



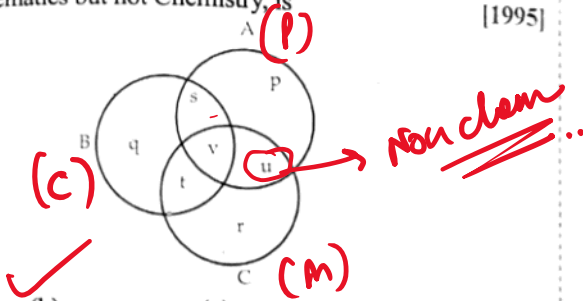
UPSC
MENTAL ...

Handwritten red notes:
 4/12/95 28
 11/1/96 28
 24/1/96 28
 26/2/96 (leap)
 29 (circled)
 25 28

1. Consider the series given below: [1995]
 4/12/95, 1/1/96, 29/1/96, 26/2/96, The next term of the series is

- (a) 24/3/96 (b) 25/3/96 (c) 26/3/96 (d) 27/3/96

2. In the given diagram, circle A represents teachers who can teach Physics, circle B represents teachers who can teach Chemistry and circle C represents those who can teach Mathematics. Among these, which represents teachers who can teach Physics and Mathematics but not Chemistry, is [1995]



- (a) v (b) u (c) s (d) t

3. Seven men A, B, C, D, E, F and G are standing in a queue in that order. Each one is wearing a cap of a different colour like violet, indigo, blue, green, yellow, orange and red. D is able to see in front of him green and blue, but not violet. E can see violet and yellow, but not red. G can see caps of all colours other than orange. If E is wearing an indigo coloured cap, then the colour of the cap worn by F is [1995]

- (a) blue (b) violet (c) red (d) orange

4. Examine the following statements : [1995]

- I. All children are inquisitive
- II. Some children are inquisitive
- III. No children are inquisitive
- IV. Some children are not inquisitive

Among these statements the two statements which cannot both be true simultaneously but can both be false, would be

- (a) I & III (b) I & IV (c) II & III (d) III & IV

5. Which of the following can be inferred from the statement that "Either John is stupid or John is lazy" ? [1995]

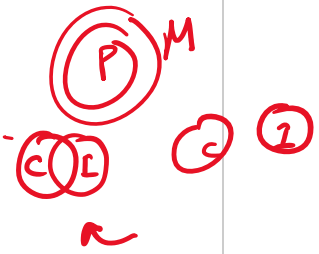
- 1. John is lazy/therefore, John is not stupid
- 2. John is not lazy/therefore, John is stupid
- 3. John is not stupid/therefore, John is lazy
- 4. John is stupid/therefore, John is not lazy

Codes:

- (a) 1 & 2 (b) 2 & 3 (c) 3 & 4 (d) 1 & 4

6. Six roads lead to a country. They may be indicated by letters X, Y, Z and digits 1, 2, 3. When there is storm, Y is blocked. When there are floods X, 1 and 2 will be affected. When road 1 is blocked, Z also is blocked. At a time when there are floods and a storm also blows, which road (s) can be used ? [1996]

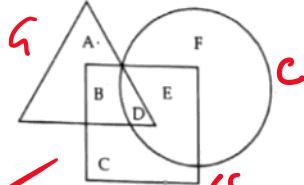
- (a) Z & 2 (b) Only Z (c) Only 3 (d) Only Y



7. Which one of the following Venn diagrams correctly illustrates the relationship among the classes: Carrot, Food, Vegetable? [1996]



8. In the given figure, the triangle represents girls, the square represents sports persons and the circle represents coaches. The portion in the figure which represents girls who are sports persons but not coaches is the one labelled, as [1996]



- (a) A (b) B (c) D (d) E

9. The next pair of letters in the series AZ, CX, FU..... is [1996]

- (a) JQ (b) KP (c) IR (d) IV

10. Mouse is to cat as fly is to : [1996]

- (a) rat (b) animal (c) spider (d) horse

11. Examine the following statements: [1996, 2014-II]

- George attends Music classes on Monday
 - He attends Mathematics classes on Wednesday
 - His Literature classes are not on Friday
 - He attends History classes on the day following the day of his Mathematics classes
 - On Tuesday he attends his Sports classes.
- If he attends just one subject in a day and his Sunday is free, then he is also free on

- (a) Monday (b) Thursday
(c) Saturday (d) Friday

12. In an accurate clock, in a period of 2 hours 20 minutes (140 minutes), the minute hand will move over [1996]

- (a) 520° (b) 370° (c) 840° (d) 140°

13. Two important characteristics of a hypothesis are that it should be testable and that it should be stated in a manner that it can be refuted. Which one of the following hypothesis fulfills these characteristics? [1996]


- (a) Intelligent persons have good memory
(b) Some birds are animals
(c) Some businessman are dishonest
(d) All men are mortal

14. In the series POQ, SRT, VUW, _____, the blank space refers to [1997]

- (a) XYZ (b) XZY (c) YXZ (d) ZYX

AZ
1 26 = 27
CX
3 24
FU
6 22

1+2=3
3+3=6
6+4=10

 360 x 2 = 720

90 623
360 95123
60
= 60 x 20 = 1200

1 2 3
+2 +3 +2

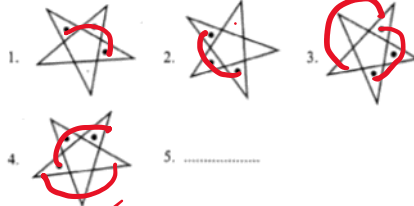
15. Examine the following statements regarding a set of balls

1. All balls are black [1997]
2. All balls are white
3. Only some balls are black
4. No balls are black

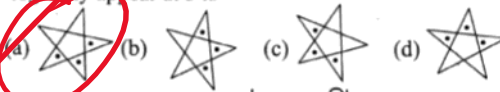
Assuming that the balls can only be black or white, which two of the statements given above can both be true, but cannot both be false? Choose the correct answer from the codes given below.

- (a) 1 and 4 (b) 1 and 3
(c) 2 and 3 (d) 2 and 4

16. Consider the figures given below: [1997]

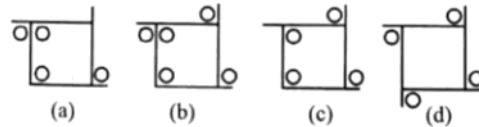


In the given sequence of figures, the figure that would logically appear at 5 is



17. [1998]

In the above set of figures (I) to (IV), some parts are shown to change their position in a regular direction. Following the same sequence, which one of the following will appear at the fifth stage?



18. Examine the following statements: [1998]

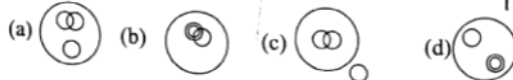
1. All members of Mohan's family are honest
2. Some members of Mohan's family are not employed
3. Some employed persons are not honest
4. Some honest persons are not employed

Which one of the following inferences can be drawn from the above statements?

- (a) All members of Mohan's family are employed
- (b) The employed members of Mohan's family are honest
- (c) The honest members of Mohan's family are not employed
- (d) The employed member of Mohan's family are not honest

19. In a dinner party both fish and meat were served. Some took only fish and some only meat. There were some vegetarians who did not accept either. The rest accepted both fish and meat

Which one of the following logic diagrams correctly reflects the above situation? [1998]



(B) Blank

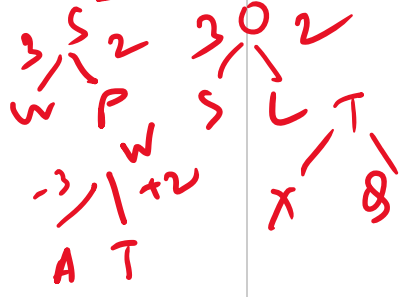
20. B, C, D, E, F and G are members of a family consisting of 4 adults and 3 children, two of whom, F and G are girls. A and D are brothers and A is a doctor. E is an engineer married to one of the brothers and has two children. B is married to D and G is their child. Who is C ? [1998]
 (a) G's brother (b) F's father
 (c) E's father (d) A's son
21. Which one of the following satisfies relationship Dda: aDD :: Rrb : ? [1998]
 (a) DDA (b) RRR (c) bRR (d) BBr
22. A, B, C, D, E and F, not necessarily in that order, are sitting on six chairs regularly placed around a round table. It is observed that A is between D and F, C is opposite to D and D and E are not on neighbouring chairs. [1998]
 Which one of the following pairs must be sitting on neighbouring chairs?
 (a) A and B (b) C and E (c) B and F (d) A and C
23. If in a certain code SAND is VDQG and BIRD is ELUG, then what is the code for LOVE? [1998]
 (a) PRYG (b) ORTG (c) NPUH (d) ORYH
24. In a group of five people, K, L and M are ambitious, M, N, and R are honest, L, M and N are intelligent and K, N and R are industrious. Among these neither industrious nor ambitious person(s) would include [1999]
 (a) K alone (b) L and R
 (c) M and N (d) none of the group
25. On another planet, the local terminology for earth, water, light, air and sky are 'sky', 'light', 'air', 'water' and 'earth' respectively. If someone is thirsty there, what would he drink? [1999]
 (a) Sky (b) Water (c) Air (d) Light
26. In a code language, 'SOLID' is written as 'WPSLPIKHA'. What does the code 'ATEXQIBVO' refer to? [1999]
 (a) EAGER (b) WATER (c) WAGER (d) WATER
27. Examine the following relationships among members of a family of six persons A, B, C, D, E and F. [2000]
 1. The number of males equals that of females
 2. A and E are sons of F.
 3. D is the mother of two, one boy and one girl
 4. B is the son of A
 5. There is only one married couple in the family at present
 Which one of the following inferences can be drawn from the above?
 (a) A, B and C are all females
 (b) A is the husband of D
 (c) E and F are children of D
 (d) D is the grand daughter of F
28. In a certain code, MARCH is written as OCTEJ, how is RETURN written in that code? [2000]
 (a) TFUVSM (b) QGSTQM
 (c) TGVWTP (d) TGRVSO
29. A, B, C, D, E and F not necessarily in that order are sitting in six chairs regularly placed around a round table. It is observed that
 A is between D and F
 C is opposite to D
 D and E are not on neighbouring chairs

SAND + 3
 VDQG

BIRD + 3
 ELUG

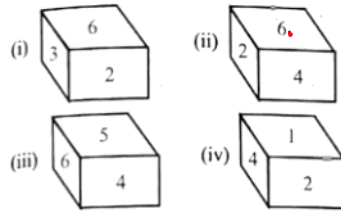
LOVE
 O H

SOLID
 WPSLPIKHA



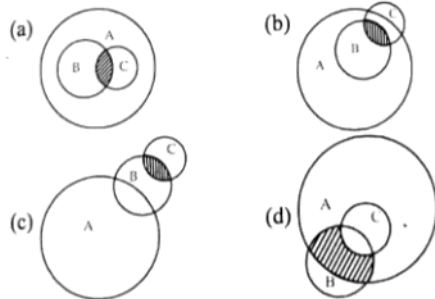
Which one of the following must be true [2000]
 (a) A is opposite B (b) D is opposite E
 (c) C and B are neighbours (d) B and E are neighbours

Consider the following pictures of dice : [2000]



What is the number opposite to 3 ?
 (a) 1 (b) 4
 (c) 5 (d) Data insufficient

31. 30. Most guitarists are bearded males. If A represents all males, B represents bearded males and C represents all male guitarists, then the correct diagram for their relations (shaded portion) is [2001]



DIRECTIONS (Qs. 32-35): The details given below relate to the FOUR items that follow:

Amit wishes to buy a magazine, four magazines one each on politics, sports, science and films are available to choose from. They are edited by Feroz, Gurbaksh, Swami and Ila (not necessarily in that order) and published by Aryan, Bharat, Charan and Dev Publishers (not necessarily in that order) Further, it is given that

- (i) Dev publishers have published the magazine edited by Feroz.
- (ii) The magazine on politics is published by Aryan Publishers
- (iii) The magazine, on films is edited by Swami and is not published by Charan Publishers
- (iv) The magazine on science is edited by Ila.

For the following four items, select the correct answer. [2004]

- 32. The magazine on science is published by [2004]
 (a) Aryan Publishers (b) Bharat Publishers
 (c) Charan Publishers (d) Dev Publishers
- 33. The magazine on sports is [2004]
 (a) edited by Feroz (b) edited by Gurbaksh
 (c) published by Bharat Publishers
 (d) published by Charan Publishers
- 34. The magazine on film is [2004]
 (a) published by Dev Publishers
 (b) published by Bharat Publishers
 (c) edited by Gurbaksh
 (d) published by Charan Publishers

- 35. The magazine on politics is [2004]
 (a) edited by Ila
 (b) edited by Gurbaksh
 (c) published by Dev Publishers
 (d) published by Charan Publishers

36. A person stands at the middle point of a wooden ladder, which starts slipping between a vertical wall and the floor of a room. The path traced by a person standing at the middle point of the slipping ladder, is [2004]

It's a 7
 1 die
 2 dice
 regular die
 paired

Handwritten calculations and notes in red ink:

- AM - z
- z - A
- 25
- 35
- 784
- 625
- 7 | 2023 | 28977
- 14
- 62
- 56
- 63
- 63
- 50-70
- 0
- 1 cam
- 25-357
- 307
- 707
- 457
- 257

35. The magazine on politics is [2004]
 (a) edited by Ila
 (b) edited by Gurbaksh
 (c) published by Dev Publishers
 (d) published by Charan Publishers
36. A person stands at the middle point of a wooden ladder, which starts slipping between a vertical wall and the floor of a room. The path traced by a person standing at the middle point of the slipping ladder, is [2004]
 (a) a straight line (b) an elliptical path
 (c) a circular path (d) a parabolic path

DIRECTIONS (Qs. 37-40): *Based on the information given below, answer the four items which follow it:*

Gopal, Harsh, Inder, Jai and Krishnan have Ahmedabad, Bhopal, Cuttack, Delhi and Ernakulam as their hometowns (not necessarily in that order). They are studying in Engineering, Medical, Commerce, Economics and History college. (not necessarily in that order). None of the five boys is studying in his hometown, but each of them studies in one of the cities given above.

Further, it is given that [2005]

- (i) Gopal's home town is Ernakulam.
- (ii) Harsh is not studying in Ahmedabad or Bhopal
- (iii) Economics college is in the Bhopal
- (iv) Inder's hometown is in Cuttack
- (v) Krishnan is studying in Delhi
- (vi) Jai is studying in Ernakulam and the History college is in his hometown Ahmedabad
- (vii) Engineering college is situated in Ernakulam.

Based on the information given above answer the next FOUR items:

37. Which is Krishnan's hometown?
 (a) Ahmedabad (b) Cuttack
 (c) Bhopal (d) Cannot be determined.
38. Which college is situated in Inder's hometown?
 (a) Commerce (b) Medical
 (c) Economics (d) Commerce or Medical
39. Who studies in Bhopal ? [2005]
 (a) Gopal (b) Harsh
 (c) Gopal or Inder (d) Inder or Harsh
40. If Inder studies in Ahmedabad, then which one of the following is the correct combination of person Hometown-Place of study? [2005]
 (a) Gopal – Ernakulam – Delhi
 (b) Jai – Ahmedabad – Ernakulam
 (c) Krishnan – Delhi – Ernakulam
 (d) Harsh – Bhopal – Delhi
41. An equilateral triangular plate is to be cut into n number of identical small equilateral triangular plates. Which of the following can be possible value of n ? [2005]
 (a) 196 (b) 216 (c) 256 (d) 296
42. P, Q, R, S and T reside in a five-storeyed (Ground + 4) building, and each of them resides on a separate floor. Further: [2006]
 1. T does not reside on the topmost floor.
 2. Q does not reside on the ground floor.

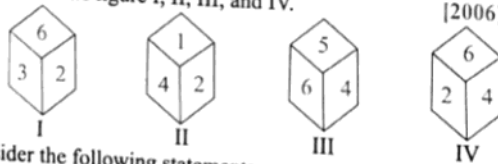
3. S resides on one storey above that of P and one storey below that of R. To know as to which one of the five persons resides on the ground floor which of the above statements are sufficient/ insufficient?
- (a) 1 and 3 are sufficient (b) 2 and 3 are sufficient
 (c) 1, 2 and 3 are sufficient (d) 1, 2 and 3 are insufficient
43. A box contains five sets of balls while there are 3 balls in each set. Each set of balls has one color which is different from every other set, what is the least number of balls that must be removed from the box in order to claim with certainty that a pair of balls of the same colour has been removed? [2006]
 (a) 6 (b) 7 (c) 8 (d) 9
44. In an office, the number of persons who take tea is twice the number of persons who take only coffee. The number of persons who take coffee is twice the number of persons who take only tea. [2006]

Consider the following statement:

- The sum of the number of persons who take either tea or coffee or both is four times the number of persons who take both coffee and tea.
- The sum of the number of persons who take only coffee and those who take only tea is twice the number of persons who take both tea and coffee.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
 (c) Both 1 and 2 (d) Neither 1 nor 2
45. Each of the six faces of a cube is numbered by one of the digits from 1 to 6. This cube is shown in its four different positions in the figure I, II, III, and IV. [2006]

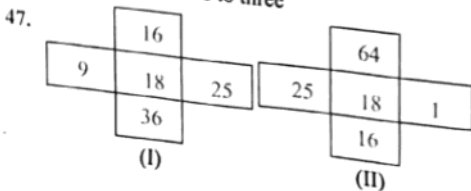


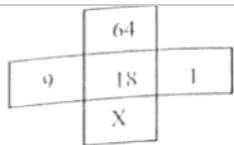
Consider the following statements.

- Figures II and III are sufficient to know as to which face is opposite to the face numbered 6.
- Figures II and III are sufficient to know as to which face is opposite to the face numbered 4.
- Figures I and IV are sufficient to know as to which face is opposite to the face numbered 3.

Which of the statements given above are correct?

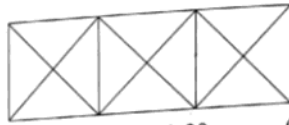
- (a) 1 and 3 only (b) 1 and 2 only
 (c) 2 and 3 only (d) 1, 2 and 3
46. A watch showed a time of fourteen minutes past nine (9 hrs and 14 minutes). The positions of the hour-hand and the minute hand of the watch are exactly interchanged. The new time shown by the watch is closest to which one of the following? [2006]
- (a) Twelve minutes to three
 (b) Thirteen minutes to three
 (c) Fourteen minutes to three
 (d) Fifteen minutes to three





(III)

- What is the value of X in figure III ? [2006]
- (a) 4 (b) 16 (c) 25 (d) 36
48. Six faces of a cube are numbered from 1 to 6, each face carrying one different number. Further,
1. The face 2 is opposite to the face 6.
 2. The face 1 is opposite to the face 5.
 3. The face 3 is between the face 1 and the face 5
 4. The face 4 is adjacent to the face 2.
- Which one of the following is correct? [2007]
- (a) The face 2 is adjacent to the face 3
 - (b) The face 6 is between the face 2 and the face 4
 - (c) The face 1 is between the face 5 and the face 6
 - (d) None of the above
49. How many different triangles are there in the figure shown below?



- (a) 28 (b) 24 (c) 20 (d) 16 [2008]
50. Six persons A, B, C, D, E and F are standing in a row. C and D are standing close to each other alongside E. B is standing beside A only. A is fourth from F. Who are standing on the extremes? [2009]
- (a) A and F
 - (b) B and D
 - (c) B and F
 - (d) None of the above
51. How many letters of the English alphabet (capitals) appear same when looked at in a mirror? [2009]
- (a) 9
 - (b) 10
 - (c) 11
 - (d) 12
52. There is a family of 6 persons A, B, C, D, E and F. There are two married couples in the family. The family members are lawyer, teacher, salesman, engineer, accountant and doctor. D, the salesman is married to the lady teacher. The doctor is married to the lawyer. F, the accountant is the son of B and brother of E. C, the lawyer is the daughter-in-law of A. E is the unmarried engineer. A is the grandmother of F. How is E related to F? [2009]
- (a) Brother
 - (b) Sister
 - (c) Father
 - (d) Cannot be established (cannot be determined)
53. There are three cans A, B and C. The capacities of A, B and C are 6 litres, 10 litres and 16 litres respectively. The can C contains 16 litres of milk. The milk has to be divided in them using these three cans only. [2009]
- Consider the following statements:
1. It is possible to have 6 litres of milk each in can A and can B.
 2. It is possible to have 8 litres of milk each in can B and can C.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2

54. A person travels 12 km due North, then 15 km due East, after that 15 km due West and then 18 km due South. How far is he from the starting point? [2009]
 (a) 6 km (b) 12 km (c) 33 km (d) 60 km
55. Six books A, B, C, D, E and F are placed side by side. B, C and E have blue cover and the other books have red cover. Only D and F are new books and the rest are old. A, C and D are law reports and others are Gazetteers. Which book is a new law report with a red colour? [2010]
 (a) A (b) B (c) C (d) D
56. Six persons M, N, O, P, Q and R are sitting in two rows, three in each. Q is not at the end of any row. P is second to the right of R. O is the neighbour of Q and is sitting diagonally opposite to P. N is the neighbour of R. On the basis of above information, who is facing N? [2010]
 (a) R (b) Q (c) P (d) M
57. P, Q, R and S are four men. P is the oldest but not the poorest. R is the richest but not the oldest. Q is older than S but not than P or R. P is richer than Q but not than S. The four men can be ordered (descending) in respect of age and richness, respectively, as [2010]
 (a) PQRS, RPSQ (b) PRQS, RSPQ
 (c) PRQS, RSQP (d) PRSQ, RSPQ
58. In a meeting, the map of a village was placed in such a manner that south-east becomes north, north-east becomes west and so on. What will south become? [2010]
 (a) North (b) North-east (c) North-west (d) West
59. A cuboid has six sides of different colours. The red side is opposite to black. The blue side is adjacent to white. The brown side is adjacent to blue. The red side is face down. Which one of the following would be the opposite to brown? [2010]
 (a) Red (b) Black (c) White (d) Blue

DIRECTIONS (Qs. 60-62): Read the following passage and answer the 3 (three) items that follow : [2011-II]

A, B, C, D and E are members of the same family. There are two fathers, two sons, two wives, three males and two females. The teacher was the wife of a lawyer who was the son of a doctor. E is not a male, neither also a wife of a professional. C is the youngest person in the family and D is the eldest. B is a male."

60. How is D related to E ?
 (a) Husband (b) Son (c) Father (d) Wife
61. Who are the females in the group ?
 (a) C & E (b) C & D (c) E & A (d) D & E
62. Whose wife is the teacher ?
 (a) C (b) D (c) A (d) B

DIRECTIONS (Qs. 63-65): Read the following passage and answer the 3 (three) items that follow : [2011-II]

In a survey regarding a proposed measure to be introduced, 2878 persons took part of which 1652 were males. 1226 persons voted against the proposal of which 796 were males. 1425 persons voted for the proposal. 196 females were undecided.

63. How many females voted for the proposal ?
 (a) 430 (b) 600 (c) 624 (d) 640
64. How many males were undecided ?
 (a) 31 (b) 227 (c) 426 (d) 581

65. How many females were not in favour of the proposal?
 (a) 430 (b) 496 (c) 586 (d) 1226
66. In a queue, Mr. X is fourteenth from the front and Mr. Y is seventeenth from the end, while Mr. Z is exactly in between Mr. X and Mr. Y. If Mr. X is ahead of Mr. Y and there are 48 persons in the queue, how many persons are there between Mr. X and Mr. Z?
 (a) 6 (b) 7 (c) 8 (d) 9

DIRECTIONS (Qs. 67-68): Each of the following two items consists of four statements. Of these four statements, two cannot both be true, but both can be false. Study the statements carefully and identify the two that satisfy the above condition. Select the correct answer using the codes given below each set of statements:

67. Examine the following statements : [2011-11]
 1. All animals are carnivorous.
 2. Some animals are not carnivorous.
 3. Animals are not carnivorous.
 4. Some animals are carnivorous.
 Codes:
 (a) 1 & 3 (b) 1 & 2 (c) 2 & 3 (d) 3 & 4
68. Examine the following statements : [2011-11]
 1. All trains are run by diesel engine.
 2. Some trains are run by diesel engine.
 3. No train is run by diesel engine.
 4. Some trains are not run by diesel engine.
 Codes:
 (a) 1 & 2 (b) 2 & 3 (c) 1 & 3 (d) 1 & 4
69. There are four routes to travel from city A to city B and six routes from city B to city C. How many routes are possible to travel from the city A to city C? [2011-11]
 (a) 24 (b) 12 (c) 10 (d) 8
70. Consider the following figure and answer the item that follows:



What is the minimum number of different colours required to paint the figure given above such that no two adjacent regions have the same colour? [2011-11]
 (a) 3 (b) 4 (c) 5 (d) 6

71. Consider the following argument : [2011-11]
 "In order to be a teacher one must graduate from college. All poets are poor. Some Mathematicians are poets. No college graduate is poor."
 Which one of the following is not a valid conclusion regarding the above argument?
 (a) Some Mathematicians are not teachers.
 (b) Some teachers are not Mathematicians.
 (c) Teachers are not poor, (d) Poets are not teachers.
72. The houses of A and B face each other on a road going north-south, A's being on the western side. A comes out of his house, turns left, travels 5 km, turns right, travels 5 km to the front of D's house. B does exactly the same and reaches the front of C's house. In this context, which one of the following statements is correct ?

- (a) C and D live on the same street. [2011-II]
 (b) C's house faces south.
 (c) The houses of C and D are less than 20 km apart.
 (d) None of the above

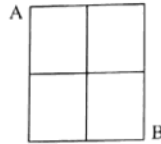
73. Consider the following figures : [2011-II]

2	6
80	24

3	?
120	36

What is the missing number?

- (a) 7 (b) 8 (c) 9 (d) 10
74. Study the following figure :



A person goes from A to B always moving to the right or downwards along the lines. How many different routes can he adopt? [2011-II]

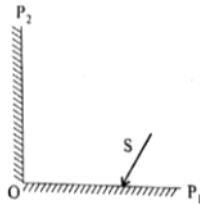
Select the correct answer from the codes given below:

- (a) 4 (b) 5 (c) 6 (d) 7
75. Consider the following figure and answer the item that follows : [2011-II]



What is the total number of triangles in the above grid ?

- (a) 27 (b) 26 (c) 23 (d) 22
76. Consider the figure given below and answer the items that follows: [2011-II]



In the figure shown above, OP 1 and OP 2 are two plane mirrors kept perpendicular to each other. S is the direction of a beam of light falling on the mirror OP 1. The direction of the reflected beam of light from the mirror OP 2 will be

- (a) Perpendicular to the direction S.
 (b) At 45° to the direction S.
 (c) Opposite and parallel to the direction S.
 (d) At 60° to the direction S.
77. A person stood alone in a desert on a dark night and wanted to reach his village which was situated 5 km east of the point where he was standing. He had no instruments to find the direction but he located the polestar. The most convenient way now to reach his village is to walk in the [2012-I]
- (a) direction facing the polestar
 (b) direction opposite to the polestar