

KARNATAKA NTSE - STAGE 1 (2017)
ANSWER KEY & SOLUTIONS
MAT

1. (4)
– and + (By putting options)
2. (2)
(By putting signs in options)
3. (3)
 $10n^2 + 10n(n = 4)$
4. (1)
 $120 (n = 3)$
5. (2)
(By observation)
6. (3)
(By observation)
7. (1)
(Hints: No faces painted = $(n - 2)^3$
 $= (4 - 2)^3 = 8$
 \therefore At least one face painted = 56 (i.e. $64 - 8 = 56$))
8. (4)
14 (By observation)
9. (3)
15 (By observation)
10. (2)
 $19 (9 \times 2 + 1)$
11. (1)
(This is the only set of ODD numbers)
12. (2)
154, 63, 14 (others: $\frac{12 \times 56}{7} = 96; \frac{16 \times 91}{7} = 208; \frac{15 \times 58}{7} = 252$)
13. (1) ASDWFZ
EOIRLV (E – V, O – L, I – R) (Opposite Letters)
MYJQBN (M – N, Y – B, J – Q) (Opposite Letters)
KTCXGP (K – P, T – G, C – X) (Opposite Letters)

14. (3)
35 (-23, -21, -19, -17, -15)
15. (2)
325 ($0 \times 1 + 1 = 1$; $1 \times 2 + 2 = 4$; $4 \times 3 + 3 = 15$; $15 \times 4 + 4 = 64$; $64 \times 5 + 5 = 325$)
16. (4)
(By observation \rightarrow Steps)
17. (3)
(By observation \rightarrow Rotation)
18. (1)
($4 \times$ Age of Pramod = $6 \times$ Age of Praveen)
19. (4)
18: $(18-1)^2 : (18-1)^2 - (18-1)$
14: $(4-1)^2 : (4-1)^2 - (4-1)$
20. (2)
 $66 \times 6 + 4 = 400$
 $166 \times 6 + 4 = 1000$
21. (1)
S A M O H T : S I N N Z T
S + 1 = T O - 1 = N
A - 1 = Z H + 1 = I
M + 1 = N T - 1 = S
22. (4)
(By Observation)
23. (3)
(By Observation)
24. (2)
(diff. +100, +200, +400, +800, +1600)
25. **Grace**
Ideally no any option is correct only conclusion III follows. But, DSERT Karnataka will give answer as (1)
26. (2)
20 (By putting values in Venn diagram)

27. (3)
30 (By putting values in Venn diagram)
28. (4)
8 and 7 (only one possible value of S, i. e $S = 8 \therefore P = 8 R = 7$)
29. (2)
1 3 6 6 2 3 (By equation: $2E + L = 8$
 $2L + P = 5$
 $2A + P = 9$
 $P + B = 7$
 $A = 4$)
30. (1)
(By observation)
31. (4)
(By observation)
32. (4)
33. (2)
Assume three figures as x, y and z
19 $x + 2y = 12$; $2x + y = 9$
 $x + 2z = 20$; $y + 2z = 23$
 $y + x + z = 16$; $x + y + z = 16$
34. (4)
(Row pattern: + 3, -2, +3)
35. (3)
(By Observation)
36. (1)
(By observation & opposite faces rule)
37. (4)
(All surgeons are doctors. Some professors will be doctors. Some professors will be engineers. Engineers & doctors are different professionals).
38. (1)
5 (By drawing Venn diagram and putting the values)
39. (3)
50 (By drawing Venn diagram and putting the values)

40. (2)
(By observation)
41. (3)
R, O, N
 $G - 4 = C$ $C - 4 = Y$ $X - 4 = T$ $R - 4 = N$
 $X - 6 = R$ $T - 6 = N$ $O - 6 = I$ $I - 6 = 3$
42. (1)
A, M (Outer: $D + 3 = G$; $G + 5 = L$; $L + 7 = S$; $S + 9 = B$; $B + 11 = M$; $M + 13 = Z$; $Z + 15 = 0$).
(Inner: $A + 14 = O$; $O + 12 = A$; $A + 10 = K$; $K + 8 = S$; $S + 6 = Y$; $Y + 4 = C$; $C + 2 = E$).
43. (4)
(By observation)
44. (2)
(By drawing diagram)
45. (1)
(sum of even no. — sum of odd no.)
 $(26 + 24) - (17 + 11) = 22$, $(28 + 18) - (21 + 19) = 6$
46. (3)
21, 171 $(3 \times 2 - 1 = 5)$ $(5 \times 2 + 1 = 11)$
47. (2)
(Common in all circles)
48. (4)
(one dot: Only circle & triangle)
(second dot: Only circle & square)
49. (4)
50. (1)
(By observation)