



# INTSO EDUCATION

APTITUDE TALENT SEARCH OLYMPIAD (ATSO) 2016 - 2017

STAGE - 1

TIME : 60 min.

CLASS : VI

Max. Marks : 50

### Instructions:

- ⇒ Fill the OMR sheet completely and carefully.
- ⇒ Each question carries one mark and has only one correct answer.  $\frac{1}{4}$  (one fourth) marks will be deducted for indicating incorrect response of each question.
- ⇒ The question paper contains 50 questions to be answered in 60 minutes.

### NUMBER SERIES :

- |    |                       |         |        |         |     |
|----|-----------------------|---------|--------|---------|-----|
| 1. | 3, 8, 24, 48, 120, ?  |         |        |         | [ ] |
|    | 1) 195                | 2) 255  | 3) 168 | 4) 224  |     |
| 2. | 1, 27, 125, 343, ?    |         |        |         | [ ] |
|    | 1) 729                | 2) 1331 | 3) 512 | 4) 2197 |     |
| 3. | 4, 8, 16, 64, 36, ?   |         |        |         | [ ] |
|    | 1) 216                | 2) 125  | 3) 343 | 4) 512  |     |
| 4. | 8, 24, 40, 56, 72, ?  |         |        |         | [ ] |
|    | 1) 80                 | 2) 88   | 3) 96  | 4) 112  |     |
| 5. | 13, 16, 22, 26, 38, ? |         |        |         | [ ] |
|    | 1) 76                 | 2) 68   | 3) 74  | 4) 62   |     |

### NUMBER ANALOGY :

- |     |                     |        |        |        |     |
|-----|---------------------|--------|--------|--------|-----|
| 6.  | 5 : 20 :: 8 : ?     |        |        |        | [ ] |
|     | 1) 58               | 2) 56  | 3) 40  | 4) 72  |     |
| 7.  | 36 : 81 :: 47 : ?   |        |        |        | [ ] |
|     | 1) 196              | 2) 441 | 3) 121 | 4) 169 |     |
| 8.  | 4 : 60 :: 6 : ?     |        |        |        | [ ] |
|     | 1) 210              | 2) 180 | 3) 256 | 4) 324 |     |
| 9.  | 225 : 15 :: 676 : ? |        |        |        | [ ] |
|     | 1) 34               | 2) 28  | 3) 26  | 4) 24  |     |
| 10. | 42 : 68 :: 56 : ?   |        |        |        | [ ] |
|     | 1) 117              | 2) 103 | 3) 97  | 4) 121 |     |

### LETTER SERIES :

- |     |                  |      |      |      |     |
|-----|------------------|------|------|------|-----|
| 11. | K, L, N, Q, U, ? |      |      |      | [ ] |
|     | 1) X             | 2) Z | 3) Y | 4) W |     |
| 12. | L, K, I, F, B, ? |      |      |      | [ ] |
|     | 1) O             | 2) Q | 3) R | 4) W |     |
| 13. | C, I, O, U, ?    |      |      |      | [ ] |
|     | 1) A             | 2) Z | 3) Y | 4) B |     |

14. QA, SE, UI, WO, ? [ ]  
 1) XE                                      2) YE                                      3) YU                                      4) ZU
15. CDF, DFG, EHH, FJI, ? [ ]  
 1) GKL                                      2) GLJ                                      3) GLH                                      4) GLN


**LETTER ANALOGY :**

16. Q : U :: W : ? [ ]  
 1) Z                                      2) X                                      3) A                                      4) Y
17. SG : VJ :: AK : ? [ ]  
 1) DS                                      2) DO                                      3) DI                                      4) DN
18. DM : WN :: RK : ? [ ]  
 1) IP                                      2) IS                                      3) IQ                                      4) IO
19. MORE : EMOR :: KING : ? [ ]  
 1) NIKG                                      2) IKNG                                      3) GIKN                                      4) GNIK
20. B, C, E, G, K, ? [ ]  
 1) M                                      2) N                                      3) O                                      4) P

**WORD ANALOGY :**

21. HAPPY : SAD :: TALL : ? [ ]  
 1) SHORT                                      2) LENGTH                                      3) HEIGHT                                      4) LONG
22. BRIGHT : SUN :: ? : KNIFE [ ]  
 1) STEEL                                      2) SHARP                                      3) CUT                                      4) BLADE
23. HAMMER : TOOL :: SCOOTER : ? [ ]  
 1) RIDE                                      2) PETROL                                      3) ROAD                                      4) TWOWHEELER
24. COW : CALF :: LIONESS : ? [ ]  
 1) LION                                      2) CUB                                      3) PUB                                      4) KIT
25. MATCH : GAME :: GESTURE : ? [ ]  
 1) MOVEMENT                                      2) RUN                                      3) LOOK                                      4) WALK

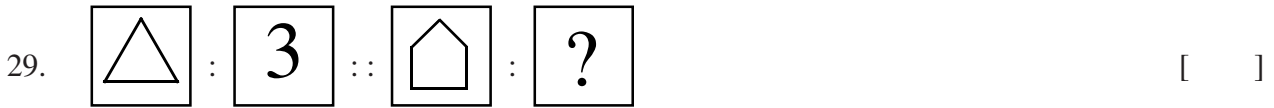
**NONVERBAL ANALOGY :**

26.  [ ]

- 1)                                       2)                                       3)                                       4) 

27.  [ ]

- 1)                                       2)                                       3)                                       4) 



- 1) 5                                      2) 2                                      3) 4                                      4) 6



**UNIT'S DIGIT :**

31. The unit digit of  $5^{21} \times 4^{28}$  is [   ]  
 1) 1                                      2) 5                                      3) 0                                      4) 4

32. Unit digit of  $7^{356}$  is [   ]  
 1) 7                                      2) 1                                      3) 9                                      4) 3

**DIVISIBILITY RULES :**

33. Which of the following number is divisible by 4 ? [   ]  
 1) 15262                                      2) 56426                                      3) 45874                                      4) 38268

34. Which of the following number is divisible by 3 ? [   ]  
 1) 4567                                      2) 3855                                      3) 4624                                      4) 5735

**LCM AND HCF :**

35. The LCM of 6, 8, 15 is [   ]  
 1) 90                                      2) 120                                      3) 180                                      4) 240

36. The HCF of 24, 18, 48 is [   ]  
 1) 3                                      2) 6                                      3) 2                                      4) 4

**MULTIPLE, FACTORS RELATED CONCEPTS :**

37. The total number of factors of 42 is [   ]  
 1) 8                                      2) 6                                      3) 4                                      4) 10

38. Express 124 as a product of prime factors [   ]  
 1)  $2^1 \times 31^1$                                       2)  $2^3 \times 31^1$                                       3)  $2^2 \times 31^1$                                       4)  $2^2 \times 31^2$

39. The total number of factors for 35 other than one and itself [   ]  
 1) 1                                      2) 2                                      3) 3                                      4) 4

## EQUATIONS :

40. Sub triplicate ratio of 216 : 343 is [ ]  
1) 36 : 49                      2) 6 : 7                      3) 6 : 5                      4) 5 : 6
41. Triplicate ratio of 3 : 4 is [ ]  
1) 9 : 16                      2) 81 : 256                      3) 27 : 64                      4) 18 : 48
42. Sub - duplicate ratio of 9 : 25 is [ ]  
1) 3 : 4                      2) 3 : 5                      3) 6 : 5                      4) 4 : 5
43. Duplicate Ratio of 6 : 7 is [ ]  
1) 12 : 14                      2) 216 : 343                      3) 236 : 263                      4) 36 : 49
44. If  $a : b = 3 : 7$  and  $b : c = 4 : 9$  then find  $a : b : c =$  [ ]  
1) 15 : 25 : 63                      2) 12 : 24 : 63                      3) 12 : 28 : 63                      4) 12 : 32 : 63
45. If two numbers are in the ratio 7 : 6 and the difference between them is 4 then find the numbers [ ]  
1) 14, 12                      2) 35, 30                      3) 28, 24                      4) 42, 46
46. If  $\frac{5x-1}{7} = 5x-13$  then x is [ ]  
1) 3                      2) 4                      3) 5                      4) 6
47. Sum of four consecutive numbers is 58 then find the sum of the extremes [ ]  
1) 27                      2) 29                      3) 31                      4) 33
48. A number when increased by 36 it will four times the original number then the initial number is [ ]  
1) 9                      2) 12                      3) 18                      4) 4
49. If  $\frac{5x}{6} = \frac{x}{3} + 12$  then x is [ ]  
1) 18                      2) 12                      3) 24                      4) 30
50. If sum of two numbers is 46 and their difference is 18, then the numbers are [ ]  
1) 35, 11                      2) 32, 14                      3) 29, 17                      4) 36, 10

