SBI Clerk Mains 2020 Quantitative Aptitude Practice PDF - Solutions

S1. Ans (a)

Sol. Girls participated from DAV in 2007 $= 9600 \times \frac{36}{100} = 3456$

girls participated from Gita Niketan in 2009 and 2010 together $= 9000 \times \frac{51}{100} + 7800 \times \frac{55}{100} = 8880$

boys participated from Gita Niketan in 2009 and 2010 together $= (9000 + 7800) - 8880 = 7920$

Required percentage $= \frac{7920-3456}{7920} \times 100 \approx 56\%$

S2. Ans (e)

sol. Students from Gita Niketan $= 8400 + 8200 + 9500 + 7100 + 9000 + 7800 = 50000$

students from DAV $= 8100 + 9200 + 9600 + 9400 + 8400 + 8000 = 52700$

required difference $= \frac{52700}{6} - \frac{50000}{6} = \frac{2700}{6} = 450$

S3. Ans (d)

Sol. Girls participated from DAV & Gita Niketan together in 2009 $= \frac{45}{100} \times 8400 + \frac{51}{100} \times 9000$

$= 3780 + 4590 = 8370$

boys participated from green field public school $= \frac{90}{100} \times 8370 = 7533$

total no. of students of green field $= 7533 \times \frac{100}{45} = 16740$

no. of girls $= 16740 - 7533 = 9207$

S4. Ans (b)

Sol. Total no. of boys $= 84 \times \frac{55}{100} + 82 \times \frac{56}{100} + \frac{65}{100} \times 95 + \frac{58}{100} \times 71 + \frac{49}{100} \times 90 + \frac{45}{100} \times 78$

$= 27425$

S5. Ans (a)

Sol. Total Students from Gita Niketan $= 50000$

Total boys from Gita Niketan $= 27425$

Total no. of girls participated $= 50000 - 27425 = 22575$

required percentage $= \frac{27425-22575}{50000} \times 100$

$= 9.7\%$

S6. Ans.(a)

Sol. At the end of three years amount will be $= 15000 + \frac{15000 \times 3 \times 8}{100}$

$= 18600$ Rs.

Now, amount put at CI for 2 years

So amount $= 18600(1 + \frac{10}{100})^2$

$= 22506$ Rs.

S7. Ans.(e)

Sol. $P\times4\times9/100-P\times2\times12/100=360$

$12P/100=360$

$P = 3000$ Rs.

S8. Ans.(c)

Sol. Let distance from B to C is x km

ATQ, $\frac{x}{20}-\frac{x+4}{28}=\frac{36}{60}$

$\frac{7x-5x-20}{140}=\frac{3}{5}$

$2x-20=84$

$2x=104$

$x = 52$ km

$\therefore$ Distance from A to B $= 56$ km

S9. Ans.(d)

Sol.

Given,

$(A+B)=\frac{72}{5}$ days

$B+C=\frac{72}{7}$ days

ATQ,

$(A+B)8$ days $+ (B+C)4$ days $+ (C)1$ days $=$ Total work

$\frac{8\times5}{72}+\frac{4\times7}{72}+\frac{1}{C}=1$

$\frac{5}{9}+\frac{7}{18}+\frac{1}{C}=1$

$\frac{17}{18}+\frac{1}{c}=1$

$\frac{1}{c}=1-\frac{17}{18}$

$\frac{1}{c}=\frac{1}{18}$

$C = 18$ days

$B=\frac{7}{72}-\frac{1}{18}$

$B=\frac{7-4}{72}$

$B = 24$ days

$A=\frac{5}{72}-\frac{1}{24}$

$A = 36$ days

Total work $= 72$ units (LCM of days taken by A, B & C)

Efficiency of $A = 2$ unit/day

Efficiency of $B = 3$ units/day

Efficiency of $C = 4$ units/day

New efficiency of $C=\frac{4}{2}=2$ units/day

Required days $=\frac{72}{(2+3+2)}=10\frac{2}{7}$ days

S10. Ans(c)

Sol. Let number of blue & yellow balls in the bag be 3x & 4x respectively

ATQ –

$\frac{3x}{4x-2}=\frac{5}{6}$

$18x = 20x - 10$

x = 5

Number of blue balls = 15

Number of yellow balls = 20

Required probability $= \frac{^{15}C_2 + ^{20}C_2}{^{35}C_2} = \frac{21}{119} + \frac{38}{119}$

$= \frac{59}{119}$

S11. Ans.(c)

Sol.

×0.5, ×1.5, ×2.5, ×3.5, ×4.5

328.125 × 4.5 = 1476.5625

S12. Ans.(d)

Sol.

×2 + 2.5, ×4 + 4.5, ×6 + 6.5, ×8 + 8.5, ×10 + 10.5

2676.5×10+10.5

= 26765 + 10.5

= 26775.5

S13. Ans.(a)

Sol.

$+8^3, +12^3, +16^3, 20^3, +$ .....

$14412 + 24^3 = 28236$

S14. Ans.(a)

Sol.

+(8×6) − 1, +(8×7) − 1, +(8×8) − 1, +(8×9) − 1, +(8×10) − 1

284 + (8 × 9) − 1 = 284 + 71

= 355

S15. Ans.(e)

Sol.

–80, +10, –40, +20.....

(it's a double series – 80 -40 ..... & +10 +20 .....)

447 – 20= 427

Solutions (16-20):

Bikes produced by Hero on Monday $= \frac{540}{3} = 180$

Let no. of bikes produced by Bajaj and Honda on Monday be x and y respectively.

So, $180 - x = y - 180$

$x + y = 360$

And $y - x = 40$

From above equation $x = 160\ and\ y = 200$

Bikes produced by Hero on Wednesday = 150+100=250

Bikes produced by Hero on Thursday $= \frac{5}{11} \times [910 - (180 + 150 + 250)]$

$= 150$

And bikes produced by Hero on Friday = 180

Bikes produced by Honda on Wednesday $= 220 + 80 = 300$

Bikes produced by Honda on Tuesday $= 570 - 150 - 220 = 200$

Total bikes produced on Wednesday $= 570 \times \frac{100}{76} = 750$

Bikes produced by Bajaj on Wednesday $= 750 - (250 + 300) = 200$

Bikes produced by Honda on Thursday $= \frac{5}{3} \times 150 = 250$

Bikes produced by Bajaj on Thursday $= 580 - (150 + 250) = 180$

	Hero	Bajaj	Honda	total
Monday	180	160	200	540
Tuesday	150	220	200	570
Wednesday	250	200	300	750
Thursday	150	180	250	580
Friday	180	140	200	520
Total	910	900	1150	

S16. Ans (c)

Sol. $\frac{570}{750} = 19 : 25$

S17. Ans (a)

Sol. Required percentage $= \frac{200}{900} \times 100 = \frac{200}{9} = 22\frac{2}{9}\%$

S18. Ans (e)

Sol. Required average $= \frac{1150}{5} = 230$

S19. Ans (c)

Sol. No. of bikes produced on Tuesday and Thursday is same i.e. 150

S20. Ans (c)

Sol. Bikes produced by Honda on Saturday $= 200 \times \frac{75}{100} = 150$

So, bikes produced by Hero on Saturday $= 150 \times \frac{23}{25} = 138$

So, bikes produced by Bajaj on Saturday $= 430 - 150 - 138 = 142$

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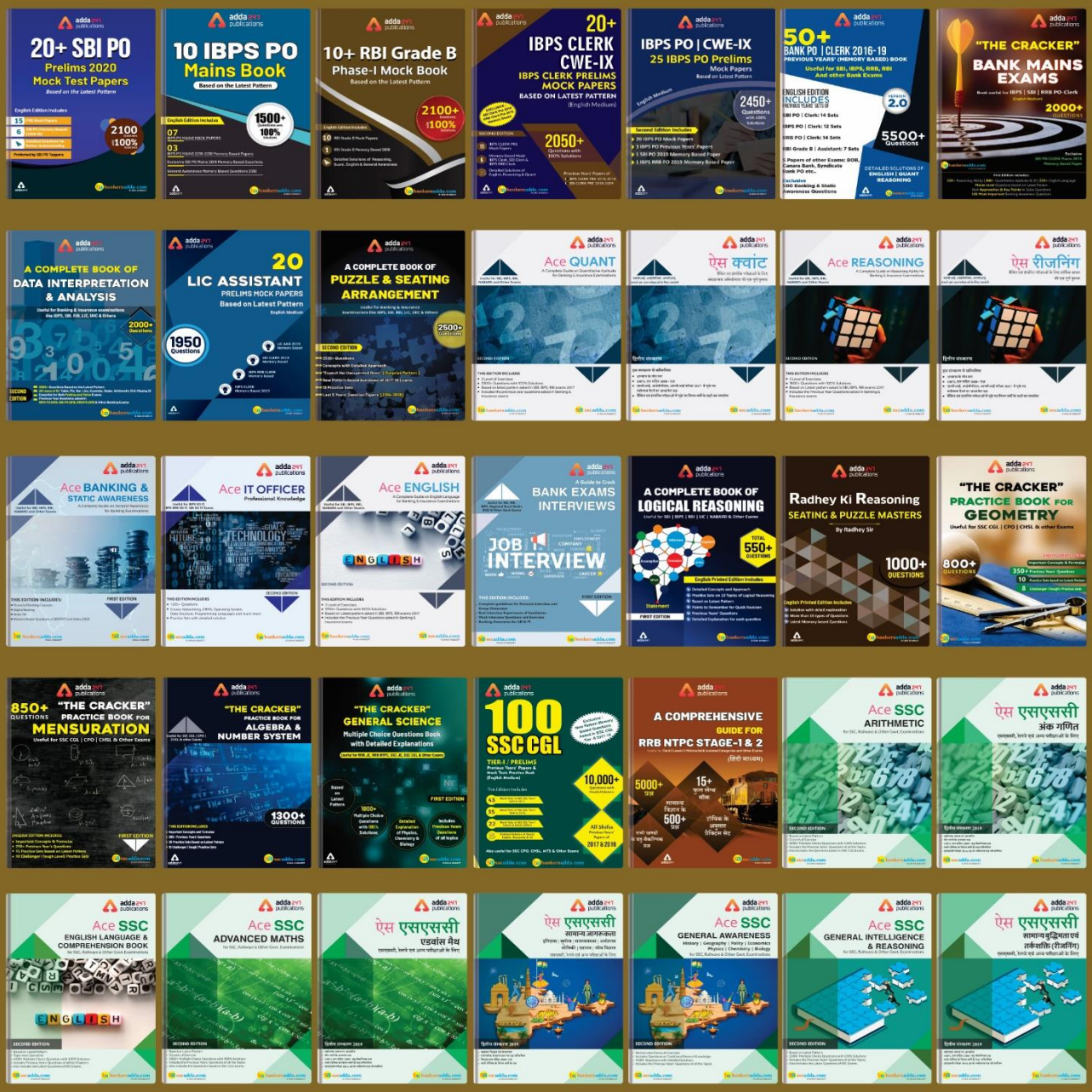

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