

$$y(y - 13) - 7(y - 13) = 0$$

$$(y - 7)(y - 13) = 0$$

$$y = 7, 13$$

Hence,  $y \geq x$

E83. Total cellular phones sold by store P =  $14/100 \times 11200 = 1568$

Nokia cellular phones sold by store P =  $4/7 \times 1568 = 896$

Total cellular phones sold by store R =  $18/100 \times 11200 = 2016$

Nokia cellular phones sold by store R =  $5/9 \times 2016 = 1120$

Total cellular phones, sold by store S =  $26/100 \times 11200 = 2912$

Nokia cellular phones sold by store S =  $7/13 \times 2912 = 1568$

Total cellular phones sold by store T =  $20/100 \times 11200 = 2240$

Nokia cellular phones sold by store T =  $1/5 \times 2240 = 448$

Total Nokia cellular phones sold by stores

P, R, S and T =  $896 + 1120 + 1568 + 448 = 4032$

$$\therefore \text{Required average} = 4032/4 = 1008$$

E84. Nokia cellular phones sold by store R = 1120

Total number of cellular phones sold by store P = 1568

Number of Samsung cellular phones sold by store P =  $3/7 \times 1568 = 672$

Total number of cellular phones sold by store Q =  $10/100 \times 11200 = 1120$

Number of Samsung cellular phones sold by store Q =  $1/4 \times 1120 = 280$

$$\therefore \text{Required percentage} = (1120 - 952/952 \times 100)\% = 17 \frac{11}{17}\%$$

E85. Central angle =  $26/100 \times 360^\circ = 93.6^\circ$

E86. Number of Nokia cellular phones sold by store S = 1568

Total number of cellular phones sold by store T = 2240



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

Number of Samsung cellular phones sold by store T =  $\frac{4}{5} \times 2240 = 1792$   
Total number of cellular phones sold by store U =  $\frac{12}{100} \times 11200 = 1344$   
Number of Samsung phones sold by store U =  $\frac{10}{21} \times 1344 = 640$   
Required ratio =  $1568 : 1792 + 640 = 1568 : 2432 = 49 : 76$

E87. Total number of cellular phones sold by store Q in October = 1120  
 $\therefore$  In November =  $\frac{115}{100} \times 1120 = 1288$   
Total number of cellular phones sold by store T in October = 2240  
 $\therefore$  In November =  $\frac{105}{100} \times 2240 = 2352$   
 $\therefore$  Total number of cellular phones sold by stores Q and T together in November  
=  $1288 + 2352 = 3640$

E88. Distance travelled by Ashok till 10 a.m. =  $39 \times 2 = 78$  km  
 $\therefore$  Rahul starts at 10 a.m.  
 $\therefore$  At 10 a.m. distance between them  
=  $637 - 78$   
= 559 km  
Time at which they will meet after 10 a.m.  
= Distance between them / Relative speed =  $\frac{559}{39 + 47} = 6.5$  hour  
 $\therefore$  They will meet at 4.30 p.m.

E89. Let the present age of Rashika be  $x$  years and the present age of Sumit be  $y$  years.  
I.  $x : y + 4 = 5 : 7$   
 $\frac{x}{y+4} = \frac{5}{7} \Rightarrow 7x = 5y + 20$   
 $\Rightarrow 7x - 5y = 20$  .....(i)  
II.  $x - 4 : y = 2 : 3$   
 $\frac{x-4}{y} = \frac{2}{3}$   
 $3x - 2y = 12$  .....(ii)  
On solving equation (i) and equation (ii), we get  
 $x = 20$  years,  $y = 24$  years

E90. I. After replacement, let the quantity of milk be  $27x$  and of water be  $13x$  litre  
 $\therefore 27x + 13x = 80 \Rightarrow 40x = 80 \Rightarrow x = 2$  litre  
 $\therefore$  Quantity of milk in 80 litre of mixture =  $27 \times 2 = 54$  litre  
II. After replacement, let the quantity of milk be  $4x$  litre and of water be  $x$  litre  
 $\therefore 4x + x = 80 \Rightarrow x = 16$  litre  
 $\therefore$  Quantity of milk in 80 litre of mixture =  $4 \times 16 = 64$  litre



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

E91. Let the amount invested by A be  $3x$  and by B be  $5x$ . Time = 2 years (Given)

I. Rate of Interest in scheme A = 20%

$\therefore$  Rate of interest in scheme B =  $75/100 \times 20 = 15\%$

II. Difference between simple interest and compound interest = Rs 900/-

$\therefore 5x \times 15 \times 2/100 - 3x [(1 + 20/100)^2 - 1] = 900$

$15/10x - 33/25x = 900$

$75x - 66x/50 = 900$

$9x = 900 \times 50$

$x = \text{Rs } 5000 \text{ /-}$

$\therefore$  Amount invested in scheme A =  $3 \times 5000 = \text{Rs } 15,000 \text{ /-}$

E92. We know, Time = Distance/Speed

Time = 135 min =  $135/60 \text{ hr} = 9/4 \text{ hr}$

I. Total distance = 45 km

Let the speed of y be  $m \text{ km/hr}$ .

$\therefore$  Speed of x =  $150/100 \times m = 3/2 m$

$\therefore 45/3/2m + m = 9/4 \Rightarrow m = 8 \text{ km/hr}$

$\therefore$  Speed of x =  $3/2 \times 8 = 12 \text{ km/hr}$

E93. I. Let the length and breadth of a hall be  $3x$  and  $2x$  metre respectively.

II. Perimeter =  $2(l + b)$

$2(l + b) = 50 \Rightarrow 2(3x + 2x) = 50$

$x = 5 \text{ m}$

and height =  $1/4 \times 50 = 25/2 \text{ m}$

As, we know

Area of four walls =  $2(l + b) \times h$

$\therefore$  Area of two walls =  $(l + b) \times h$

$= (3 \times 5 + 2 \times 5) \times 25/2 \text{ m}^2 = 25 \times 25/2 \text{ m}^2$

Cost of painting two walls

$= \text{Area of two walls} \times 450 = 25 \times 25/2 \times 450$

$= 625 \times 225 = \text{Rs } 1,40,625 \text{ /-}$

E94.  $S = (u - v) T \rightarrow$  upstream

$S = (u + v) T \rightarrow$  downstream

Let the speed of current be  $x \text{ km/hr}$ . then speed of boat be  $5x \text{ km/hr}$ .

$\therefore 13.2 = (x + 5x) \times 1.1$

$6x = 12$

$x = 2 \text{ km/hr}$

$\therefore v = x = 2$

$u = 5x = 10$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

$$\begin{aligned}\therefore S &= (10 - 2) \times 312/60 \\ &= 41.6\text{km}\end{aligned}$$

E95. Work /Men x Days = Remaining work /Men x Days

$$W/24 \times 13 = W/20 \times D$$

$$20 \times D = 24 \times 13$$

$$\Rightarrow D = 24 \times 13/20 = 78/5 = 15 \frac{3}{5} \text{ days}$$

E96. Total number of vehicles manufactured by company P in 2010, 2011 and 2013

$$= (220 + 160 + 310) \text{ thousand} = 690 \text{ thousand}$$

Total number of vehicles manufactured by company Q in 2011, 2012 and 2013

$$= 120 + 180 + 210 = 510 \text{ thousand}$$

$$\therefore \text{Required difference} = 690 - 510 = 180 \text{ thousand}$$

E97. Total number of vehicles manufactured by company Q in six years ' - .

$$= (130 + 100 + 160 + 120 + 180 + 210) \times 1000$$

$$= 900 \times 1000$$

$$\therefore \text{Required average} = 900/6 \times 1000$$

$$= 150 \text{ (thousand)}$$

E98. Total number of vehicles in 2010 = 380

Total number of vehicles produced in 2011 = 280

Percentage decrease

$$= 100/380 \times 100$$

$$= 500/19 = 26 \frac{6}{19}\%$$

E99. Number of vehicles manufactured by company P in 2012 = 240 (thousand)

$\therefore$  Non-defective piece

$$= 240000 - 15000$$

$$= 225000$$

Number of vehicles manufactured by company Q in 2013 = 210(thousand)

$$\therefore \text{Non-defective piece} = 210000 - 10000 = 200000$$

$$\therefore \text{Required ratio} = 225000 : 200000 = 9 : 8$$



# SHAKTHII ACADEMY

Increasing Confidence ; Reaching Goals

E100. Number of vehicles manufactured by company P in 2009 = 190

∴ In 2014 =  $130/100 \times 190 = 247$

---Explanation---

---

Video Class Available Link : <https://shakthiiacademy.com/online-classes-for-you/>

Subscribe Our Youtube Channel : [“Shakthii Academy”](#)

For more Details : Call / Whatsapp : 9884 2222 49

Shakthii