Directions: In each of the following questions there is a specific relationship between the first and second figure. The same relationship exists between the third and fourth figure which will replace the question mark. Select the correct option from the given alternatives.Question figures.



2.

3.

#### 4. ABZYCDXWEFVUGHTSIJRQKLPOMN

Observe the letter series and observe letter which is at the central place of letters which is at 8th place from the left and at 13th place from right, find the serial number of that letter from left?

(1)	13	(2)	14
(3)	16	(4)	11

#### Q. 5 to Q. 8

5.

6.

7.

8.

Directions: Which number will replace the question mark in the given series. Select the correct number from the given alternatives. ~ 4

68, 54	, 45, 34, 27, ?		
(1)	13	(2)	17
(3)	18	(4)	21
18, 30	, 48, 72, 96, ?		
(1)	96	(2)	106
(3)	115	(4)	120
8, 1,9,	10, 19, 29, ?, 77		
(1)	38	(2)	48
(3)	52	(4)	56
12, 32,	72,152,?,632		
(1)	312	(2)	515
(3)	613	(4)	815

#### Q. 9 to 11

Directions: Find the odd figure.





(1) 10.

С

(3)















(2)

(4)



#### Q. 12 to 14

**Directions:** The figure given alongside is folded on the given lines to construct a cube. Observe the figure and answer the following questions by choosing correct alternative.

8

3



- (3) 0 (4) 1
- 14. From the following which figure is not obtained by folding the paper to form a cube?



- **15.** In the following question there is a specific relationship between the first and second term. The same relationship exists between the third and fourth term. Considering the relationship select correct alternative to replace question mark:
  - 4:80:21:?

(1)	9702	(2)	8702
(3)	8820	(4)	421

#### Q.16 and 17

**Directions:** In each of the following, the question figures change in a particular order. Decide which figure from the given alternatives will replace the question mark.

**16.** Question figure.





#### Q.18 to 20

18.

19.

20.

Directions: Sushil, Vipin, Prashant, Amar are four class friends. Sushil does not like dance. Vipin likes only music and dance. Only three of them like dance and craft. Prashant likes all subjects except music. Sushil is master in drawing and music. ы which subject

Amar	likes which subjects:		
(1)	music and craft	(2)	dance and drawing
(3)	dance and craft	(4)	music and drawing
Which	subject Vipin, Prashant and Amar likes?		
(1)	drawing	(2)	music
(3)	dance	(4)	craft
Who l	kes drawing?		
(1)	Sushil and Vipin	(2)	Vipin and Prashant
(3)	Sushil and Prashant	(4)	Prashant and Amar

#### Q. 21 to 23.

Directions : A wooden block of 4 x 4 dimensions is taken. All faces of block are painting from outside. As shown in the figure it is cut into smaller cubes. Answer the questions by studying adjoining figure.



- 21. How many cubes are there having at least one face painted?
  - 64 (A) 52 (2) 24 (3) 48 (4)
- 22. If the base layer of the block would be same as the top layer then how many cubes will be in the block?
  - (A) 56 52 (2)
  - (3) 60 (4) 62

23. If the base layer and top layer of block is same then at the most how many faces of the cube will be painted? (A) 3 (2) 2

(3)	1
(-)	-

(4) 0

(2)

(4)

#### Q.24 and 25.

Directions : Choose the mirror image from the alternatives given for the given question figures.

24. Question Figure.





### Q.26 and 27:

(3)

25.

**Directions:** A rhythmic arrangement of letters is given. The mission letters appear in the same order in one of the alternative answers. Find the correct alternative.

26.  $p\_rsqr\__rs\_q\_pqr$ (1) (2) qrppr qrspq (3) qspps (4) qsqpr 27. a \_ cb \_ ac \_ \_ ab \_ bcabb (1) (2) bcaab (3) bacbc (4) bcabc

#### Q. 28 to Q. 30

**Directions:** The numbers in the figure show number of tourists from different states. Observe the figure and choose the answer from given alternatives for following questions.

	56 (52) (67) (21) (41) (41) (41) (41) (41) (41) (41) (4			
			72	
28.	How r	nany tourists visited all three states?		
	(1)	119	(2)	108
	(3)	21	(4)	195
29.	Find r	number of tourists visiting only two states.		
	(1)	93	(2)	98
	(3)	87	(4)	139
30.	Find r	number of tourists who visited Kerala and	Rajasthan but n	ot visited Maharashtra?
	(1)	139	(2)	185
	(3)	206	(4)	232
Q.31	and 32	:		
Direc	tions:	Find the odd term.		
31.	(1)	ACEDB	(2)	FULIR
	(3)	TVXWU	(4)	PRTSQ
32.	(1)	ZBX	(2)	VFT
	(3)	RJO	(D)	SIO

#### Q.33 and 34.

Directions: Which symbols will come in the order. Choose the correct alternative.

**33.**  $\Sigma \theta \Delta \mu \beta, \ \theta \Sigma \Delta \mu \beta, \ \theta \Delta \Sigma \mu \beta, ?$ 

(1)	$\theta \Delta \beta \sum \mu$	(2)	θΔμβΣ
(3)	$\theta \Delta \sum \beta \mu$	(4)	θ∆μ∑β

#### **34.** $\psi \Omega WO$ , $\Omega WO\delta$ , $WO\delta\alpha$ ,?

(1)	Οδαη	(2)	ΟδαΩ
(3)	Οδαψ	(4)	ΟδαΨ

#### **35. Directions:** Find number of triangles in the given figure.

(1)	16	(2)	20
(3)	24	(4)	32

#### **36. Directions:** Find total number of squares in the following figure.



#### Q.37 to 39

**Directions :** The following figure is made by arranging some cutes having each side 1 unit. This is painted from all sides. Observe the figure and choose correct alternative for following questions.



- 37. Find the number of cubes having maximum number of faces painted. 2
  - (1) 1 (2)
  - (4) 4 (3) 3

38. How many cubes are used to make the arrangement as shown in the figure?

(1)	35	(2)	40
(3)	44	(4)	46
Find t	he number of cubes having no face painted.		
(1)	0	(2)	1
(3)	2	(4)	3

#### Q.40 and 41.

Directions: In the following figure numbers are written with a specific rule. Find the rule and decide which alternative will be in place of question mark.

40.

39.

15	36 4 6	6 <u>21</u> 5 7	50 <u>?</u> 10		
(1)	140			(2)	220
(3)	320			(4)	500

41.

	36	9	25		
49	26 64	81 21 25	64 ? 144		
	25	16	36		
(1)	19			(2	2) 23
(3)	31			(4	l) 25

#### Q.42 to 44

Directions: In the following questions there is a specific relation between first and second term. The same relationship exists between third and fourth term, which will replace the question mark. Select the correct alternative from the given alternative.

42.	EJOT (1) (3)	: VQLG :: BGLQ : ? DINS SNID	(2) (4)	rmhc Ejot
43.	FJUL : (1) (3)	BOQQ :: LHRX : ? BKPR HRYY	(2) (4)	MNCC HMNC
44.	QPRS (1) (3)	: TUWV :: JIKL : ? MNOP MNPO	(2) (4)	NMOP NMPO

#### Q.45 to 46

45.

Directions: Choose the mirror image from the alternative given for the given question figures.



46. Question figure.





#### Q.47 and 48.

Directions: In a row Pradyuman is twelfth from front and Sarvesh is Twentyfifth from behind. Rahul is exactly at the centre place between Pradyuman and Sarvesh. There are 70 persons in the row then.47. Rahul is standing at which place form front?

Ranu	is standing at which place form nont:		
(1)	29	(2)	33
(3)	17	(4)	42
Rahul	is at which place from behind?		
(1)	29	(2)	42
(3)	33	(4)	17

#### Q. 49 to 52

48.

Directions: In each of the following questions write which correct term in sequence replaces the question mark?49. CD, HI, MN,?

	(1) (3)	QS RS	(2) (4)	OP PQ
50.	RD, PO	G, MK, IN, ?		
	(1)	ER	(2)	DR
	(3)	CQ	(4)	DQ
51.	BM26	, EN70, HO120, KP176,?		
	(1)	NQ250	(2)	NP224
	(3)	MQ221	(4)	NQ238
52.	T23C	, QG24 , 26NL , KP27 ,?		
	(1)	29GV	(2)	29HU

(3)	27GT
(0)	2/01

(4) 28HT

#### Q.53 to 55

Directions: Observe the following pyramid and decide which alternative will be place of question mark in each of the following questions

							j			
						h		I		
					9	g	f	е		
					а	I	b	c d		
				z	3	y	х	w	v	
				р	q	r	s	t	u	
			o	n	m	1	i	k j	i	
			a	b	с	d	е	f	g	h
53.	oab : z (1) (3)	:pq : gab : ? mde jhi						(2) (4)	bxy tjk	
54.	pqcb : (1) (3)	utfg : : yzqr : ? abcd ekig						(2) (4)	lscb wvts	
55.	opnqm (1) (3)	n : ijtk : : ? : gjfke bncmd jfxle						(2) (4)	gbfce ybxsr	
56.	A map (1) (3)	was so placed that north-we South – west North – east	est b	econ	nes	sou	ith the	en wha (2) (4)	at will ea North West	st become?

57. A map was so placed that south-east becomes west then what will north-east become?

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

#### Q.58. to 60.

Directions: There is a certain relationship between the numbers that are given in the following figure. According to that relationship which alternative will replace the question mark? 58.



59.



240 400

(1)	32	(2)	40
(3)	64	(4)	80



#### Q.61 to 63

Directions: A, B, C, D, E, F, G, H eight friends are sitting around their circular table. C is sitting in front of A and H is sitting at the first position to the left of A. F is in front of H. Whereas D is at the first position to right of E and C is at the first position to left of E. A is between G and H. Choose the correct alternatives for the question given below:

<b>61</b> .	Who is	s sitting between B and C?		
	(1)	D	(2)	G
	(3)	F	(4)	Н
<b>62</b> .	Who is	s sitting between A and B?		
	(1)	D	(2)	G
	(3)	E	(D)	F
63.	If E ar	nd B would have interchanged the places then who	will be	sitting at the first position to the left of B?
	(1)	G	(2)	С
	(3)	F	(4)	E
64.	If acco	ording to mathematical code language $8+2=70$ ,	9+3=	87, 10+4=106 then $7+5=?$
	(1)	65	(2)	58
	(3)	51	(4)	63
<b>65</b> .	If acco	ording to mathematical code $9+2=36$ , $8+3=72$	, 7+4	= 112 then $6+5=?$
	(1)	84	(2)	130
	(3)	75	(4)	150

(3)	75	(4)	1

#### Q.66 and 67

Direction: A square shaped paper is folded as shown in the figure. The paper when unfolded will look like as shown in one of the alternatives. Select the correct alternatives.

**66**. Question figure



### 67. Question figure



#### Q.68 and 69.

**68**. Ten years before ratio of ages Ram and Shyam was 1:7, ten years after ratio of their ages is 1:3. Find present age of Ram.

(1)	10 years	(2)	20 years
(3)	30 years	(4)	70 years

69.	From the above information what will be the age of Shyam after	10 years?
	i form and above information what will be the age of onyam after	TO youro.

(1)	70 years	(2)	80 years

(3)	90 years	(4	4)	30 years
-----	----------	----	----	----------

#### Q.70 and 71

Directions: In the following questions the numbers outside the bracket are related to number inside the bracket in a specific manner. From the given manner find the right number which matches and will replace the question mark. **70**. 78(20)82

78(2	20)82		
37(1	2)59		
45(3	9)91		
(1)	13	(2)	17
(3)	19	(4)	23

**71**. 95(53)87

152(8	32)58		
76(?)	174		
(1)	46	(2)	93
(3)	89	(4)	78

#### Q.72 and 73

Direction: Select the correct alternatives which can complete the figures.





#### Q 74 and 76

73.

Directions: In the following specific group of letters are given. From the given alternatives, find out the right letters which matches the given group.

74.	GECA (1) (3)	ZXVT SQOM YWUT MKIH	(2) (4)	VTRQ LJHF
75.	BEIN I (1) (3)	EHLQ ILPU NQUZ LOSY	(2) (4)	HKOS JMQT
76.	BYEV (1) (3)	DWHS IRLO FUKO GTDW	(2) (4)	CXJP AZCW

#### Q.77 and 78

Direction: A square piece of paper is folded and cut at a specific spots as shown in the figure. The paper when unfolded will look – like as shown in one of the alternatives. Select the correct alternative.

#### 77. Question figure



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#### Q.79 and 80.

**79**.

Directions: In the given below a transparent square shaped paper is folded along the dotted lines, which figure will be obtained? Find the figure from the alternative figure given.



80. Question figure



#### Q.81 to 83

Directions: In a certain code language the word BASIC has been written in four different code languages. Understanding the code, find out the correct code language for the word given in each the following questions. Word Code language

## BASIC =

## EDVLF

- (1) CISAB (2)
- YASIZ (3)

(4) BZRHC

- 81. EARTH = BARTE
- 82. CLOUD = CKNTD
- 83. LEARN = OHDUQ

84. In a certain code language if

**85**. In a certain code language if  $\downarrow\uparrow$  means 4

 $\downarrow\uparrow\downarrow\uparrow\downarrow\uparrow$  means 12, @ means ×, e means ÷,

# means + and \$ means – is used

Then	find $\downarrow\uparrow\downarrow\uparrow$ @ $\downarrow\uparrow\downarrow\uparrow\downarrow\uparrow$ \$ $\downarrow\uparrow\downarrow\uparrow$ e $\downarrow\uparrow$ # $\downarrow\uparrow$	$\downarrow \downarrow \downarrow \uparrow = ?$	
(1)	104	(2)	106
(3)	102	(4)	30

#### Q 86 to 88

**Directions :** In the following questions specific group of numbers are given. From the given alternatives, find out the right number which matches the given group.

86.	416 749 525		
	(1) 982	(2)	864
	(3) 637	(4)	319
87.	294 648 448		
	(1) 84	(2)	94
	(3) 100	(4)	194
88.	$3\frac{1}{3}$ 3.2 3.25 $3\frac{2}{3}$		
	(1) 3.5	(2)	5
	(3) 4.2	(4)	$\frac{13}{3}$

#### Q. 89 and 90

89.

**Direction:** In the given questions a complex figure is given. Find out which of the simple figures given in the alternatives is hidden in the complex figure.





**91.** In the following question letters and numbers are written with a specific rule in horizontal rows. Find the rule and decide which will be in place of question mark.

JN	28	27	GP
CE	12	45	TU
LR	?	?	MS
(1)	30	, 41	
(3)	34	, 36	

**92**. Write the correct alternative to replace question mark.



#### Q.93 and 94.

**Directions:** In the following table the digits are assigned with certain symbols. Observe the carefully and choose the correct alternative to answer the questions.

Digits	1	2	3	4	5	6	7	8	9
Symbols	$\oplus$	5	+	<b>\</b> •	$\nabla$	#	$\otimes$	•	\$

93. How will you write the number 635104?

94.	Which number will be expressed by $\$$	#	55	Δ	<b>ن</b>	$\nabla$	?

(1)	951478	(2)	958174
(3)	951847	(4)	951874

.

#### Q.95 and 96

**Directions:** In the following questions word letters are given in column I and are coded in column II. But they are not arranged according to the order of word letters in column I. Find the code language and choose the correct alternative to answer the questions.

			Column	1 I					Column II		
TEA	R					862	23				
PUR	N					564	11				
TAL	K					987	/2				
TALK NET						235	5				
5.	What is the	code fo	r the PRI	EAK?		(0)	40000				
	(1) 136	89 20				(2)	16389				
	(3) 100	39				(4)	10409				
6.	542687 cod	de is for	which wo	ord?							
	(1) NAT	URE				(2)	NATE	JR			
	(3) NUT	RAL				(4)	NURT	۹L			
7.	Observe the	e followi	ng code l	language a	ind choose	the correct	t alternativ	e to answ	er the que	stions.	
	Letters	Z	А	W	0	D	I	Y	L	Р	С
	Digits	0	1	2	3	4	5	6	7	8	9
	What is the	code fo	r the wor	d ZODIAC	?						
	(1) 034	159				(2)	03451	9			
).98 t	<ul> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> </ul>	159 951				(2) (4)	03451 09341	9 5			
).98 ti )irect	(1) 034 (3) 043 o 100 ions: Obser	159 951 ve the p	yramid o	f number a	nd choose	(2) (4) the correct 1 2 3 4	03451 09341 talternative	9 5 e which w	vill replace	question	mark.
).98 t )irect	(1) 034 (3) 043 o 100 ions: Obser	159 951 we the p	yramid o	f number a	nd choose 2 5 6	(2) (4) the correct 1 2 3 4 5 7 8 9	03451 09341 t alternativ	9 5 e which v	vill replace	question	mark.
).98 t )irect	(1) 034 (3) 043 o 100 ions: Obser	159 951 ve the p	yramid o	f number a	nd choose 2 5 6 10 11 1	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2	03451 09341 t alternative 5 16 3 24 25	9 5 e which w	vill replace	question	mark.
)irect	(1) 034 (3) 043 o 100 ions: Obser	159 951 ve the p	yramid o	f number a	10 choose 2 5 6 10 11 1 17 18 19 2 27 28 29 3	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3	03451 09341 alternative 5 16 3 24 25 3 34 35 3	9 5 e which v	vill replace	question	mark.
).98 t )irect	(1) 034 (3) 043 o 100 ions: Obser	159 951 ve the p	yramid o	f number a 26 2 37 38 3	nd choose 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 42 43 44 4	03451 09341 alternative 5 16 3 24 25 3 34 35 3 5 46 47 4	9 5 e which w 6 8 49	vill replace	question	mark.
).98 t )irect 8.	(1) 034 (3) 043 o 100 ions: Obser 18284041:	159 951 ve the p 243446	yramid o 45 :: 2030	f number a 26 2 37 38 3 04243 : ?	10 choose 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 42 43 44 4	03451 09341 t alternative 5 16 3 24 25 3 34 35 3 5 46 47 4	9 5 e which w 6 8 49	vill replace	question	mark.
).98 t )irect 8.	<ul> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> </ul>	159 951 ve the p 243446 24443	yramid o 45 :: 2030	f number a 26 2 37 38 3 04243 : ?	10 choose 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 42 43 44 4 (2)	03451 09341 t alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314	9 5 e which w 6 8 49 344	vill replace	question	mark.
).98 t )irect 8.	<ul> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> </ul>	159 951 ve the p 243446 24443 24445	yramid o 45 :: 2030	f number a 26 2 37 38 3 04243 : ?	10 11 1 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 12 43 44 4 (2) (4)	03451 09341 t alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314 24344	9 5 e which w 6 8 49 344 647	vill replace	question	mark.
).98 t )irect 8.	<ul> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> <li>261728 · 2</li> </ul>	159 951 ve the p 243446 24443 24445 	yramid o 45 :: 2030	f number a 26 2 37 38 3 04243 : ?	10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 1 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 42 43 44 4 (2) (4)	03451 09341 alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314 24344	9 5 e which w 6 8 49 344 647	vill replace	question	mark.
).98 t )irect 8. 9.	<ol> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> <li>261728:?</li> <li>(1) 281</li> </ol>	159 951 ve the p 243446 24443 24445 :: 29203 930	yramid o 45 :: 2030 1: 33223	f number a 26 2 37 38 3 04243 : ?	10 choose 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 12 43 44 4 (2) (4)	03451 09341 a alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314 24344 30213	9 5 e which w 6 8 49 344 647 2	vill replace	question	mark.
).98 t )irect 8. 9.	<ol> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> <li>261728:?</li> <li>(1) 281</li> <li>(3) 362</li> </ol>	159 951 ve the p 243446 24443 24445 24445 :: 29203 930 534	yramid o 45 :: 2034 1: 33223	f number a 26 2 37 38 3 04243 : ? 1	10 choose 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 1 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 2 43 44 4 (2) (4) (2) (4)	03451 09341 alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314 24344 30213 35243	9 5 e which w 6 8 49 344 647 2 3	vill replace	question	mark.
9.98 t )irect 8.	<ol> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> <li>261728:?</li> <li>(1) 281</li> <li>(3) 362</li> </ol>	159 951 we the p 243446 24443 24445 :: 29203 930 534	9yramid o 45 :: 2030 1: 33223	f number a 26 2 37 38 3 04243 : ?	10 choose 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 1 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 42 43 44 4 (2) (4) (2) (4)	03451 09341 a alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314 24344 30213 35243	9 5 e which w 6 8 49 344 647 2 3	vill replace	question	mark.
9.98 t )irect 8. 9.	<ol> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> <li>261728:?</li> <li>(1) 281</li> <li>(3) 362</li> <li>37261718:</li> </ol>	159 951 ve the p 243446 24443 24445 :: 29203 930 534 : 493625	yramid o 45 :: 2030 1: 33223 524 :: 392	f number a 26 2 37 38 3 04243 : ? 1 1	10 11 1 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 1 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 12 43 44 4 (2) (4) (2) (4)	03451 09341 alternative 5 16 3 24 25 3 24 25 3 34 35 3 5 46 47 4 21314 24344 30213 35243	9 5 e which w 6 8 49 344 647 2 3	vill replace	question	mark.
9. 00.	<ol> <li>(1) 034</li> <li>(3) 043</li> <li>o 100</li> <li>ions: Obser</li> <li>18284041:</li> <li>(1) 223</li> <li>(3) 223</li> <li>261728:?</li> <li>(1) 281</li> <li>(3) 362</li> <li>37261718:</li> <li>(1) 392</li> <li>(2) 372</li> </ol>	159 951 we the p 243446 24443 24445 :: 29203 930 534 : 493625 81920	yramid o 45 :: 2030 1: 33223 524 :: 392	f number a 26 2 37 38 3 04243 : ? 1 71710 : ?	10 11 1 5 6 10 11 1 17 18 19 2 27 28 29 3 39 40 41 4	(2) (4) the correct 1 2 3 4 5 7 8 9 2 13 14 1 20 21 22 2 30 31 32 3 2 43 44 4 (2) (4) (2) (4)	03451 09341 alternative 5 16 3 24 25 3 34 35 3 5 46 47 4 21314 24344 30213 35243 47352	9 5 e which w 6 8 49 344 647 2 3 516	vill replace	question	mark.

# MAHARASHTRA NATIONAL TALENT SEARCH EXAMINATION, 2020-21, STAGE 1\_MAT

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

**Directions:** In each of the following questions there is a specific relationship between the first and second figure. The same relationship exists between the third and fourth figure which will replace the question mark. Select the correct option from the given alternatives.

**1.** 2

By observation 2.

**2.** 4

By observation 4.

3. 2 & 3 Bonus recommended.

**4**. 4

8<sup>th</sup> letter from left is V.
13<sup>th</sup> letter from right is H
& V is in the middle of these two to V is
11<sup>th</sup> from left end. 4

#### Q. 5 to Q. 8

**Directions:** Which number will replace the question mark in the given series. Select the correct number from the given alternatives.





6.

 $18 + 30 - (1^{3} - 1) = 48$   $48 + 30 - (2^{3} - 2) = 72$   $72 + 48 - (3^{3} - 3) = 96$   $96 + 72 - (4^{3} - 4) = 108$ No, option matches. Bonus Recommend.

#### 7.

2

Sum of previous two digit is 3rd number. Fibonacci series. 2.

**8.** 1

**9.** 3

All options are same when rotated except option 3.

#### **10.** 4

By observation

11. 12. 13.	2 4 1 3 is opposite to 4 [1]			
14.	2 3 and 4 are opposite to each other. [2]			
15.	1 $21^3 + 21^2 = 9702 [1]$			
16	2 Circle is moving 1 place anti clockwise "+" is moving 3 place in same direction moves two place in same direction. 2.			
17.	4 Line is adding. [4] in figure.			
18.	3 Sunshil Drawing Moving Craft	Vipin Music Dance	Prashant Drawing Dance Craft	Amar Dance Craft
19.	3			
20. 21.	$3 \\ 2 \\ 14+14+16+8=52$			
22.	1 64-8=56			
23.	1 Only corners can be pointed at most of its faces.			
24	1 By observation			
25.	3 By observation			
26.	3 p_rsqrrs_q_pqr pqrs qrsp rspq spqr			
27.	4 alpc bica cab alpc			
28.	3 "21" represent the common part of all three destination that's why 21 is answer.			
29.	4 52 + 41 + 46 = 139 MH+KR MH+RJ RJ+KR			
30.	2			

$$\frac{1}{12} + \frac{1}{2}6 + \frac{1}{27} = \frac{1}{12}65$$
31. 2  
Continue letter group.
32. 3  
Combination of opposite letters and next letter.
33. 4  
 $\sum$  moving 1 place in right side
34. 1  
Let most element is eliminating and new elements add at right most place remaining elements shift place towards left side.
35. 3
36. 4
37. 3
38. 3  
20+12+12
39. 1  
'O' when will be there with n face painted.
40. 4  
Multiply the corner elements with each other i.e.,  $15 \times 6 \times 4 = 360$  then divided it by 10  
 $\therefore 360 \times 10 = 360 \text{ sit the middle no.}$   
Q 50×10×10=5000+10=500
41. 3  
Addition of square [3] not of adjacent Number.  
25 = 5  
64 = 8  
is 144 = 12  
96 = 6  
31
42. 3  
4. 4  
F J U L : B O Q Q : : LH R X : H M N C  
 $\left(\begin{array}{c} 102112 \\ 21527 \\ 11277 \\ 21527 \\ 11277 \\ 4 + 5 - 4 + 5\end{array}\right)$ 

45. 4 By observation

#### 46. 3 By observation



#### **48.** 2

$$(F) \xrightarrow{12th} 224$$

$$(F) \xrightarrow{22th} (B)$$

$$P R S$$

#### **49.** 3

 $\begin{array}{ccc} CD^{(+4)} & HI^{(+4)} & MN^{(+4)} & RS \\ + 3 & + 4 & + 3 & + 4 \end{array}$ 

#### **50.** 2

RD, PG, MK, 1N, DR

#### **51**. 4

BM 26, EN 70, HO 120, KP 176. +3, 1 and (multiplication of)  $B(2)\times(H) = 26$ So, option 4 satisfy given.

#### **52**. 4

T23C, QG24, 26NL, KP27, \_\_\_\_ 28HT – option (2) -3 -3 -3 -3 T, Q, N, K, H +4 +5 +4 +5 U Ans 29 HU

#### **53**. 3

By observation.

#### **54**. 4

By observation.

## **55**. 1

By observation.

#### 56. Option incorrect.

North west becomes south, so it has been rotated 135° anticlockwise. So, east will become north-west. No option matches. Bonus recommend

- 57. 4
- By interchanging direction we get answer as option (4! south) 2
- 58.

(225+15) = 240 as per pattern in Question 59.

59. 3

As we relate question 58 and 59. the blank should be  $8^2 = 64$ 

**60**.3











63.

4



**64**. 3

> $8\div 2=70,9-3=87,10\div 4=106$ So, 7 ÷ 5 = 7 Pattern is  $(8)^2 + (8-2), a^2 + (9-3)$ So,  $7^2 + (7-5) = 51(3)$

65. 4

> 9+2=36, 8+3=72,7 + 4 = 112, so 6 + 5 = ?Pattern is  $9 + (2 \times 2) = 36$  $8 + (3 \times 3) = 72$ So,  $6 + (5 \times 5) = 150$

- **66**. 4
  - By observation
- **67.** 3
- By observation **68**. 2

2  $\frac{x+20}{7x+20} = \frac{1}{3}$  3x+60 = 7x+20  $40 = 4x \Longrightarrow x = 10$ Age of Ram: 20 years (2)

#### **69**. 3

Age of Shyam after 10 year = 90 years.

**70**. 2

78 (20) 82 37 (12) 59 45 (1) 91  $\frac{78+82}{8} = 20$  $\Rightarrow \frac{45+91}{8} = \frac{136}{8} = 17(2)$ 

#### **71**. 1

95 (53) 87  $\rightarrow$ 

- First digit of central no. is equal to sum of digits of no. on left side.
- Second digit of central no. is obtained by dividing the sum of digits on right by 2.

So, 76 (?)  $174 \Rightarrow (7+6)\left(\frac{1+7+4}{2}\right) \Rightarrow 46$ 

Answer, option (1)

#### **72.** 4

By observation

#### **73.** 2

By observation

#### **74**. 4

GECA,ZXUT,SQOM -2,-2,-2,-2 in each term So, option 4 satisfies the condition.

#### 75.

1

BEIN, EHLQ, ILPU,+3,+4,+5,+6 in each term.So, option (1) satisfy given condition.

#### **76**. 3

BYEV, DWHS, IRLO, \_\_\_\_\_ opposite of letters. i.e., B – Y, E – V (opposite) So, Option (3) satisfy the given condition.

#### 77.

4

Option (4) by observation.

4

- Option (4) by observations.
- **79**. 1
  - By observation
- **80**. 4
  - By observation
- **81**. 3
  - Basic
  - (i) EDVLF
  - (ii) CISAB
  - (iii) YASIZ
  - (iv) BZRHC
- 1. Code (+3) in each position.
- 2. Code reversing the oder.
- 3. (first and last) –3 middle there same.
- 4. Code first, last same middle (–1). So, far Question

#### **82**. 4

- Basic
  - (i) EDVLF
  - (ii) CISAB
  - (iii) YASIZ
  - (iv) BZRHC
- 1. Code (+3) in each position.
- 2. Code reversing the order.
- 3. (first and last ) -3 middle there same.
- 4. Code first, last same middle (–1). So, far Question

#### **83**. 1

- Basic
- (i) EDVLF
- (ii) CISAB
- (iii) YASIZ
- (iv) BZRHC
- 1. Code (+3) in each position.
- 2. Code reversing the order.
- 3. (first and last ) -3 middle there same.
- 4. Code first, last same middle (–1). So, far Question

#### **84**. 3

In a certain code language if

 $\begin{array}{l} \downarrow\uparrow\downarrow\uparrow @ \downarrow\uparrow\downarrow\uparrow\downarrow\uparrow \$ \downarrow\uparrow\downarrow\uparrow e \downarrow\uparrow \# \downarrow\uparrow\downarrow\downarrow\downarrow\uparrow=? \\ 8\times12-8\div4+12 \\ 8\times12-2+12 \\ = 106-(2) \end{array}$ 

### **86.** 2

By observation

**87.** 2

$$^{+4}$$
  $^{+1}$   
416 , 525 , 749 , 864  
 $^{+4^2}$   $^{+5^2}$   $^{+7^2}$   $^{+8^2}$ 

**88.** 1 Given numbers have 3 as their integer part.

## **89.** 2

By observation.

```
90. 4
```

```
91. 3
```

JN 28 27 GP CE 12 45 TU LR ? ? MS The patter is like. (12) + (18)+4 position of (L) +Positionof(R)+4=34 M+S=13+19+4=36.

```
92.
```

2



Ans. option 2.

93. 2 635104 is written as  $\bigotimes \checkmark \# \# \bigoplus \bigotimes \bigtriangledown$ 

## ₄ \$**#५∆৩▽ —** 951874

#### **95**. 2 So, code far PREAK = 16389 Coder far R = 6, E = 3, T = 2, N = 5.

- **96**. 3 Coder far R = 6, E = 3, T = 2, N = 5. 5 4 2 6 8 7 - N U T R A L
- 97. 2 Direct coding ZODIAC-034519
- 98. 1 By observations

### **99**. 3

94.

By observations

#### 100. 2

By observations