

## Chapter - 13

## FIGURE MATRIX

Answer Key with Step-by-Step Solutions  
Includes: All MCQs + Extra PYQs with Detailed Explanations

CHASE  
ACADEMY

## Previous Year Questions

Directions (1-2):

MATRIX-I

	0	1	2	3	4
4	A	F	K	P	U
3	F	K	A	U	P
2	P	U	F	K	A
1	K	P	U	A	F
0	U	A	P	F	K

MATRIX-II

	5	6	7	8	9
9	D	I	N	S	X
8	X	S	I	D	N
7	N	X	S	I	D
6	S	D	X	N	I
5	I	N	D	X	S

1. SIX-KIDS

- (a) 86, 87, 99—40, 41, 86, 64  
(b) 98, 96, 85—42, 78, 88, 77  
(c) 77, 69, 76—22, 95, 28, 31  
(d) 65, 55, 67—05, 25, 91, 40

2. NASA

- (a) 97, 32, 34, 45  
(b) 56, 13, 98, 40  
(c) 03, 14, 69, 98  
(d) 97, 35, 43, 58



3. BEE

MATRIX-I

	1	2	3	4	5
1	A	B	C	D	E
2	E	D	A	B	C
3	B	C	D	E	A
4	D	A	E	C	D
5	C	E	B	A	B

MATRIX-II

	6	7	8	9	10
6	F	G	H	I	J
7	J	I	G	H	F
8	F	H	I	J	G
9	G	J	F	G	I
10	H	E	J	F	E

- (a) 12, 15, 33  
(c) 12, 15, 41

- (b) 21, 12, 22  
(d) 12, 21, 15

Directions (4 - 8):

MATRIX-I

	0	1	2	3	4
0	I	L	A	D	C
1	D	C	I	L	A
2	A	I	D	C	L
3	L	A	C	I	D
4	C	D	L	A	I

MATRIX-II

	5	6	7	8	9
5	W	R	T	E	Y
6	R	W	Y	T	E
7	E	Y	W	R	T
8	Y	T	E	W	R
9	T	E	R	Y	W

4. DAILY

- (a) 10, 31, 21, 42, 85  
(c) 41, 14, 13, 24, 98

- (b) 22, 43, 00, 32, 67  
(d) 34, 44, 21, 01, 76

5. RATE

- (a) 89, 20, 96, 69  
(c) 78, 14, 95, 58

- (b) 65, 03, 86, 96  
(d) 56, 31, 58, 87

6. CIAT

- (a) 11, 21, 31, 87  
(c) 23, 34, 43, 95

- (b) 32, 44, 20, 68  
(d) 04, 14, 02, 57

7. WEAR

- (a) 77, 87, 32, 89  
(c) 88, 69, 21, 65

- (b) 99, 78, 14, 56  
(d) 66, 87, 31, 97

8. DWART

- (a) 10, 77, 32, 89, 68  
(c) 34, 99, 43, 66, 79

- (b) 22, 88, 02, 89, 57  
(d) 41, 66, 20, 78, 88

Directions (9 - 13):

MATRIX-I

	0	1	2	3	4
0	E	H	J	O	A
1	H	O	E	A	J
2	O	J	A	E	H
3	J	A	O	H	E
4	A	E	H	J	O

MATRIX-II

	5	6	7	8	9
5	L	F	S	K	T
6	T	K	L	S	F
7	S	L	F	T	K
8	K	S	T	F	L
9	F	T	K	L	S

9. JOLE

- (a) 21, 44, 89, 34  
(c) 14, 33, 98, 23

- (b) 30, 11, 68, 41  
(d) 43, 20, 76, 13

10. FATH

- (a) 69, 13, 79, 24  
(c) 88, 21, 87, 42

- (b) 95, 31, 99, 12  
(d) 77, 22, 96, 33

11. KHOLE

- (a) 66, 24, 20, 76, 24  
(c) 97, 33, 12, 89, 34

- (b) 85, 10, 32, 67, 41  
(d) 79, 43, 03, 98, 12

12. FEAST

- (a) 77, 00, 14, 86, 96  
(c) 69, 23, 31, 75, 87

- (b) 56, 12, 22, 69, 65  
(d) 88, 33, 40, 99, 59

13. LOHA

- (a) 98, 20, 42, 04  
(c) 67, 12, 24, 31

- (b) 76, 32, 01, 41  
(d) 55, 03, 11, 22

Directions (14 - 18):

MATRIX-I

	0	1	2	3	4
0	A	S	U	E	O
1	U	O	E	S	A
2	S	A	O	U	E
3	E	U	A	O	S
4	O	E	S	A	U

MATRIX-II

	5	6	7	8	9
5	C	R	T	P	N
6	N	P	C	T	R
7	P	C	R	N	T
8	T	N	P	R	C
9	R	T	N	C	P

14. TUNE

- (a) 68, 31, 79, 41  
(c) 79, 23, 86, 30

- (b) 85, 10, 97, 22  
(d) 96, 42, 65, 12

15. CROPS

- (a) 89, 95, 11, 75, 20  
(c) 76, 88, 40, 67, 13

- (b) 67, 77, 32, 87, 34  
(d) 98, 56, 04, 58, 43

16. SENT

- (a) 20, 31, 86, 79  
(c) 13, 03, 66, 85

- (b) 34, 24, 59, 89  
(d) 42, 12, 78, 96

17. PART

- (a) 75, 21, 89, 96  
(c) 87, 00, 95, 69

- (b) 66, 14, 88, 57  
(d) 99, 43, 78, 85

18. SPENT

- (a) 13, 66, 25, 86, 96  
(c) 34, 87, 41, 59, 85

- (b) 20, 75, 30, 98, 57  
(d) 42, 58, 03, 65, 78

19. Identify the set for the word 'BEAD'

MATRIX-I

	0	1	2	3	4
0	I	E	A	O	U
1	A	O	U	I	E
2	E	I	O	U	A
3	O	U	E	A	I
4	U	A	I	E	O

MATRIX-II

	5	6	7	8	9
5	F	D	B	G	H
6	B	G	H	F	D
7	D	F	G	H	B
8	G	H	D	B	F
9	H	B	F	G	D

- (a) 75, 14, 20, 57  
(c) 81, 41, 20, 57

- (b) 97, 32, 14, 56  
(d) 57, 32, 41, 87



20. Identify the set for the word 'NIFE'?

MATRIX-I

	0	1	2	3	4
0	E	F	G	H	I
1	H	I	E	F	G
2	F	G	H	I	E
3	I	E	F	G	H
4	G	H	I	E	F

MATRIX-II

	5	6	7	8	9
5	L	M	N	O	P
6	O	P	L	M	N
7	M	N	O	P	L
8	P	L	M	N	O
9	N	O	P	L	M

- (a) 95, 30, 32, 43                      (b) 95, 30, 31, 44  
 (c) 57, 42, 31, 43                      (d) 57, 41, 32, 43

21. Identify the set for the word 'AELO'?

MATRIX-I

	0	1	2	3	4
0	A	E	C	B	D
1	C	D	A	E	B
2	B	E	D	C	A
3	D	A	C	B	E
4	B	E	D	A	C

MATRIX-II

	0	1	2	3	4
0	L	M	O	N	P
1	N	P	L	M	O
2	P	M	O	L	N
3	L	N	P	M	O
4	O	N	L	P	M

- (a) 31, 00, 23, 22                      (b) 43, 01, 12, 42  
 (c) 12, 34, 30, 02                      (d) 12, 30, 42, 14

22. Identify the set for the word 'STEP'?

MATRIX-I

	0	1	2	3	4
0	A	E	M	N	P
1	N	P	A	E	M
2	E	M	N	P	A
3	P	A	E	M	N
4	M	N	P	A	E

MATRIX-II

	5	6	7	8	9
5	I	L	R	S	T
6	R	S	T	I	L
7	T	I	L	R	S
8	L	R	S	T	I
9	S	T	I	L	R

- (a) 66, 88, 31, 03                      (b) 58, 67, 01, 11  
 (c) 65, 87, 01, 32                      (d) 85, 75, 01, 40

23. Identify the set for the word 'DIRT'?

MATRIX-I

	0	1	2	3	4
0	D	E	F	I	N
1	I	N	D	E	F
2	E	F	I	N	D
3	N	D	E	F	I
4	F	I	N	D	E

MATRIX-II

	5	6	7	8	9
5	O	P	R	S	T
6	S	T	O	P	R
7	P	R	S	T	O
8	T	O	P	R	S
9	R	S	T	O	P

- (a) 00, 10, 76, 86                      (b) 43, 34, 88, 79  
 (c) 24, 34, 57, 66                      (d) 00, 10, 76, 86

24. Identify the set for the word 'PENS'?

MATRIX-I

	0	1	2	3	4
0	P	W	I	N	S
1	I	S	P	W	N
2	W	N	I	S	P
3	S	P	W	N	I
4	N	I	S	P	W

MATRIX-II

	5	6	7	8	9
5	A	E	R	O	H
6	O	H	A	E	R
7	E	R	O	H	A
8	H	A	E	R	O
9	R	O	H	A	E

- (a) 12, 67, 21, 30                      (b) 43, 56, 13, 23  
 (c) 43, 56, 21, 42                      (d) 31, 57, 21, 42

25. Identify the set for the word 'DRIFT'?

MATRIX-I

	0	1	2	3	4
0	P	I	D	S	T
1	U	N	R	Q	M
2	D	A	E	F	G
3	B	W	V	L	N
4	C	H	J	K	I

MATRIX-II

	5	6	7	8	9
5	F	P	R	S	D
6	N	L	M	T	I
7	A	S	N	P	R
8	D	G	Z	W	O
9	N	C	K	E	S

- (a) 20, 57, 69, 23, 68                      (b) 20, 12, 69, 32, 40  
 (c) 85, 75, 96, 32, 40                      (d) 58, 57, 96, 23, 40

26. Which of these columns are related and how?

Line	Column				
	I	II	III	IV	V
1	6	24	24	89	28
2	5	20	44	78	24
3	7	28	30	77	32
4	9	36	36	49	40
5	10	40	42	47	44

- (a) Column I, II and III                      (b) Column I, II and V  
 (c) Column II, III and IV                      (d) Column I, III and IV

Directions (27-29): Below, a table is given. The number of first two digit shows the number of gas agency and last four digits show consumer.

312864	457894	562354	278262
273572	596971	841021	592684
451234	272572	316824	844294
847801	312525	459876	311864
275684	561997	594949	457801
568585	841874	277582	568234

27. In which gas agency are there consumers number is same?

- (a) 56 and 27                                      (b) 45 and 31  
 (c) 59 and 84                                      (d) 84 and 45

28. In the above table how many consumers are there of odd number?

- (a) 15    (b) 10  
 (c) 8    (d) 5

29. In above table, in which gas agency are there maximum number of consumers?  
 (a) 45 (b) 84  
 (c) 27 (d) 31
30. Find out the set, which is like the given set.  
 Given set : (9, 27, 108)  
 (a) (15, 45, 90) (b) (8, 32, 96)  
 (c) (5, 15, 75) (d) (11, 33, 132)

**Practice Set Solutions**

Directions (1 - 2):

E ⇒ 00, 13, 21, 34, 42 N ⇒ 04, 11, 22, 33, 40  
 O ⇒ 56, 67, 75, 88, 99 P ⇒ 57, 69, 78, 86, 95  
 T ⇒ 58, 65, 79, 87, 96

1. (d);

Option	P	E	N	T
(1)	87	21	<del>31</del>	<del>66</del>
(2)	95	<del>33</del>	40	<del>78</del>
(3)	57	<del>02</del>	<del>34</del>	87
(4)	78	42	11	58

2. (a);

Option	N	O	T	E
(1)	40	75	96	34
(2)	33	99	87	<del>14</del>
(3)	04	67	<del>78</del>	21
(4)	22	56	65	<del>43</del>

Directions (3 - 7): All the possible representations of the letters.

Matrix-I

F ⇒ 00, 12, 24, 31, 43 M ⇒ 02, 14, 21, 33, 40  
 O ⇒ 01, 13, 20, 32, 44 R ⇒ 04, 11, 23, 30, 42  
 S ⇒ 03, 10, 22, 34, 41

Matrix-II

A ⇒ 55, 67, 79, 86, 98 D ⇒ 57, 69, 76, 88, 95  
 I ⇒ 58, 65, 77, 89, 96 P ⇒ 59, 66, 78, 85, 97  
 T ⇒ 56, 68, 75, 87, 99

3. (d);

Option	R	O	A	D
(1)	04	20	55	<del>78</del>
(2)	23	32	98	<del>99</del>
(3)	42	32	79	<del>58</del>
(4)	11	13	67	69

4. (a);

Option	M	O	S	T
(1)	02	13	34	56
(2)	21	<del>00</del>	03	<del>88</del>
(3)	33	20	<del>11</del>	<del>79</del>
(4)	40	44	22	<del>89</del>

Directions (5 - 7): All the possible representations of letters

F = 00, 12, 24, 31, 43 S = 03, 10, 22, 34, 41  
 O = 01, 13, 20, 32, 44 R = 04, 11, 23, 30, 42  
 M = 02, 14, 21, 33, 40

5. (d);

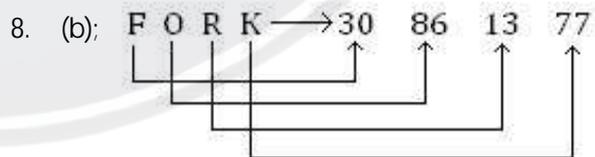
Option	F	O	A	M
(1)	24	01	55	<del>22</del>
(2)	43	32	<del>56</del>	33
(3)	12	13	67	<del>28</del>
(4)	00	01	67	33

6. (a);

Option	S	T	O	P
(1)	10	56	44	97
(2)	41	68	01	<del>77</del>
(3)	22	75	32	<del>86</del>
(4)	<del>38</del>	99	<del>42</del>	59

7. (b);

Option	M	O	S	T
(1)	02	<del>31</del>	34	75
(2)	33	44	22	99
(3)	<del>41</del>	01	<del>42</del>	68
(4)	21	32	<del>38</del>	<del>98</del>



9. (c) 10. (d) 11. (a) 12. (b) 13. (c)  
 14. (b) 15. (d) 16. (d) 17. (d) 18. (a)  
 19. (a) 20. (c) 21. (b) 22. (a) 23. (b)  
 24. (a) 25. (c) 26. (c) 27. (a) 28. (b)  
 29. (d) 30. (c) 31. (c) 32. (a) 33. (b)  
 34. (d) 35. (c) 36. (d) 37. (b) 38. (d)  
 39. (a) 40. (b)

**Distinct Solutions**

41. (d); Column I, III, IV

I	III	IV
$9 \times 1$	$9 \times 2 = 18,$	$9 \times 3 = 27$
$5 \times 1$	$5 \times 2 = 10,$	$5 \times 3 = 15$
$7 \times 1$	$7 \times 2 = 14,$	$7 \times 3 = 21$
$3 \times 1$	$3 \times 2 = 6,$	$3 \times 3 = 9$
$11 \times 1$	$11 \times 2 = 22,$	$11 \times 3 = 33$

42. (b); Column I, IV, V

I	IV	V
$6 \times 6$	$36 \times 1.5$	54
$8 \times 6$	$48 \times 1.5$	72
$5 \times 6$	$30 \times 1.5$	45
$9 \times 6$	$54 \times 1.5$	81
$10 \times 6$	$60 \times 1.5$	90

43. (a); Column I, III, V

I	III	V
$5^2$	25 interchanges	52
$7^2$	49 interchanges	94
$8^2$	64 interchanges	46
$9^2$	81 interchanges	18
$4^2$	16 interchanges	61

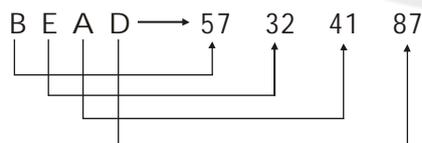
44. (a); On centre 56, roll no. 1568 is smallest number.  
 45. (a); On centre 43, there are 6 examinee.  
 46. (b); On centre 56 and 61, there are same roll no. examinee.  
 $56 \rightarrow 3809$      $61 \rightarrow 3809$   
 47. (c); On centre 43 and 52, the last two digits of examinee roll no. are same.  
 $43 \rightarrow 3214$      $52 \rightarrow 6214$   
 48. (c); As  $15 + 4 \rightarrow 19 - 3 \rightarrow 16$   
 Similarly,  $16 + 4 \rightarrow 20 - 3 \rightarrow 17$   
 49. (d); As  
 $826 \rightarrow 8 + 2 + 6 \rightarrow 16$   
 $574 \rightarrow 5 + 7 + 4 \rightarrow 16$   
 $952 \rightarrow 9 + 5 + 2 \rightarrow 16$   
 Similarly,  
 $682 \rightarrow 6 + 8 + 2 \rightarrow 16$   
 $196 \rightarrow 1 + 9 + 6 \rightarrow 16$   
 $934 \rightarrow 9 + 3 + 4 \rightarrow 16$   
 50. (d); As (48, 84, 128) all numbers are divided by 4  
 Similarly, (56, 96, 144) all number are divided by 4.

**Previous Year Solutions**

1. (b)    2. (b)    3. (d)    4. (a)    5. (c)  
 6. (b)    7. (d)    8. (b)    9. (a)    10. (d)  
 11. (b)    12. (c)    13. (a)    14. (c)    15. (a)  
 16. (d)    17. (b)    18. (c)

19. (d); The numbers of all letters.

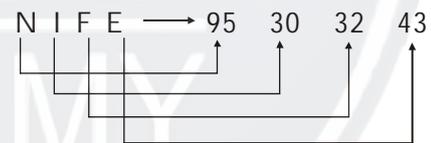
I = 00, 13, 21, 34, 42	E = 01, 14, 20, 32, 43
A = 02, 10, 24, 33, 41	O = 03, 11, 22, 30, 44
U = 04, 12, 23, 31, 40	F = 55, 68, 76, 89, 97
D = 56, 69, 75, 87, 99	B = 57, 65, 79, 88, 96
G = 58, 66, 77, 85, 98	H = 59, 67, 78, 86, 95



20. (a); The numbers of all letters.

E = 00, 12, 24, 31, 43	F = 01, 13, 20, 32, 44
G = 02, 14, 21, 33, 40	H = 03, 10, 22, 34, 41
I = 04, 11, 23, 30, 42	

L = 55, 67, 79, 86, 98    M = 56, 68, 75, 87, 99  
 N = 57, 69, 76, 88, 95    O = 58, 65, 77, 89, 96  
 P = 59, 66, 78, 85, 97



Note :- We can solve these question only by the number of given letter.

21. (c); A = 00, 12, 24, 31, 43    E = 01, 13, 21, 34, 41  
 L = 00, 12, 23, 30, 42    O = 02, 14, 22, 34, 40  
 AELO = 12, 34, 30, 02

22. (b); S = 58, 66, 79, 87, 95    T = 59, 67, 75, 88, 96  
 E = 01, 13, 20, 32, 44    P = 04, 11, 23, 30, 42  
 STEP = 58, 67, 01, 11

23. (c); D = 00, 12, 24, 31, 43    I = 03, 10, 22, 34, 41  
 R = 57, 69, 76, 88, 95    T = 59, 66, 78, 85, 97  
 DIRT = 24, 34, 57, 66

24. (c); P = 00, 12, 24, 31, 43    E = 56, 68, 75, 87, 99  
 N = 03, 14, 21, 33, 40    S = 04, 11, 23, 30, 42  
 PENS = 43, 56, 21, 42

25. (a); D = 02, 20, 79, 85      I = 01, 44, 69  
 R = 12, 57, 79                  F = 23, 55  
 T = 04, 68  
 DRIFT = 20, 57, 69, 23, 68

26. (b); Column I, II, V

I	II	V
$6 \times 4$	$24 + 4$	28
$5 \times 4$	$20 + 4$	24
$7 \times 4$	$28 + 4$	32
$9 \times 4$	$36 + 4$	40
$10 \times 4$	$40 + 4$	44

27. (d); On gas agency 84 and 45, the number is same.  
 $84 \rightarrow 7801$                    $45 \rightarrow 7801$

28. (c); Odd number consumer are  
 7801, 8585, 6971, 2525, 1997, 1021, 4949, 7801

29. (c); Maximum number of consumer are on agency  
 27.  
 3572, 5684, 2572, 7882, 8262

30. (d); As,                   $9 \times 3 \rightarrow 27 \times 4 \rightarrow 108$   
 Similarly,  $11 \times 3 \rightarrow 33 \times 4 \rightarrow 132$

