

Jawahar Navodaya Vidyalaya (2025)

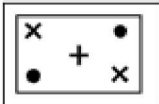
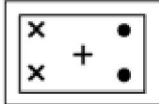
Entrance Exam Class-VI (Solved Questions)

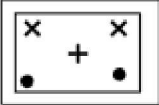
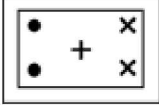
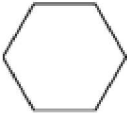
Held on: 18 January 2025

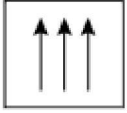
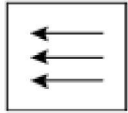
Section-I: Mental Ability Test

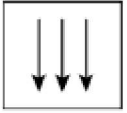
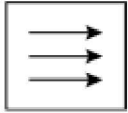
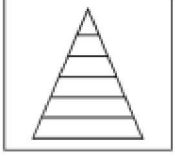
PART-1

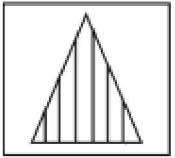
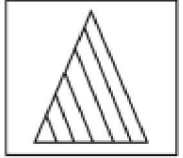
DIRECTIONS : In Question Nos. 1 to 4, four figures (a), (b), (c) and (d) have been given in each question. Of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different. Darken the circle for the answer in the OMR Answer Sheet against the number corresponding to the question.

1. (a)  (b) 

 (c)  (d) 
2. (a)  (b) 

 (c)  (d) 
3. (a)  (b) 

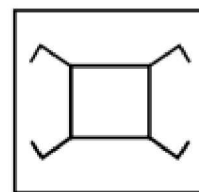
 (c)  (d) 
4. (a)  (b) 

 (c)  (d) 

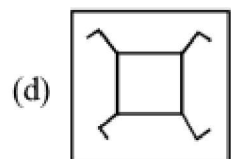
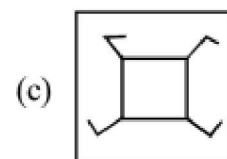
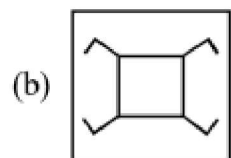
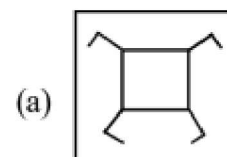
PART-2

DIRECTIONS : In Question Nos. 5 to 8, a question figure is given on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure which is exactly the same as the question figure and darken the circle in the OMR Answer sheet against the number corresponding to the question.

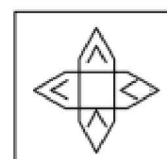
5. Question Figure



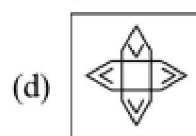
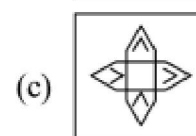
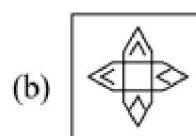
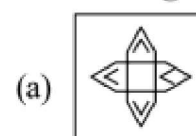
Answer Figures



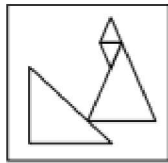
6. Question Figure



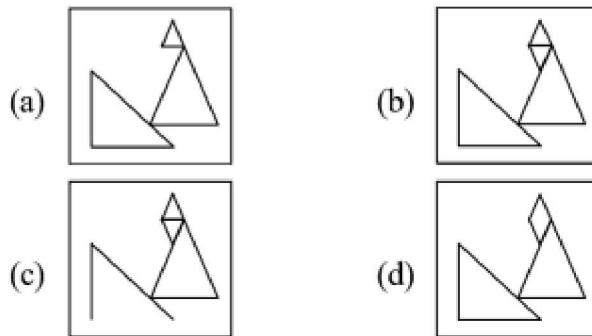
Answer Figures



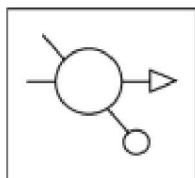
7. Question Figure



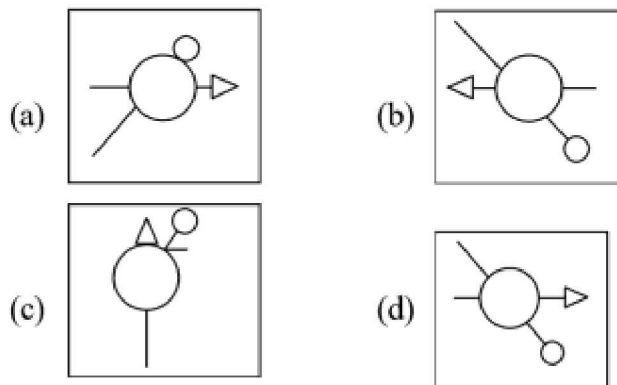
Answer Figures



8. Question Figure



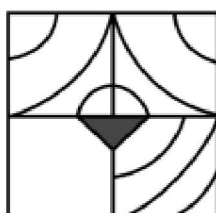
Answer Figures



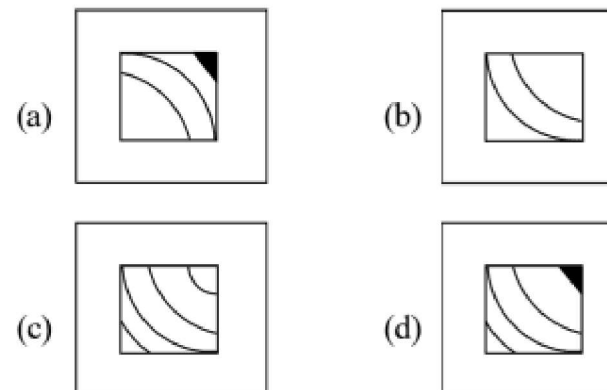
PART-3

DIRECTIONS : In Question Nos. 9 to 12, there is a question figure on the left side, a part of which is missing. Observe the answer figures (a), (b), (c) and (d) on the right side and find out the answer figure which, without changing the direction, fits in the missing part of the question figure in order to complete the pattern in the question figure. Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.

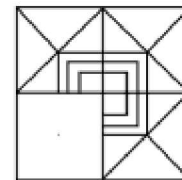
9. Question Figure



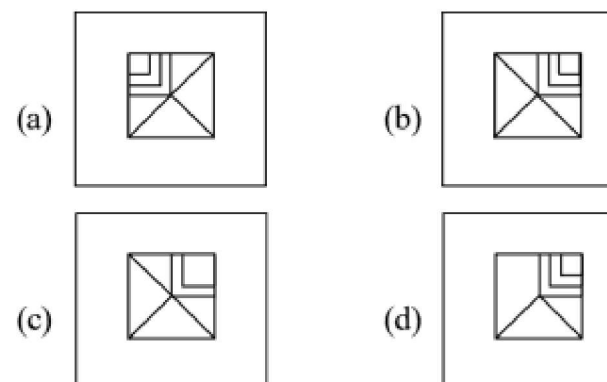
Answer Figures



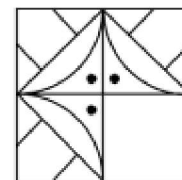
10. Question Figure



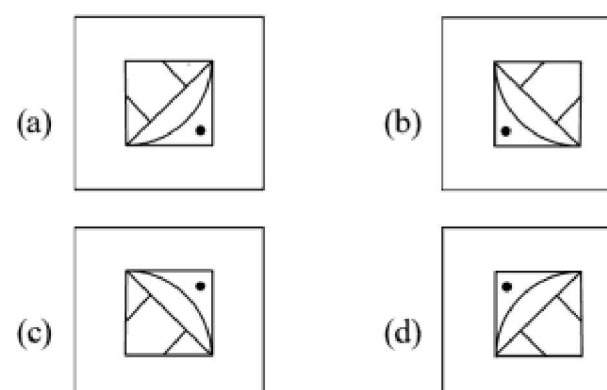
Answer Figures



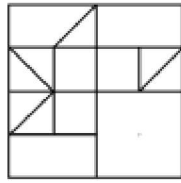
11. Question Figure



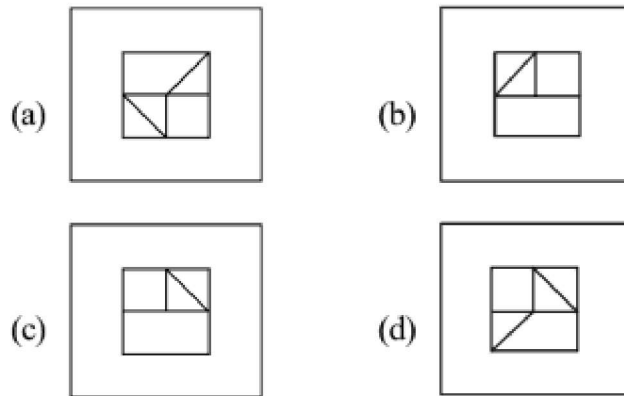
Answer Figures



12. Question Figure



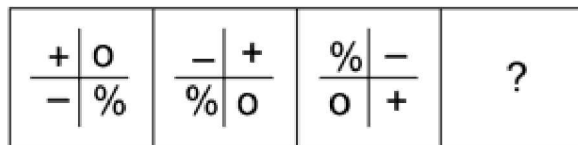
Answer Figures



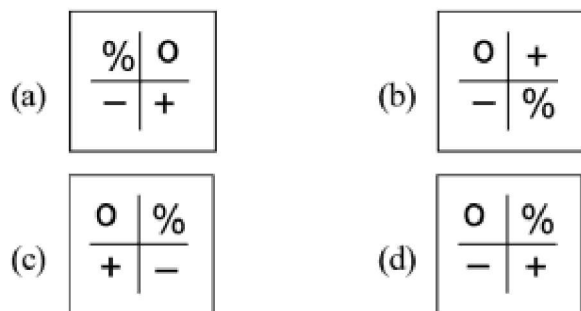
PART-4

DIRECTIONS: In Question Nos. 13 to 16, there are three question figures on the left side and the space for the fourth figure is left blank. The question figures are in a series. Find out one figure from among the answer figures given on the right side which occupies the blank space for the fourth figure on the left side and completes the series. Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.

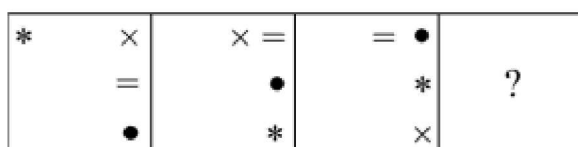
13. Question Figures



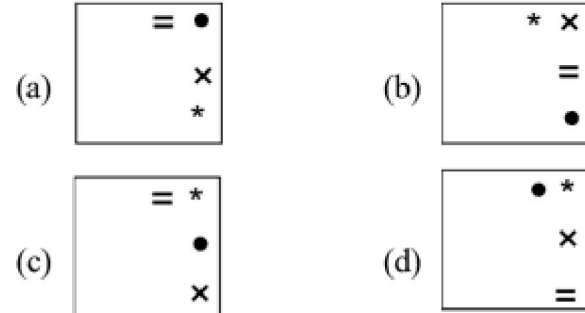
Answer Figures



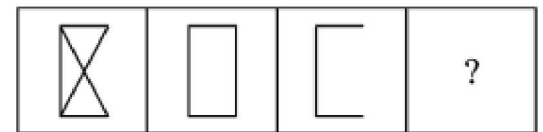
14. Question Figures



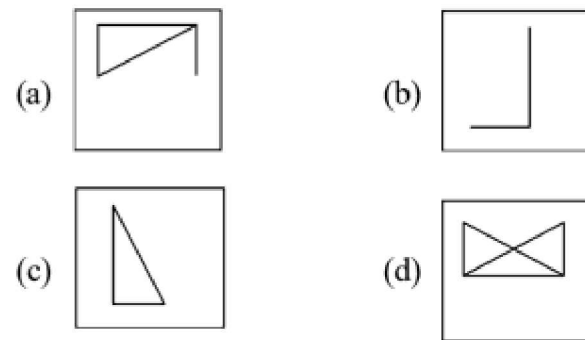
Answer Figures



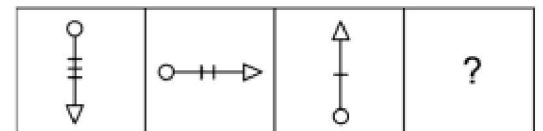
15. Question Figures



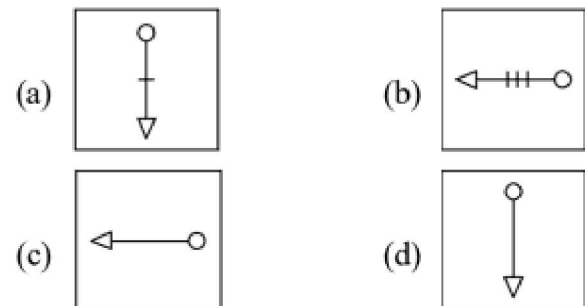
Answer Figures



16. Question Figures



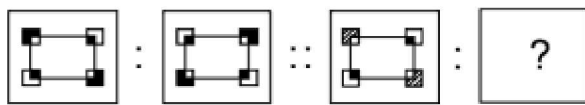
Answer Figures



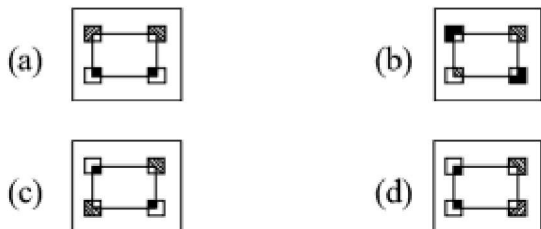
PART-5

DIRECTIONS: In Question Nos. 17 to 20, there are two sets of two question figures each. The second set has an interrogation mark (?). There exists a relationship between the first two question figures. Similar relationship should exist between the third and the fourth question figure. Select one of the answer figures which replaces the mark of interrogation. Darken the circle in the OMR Answer Sheet against the number corresponding to the question.

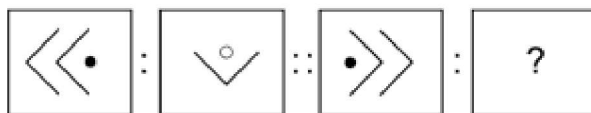
17. Question Figures



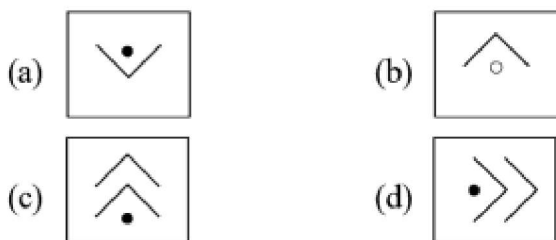
Answer Figures



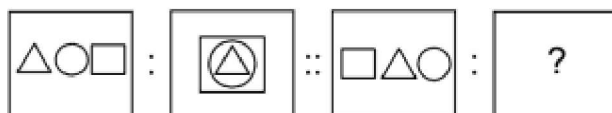
18. Question Figures



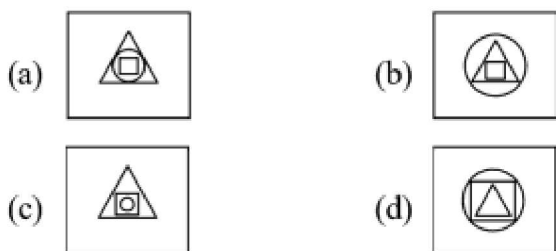
Answer Figures



19. Question Figures



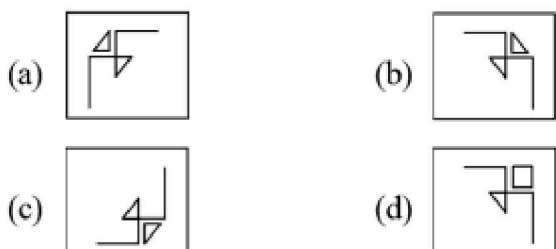
Answer Figures



20. Question Figures



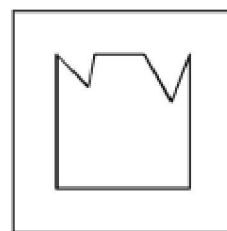
Answer Figures



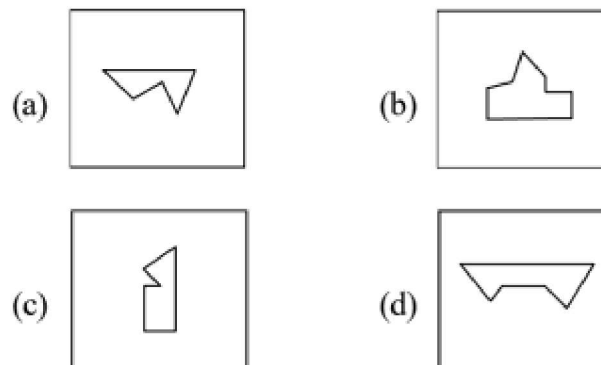
PART-6

DIRECTIONS : In Question Nos. 21 to 24, one part of a geometrical figure (Triangle, Square, Circle) is on the left side as question figure and the other part is on the right side among the four answer figures (a), (b), (c) and (d). Find the figure on the right side that completes the geometrical figure and darken the circle in the OMR Answer Sheet against the number corresponding to the question.

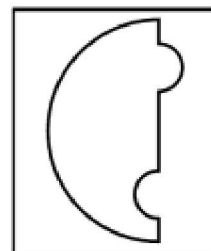
21. Question Figure



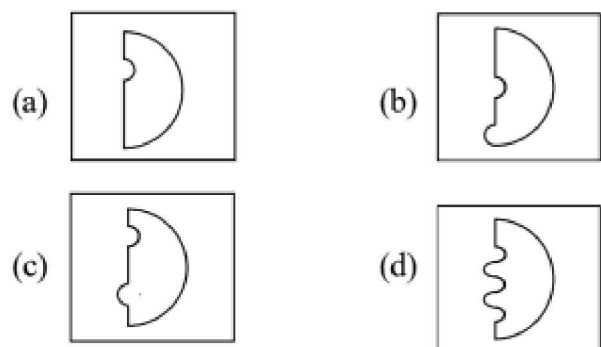
Answer Figures



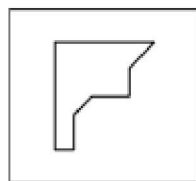
22. Question Figure



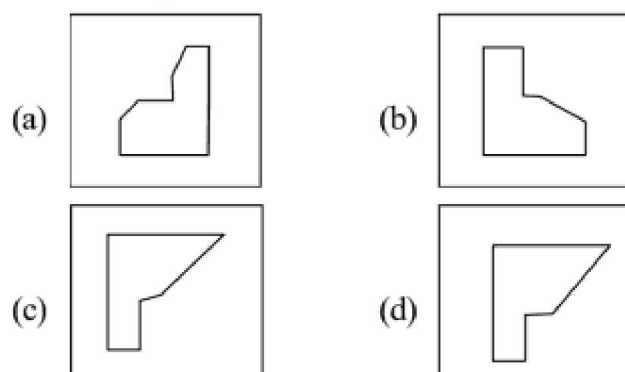
Answer Figures



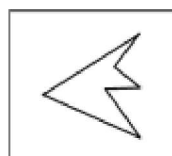
23. Question Figure



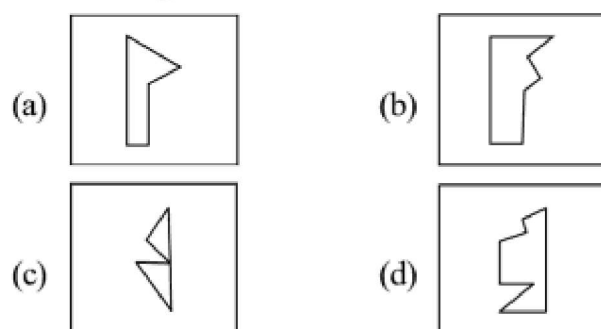
Answer Figures



24. Question Figure



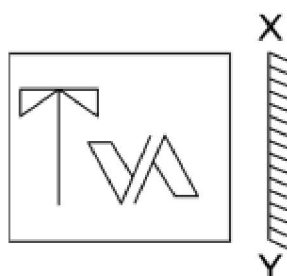
Answer Figures



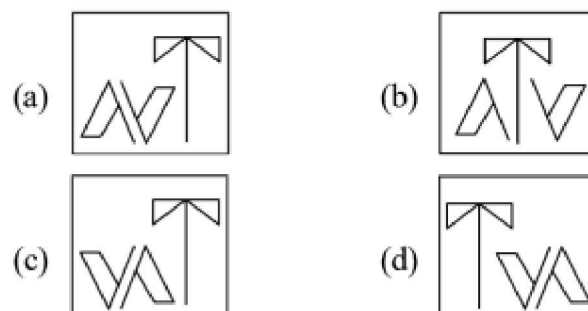
PART-7

DIRECTIONS : In Question Nos. 25 to 28, there is a question figure on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure which is exactly the mirror image of the question figure when the mirror is held at XY. Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.

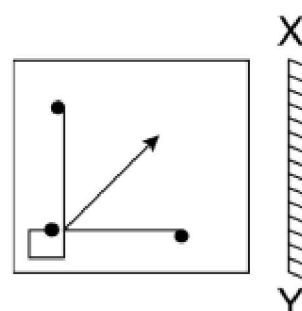
25. Question Figure



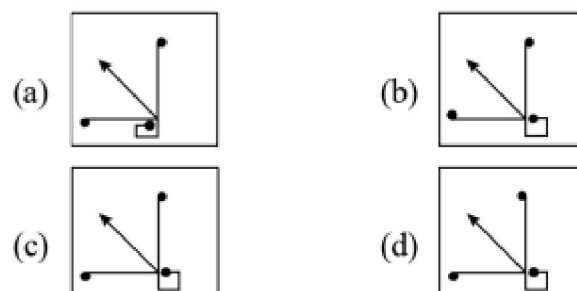
Answer Figures



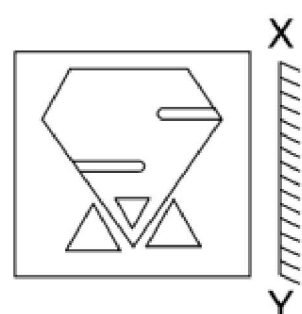
26. Question Figure



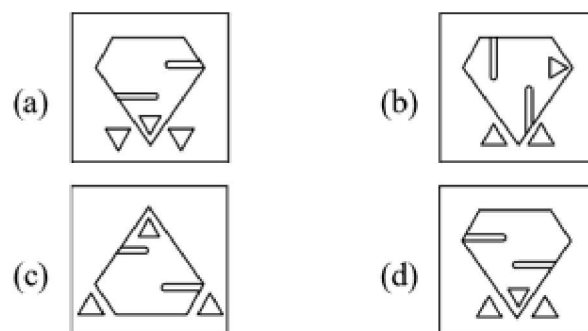
Answer Figures



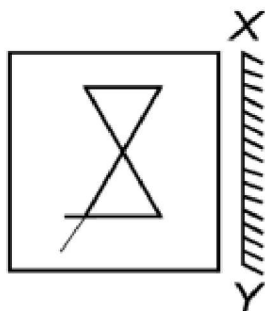
27. Question Figure



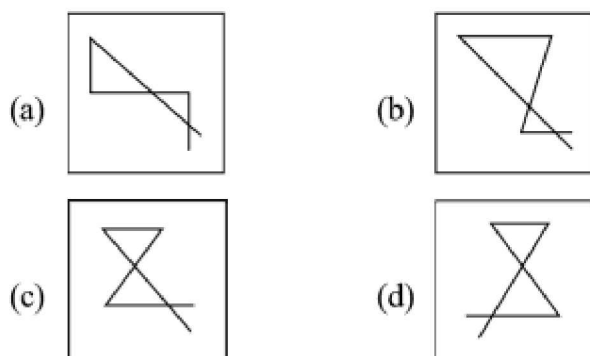
Answer Figures



28. Question Figure



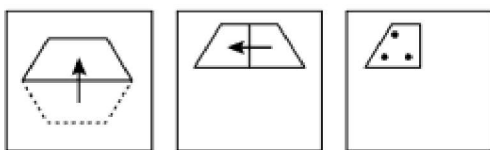
Answer Figures



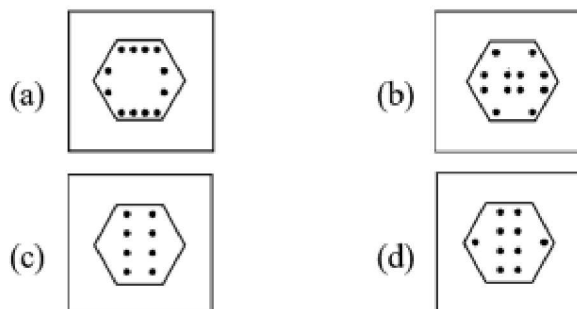
PART-8

DIRECTIONS : In Question Nos. 29 to 32, a piece of paper is folded and punched as shown in the question figures on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure which indicates how the paper will appear when opened (unfolded). Indicate your answer by darkening the circle in the OMR Answer Sheet against the number corresponding to the question.

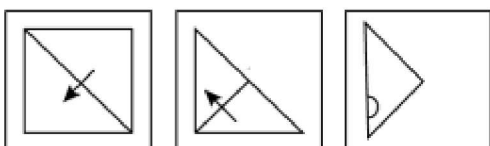
29. Question Figures



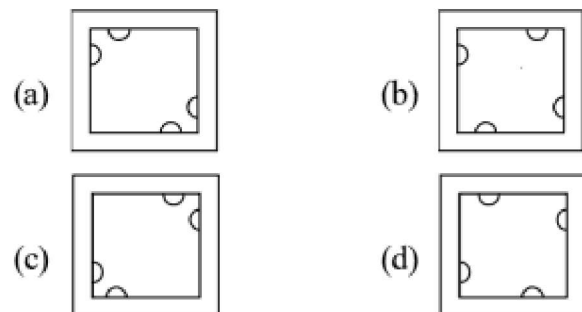
Answer Figures



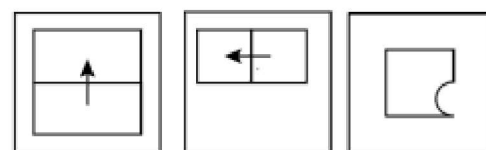
30. Question Figures



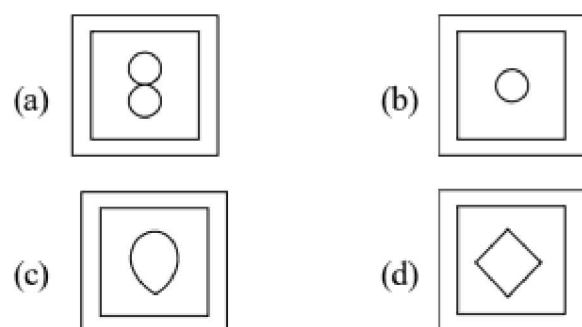
Answer Figures



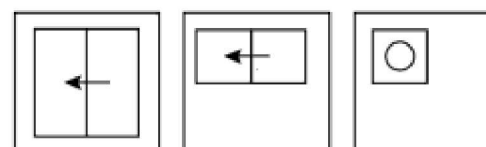
31. Question Figures



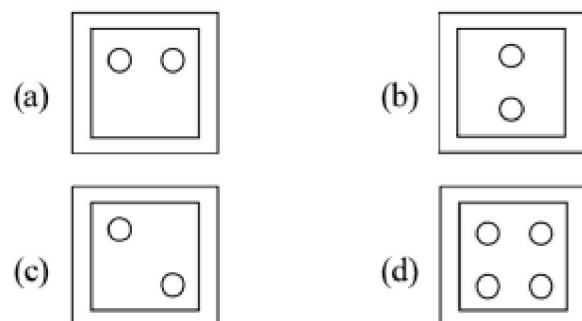
Answer Figures



32. Question Figures



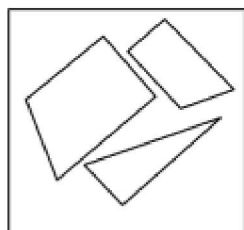
Answer Figures



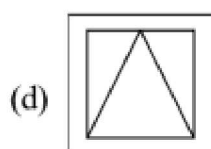
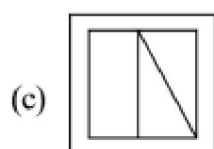
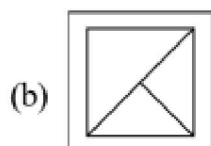
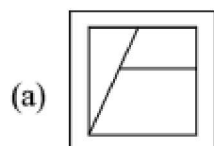
PART-9

DIRECTIONS : In Question Nos. 33 to 36, a question figure is given on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure which can be formed from the cut-out pieces given in the question figure. Darken the circle in the OMR Answer Sheet against the number corresponding to the question.

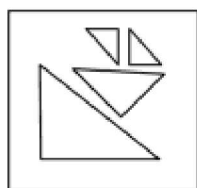
33. Question Figure



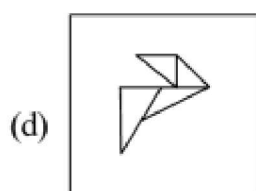
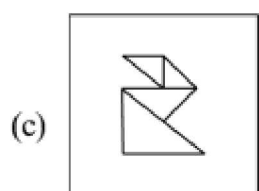
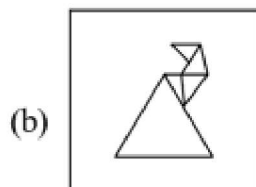
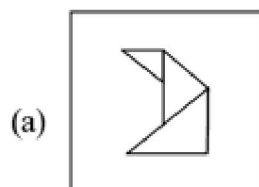
Answer Figures



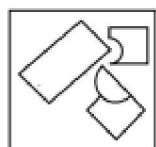
34. Question Figure



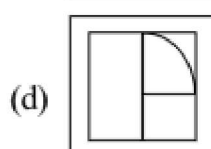
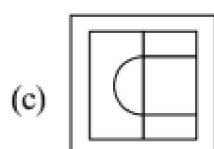
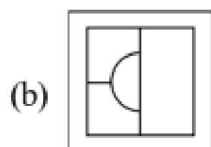
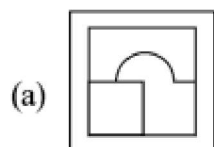
Answer Figures



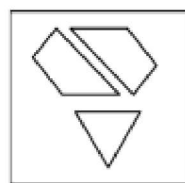
35. Question Figure



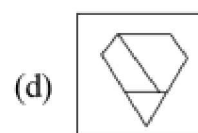
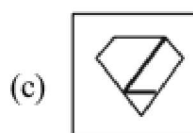
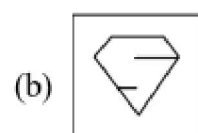
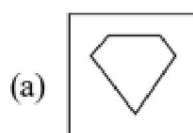
Answer Figures



36. Question Figure



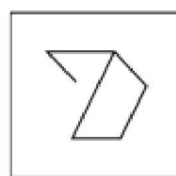
Answer Figures



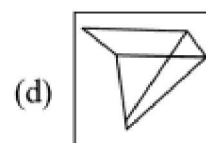
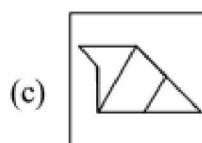
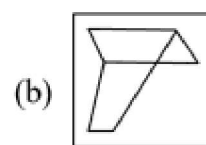
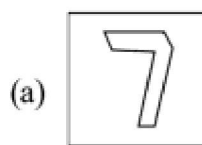
PART-10

DIRECTIONS : In Question Nos. 37 to 40, a question figure is given on the left side and four answer figures marked (a), (b), (c) and (d) are given on the right side. Select the answer figure in which the question figure is hidden/embedded. Darken the circle in the OMR Answer Sheet against the number corresponding to the correct answer for the question.

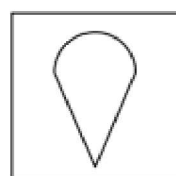
37. Question Figure



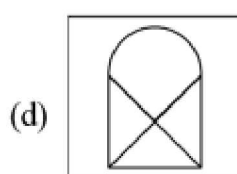
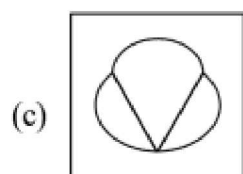
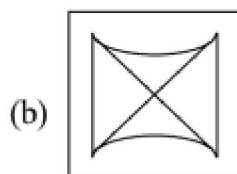
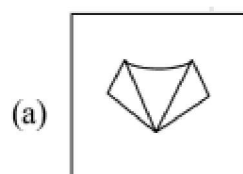
Answer Figures



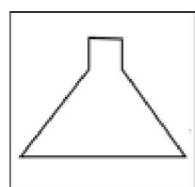
38. Question Figure



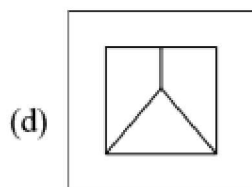
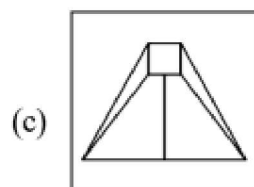
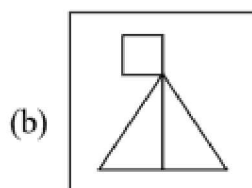
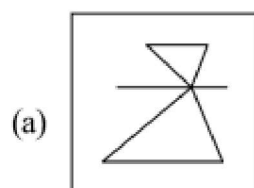
Answer Figures



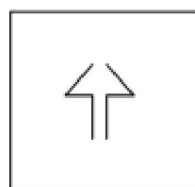
39. Question Figure



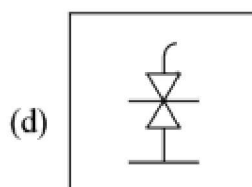
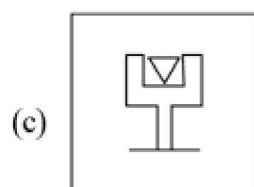
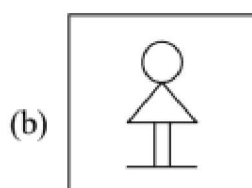
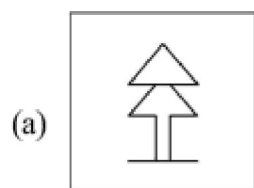
Answer Figures



40. Question Figure



Answer Figures



Section-II: Arithmetic Test

DIRECTIONS : For every question, **four** probable answers (a), (b), (c) and (d) are given. Only **one** out of these is **correct**. Choose the correct answer and darken the circle in the OMR Answer Sheet against the number corresponding to the question.

41. Prime factorisation of 90 is
 - (a) 9×10
 - (b) $3 \times 6 \times 5$
 - (c) $2 \times 3^2 \times 5$
 - (d) $2 \times 3 \times 15$
42. Find the difference between the greatest and the smallest 4-digit numbers formed using all the digits 4, 2, 0 and 7.
 - (a) 5000
 - (b) 5300
 - (c) 5373
 - (d) 5720
43. If $9432 \div 1.25 = 7545.6$, then $9.432 \div 12.5$ is equal to :
 - (a) 7.5456
 - (b) 0.75456
 - (c) 75.456
 - (d) 754.56
44. The sum of 1.1, 1.01, 1.001, 0.01, 11.01 and 111.1001 is :
 - (a) 125.2312
 - (b) 126.2311
 - (c) 125.2311
 - (d) 125.2321
45. In a question of division, if divisor is 51, quotient is 16 and remainder is 27, then the dividend is :
 - (a) 843
 - (b) 483
 - (c) 9
 - (d) 1393
46. Which of the following is always a factor of every prime number?
 - (a) 1
 - (b) 2
 - (c) 4
 - (d) 7
47. The simplest fraction form of 20.0925 is :
 - (a) $\frac{803.7}{400}$
 - (b) $\frac{8037}{200}$
 - (c) $\frac{8037}{400}$
 - (d) $\frac{8037}{4000}$
48. $8 - [18 - \{16 - (5 - 4 - 1)\}]$ is equal to :
 - (a) 2
 - (b) 3
 - (c) 4
 - (d) 5
49. $3 + \frac{3}{100} + \frac{3}{1000} + \frac{3}{1000000}$ is equal to the decimal number :
 - (a) 3.030333
 - (b) 3.033003
 - (c) 3.003303
 - (d) 3.0303003

50. 17 bottles of water, each of 300 mL and 30 bottles of juice, each of 130 mL are poured into a jug. The total liquid in the jug in litres is :

(a) 8 (b) 9
(c) 10 (d) 11

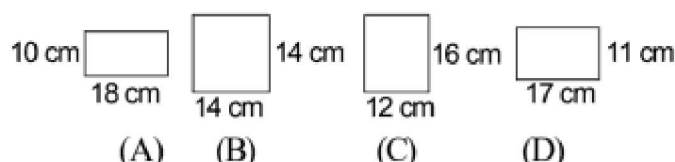
51. Suresh left his home at 9:00 a.m. to meet his uncle. He walked for 10 minutes, travelled in bus for 1 hour 05 minutes and then walked for 15 minutes to reach his uncle's home. He stayed there for 3 hours 20 minutes and reached his home at 3:30 p.m. How much time did he take on the return journey?

(a) 1 hour 30 minutes
(b) 1 hour 35 minutes
(c) 1 hour 40 minutes
(d) 1 hour 45 minutes

52. A shopkeeper buys at the rate of 5 toffees for a rupee and sells at the rate of 4 toffees for a rupee. The number of toffees sold, so as to earn a profit of ₹125 is :

(a) 1,200 (b) 1,500
(c) 2,000 (d) 2,500

53. Which of the following rectangles has maximum area and how much is the maximum area (in sq. cm) ?



(a) Rectangle (C), 192
(b) Rectangle (B), 196
(c) Rectangle (D), 212
(d) Rectangle (A), 280

54. What should be subtracted from $\frac{33}{40}$ to get $\frac{11}{40}$?

(a) $\frac{11}{20}$ (b) 22

(c) $\frac{11}{40}$ (d) $\frac{3}{5}$

55. A square park is of side 50 m. There is a path 2.5 m wide running all around inside it. The cost of levelling the path (in ₹) at ₹10 per square metre is :

(a) 4,500 (b) 4,750
(c) 5,000 (d) 5,250

56. $\frac{5}{22} + \frac{7}{22} - \frac{3}{22} + \frac{9}{22} - \frac{1}{22}$, on simplification gives:

(a) $\frac{15}{22}$ (b) $\frac{17}{22}$

(c) $\frac{19}{22}$ (d) $\frac{13}{22}$

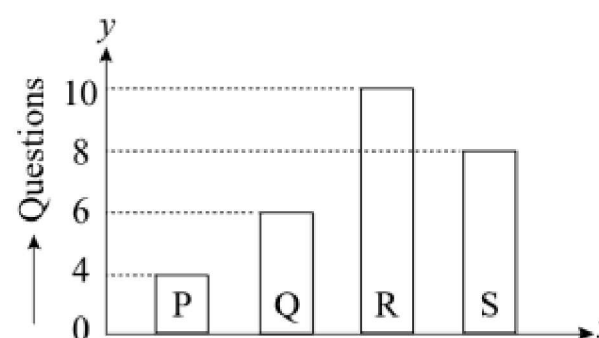
57. Teena purchased a scooter for ₹55,000. She spent ₹3,400 on its repair. She sold the scooter to her friend for ₹56,030. Her profit or loss is :

(a) Profit to ₹2,370 (b) Loss of ₹2,370
(c) Profit to ₹1,030 (d) Loss of ₹1,030

58. The angle between the minute hand and the hour hand at 6:00 p.m. is :

(a) Acute angle (b) Right angle
(c) Obtuse angle (d) Straight angle

59. The bar graph shows the number of questions solved by P, Q, R and S.



From the above bar graph, find how many more questions Q and R solve together than P and S together did.

(a) 4 (b) 2
(c) 16 (d) 12

60. A bicycle wheel has a total of 24 spokes. The angle between a pair of adjacent spokes is :

(a) 10° (b) 15°
(c) 24° (d) 30°

Section-III: Language Test

DIRECTIONS : There are **four** passages in this Section. Each passage is followed by **five** questions. Read each passage carefully and answer the questions that follow. For each question, **four** probable answers as (a), (b), (c) and (d) are given. Only **one** out of these is **correct**. Choose the correct answer and darken the circle in the OMR Answer Sheet against the number corresponding to the question.

Passage – 1

All spiders spin webs. Webs help spiders do three things. They help spiders hold eggs, hide from danger and catch food.

Most spiders are dark brown, grey or black in colour while the spider webs are light in colour, white and cloudy. When spiders hide in their webs, they are harder to see. Webs help spiders catch food. Spider webs are sticky. When a bug flies into the web, it gets stuck. It tries to get out, but it can't. It is trapped! Spiders can tell that the bug is trapped as they feel the web move.

So without webs, spiders would not be able to live, like they do. Webs, in fact are crucial for the survival of spiders.

61. This passage is about the _____.
(a) importance of spider's web
(b) importance of bugs for the spiders
(c) importance of laying eggs
(d) nature of spiders
62. What is **not** true about webs of spiders?
(a) They hold eggs.
(b) They catch food.
(c) They find water.
(d) They hide from enemies.
63. The synonym of the word 'trapped' is :
(a) stuck (b) hidden
(c) eaten (d) escape
64. How can spiders tell when something is trapped in their web?
(a) They can hear it.
(b) They can smell it.
(c) They can feel it.
(d) They can taste it.
65. As used in the last sentence of the passage, the word 'survival' means _____.
(a) being alive (b) hidden
(c) caught (d) defence

Passage – 2

Books are by far the most lasting products of human effort. Temples crumble into ruin, pictures and statues decay, but books survive. Books do not destroy the great thoughts which are as fresh today as when they

first passed through the author's mind. The thoughts speak through the printed pages. The effect of time has been to throw out of current inappropriate products. Nothing in literature which is not good can live for long. Good books have always helped man in various spheres of life. No wonder the world keeps its books with great care.

66. Of all the products of human effort, books are the most _____ creation.
(a) caring (b) inappropriate
(c) time consuming (d) useful
67. Good books have been able to stand the test of time because they contain
(a) the author's mind
(b) great ideas
(c) inappropriate products
(d) printed matter
68. Which of the following words is a synonym of the word 'inappropriate'?
(a) illness (b) unaware
(c) suitable (d) incorrect
69. The world keeps its books with care because they _____.
(a) train us
(b) help us in various fields
(c) are timeless
(d) celebrate human effort
70. The word 'crumble', as used in the passage, means _____.
(a) disintegrate (b) dismiss
(c) displace (d) dissect

Passage – 3

The golden eagle is easily recognizable by its most dark brown plumage and golden feathers. In adult the females resemble the males, but are often larger. This majestic creature makes its home in the open country in the northern hemisphere. They build large nests in trees or on the walls of cliffs which give them greater room to manoeuvre. The golden eagle is a master at soaring. With its large wingspan, it is a magnificent sight as it soars for long periods of time, aided by the rising mass of warm air. Upwind is important, for it can carry the golden eagle to massive heights without flapping.

71. The golden eagle is mostly found in _____.
- areas that have little wind and warm air
 - areas that have buildings
 - the southern hemisphere
 - the northern hemisphere
72. The female golden eagle can be distinguished by its _____.
- darker plumage
 - brighter wings
 - dark brown plumage
 - larger size
73. Which places would the bird look for building nests?
- Open country
 - Areas isolated from vegetation
 - Massive heights
 - Open country with houses
74. Which word is similar in meaning to the word 'majestic'?
- golden
 - humble
 - grand
 - modest
75. Which of the following words is **not** an antonym of 'massive'?
- tiny
 - vast
 - puny
 - weightless

Passage – 4

A robot is a special machine. It moves and follows instructions that come from a computer. Because it is a machine, it does not make mistakes or get tired. It never complains.

Robots are all around us. Some robots are used to make things. For example, robots can help make cars.

Some robots are used to explore dangerous places like volcanoes. Some robots can help clean houses. Some robots can even recognize words. They can be used to help answer telephone calls. Some robots look like humans. Most robots just look like machines.

76. The synonym of 'tired' is _____.
- explore
 - exhausted
 - vacuum
 - dangerous
77. Robots don't make mistakes because they _____.
- are machines
 - follow instructions given by a computer
 - look like humans
 - don't look tired
78. According to the passage, for which of the following tasks are robots **not** used?
- To clean houses
 - To answer telephone calls
 - For making cars
 - For teaching children
79. Which of the following words is an antonym of the word, 'dangerous'?
- explore
 - safe
 - tired
 - recognise
80. Which of the following statements about robots is **not** true?
- Most robots look like machines.
 - Robots don't make mistakes.
 - Robots are very useful.
 - Most robots look like humans.

HINTS AND SOLUTIONS

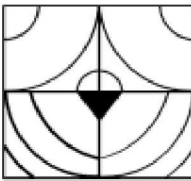
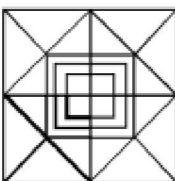
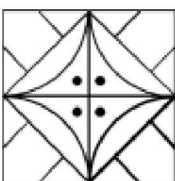
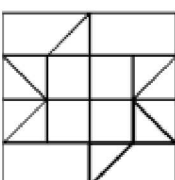
Sol. (1-4)

1. (a) Except option (a), all other figures have cross sign (x) and black dot on the adjacent corners of the rectangle.
2. (c) Except figure (c), all other figures are single figure.
3. (a) Except figure (a), all other figures have arrows with base line.
4. (c) Except figure (c), all other figures have inner center line originating from vertices of triangle.

Sol. (5-8)

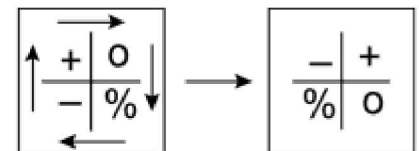
5. (b) Figure (b) is exactly the same as the given figure.
6. (b) Figure (b) is exactly the same as the given figure.
7. (b) Figure (b) is exactly the same as the given figure.
8. (d) Figure (d) is exactly the same as the given figure.

Sol. (9-12)

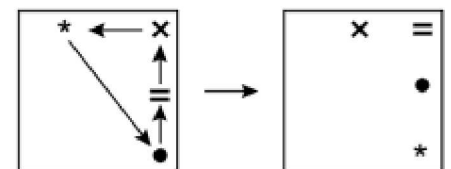
9. (d) 
10. (b) 
11. (d) 
12. (d) 

Sol. (13-16)

13. (c) Pattern as follows:-



14. (d) Pattern as follows:-

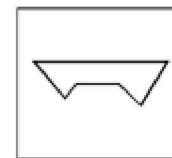
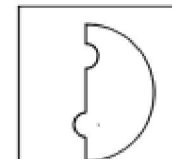
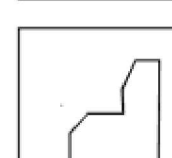


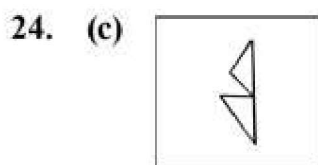
15. (b) In every next step one line is reduced.
16. (c) In every next step arrow is rotating 90° anti-clockwise and one centre line is reduced.

Sol. (17-20)

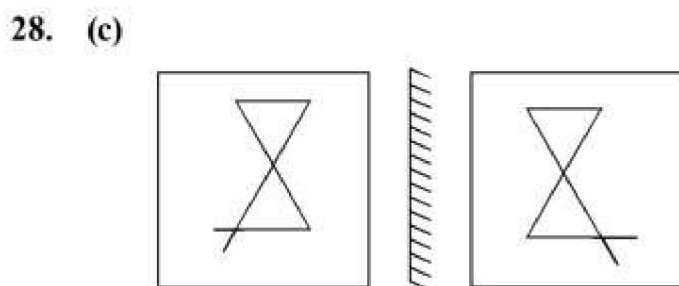
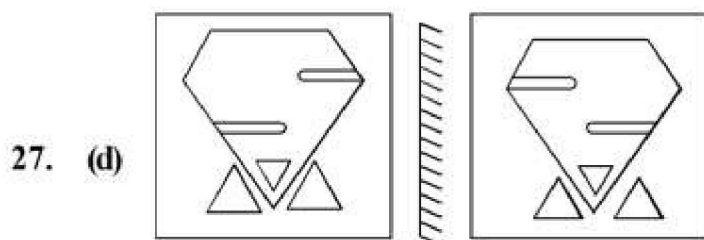
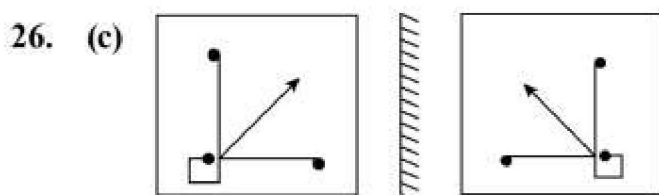
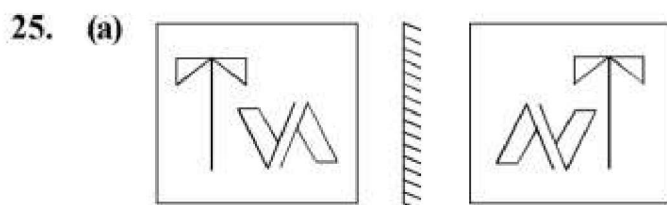
17. (c) Small squares at corner are shifting to next corner in clockwise direction.
18. (b) '∧' is rotating 90° anti-clockwise and reducing by one and black dot changes to white dot.
19. (b) From left to right all figures are one step ahead of another.
20. (c) Figure is rotating 90° anti-clockwise.

Sol. (21-24)

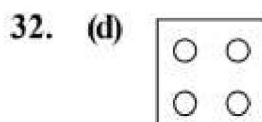
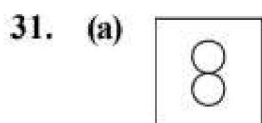
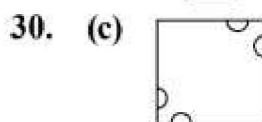
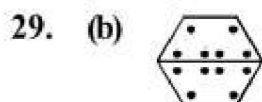
21. (d) 
22. (c) 
23. (a) 



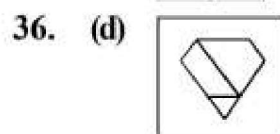
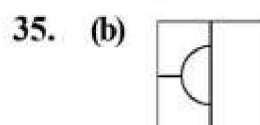
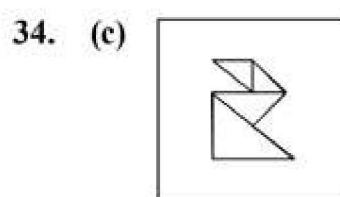
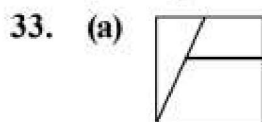
Sol. (25-28)



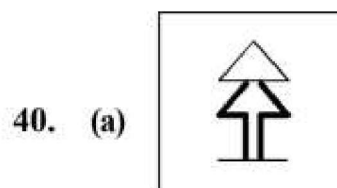
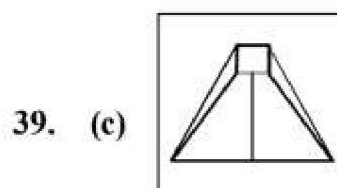
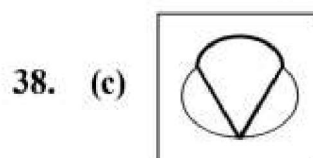
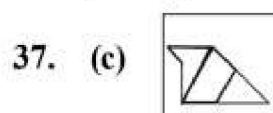
Sol. (29-32)



Sol. (33-36)



Sol. (37-40)



41. (c) Prime factorisation:-

$$\begin{array}{r|l} 2 & 90 \\ 3 & 45 \\ 3 & 15 \\ 5 & 5 \\ & 1 \end{array}$$

$$\Rightarrow 2 \times 3^2 \times 5$$

42. (c) Greatest 4-digit number using 4, 2, 0 and 7 = 7420

Smallest 4-digit number using 4, 2, 0 and 7 = 2047

Required difference = 7420 - 2047

$$= \boxed{5373}$$

43. (b)

$$\Rightarrow \frac{9432}{1.25}$$

$$\Rightarrow \frac{9432 \times 100}{125}$$

$$\Rightarrow 75.456 \times 100 \Rightarrow 7545.6$$

Then,

$$\Rightarrow \frac{9.432}{12.5}$$

$$\Rightarrow \frac{9432 \times 10}{125 \times 1000}$$

$$\Rightarrow \frac{75.456}{100} \Rightarrow \boxed{0.75456}$$

44. (c) Sum of $1.1 + 1.01 + 1.001 + 0.01 + 11.01 + 111.1001 = \boxed{125.2311}$

45. (a) Dividend = Divisor $\times$ Quotient + Remainder
 $= 51 \times 16 + 27$
 $= \boxed{843}$

46. (a) '1' is always a factor of every prime number.

47. (c) Simplest fraction of 20.0925

$$\Rightarrow \frac{200925}{10000}$$

$$\Rightarrow \boxed{\frac{8037}{400}}$$

48. (c) $8 - [18 - \{16 - (5 - \overline{4 - 1})\}]$

$$\Rightarrow 8 - [18 - \{16 - (5 - 3)\}]$$

$$\Rightarrow 8 - [18 - \{16 - 2\}]$$

$$\Rightarrow 8 - [18 - 14]$$

$$\Rightarrow 8 - 4 \Rightarrow \boxed{4}$$

49. (b) $3 + \frac{3}{100} + \frac{3}{1000} + \frac{3}{1000000}$

$$\Rightarrow 3 + 0.03 + 0.003 + 0.000003$$

$$\Rightarrow \boxed{3.033003}$$

50. (b) 17 bottles of water, each of 300 ml then,

$$\text{total litres of water} = \frac{17 \times 300}{1000}$$

$[\because 1\text{L} = 1000\text{ml}]$

$= 5.1 \text{ litres}$

30 bottles of juice, each of 130 ml then,

$$\text{total litres of juice} = \frac{30 \times 130}{1000}$$

$[\because 1\text{L} = 1000]$

$= 3.9 \text{ litres}$

Total liquid in the jug $= 5.1 + 3.9$
 $= 9 \text{ litres}$

51. (c) Suresh left his home at 9 : 00 AM

He walked = 10 minutes

Travelled in bus = 1 hour 05 minutes

Then, walked to his uncle's home =

minutes and stayed there for = 3 hour

minutes Total time = 10 min + 1 hour 05 min

+ 15 min + 3 hour 20 min

$= 4 \text{ hour } 50 \text{ minutes}$

He left the uncle's home = 9 : 00 am

hour 50 min.

$= 1 : 50 \text{ pm}$

He reached home at 3 : 30 pm so, he to

time on the return journey

$$\Rightarrow 1 : 50 \text{ pm to } 3 : 30 \text{ pm}$$

$$\Rightarrow \boxed{1 \text{ hour } 40 \text{ minutes}}$$

52. (d) Cost price of 5 toffees is ₹. 1

Cost price of 1 toffee is $\frac{1}{5} = ₹ 0.2$

Selling price of 4 toffees is ₹ 1

Selling price of 1 toffee is $\frac{1}{4} = ₹ 0.25$

Profit per toffee = Selling price of 1 toffee

– Cost price of 1 toffee

$$= \frac{1}{4} - \frac{1}{5} = \frac{5-4}{20} \Rightarrow \frac{1}{20}$$

$= ₹ 0.05$

Number of toffees = $\frac{\text{Total profit}}{\text{Profit per toffee}}$

$$= \frac{125}{\frac{1}{20}} \Rightarrow 125 \times 20$$

$$= \boxed{2500}$$

53. (b) Area of the rectangle = $\ell \times b$

(a) $\ell \times b = 10 \times 18$
 $= 180 \text{ cm}^2$

(b) $\ell \times b = 14 \times 14$
 $= 196 \text{ cm}^2$

(c) $\ell \times b = 12 \times 16$
 $= 192 \text{ cm}^2$

(d) $\ell \times b = 17 \times 11$
 $= 187 \text{ cm}^2$

54. (a) Let the number to be subtracted be x
 ATQ

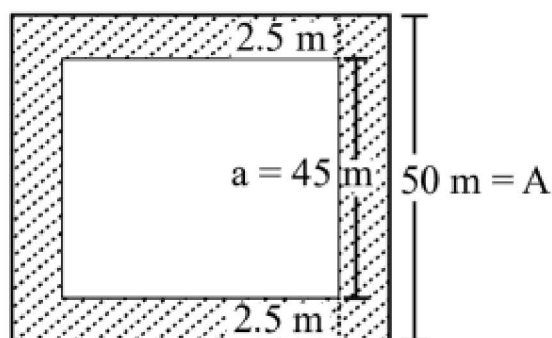
$$\Rightarrow \frac{33}{40} - x = \frac{11}{40}$$

$$\Rightarrow x = \frac{33}{40} - \frac{11}{40}$$

$$= \frac{33-11}{40}$$

$$= \frac{22}{40} \Rightarrow \boxed{\frac{11}{20}}$$

55. (b)



Area of square = $(\text{side})^2$

Area of shaded region = $(A)^2 - (a)^2$
 $= (50)^2 - (45)^2$ [$\because a^2 - b^2 = (a + b)(a - b)$]
 $= (50 + 45)(50 - 45)$
 $= 95 \times 5 \Rightarrow 475 \text{ m}^2$

Cost of the path levelling = 475×10
 $= \boxed{\text{₹}4,750}$

56. (b) $\frac{5}{22} + \frac{7}{22} - \frac{3}{22} + \frac{9}{22} - \frac{1}{22}$

$$\Rightarrow \frac{5+7-3+9-1}{22} \Rightarrow \boxed{\frac{17}{22}}$$

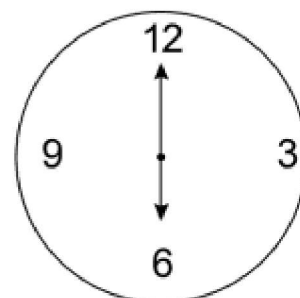
57. (b) Teena purchased a scooter for ₹ 55,000
 She spends on its repair ₹ 3400

Teena spends total amount on scooter
 $= 55000 + 3400 = \text{₹}58,400$

She sold the scooter to her friend = ₹ 56,030

Her loss is = ₹ 58400 – ₹ 56,030
 $= \boxed{\text{₹}2,370}$

58. (d)



$\therefore$ At 6 : 00 pm the angle between the minute hand and the hour hand is 180° i.e., Straight angle

59. (a) Q and R together solved the questions
 $= 10 + 6 = 16$

P and S together solved the questions
 $= 8 + 4 = 12$

Difference required = $16 - 12 = \boxed{4}$

60. (b) A bicycle wheel has a total of 24 spokes
 AT

$24 \text{ spokes} = 360^\circ$

The angle between a pair of adjacent

spokes = $\frac{360}{4} = \boxed{15^\circ}$

61. (a) This passage is about the **importance of spider's web**. As the given passage is primarily based on that how spider's webs help them in various activities such as hiding from danger, catch food, hence they are ultimately crucial for their survival.

62. (c) According to the given passage, there is no reference given for spider's webs help in finding water, while it is only given that they help in hiding from enemies, catch food and hold eggs.

63. (a) Since the meaning of both the words "Trapped" and "Stuck" mean "to be caught" or "being unable to escape from a situation" hence they are synonymous with each other.

64. (c) Since it is clearly mentioned in the passage that "spiders can tell that the bug is trapped as they feel the web move." Hence, this is how they get to know when something is trapped in their web.
65. (a) The meaning of the word 'Survival' is "**being alive**".
66. (d) Of all the products of human effort, books are the most **useful** creation. As it is given in the passage that how they have always helped man in various spheres of life.
67. (b) Good books have been able to stand in the test of time because they contain **great ideas**.
68. (d) The closest synonymous word to "inappropriate" is "incorrect" as both the words mean "**not accurate**" or "**proper**".
69. (b) The world keeps its books with care because they **help us in various fields**. As it is clearly mentioned in the last lines of the passage that "Good books have always helped man in various spheres of life. No wonder the world keeps its books with great care."
70. (a) The word 'crumble' as used in the passage means **disintegrate**. As both the words "crumble" and "disintegrate" describe the "**breakdown of something**". Hence it is the most suitable fit here.
71. (d) The golden eagle is mostly found in **the northern hemisphere**. As it is mentioned in the passage that "this majestic creature makes its home in the open country in the northern hemisphere."
72. (d) The female golden eagle can be distinguished by its **larger size**. As it is clearly stated in the given passage that the female golden eagles resemble the males but they are often larger in size.
73. (a) The passage states that the golden eagles make their nests in open country in trees or on the walls of cliffs which gives them greater room to manoeuvre.
74. (c) As the words 'majestic' and 'grand' both imply a sense of "**impressive**", "**grandeur**" and "**dignity**". Hence they are similar in meaning.
75. (b) As both the words 'massive' and 'vast' mean "**very large**" hence they are synonyms but similar in meaning.
76. (b) The synonym of tired is "**exhausted**". Both the words mean "**feeling of lack of energy**" or "**weariness**".
77. (a) Robots don't make mistakes because they **are machines**. As it is given in the beginning of the passage that "**because it is a machine, it does not make mistakes or get tired.**"
78. (d) As for cleaning houses, making cars and answering telephone calls, robots are useful but there is no reference of 'teaching children' by robots is given.
79. (b) As the meaning of the word 'dangerous' is "**risky**" or "**unsafe**" while the word 'safe' means "**secure**" or "**harmless**" which is antonymous to the given word 'dangerous'.
80. (d) This statement is not true as it is not clearly mentioned in the passage that "some robots look like humans. Most robots just look like machines."