## TCS Mock 1

## SOLUTIONS

Section A: Verbal Reasoning

| 1. Ans. (a) | 2. Ans. (e) | 3.Ans. (b) | 4. Ans. (c) | 5. Ans. (a) | 6. Ans. (e) |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 8. Ans. (c) | 9. Ans. (e) | 10. Ans. (b) | 11. Ans. (b) | 12. Ans. (c) | 13. Ans. (b) | 14. Ans. (a) |
| 15. Ans. (b) | 16. Ans. (a) | 17. Ans. (d) | 18. Ans. (c) | 19. Ans. (d) | 20. Ans. (b) | 21. Ans. (b) |
| 22. Ans. (a) | 23. Ans. (b) | 24. Ans. (d) | 25. Ans. (b) | 26. Ans. (d) | 27. Ans. (e) | 28. Ans. (d) |
| 29. Ans. (e) | 30. Ans. (b) | 31. Ans. (b) | 32. Ans. (d) | 33. Ans. (e) | 34. Ans. (e) | 35. Ans. (b) |
| 36. Ans. (c) | 37. Ans. (a) |  |  |  |  |  |

## Section B: Quantitative Aptitude

38. Ans.(b) Solution: $9 / x=180 / 100$. i.e., $x=5$; i.e., Auto industry.
39. Ans.(a) Solution: $1^{\text {st }}$ person does in $1 \mathrm{~min} .=1 / 40$ of total work. So, the other person does in $1 \mathrm{~min} .=(1 / 24-1 / 40)=1 / 60$. i.e., he can complete in 60 minutes.
40. Ans.(c) Solution: Let the high temperature be $h$. So according to the problem. Low temperature $=1 / 2 h+1 / 3 \times 1 / 2 h=2 / 3 h$. By the problem $2 / 3 \mathrm{~h}+\mathrm{h}=100$. Therefore $\mathrm{h}=60$ \& low temp $=40 \mathrm{hr}$.
41. Ans.(b) Solution: Assume 1; i.e., $1^{*} 3=3$ So, $1^{*} 1 / 3=1 / 3$ so he had to get $1 / 3$.
42. Ans.(c) Solution: So, total time taken $=(27 / 18+1 /+27 / 27)=3 \mathrm{hr}$.

43. Ans.(a) Solution: Let ' $x$ ' be the speed limit. Person ' $A$ ' was fined for exceeding the speed limit by $=10 \mathrm{mph}$. Person ' $B$ ' was fined for exceeding the speed limit by $=$ twice of ' $A$ ' $=2$ * $10 \mathrm{mph}=20 \mathrm{mph}$ given that the second person was traveling at the speed of 35 mph . Therefore the speed limit is $35 \mathrm{mph}-20 \mathrm{mph}=15 \mathrm{mph}$.
44. Ans.(a) Solution: Let, the tree beside it (or better say the faster tree) grow at the rate of $x$ feet/year. So, the slower tree growth rate is $3 / 5^{*} x \mathrm{ft} / \mathrm{yr}$. After four years, $=>4^{*} x+3 / 5^{*} x^{*} 4=8 ;=>x=5 / 4 \mathrm{ft}$. So the slower tree growth rate is $3 / 5^{*} 5 / 4=3 / 4 \mathrm{ft} / \mathrm{yr}$. After two years the slower tree height will be $3 / 4^{*} 2=1.5 \mathrm{ft}$.
45. Ans.(d) Solution: $1^{\text {st }}$ lets consider addition \& let $x$ has to be added then $(17+x) /(24+x)=1 / 2$. Or $x=-10$ so 10 has to be deducted from the ratio.
46. Ans.(a) Solution: Looking at the problem only we can very easily predict the ans. its very much clear that as the lower speed is more than $30 \mathrm{~m} / \mathrm{hr}$ \& the upper speed is less than $4 \mathrm{~m} / \mathrm{hr}$. So the picnic spot must be within 120 miles \& 160 miles. But the nearest option that we have is between $120-140$ miles.
47. Ans.(b) Solution: Let, the fuel used while going $=x$ gallon and $y$ gallon while coming. From, given criterion, $x=y+1 / 4 y .=>x=5 / 4 y$. Again, $x+y=41 / 2=9 / 2$. i.e., $x=2$ gallons.
48. Ans.(c) Solution: So, change in area $=(104 a b-a b) / a b * 100 \%=.04 * 100 \%=4 \%$.

Previous case
Changed case

49. Ans.(a) Solution: It 'ld be "CLEAR". Analysis is given below:

50. Ans.(d) Solution: $330 * 80 / 160=165 \mathrm{~min} . \mathrm{s}=2 \mathrm{hr} .45 \mathrm{~min}$.
51. Ans.(b) Solution: A's speed $=72 \mathrm{~km} / \mathrm{hr} .=72 * 5 / 18=20 \mathrm{~m} / \mathrm{s}$. B's speed $=21 \mathrm{~m} . / \mathrm{s}$. Difference in speed $=(21-20)=1 \mathrm{~m} . / \mathrm{s}$.
52. Ans.(e) Solution: $4 / 5 x=12$. i.e., $x=15 \mathrm{hr} .1 / 3(x)=5 \mathrm{hr}$.
53. Ans.(d) Solution: At the beginning, $\mathrm{S}: \mathrm{R}=1: 2$. Later $\mathrm{S}: \mathrm{R}$ turned into $25 \%: 75 \%=1: 3 \mathrm{So}, 1$ gallon R should be added.
54. Ans.(a) Solution: $\left[4,000(121 / 100 * N)^{1 / 2}-4,000 * N^{1 / 2}\right] / 4,000 * N^{1 / 2}=0.1$ i.e., $0.1 * 100 \%=10 \%$.
55. Ans.(b) Solution: This given curve has attains minimum value at ' $\pi / 2$ ' and maximum value at ' 0 '. For, $y=\cos x$, these values can be attained periodically.
56. Ans.(e) Solution: \%\&\%\&6= 24 \& \%\&\%6 = -12. So, \%\&\%\&6-\%\&\%6 = $24-(-12)=36$.

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57. Ans.(c) Solution: $10^{\text {th }}$ from right in a pool of 15 letters means, $5^{\text {th }}$ from left. As, $5^{\text {th }}$ and $6^{\text {th }}$ are interchanged (as narrated in question), ' N ' is replaced by 'I'.
58. Ans.(b) Solution: 127 is that prime number.
59. Ans.(d) Solution: Try out by trial-n-method. If we divide 194 by 5 , we get the remainders as $4,3,2,1$ and by reversing them we get 1234 .
60. Ans.(c) Solution: This is called the famous knock out game problem where some members participate in some knock game and the number of matches is asked. In this type of cases the answer is $=$ No. of members $-1=139-1=138$.
61. Ans.(c) Solution: $M(373,5)=R(3.4)=T(7.7)=R(5.8)=$
62. Ans.(e) Solution: Length of cable on the bank is $(1500-750) \mathrm{m}=750 \mathrm{~m}$. The cost of the cable below water is $\mathrm{Rs} .15 /-\mathrm{per}$ meter and cost of cable on the bank is Rs.12/-per meter. So the total cost of laying of cable is $=750 \times(15+12)=$ Rs.

20250.
63. Ans.(a) Solution: $\left(3^{*} 2\right) /(3+2)=6 / 5 \mathrm{hr} .=1 \mathrm{hr} .12 \mathrm{~min}$.
64. Ans.(d) Solution: $(3 \mathrm{i}+2 \mathrm{j})(2 \mathrm{i}-3 \mathrm{j})$ makes orthogonal pair.
65. Ans.(d) Solution: $A=2 B$. $A+B$ work done in 1 day $=1 / 7$. i.e., $3 B-1$ day $-1 / 7$ work. i.e., B's work in 1 day $=1 / 21$. i.e. A's work in 1 day $=1 / 10.5$. So, $A$ does total work in $=10.5$ days.
66. Ans.(c) Solution: $(24+6) \times 2=F+6$ Therefore $F=54 \&(24-2) \times 2=M-2$ Therefore $M=46$ So $F-M=54-46=8$ years.
67. Ans.(d) Solution: Total no. Bs followed by $\mathrm{G}=5$.
68. Ans.(a) Solution: Vol. of rect. plate $=8^{*} 11^{*} 2=176$ cubic inches. Area of $\mathrm{rod}=(22 / 7)^{*}(8 / 2)^{*}(8 / 2)=(352 / 7)$. Vol. of rod= area*length= vol. of plate. So length of rod= volume of plate/area=176/(352/7)=3.5
69. Ans.(a) Solution: $42 \%$ of Rs. 20 with respect to 70 i.e. $(28+42)=(42 * 20) / 70=$ Rs. 12.
70. Ans.(c) Solution: Normally a clock is divided in 12 hours(12 equal divisions of 1 hr .). $a+b+c=12$ and $a=b+c . S o, 2 a=12$ i.e., $a=6$. That means that larger part would be of 6 hours.
71. Ans.(b) Solution: $40 \%$ employees are male if $60 \%$ of supervisors are male so for $100 \%$ is $26.4 \%$ so the probability is 0.264 .

## Section C: Analytical Reasoning

Solutions for questions 72-75: The summary with dotted lines means combinations to avoid.

72. Ans.(b) Solution: Refer above.
73. Ans.(a) Solution: Since $C$ is going, $A$ cannot go, leaving $B$ as the second bookkeeper. To have three secretaries, you cannot use $E$ with $C$ leaving only $D, F, G$ and $H$. If $D$ is used, $F$ and $G$ are ruled out. There is one and only one combination: $F, G$ and $H$ with $C$ and $B$.
74. Ans.(b) Solution: If $C$ goes you cannot use D. See above.
75. Ans.(a) Solution: Bookkeeper B has no limitations. A cannot go with C. D cannot go with F or G. E cannot go with C. Although $H$ has no limitations, he could be left in the old office with a combination of $\mathrm{E}, \mathrm{F}$ and G .
76. Ans.(c) Solution: By inspection of the diagram, note that choice D gives a correct list from top to bottom - don't get careless and choose the answer.
77. Ans.(c) Solution: Again by simple inspection of the diagram.
78. Ans.(b) Solution: The only person mentioned who can live on floor six, and therefore be Larry's roommate, is Willy.
79. Ans.(a) Solution: By inspection of the diagram, choices B and C also have the wrong persons above or below; choices D and E list persons, but Rick can't live on floor four or floor six.
80. Ans.(e) Solution: No one mentioned is on floor four; Willy may live with Larry on floor six.
81. Ans.(b) Solution: Refer to statement 4
82. Ans.(c) Solution: A violates 5, B contradicts 4, D fails to consider 5, E does not take 6 into account.
83. Ans.(e) Solution: A and B are not correct, see 4.C and D contradict 5.
84. Ans.(a) Solution: Since there are five applicants and three appear at each session, after the second session all applicants must have made an appearance.

Fall seven times, stand up eight. - Japanese Proverb.

