State Level National Talent Search Examination – 2016 Mental Ability Test

1.	ab - cc - abb - cc - bbc (1) abcca Answer (4) Solution ab - cc - abb - cc - bb $b \ c \ c \ a$	(2) bccba bc – c	(3) bcaba	(4) bccac
2.	- xyx - xxy - xxx - xxy - (1) xyxyx Answer (3) Solution - xy x - x xy - xxx - xxy x x y x	(2) xxyyy y - y	(3) ххуху	(4) уууух
3.	M – MN – MNNN – NN (1) NNMN Answer (1) Solution M – MN – MNN – MNN	(2) MMNN	(3) NNNN	(4) MNMN
4.	Ecology is related to er (1) Hormones Answer (2) Solution Histology y → study of	(2) Tissues	vay as Histology is related (3) Bones	d to (4) Histology
	Questions 5- 6: Find	d the missing numbe	r in the given series	
5.	17, 33, 70, 131, 278? (1) 581 Answer (2) Solution 17, 33, 70, 131, 278 17 \rightarrow 17x 2 - 1 ² = 34 - 33 \rightarrow 33x2 + 2 ² = 66 + 70 \rightarrow 70x2 - 3 ² = 131 131 \rightarrow 131x2 + 4 ² = 2	+ 4 = 70	(3) 541	(4) 575
6.	5, 25, 61, 113, 181? (1) 265 Answer (1) Solution 5, 25, 61, 113, 181? V V V V 20 36 52 16	(2) 375	(3) 275	(4) 365

Questions 7 – 9

7. If ROYAL is coded as 18, 4, 25, 1, 12. What is the code for LIVES? (1) 12, 4, 23, 5, 8 (2) 12, 2, 19, 22, 1 (3) 12, 4, 1, 15, 22 (4) 12, 3, 22, 2, 19 Answer (4) Solution ROYAL \rightarrow 18 4 25 1 12 Lt AEIOU \rightarrow 123 45 (vowels) \therefore YEAR \rightarrow 25 2 1 18 Vowels $R \rightarrow 18$ Lt A $\rightarrow 1$ $\therefore L \rightarrow 12$ $E \rightarrow 2$ $0 \rightarrow 4$ $I \rightarrow 3$ $V \rightarrow 22$ $Y \rightarrow 25$ $I \rightarrow 3$ $A \rightarrow 1$ $0 \rightarrow 4$ $E \rightarrow 2$ $S \rightarrow 19$ $L \rightarrow 12$ $U \rightarrow 5$.: 12, 3, 22, 2, 19 8. If DIVE is coded as 9, 19, 45, 11. What is the code for YEAR? (1) 51, 11, 3, 37 (2) 25, 11, 5, 37 (3) 51, 11, 5, 36 (4) 25, 11, 3, 36 Answer (1) Solution $D = 4 \rightarrow 2x 4 + 1 = 9$ \therefore Y = 25 \rightarrow 2x 25 + 1 = 51 $1 = 9 = 2 \times 9 + 1 = 19$ $E=5 \rightarrow 2x5+1=11$ $V = 22 = 2 \times 22 + 1 = 45$ $A = 1 \rightarrow 2x + 1 + = 3$ $E = 5 = 2 \times 5 + 11 = 11$ $R = 18 \rightarrow 2 \times 18 + 1 = 37$ 51, 11, 3, 37 9. If POCKET is coded as JKWOUF, what is the code word for BEAUTY? (1) XUYEFA (2) YXZFGA (3) YTZGVB (4) UYXAFE Answer (1) Solution POCKET \rightarrow JKWOUF BEAUTY =? ic P \rightarrow 16 \rightarrow 26 - 16 = 10 \rightarrow J $\therefore B \rightarrow 2 \rightarrow 26 - 2 = 24 \rightarrow X$ $O \rightarrow 15 \rightarrow 26 - 15 = 11 \rightarrow K$ $E \rightarrow 5 \rightarrow 26 - 5 == 21 \rightarrow U$ $C \rightarrow 3 \rightarrow 26 - 3 = 23 \rightarrow W$ $A \rightarrow 1 \rightarrow 25 - 1 = 25 \rightarrow Y$ $K \rightarrow 11 \rightarrow 26 - 11 == 15 \rightarrow 0$ $T \rightarrow 20 \rightarrow 26 - 20 = 6 \rightarrow R$ $T \rightarrow 20 \rightarrow 26 - 20 = 6 \rightarrow F$ $v - 25 \rightarrow 26 - 25 = 1 \rightarrow A$ 10. In Vinod's bag, except six books all remaining books all remaining books are English books and except six books all remaining books are Malayalam books. Then totally how many books are there in Vinod's bag? (1) 9(2) 10 (3) 15(4) 12Answer (1) Solution Lt Books are Mt, Mt, Mt, Eg, Eg, E, Mr, Mr, Mr. ∴ Total no of Books = 9 In there Except 6, Remaining are Maths English Malayalam Questions 11 – 14: Read the following information and answer the guestion 11 – 14 based on it

- (i) The length, breadth and height of a rectangular piece of wood are 4 cm, 3 cm are 5 cm respectively
- (ii) Opposite sides of 5 cm x 4 cm are coloured in white
- (iii) Opposite sides of 4 cm x 3 cm are coloured in black
- (iv) Rest 5 cm x3 cm are coloured in yellow in both sides
- (v) Now the places are cut in such a way that a cube 1 cm x 1 cm x 1cm will be made



Solution

Cube that one white are yellow = 12

Questions 15 – 17: In a region, it was observed that 120 people liked only cricket 45% of the people liked only football 5% of the people liked both cricket and football. 10% of the people liked neither cricket nor football



16. How many people do not like any of the two games? (2) 20 (3) 30 (4) 40(1) 10 Answer (3) Solution Do not like any same = 10T of total = 10% of 300 = 30 17. How many people like only football? (1) 100(2) 135 (3) 145 (4) 155 Answer (2) Solution Only foot ball = $45\% = \frac{45}{100} \times 300 = 135$ Questions 18 – 19: Given below is a series of letters, numbers and symbols. Study the series carefully and answer the questions $A\Delta \emptyset B3C8F \sqcup KW \# 6N5 \% \uparrow PA\Delta 7B45 \sqcup Q6 \uparrow B \sqcup$ L = A, B, C, F, K, W, N, P, Q = 9 18. What is the ratio between the letters and numbers in the series? If a letter or number has been used more then once, it is to be counted as only (3) 4: 3 (1) 2: 1 (2) 5: 3 (4) 3: 2

Answer (4) Solution Number = 3, 8, 6, 5, 7, 4 = 6 9:6=3:2 19. How many letters have symbols on their left as well as on their right? (4) 4 (1) 1(2) 2 (3) 3Answer (1) Solution Conceptual Questions 20 – 21: Which of the following will come in the position of (?) 20. 4A, 10D, 22G, 46J, 94M? (1) 168N (2) 128P (3) 190P (4) 156L Answer (3) Solution 4A, 10D, 224, 465, 94M 4, 10, 22, 46, 94 A, D, G, J, M 4x2 + 2 = 101 4 7 10 13 10x 2 x 2 = 22 $\therefore 13 + 3 = 16$ 22x 2 + 2 = 46= P 46 x 2 + 2 = 94 $94 \times 2 + 2 = 190$ ∴ Answer = 190P 21. 2Z57Y714X923W1134V13? (2) 47U15 (3) 27W24 (4) 47V14 (1) 45U14 Answer (2) Solution 2Z5, 7Y7, 14 x 9, 23W11, 34V13 25 = 95 Ζ Υ 7 + 9 = 147 14 + 9 = 23Х 9 23 + 11 = 34W 11 34 + 13 = 47V 13 U 15

∴ 47U15

Questions 22 -24: Seven towns $T_1, T_2, T_3, T_4, T_5, T_6$ and T_7 are situated as follows

- $T_{\rm 5}$ is 8 km to the west of $T_{\rm 2}$
- T_6 is 8 km to the north of T_1
- T_4 is 8 km to the south of T_7
- T_7 is 8 km to the east of T_3
- T_3 is 4 km to the west of T_1
- T_4 is exactly in the middle of T_2 and T_5



Question: 26 Read the information and answer the question No 26

Find friends R, S, T, U and X wore shirts of brown, yellow, green, pink and blue colours and shorts of white, black, grey, blue and yellow colours

Nobody wore shirt and shorts of same colour

T wore yellow shorts and U wore blue shirt

The one who wore yellow shirt wore white shorts and one who wore blue shots wore pink shirt

R wore black shorts and brown shirt

X did not water pink shirt

26. Who wore blue shorts?

(1) T (2) U (3) S	(4) X
Answer (3)	
Solution	
Shirts \rightarrow Br. Yel Grn \rightarrow X Pink \rightarrow No X Blue \rightarrow T	
Short \rightarrow Wht Blk Grey Blue \rightarrow S Yellow	

Questions 27- 28: The numerals are given on the basis of some rule and one space is marked by (?). Find the correct answer from the four alterative to replace the question mark





Question 29: is bases on various faces of a cube. Six sides of cube are numbered 1 to 6. Study the faces and answer the questions



29. Which number is on opposite of 1? (1) 3 (2) 4 **Answer (3)**

Solution



 $1 \rightarrow 3$

30. What letter should replace the question mark?

F	J	Ρ	L	G	Р	Κ			
R	Κ	F	Ι	Ν	F	J			
Х	F	V	G	U	J	?			
(1) U	1) U (2) A				(3) K	((4) 1		
Answ	ver (3	3)							

(3)5

(4) 6

Solution

$6 \overset{\oplus}{F}$	10^{-}_{5}	$16 \frac{\oplus}{P}$	$12{2}$	7⊕ 4	– P	
18R	4D	6F	91	14N	F	J 10
+ 24 X	6F	22V	3C	21U	J	? 21

 $\therefore 21 \!\rightarrow\! U$

Question 31

	0	1	2	3	4	5	6	7	8	9
0	А	Q	E	R	С	Х	0	N	E	Н
1	D	G	В	F	Q	Р	D	Y	K	М
2	Х	М	L	Μ	K	Р	С	J	W	V
3	Ν	Р	U	S	В	Q	I	G	В	F
4	0	С	L	G	W	Υ	Н	Т	U	А
5	Н	Ι	Y	K	R	S	L	F	1	Е
6	Z	Ν	0	V	J	А	G	J	Z	D

The columns of the matrix are numbered from 0 to 9 and rows are numbered form 0 to 6. A letters form this matrix can be represented first by its row and next by its column. For example, N can be represented by 30 or 61 etc. Now find the answer for the following question

31. Identify the set of numbers corresponding to the word MATCH

(1) 23, 10, 43, 40, 56 (2) 21, 49, 43, 41, 64 (3) 21, 65, 47, 26, 50 (4) 19, 46, 47, 04, 46 Answer (3) Solution

MATCH \rightarrow 21, 65, 47, 26, 50

32.

Question 32: In the following question two statements are followed by four conclusions numbered I, II, III and IV. You have to take the two given statements to be true even if they seem to be at variance form commonly known facts. Read all the conclusions together and then decided which of the given conclusions logically follows form the two given statements

Statements

(a) All red are green

(b) All green are white

Conclusions

(i) Some green are red
(ii) Some white are red
(iii) Some red are not white
(iv) All white are green
(1) Only I and II follows
(2) Only II and III follows
(3) Only I and IV follows
(4) Only I and IV follows

Answer (1)

Solution

Conceptual

Questions 33 – 34: Each of the items 33-34 consists of a square of 9 cells in three rows and three columns. The designs in each row or column follow the same rule. Choose the correct answers form among the given alternatives to suit the cell indicated by the question mark 33.



Answer (4) Solution Conceptual

34.



Answer (2) Solution Conceptual

Questions 35 – 36: P, Q, R, S, T, U are six members of a family. P is son of R and T is the daughter of P, S is the daughter of U, who is the mother of T, Q is the spouses of R

$$A = B - C \qquad R = Q$$

$$D \qquad P = U$$

$$E - F \qquad T \qquad S$$

$$Here \qquad \Box \rightarrow male$$

$$O \rightarrow female$$
35. How many male members are in the family?
(1) 1 (2) 2 (3) 3 (4) 4
Answer (2)
Solution
Males = p and (either R or Q) = 2
36. Which of the following pairs represents parents?
(1) PR (2) RT (3) QT (4) PU
Answer (4)
Solution
Pairs = (P, U) & (R, Q) = 2

Questions 37 – 38: in each of the questions a problem figure is followed by four answer figures. The problem figure is embedded in one of the answer figures. Find out that answer figure



PU

Answer (3) Solution Conceptual

39.

Question 39: In the following diagram, there are four rectangles labeled as Liac, Yellow, Indigo and Orange. Rectangle 'Lilac' represents the persons who like Lilac, 'Yellow' for those who like Yellow, 'Indigo' for those who like Indigo and 'Orange' for those who like Orange. Study the diagram and carefully answer the question



Questions 10 – 41: In each of the questions a transparent sheet with a pattern is given. Find out from among the given alternatives as to how the pattern would appear when the transparent sheet is folded along the dotted line 40.



Answer (3) Solution Conceptual

41.



Conceptual

Questions 42: Read the information carefully and answer the question 42

P ⊔ Q means P is the brother of Q P \triangle Q means P is the father of Q P + Q means P is the mother of Q P ∉ Q means P is the husband of Q P - Q means P is the sister of Q

42. Four statements 1, 2, 3, 4 are given which statement is correct form the

Answer (3) Solution

 $A \notin B - C\Delta + E \Box F$

 $A \xrightarrow{B} C$

∴ B is aunt of D

Expression

 $\mathsf{A} \not\in \mathsf{B} - \mathsf{C}\,\Delta + \mathsf{E} \sqcup \mathsf{F}$

Statements

(1) C is the father or E

(2) D is the grandmother of F (3) B is the aunt of D (4) A is the father of D

Questions 43 - 45: In the problem figures in each question there is a definite relationship between the first tow figures. From the set of the four answer figures given, find the figure that would establish the same relationship between the next tow figures



Answer (4) Solution Conceptual

44.



Answer (4) Solution Conceptual



Answer (2) Solution Conceptual

46. A piece of paper is folded and punched as shown below in the problem figures. How will it appear when opened? Choose your answer from the answer figures

(4) 44



Solution Conceptual

47. Find the mirror image of the word 'PIONEER;

(1) REENIOL	(2)	PIONEER
(3) ABENIOP	(4)	REENIOP

Answer (2) Solution Conceptual

48. Find the number of triangles in the figure



45.

49. How many cubes are there in the following figure?



50. A mother said to her son "I was as old as you are at preset ant the time of your birth". If the mother's age is 36 years now the son's age 6 years back was

(4) 13

(1) 10 (2) 12 (3) 14 Answer (2) Solution When by born, let Mother's age = X \therefore After 'y' years, Mother's age = x = y Son's age = y But x = y Given x + y = 36 2x = 36 X = 18 \therefore Son's are years back = 18 - 6 = 12

Language Test

Questions (51 – 55): Read the following passage and choose the correct option from those given below to answer the questions. Detective stories tend to glorify crime murders, gangsters and crooks of all kinds who are described as tough, cunning and courageous individuals who know how the take care of themselves and how to get what they want. In James Mc Cain's the postman Always Rings Twice, for instance, the villain is much more impressive than his victim. He is casual, brave, smart and successful with women. It is true that he finally gets caught. But he is punished for a crime that h did not commit, so that his conviction is hardly a triumph of justice. Besides, looking back over the exciting life of the criminal, the reader might conclude that it was worth the risk

51.	The passage mentions James McCain as (1) An author of detective stories (3) Tough, cunning and courageous Answer (1)	(2) Brave, smart and successful with women(4) Being more impressive then others
52.	Murderers, gangsters and crooks (1) Always do not manage to get away (3) Are wise then their victims Answer (2)	(2) Are often glorified in detective stories(4) Know how to escape from law always
53.	A criminal in a detective story generally gets cau (1) For the crimes he committed (3) Because the police is smarter then the crimin Answer (4)	(2) Because of his careless mistakes
54.	According to the passage, the life of a criminal is (1) Exciting (3) Seldom presented in the right perspective Answer (1)	(2) Hardly worth the risk (4) A triumph of justice

55. The passage tells that detective stories
(1) Make interesting reading
(3) Encourage readers to condemn crimes
Answer (4)

(2) Are hardly worth reading

(4) Tend to create wrong notion about crime and punishment

Questions 56 – 60: Read the following poem and answer the questions given after it. The Eagle He clasps the crag with crooked hands. Close to the sun in lonely lands. Ringed with the azure world he stands. The wrinkled sea beneath him crawls. He watches form this mountain walls. And like a thunderbolt he falls

56.	What is the eagle doing (1) Dying of old age (3) Learning joyfully to fl Answer (2)	·	(2) Hunting the prey(4) Keeping watch over the young ones		
57.	What does 'azure world (1) Forest Answer (2)		(3) The cliff	(4) Nature	
58.	'The wrinkled sea benea (1) The movement of the (3) The clasping of the p Answer (1)	e waves	bes the poet mean by 'crawls? (2) The roaring of the sea (4) the fight of the bird		
59.	The rhyme scheme follo (1) ab ab ab Answer (3)	wed in the poem is (2) ba ba ba		(4) bbb aaa	
60.	"He clasps the crag with (1) Rhyming words Answer (4)	crooked hands". The lin (2) Assonance	•	(4) Alliteration	

61. In the question below, there are six sentences. The first and the last sentences are given. Find the order in which the sentences P, Q, R and S will appear in the paragraph to make it a meaningful one

S1.	In	1739,	Nadir	Shah,	the	mighty	king	of	Iran,	invaded	India

S2. ______ S3. ______ S4. ______

S5._____

S6. The Peacock throne built by Shah Jahan was also taken away by him

- $\mathsf{P}\to\mathsf{After}$ a stay of two months, the went back to Iran
- $\mathsf{Q} \to \mathsf{He}$ defeated the Mughal army in the bate of karnal
- $\mathsf{R} \to \mathsf{He}$ took with him immense wealth as well as the Kohinoor diamond

S → This was followed by the cruel massacre and reckless plunder of Delhi
 (1) SPRQ
 (2) QPSR
 (3) RQPS
 (4) QSPR
 Answer (4)

Question 63 – 64: Choose the word which best fills the blank from the four options given

62. The state in which the few govern the may is (1) Monarchy (2) Oligarchy (3) Plutocracy (4) Autocracy **Answer (2)**

63.	Air pollution can (1) Alleviate Answer (4)	(2) Alienate	(3) Abdicate	(4) Aggravate
64.	identify the set of words (1) Pompous, ridiculous (3) Analysis, philosophy Answer (3)	, photography	(2) Penance, science, p(4) Poisonous, vocalize,	
65.	-	learned to read, his exc (2) Indolent	•	uisitive mind made him an person (4) Erudite
66.	The survival of mankind (1) Regularization Answer (3)	itself in danger due to th (2) Provocation	e of atomic (3) Proliferation	ad nuclear weapons (4) Exploration
67.	Mary was attacked by a (1) Swarm Answer (1)	(2) Herd	(3) Troop	(4) Crowd
68.	"Meet me at the new bui (1) Sight Answer (3)	Iding at noon", the (2) Cite	e architect said (3) Site	(4) Seat
69.	That which cannot be co (1) Incomprehensible Answer (4)		(3) Illegible	(4) Incorrigible

Question 70 – 74: In the following passage there are some blanks that are numbered. Fill in the blanks by selecting the most appropriate word from the given options. The body were ______ (120) ______ (121) after months of cleaning and packing, they were moving into their new home. Boxes lay in a neat _____ (122) in the hall of their old home, full of their clothes, toys and books. When the removal van arrived, they helped to big and _____ (123) movers carry the light boxes to the van. Their new house was just _____ (124) blocks away from their school

70. (1) Annoyed Answer (3)	(2) Worried	(3) Excited	(4) Horrified
71. (1) Finally Answer (1)	(2) Firstly	(3) Hardly	(4) Rarely
72. (1) Bunch Answer (4)	(2) Bundle	(3) Pack	(4) Pile
73. (1) Scrawny Answer (4)	(2) Weedy	(3) Lanky	(4) Burly
74. (1) Few Answer (2)	(2) A few	(3) Many	(4) Less

Questions 75 - 76: Select the meaning of the given phrase/idioms

75. A man of straw	
(1) A man gifted with talents	(2) A greedy man
(3) A man of little worth	(4) A common man
Answer (3)	

76.	To set one's face against (1) To judge by appearance (3) To get out of difficulty Answer (4)		(2) To look at one steadily(4) to oppose with determination						
Questions 77 – 78: Identity the part in the following sentences that is incorrect									
77.	No sooner did the bell ra (1) Answer (1)		vas/ a sc 3)	ramble for/ getting ou (4)	It of the class				
78	Though senior in age/ his father is/ junior then/ may father in service								
10.	(1) Answer (3)	(2)	(3)	(4)					
Questions 79 – 81: Select the word which means the opposite of the given word/ underlined word									
79.	Humility (1) Integrity Answer (4)	(2) Disgrace		(3) Modesty	(4) Pride				
80.	Relinquish (1) Abandon Answer ()	(2) Accept		(3) Resign	(4) Renounce				
81.	Harish eats cakes with ((1) Craze Answer (3)	great relish but h (2) Appetite	e has a	(3) Distaste	(4) Hunger				
82.	Rema's mother scolded (1) Innocent Answer (2)	her for being inc (2) Lazy	dolent. T	he word 'indolent' me (3) Energetic	eans (4) Angry				
83.	Our school's efficacious (1) Unavailing Answer (4)	dance fest raise (2) Bootless	ed funds	for charity. The word (3) Abortive	'efficacious' means (4) Effectual				
Questions 84 – 85: Identify the word correctly spelt from the options given									
84.	(1) Randezvus Answer (3)	(2) Randezvous	5	(3) Rendezvous	(4) Rendezvus				
85.	(1) Treacherous Answer (1)	(2) Tracherus		(3) Treacherous	(4) Tracherous				
Questions 86 – 88: Choose the most appropriate phrasal verbs to complete the sentences									
86.					e lighter and the darker side of life (4) Contrasts among				
87.	How did the accident (1) Come by Answer (2)	? (2) Come about		(3) Come across	(4) Come over				
88.	The host was easily (1) Taken after Answer (4)	by swee (2) Taken off	et words	(3) Taken up	(4) Taken in				

89. I often scolde (1) Would get Answer (2)		(3) Will get	(4) Got	
90. There are various activi (1) Pursue Answer (1)		ur leisure time (3) Utilise	(4) Contribute	
91. " Mind your own busine (1) Meekly Answer (2)		(3) Softly	(4) Hardly	
92. We cannot the (1) Look after Answer (4)	e educational policy as a (2) Look down			
93. If I early, I w (1) Had gone Answer (3)		(3) Go	(4) were gone	
94. You never call me (1) Do you Answer (1)	(2) Did you	(3) Don't you	(4) had you	
95. The play Macbeth is a t (1) Empowered Answer (4)	ragedy of a man who wa (2) Obsessed			
96. It was the most dreadfu (1) Have, seen Answer (4)	l accident l eve (2) has, seen		(4) had, seen	
97. I have been studying ha (1) Get up Answer (4)	ard to ma (2) Get around	y examinations (3) Get along	(4) Get through	
98. Let's play the game of c (1) Will we Answer (3)	chess? (2) Won't we	(3) Shall we	(4) Shouldn't we	
99. The council (1) Has, press Answer (1)		indefinite strike form nex (3) Did, get	kt mother to (4) Had, get	their demands
100. A short piece of writing (1) Epitome Answer (4)	g on a tomb is know as (2) Epistle	(3) Epilogue	(4) Epitaph	

Questions 89 – 100: Choose the most appropriate answer from the options given