

IBPS RRB PO 2022

40 Important Quantitative Aptitude Questions Solution

DOWNLOAD PDF



Solutions

1. Ans. D

The pattern is $=5^2+1, 6^2+1, 7^2+1, 8^2+1, 9^2+1,$
So the wrong term 63 is replace by $= 8^2+1 = 65$

2. Ans. B

The pattern is all the number is regular square of the prime number so next number square is 289

3. Ans. E

The pattern of the number series is:

$$\frac{1430}{2} - 1 = 714$$

$$\frac{714}{2} - 1 = 356$$

$$\frac{356}{2} - 1 = 177$$

$$\frac{177}{2} - 1 = 87.5$$

4. Ans. A

The pattern is -

$$(5*1) + (1*1) = 6$$

$$(6*2) + (2*2) = 16$$

$$(16*3) + (3*3) = 57$$

$$(57*4) + (4*4) = 244$$

5. Ans. A

The pattern is $11^3+1, 12^3+1, 13^3+1, 14^3+1$

So the next term is $= 15^3+1 = 3376$

6. Ans. C

$$44\% \text{ of } 125 + 75\% \text{ of } 840 = 55 + 630 = 685$$

7. Ans. D

$$\sqrt{?} = \left[\frac{(144)^2}{48} \times 18 \right] \div 36$$

$$\sqrt{?} = \left[\frac{20736}{48} \times 18 \right] \div 36$$

$$\sqrt{?} = \frac{7776}{36}$$

$$\sqrt{?} = 216$$

$$\therefore ? = (216)^2$$

$$? = 46656$$

8. Ans. C

Follow BODMAS rule to solve this question, as per the order given below,

Step-1-Parts of an equation enclosed in 'Brackets' must be solved first,

Step-2-Any mathematical 'Of' or 'Exponent' must be solved next,

Step-3-Next, the parts of the equation that contain 'Division' and 'Multiplication' are calculated,

Step-4-Last but not least, the parts of the equation that contain 'Addition' and 'Subtraction' should be calculated.

$$\Rightarrow \frac{12}{3} \times \frac{2}{3} \times 12 \frac{1}{3} + 22.5\% \text{ of } 480 = \frac{2}{9} + \frac{1}{2} \times 426 + X$$

$$\Rightarrow \frac{38}{3} \times \frac{37}{3} + 108 = \frac{2}{9} + 213 + X$$

$$\Rightarrow \frac{1406}{9} + 108 = \frac{1919}{9} + X$$

$$X = 108 - \frac{513}{9}$$

$$\Rightarrow X = 108 - 57 = 51$$

9. Ans. A

$$23 \times 17.5 \approx 403 \text{ \& } 321 \div 52 \approx 6$$

$$\text{Then, } 403 + 64 - 6 = 466 - 6 = 460$$

10. Ans. C

$$970\% \text{ of } 14 \approx 135$$

$$310\% \text{ of } 43 \approx 133$$

$$\text{Also, } 135 + 133 = 268 \approx 270$$

11. Ans. A

$$\text{Number of failed students in Institution B in year 2004} = 1654 - 1566 = 88$$

$$\text{Number of failed student in Institution B in year 2006} = 1440 - 1165 = 275$$

$$\therefore \text{Required Difference}$$

$$= 275 - 88 = 187$$

12. Ans. C

Required Average

$$= \frac{1530 + 1886 + 1860 + 1478 + 1654}{5}$$

$$= \frac{8354}{5} = 1671 (\text{approx})$$



13. Ans. B

Required Percent is minimum in year 2004

Required Percent

$$= \frac{1024 \times 100}{1574}$$

$$= 65.05$$

14. Ans. D

Candidates qualified for the exam in the year of 2005 from all Institutes together

$$= 1500 + 1278 + 1210 + 1586 + 1498$$

$$= 7072$$

Candidates appeared for the exam in the year of 2005 from all Institutes together

$$= 1684 + 1550 + 1754 + 1806 + 1666$$

$$= 8460$$

Required percentage,

$$\frac{7072}{8460} \times 100$$

$$= 83.59$$

15. Ans. E

Number of candidates sitting in examination in year 2007

$$= 1564 + 1388 + 1214 + 1296 + 1480$$

$$= 6840$$

Number of successful candidates in year 2007

Required Percent

$$= \frac{6840 \times 100}{7993}$$

$$= 86 \text{ (Approx.)}$$

16. Ans. C

$$\text{Required ratio} = \frac{(20\% \times 260000)}{(12\% \times 32000)} = \frac{52000}{3840} \rightarrow 325:24$$

17. Ans. C

$$\text{Required percentage} = \left\{ \frac{25+18}{20} \right\} \times 100 = 215\%$$

18. Ans. C

$$\text{Required difference} = (18 - 15)\% \text{ of } 32000 = 960$$

19. Ans. D

$$\text{Required percentage} = \left\{ \frac{32000}{260000} \right\} \times 100 = 12.30\%$$

20. Ans. A

$$\text{Cleared the entrance exam in 2007 and 2012 is} = \frac{32000 \times (12+20)}{100} = 10240$$

21. Ans. A

$$\text{Required percentage} = \frac{27.5 - 22.5}{27.5} \times 100 = 18.18\%$$

22. Ans. B

$$\text{Required difference} = (32.5 - 27.5) \text{ lakh} = 5 \text{ lakh}$$

23. Ans. B

$$\text{Total number of mobiles manufactured in 2011} = (25+20+30) = 75$$

$$\text{Total number of mobiles manufactured in 2012} = (30+30+25) = 85$$

$$\text{Total number of mobiles manufactured in 2013} = (35+27.5+27.5) = 90$$

$$\text{Total number of mobiles manufactured in 2014} = (40+32.5+22.5) = 95$$

$$\text{Total number of mobiles manufactured in 2015} = (15+22.5+32.5) = 70$$

So 2015 is the year in which least number of mobiles were manufactured.

24. Ans. C

Production of Q type mobiles is more than the production of R type mobiles only in 2012 and 2014. We see the largest difference exists in 2014.

We can find percent production for year 2012 & 2014. It is maximum in year 2014. So, the answer is 2014.

25. Ans. E

$$\text{Total production of R type mobiles in 2011 and 2012} = (30+25) = 55$$

$$\text{Total production of Q type mobiles in 2013} = 27.5$$

$$\text{So Required percentage} = \frac{55}{27.5} \times 100 = 200\%$$

26. Ans. E

$$P^2 - 11P + 24 = 0$$

$$P = (+8, +3)$$

$$2q^2 - 14q + 24 = 0$$

$$q = (+4, +3)$$

So the relationship cannot be established

27. Ans. A

$$P^2 - 12p + 36 = 0$$

$$(p-6)^2 = 0 \rightarrow p = 6$$

$$4q^2 - 32q + 64 = 0$$

$$q^2 - 8q + 16 = 0$$

$$q = (4, 4)$$

So $p > q$

28. Ans. E

$$3P^2 + 21P + 30 = 0,$$

$$3p^2 + 15p + 6p + 30 = 0,$$

$$p = (-5, -2)$$

$$3q^2 + 17q + 24 = 0,$$

$$3q^2 + 8q + 9q + 24 = 0,$$

$$q = (-8/3, -3)$$

Since $-8/3$ and -3 lies between -5 and -2 hence No relation

29. Ans. E

$$p^2 + 16p + 55 = 0,$$

$$p^2 + 11p + 5p + 55 = 0,$$

$$P = (-5, -11)$$

$$q^2 + 16q + 63 = 0,$$

$$p^2 + 9q + 7p + 63 = 0,$$

$$P = (-7, -9)$$

So the relationship cannot be established



30. Ans. B

$$p = \pm 3$$

$$q^2 + 6q + 9 = 0,$$

$$(q+3)^2 = 0,$$

$$q = -3$$

$$p \geq q$$

31. Ans. B

Let the amount in scheme B in the original amount be Rs 5x.

Profit earned at the end of first year

$$= 9x \times \frac{30}{100} = 2.7x \text{ Rs}$$

$$\frac{7 \times 11.7x}{13} = 94500$$

$$x = 1500 \text{ Rs}$$

So amount in Scheme B in original amount = $15000 \times 5 = 75000 \text{ Rs}$

32. Ans. C

Speed of the swimmer

$$= \frac{11+5}{2} = \frac{16}{2} = 8 \text{ km/h}$$

33. Ans. C

'Rs. 2080'

Let the principal be x

SI @8p.c.p.a. for four years = 32% of x = 4000

$$x = 12500$$

CI @8p.c.p.a. for 2 years = 16.64% of 12500 = Rs. 2080

34. Ans. A

Acco.to question

$$7x - 5x = 3500$$

$$x = 1750$$

$$\text{Required amount} = 3 \times 1750 + 5 \times 1750 = 14,000$$

35. Ans. A

Let Raghu's investment = Rs. 100

∴ Mohit's investment = Rs. 90

Pradeep's investment = $.90 \times 120/100 = \text{Rs. } 108$

∴ Ratio of the investments of Pradeep, Mohit and Raghu respectively = $108 : 90 : 100 = 54 : 45 : 50$

Sum of ratios = $54 + 45 + 50 = 149$

∴ Raghu's investment = $50 \times 17880/149 = \text{Rs } 6000$

36. Ans. D

Suppose the ages of Nishi and Vinnee are 6x and 5x yr.

$$\therefore \frac{6x+9}{5x+9} = \frac{9}{8}$$

$$48x + 72 = 45x + 81$$

$$48x - 45x = 81 - 72$$

$$3x = 9$$

$$x = 3$$

Required difference,

$$6x - 5x = x = 3 \text{ yr}$$

37. Ans. D

$$\text{CP of mobile} = \frac{1950}{75} \times 100$$

Required SP of mobile

$$= \frac{1950}{75} \times 100 \times \frac{130}{100} = \text{Rs. } 3380$$

38. Ans. A

Let length of train A be x metres

∴ Length of train B = 2x metres

$$\text{Speed of train A} = \frac{x}{25} \text{ m/sec}$$

$$\text{Speed of train B} = \frac{2x}{75} \text{ m/sec}$$

$$\therefore \text{Ratio} = \frac{x}{25} : \frac{2x}{75} \\ = 3 : 2$$

39. Ans. C

In 1 day (6×10) women can complete the piece of work and in 1 day (10×15) children can complete the same piece of work.

$$\therefore 6 \times 10 \text{ women} \equiv 10 \times 15 \text{ children}$$

$$\Rightarrow 2 \text{ women} \equiv 5 \text{ children}$$

∴ 6 women + 10 children = $(15 + 10)$ children = 25 children

$$\therefore M_1 D_1 = M_2 D_2 \Rightarrow 10 \times 15 = 25 \times D_2$$

$$\Rightarrow D_2 = \frac{10 \times 15}{25} = 6 \text{ days}$$

40. Ans. D

$5R + 5B + 5G = 15$ balls.

P (at least one ball Green) = $1 - P(\text{No green}) = 1 - [{}^{10}C_2/{}^{15}C_2] = 4/7$

