### **IDBI Executive 2019 Memory Based (Solutions)**

### Solutions (1-5):

Box
D
A
С
Е
F
G
В
Н
K

**S1.** Ans.(b)

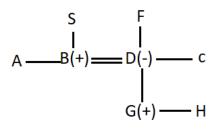
**S2.** Ans.(b)

S3. Ans.(c)

S4. Ans.(d)

**S5.** Ans.(a)

### **Solutions (6-10):**





**S6.** Ans.(d)

**S7.** Ans.(b)

**S8.** Ans.(c)

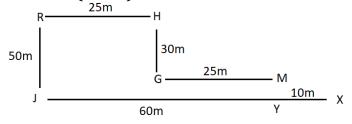
S9. Ans.(d)

**S10.** Ans.(b)

### **S11.** Ans.(b)

**Sol.** (S and T) and (S and M)

### **Solutions (12-16):**





**S12.** Ans.(b)

S13. Ans.(b)

**S14.** Ans.(b)

S15. Ans.(d)

S16. Ans.(d)

S17. Ans.(a)

Sol. Rope, Repo, Pore

### **Solutions (18-22)**:

Floor	Person
9	G
8	В
7	Н
6	K
5	Е
4	С
3	A
2	D
1	F

S18. Ans.(c)

S19. Ans.(a)

**S20.** Ans.(c)

S21. Ans.(b)

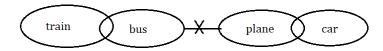
S22. Ans.(b)

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### **Solutions (23-27):**

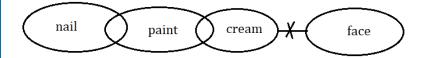
### S23. Ans.(e)

Sol.



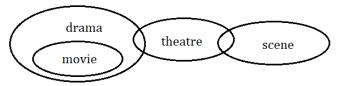
### S24. Ans.(d)

Sol.



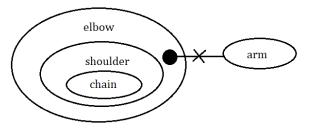
### S25. Ans.(a)

Sol.



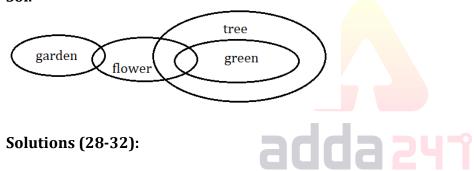
### S26. Ans.(b)

Sol.



### S27. Ans.(b)

Sol.



### **Solutions (28-32):**

**S28.** Ans.(d)

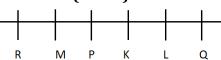
S29. Ans.(e)

S30. Ans.(d)

S31. Ans.(b)

S32. Ans.(d)

### **Solutions (33-37):**



\$33. Ans.(a)

S34. Ans.(b)

\$35. Ans.(c)

\$36. Ans.(d)

S37. Ans.(a)

### **Solutions (38-42):**

Words	Codes
summer	mn
season	hn
is	hi
boring	rd
winter	tr
are/gone	vb/jk
people	bx
feel	az

S38. Ans.(d)

S39. Ans.(c)

S40. Ans.(a)

S41. Ans.(d)

S42. Ans.(e)

### **Solutions (43-47):**

Person	Country	Color
P	Brazil	Grey
Q	Hong Kong	Red
R	Hong Kong	Purple
S	Argentina	Orange
Т	Argentina	Black
U	Brazil	Blue
V	Argentina	Green



S43. Ans.(c)

S44. Ans.(d)

S45. Ans.(a)

**S46.** Ans.(b)

**S47.** Ans.(c)

### **Solutions (48-50):**

D (Blue) > C (yellow) > A/E (Pink) > E/A (Red) > B (Green)

S48. Ans.(d)

S49. Ans.(c)

S50. Ans.(d)

S51. Ans.(a)

### \$52. Ans.(a)

**Sol.** The wealth gained through service exceeded the gain through manufacture.

### **S53.** Ans.(c)

**Sol.** The ability of an organization to raise funds.

### S54. Ans.(c)

**Sol.** Information based companies.

### \$55. Ans.(a)

**Sol.** The venture capitalists have started financing the projects even at the planning stage.

### \$56. Ans.(d)

**Sol.** Promoting information based and software companies.

### \$57. Ans.(e)

**Sol. Advent** means the arrival of a notable person or thing. So, arrival is the word which is similar in meaning to it.

### S58. Ans.(d)

**Sol. Traditional** means existing in or as part of a tradition. So, customary is the word which is similar in meaning to it.

### S59. Ans.(b)

**Sol. Burgeoning** means begin to grow or increase rapidly; flourish. So, retarding is the word which is opposite in meaning to it.

### **S60.** Ans.(a)

**Sol. Stagnating** means cease developing; become inactive or dull. So, developing is the word which is opposite in meaning to it.

For question (61-65); The correct sequence to form meaningful paragraph is DBFACE.

**S61.** Ans.(d)

S62. Ans.(a)

**S63.** Ans.(e)

**S64.** Ans.(b)

S65. Ans.(c)



### **S66.** Ans.(e)

**Sol.** No correction required

### **S67.** Ans.(c)

**Sol.** Replace 'will be likely to face' with 'is likely to face'.

### **S68.** Ans.(e)

**Sol.** No correction required

### S69. Ans.(a)

Sol. Replace 'have not previous conviction' with 'had no previous conviction'

### \$70. Ans.(b)

**Sol.** Replace 'have increased substantial' with 'have increased substantially'

### S71. Ans.(a)

**Sol.** Use 'took' in place of 'taken.' The sentence is in Simple Past Tense.

### **S72.** Ans.(b)

**Sol.** Use 'any' in place of 'none'. Double negatives are not used in a sentence.

adda 247

### \$73. Ans.(d)

**Sol.** Use 'to' in place of 'of'. Usually 'access to' is used.

### S74. Ans.(e)

**Sol.** The sentence is correct.

### \$75. Ans.(a)

**Sol.** Use 'if' in place of 'when'.

### S76. Ans.(a)

**Sol.** Replace 'involved' with 'being involved'

### **S77.** Ans.(c)

**Sol.** Replace 'lives' with 'life'

### S78. Ans.(c)

**Sol.** Replace 'elude' with 'eludes'

### \$79. Ans.(b)

**Sol.** Replace 'adapt' with 'adept'

### S80. Ans.(c)

Sol. Replace 'this' with 'that'

S81. Ans.(b)

S82. Ans.(d)

**S83.** Ans.(d)

\$84. Ans.(a)

**S85.** Ans.(b)

### **S86.** Ans.(c)

**Sol.** None of the given options will fit the given blank to make it contextually as well as grammatically correct. Hence, the correct answer choice would be option (c)

### **S87.** Ans.(b)

**Sol.** Taking hint from the use of 'stock limit' in the beginning of the sentence, it can be clearly seen that the appropriate filler for the given blank would be 'Impose'. Hence, the correct answer choice would be option (b)

### S88. Ans.(a)

**Sol.** Taking hint from the use of 'polls for the vacant seats' it can be clearly seen that the appropriate filler for the given blank would be 'electoral'. Hence the correct answer choice would be option (a)

### **S89.** Ans.(d)

**Sol.** Appropriate filler for the given blank is 'Entire' as can be seen from the usage of 'no other city or nation' in the given sentence. Hence, the correct answer choice would be option (d)

### **S90.** Ans.(b)

**Sol.** None of the given options will fit the given blank to make the given sentence both contextually as well as grammatically correct except 'Jurisdiction'. Hence, the correct answer choice would be option (b)

### **S91.** Ans.(b)

Sol. In the given statement, we will notice that the positions of (B) WITNESSES and (D) DISCLOSE are correct in context of the sentence. But (A) APPROACHED and (C) CITED have been incorrectly placed and interchanging them will make the sentence grammatically and contextually correct.

The correct statement thus formed will be:

Justice Suresh Kumar Kait cited the submission of Solicitor General Tushar Mehta that two material witnesses had been approached with the plea not to disclose any information.

Hence, option (b) is the correct answer.

### S92. Ans.(d)

Sol. In the given statement, we will notice that the positions of (C) **offence** and (D) **arising** are correct in context of the sentence. But (A) **investigating** and (B) **Enforcement** have been incorrectly placed and interchanging them will make the sentence grammatically and contextually correct.

Hence, option (d) is the correct answer.

### S93. Ans.(d)

Sol. In the given statement, we will notice that the positions of (C) **slumped** and (D) **growth** are correct in context of the sentence. But (A) **bellwether** and (B) **sectors** have been incorrectly placed and interchanging them will make the sentence grammatically and contextually correct.

The correct statement thus formed will be:

The eight core sectors that form the bellwether for the Indian economy slumped in August to their lowest growth in four years and four months.

Hence, option (d) is the correct answer.

### S94. Ans.(a)

Sol. In the given statement, we will notice that the positions of (A **resolution** and (C) **civic** are correct in context of the sentence. But (B) **incidence** and (D) **credit** have been incorrectly placed and interchanging them will make the sentence grammatically and contextually correct.

The correct statement thus formed will be:

The NDMC passed a resolution attacking the Delhi government for taking credit for the work done by the civic body in reducing the incidence of dengue.

Hence, option (a) is the correct answer.

### **S95.** Ans.(b)

Sol. In the given statement, we will notice that the positions of (B) **redevelopment** and (D) **compromising** are correct in context of the sentence. But (A) **out** and (C) **off** have been incorrectly placed and interchanging them will make the sentence grammatically and contextually correct.

The correct statement thus formed will be:

Kicking off the redevelopment of the (GPRA) colony, Mr. Puri said the project would be carried out "without compromising the green cover".

Hence, option (b) is the correct answer.

### S96. Ans.(a)

**Sol.** Only A-E can make a contextually correct and grammatically meaningful sentence. Rest of the phrases are fail to do so because they are part of some other sentences.

Sentence thus formed by combining A-E is:

Increasing demand will increase wages, thus increasing purchasing power and reviving rural demand.

### **S97.** Ans.(a)

**Sol.** Only A-E can make a contextually correct and grammatically meaningful sentence. Rest of the phrases are fail to do so because they are part of some other sentences.

Sentence thus formed by combining A-E is:

If government gives land in a city free of cost or on heavy discount to hospitals, educational institutions or any such body, this in itself could also be substantial financing.

### S98. Ans.(c)

**Sol.** Only C-F can make a contextually correct and grammatically meaningful sentence. Rest of the phrases fail to do so because they are part of some other sentences.

Sentence thus formed by combining C-F is:

A mob allegedly made four persons undergo a 'Bangladeshi test' in Baksa district of Assam, and handed them over to the police after questioning their citizenship status.

### S99. Ans.(b)

**Sol.** Only B-F can make a contextually correct and grammatically meaningful sentence. Rest of the phrases fail to do so because they are part of some other sentences.

Sentence thus formed by combining B-F is: The Aam Aadmi Party (AAP) will launch a Dalit outreach programme under which senior leaders would travel to Dalit colonies in the city.

### S100. Ans.(d)

 $\textbf{Sol.} \ \ \textbf{Only B-E and C-F can make a contextually correct and grammatically meaningful sentence. Rest of the phrases fail to do so either because they are in different context or due to some grammatical error .}$ 

Sentence thus formed are:

After the government's ambitious plan of redeveloping Parliament, some architects raised concerns about the project.

The Union Cabinet on Wednesday approved a ban on e-cigarettes, citing the need to take early action to protect public health.

### S101. Ans.(d)

**Sol.** Total number of animals sold in F =  $1800 \times \frac{25}{100} = 450$ 

Total number of animals sold in C & E together =  $1800 \times \frac{(12+10)}{100} = 396$ 

Required percentage = 
$$\frac{450-396}{450} \times 100$$

$$=\frac{54\times100}{450}=12\%$$

### Alternative solution

Required percent= = 
$$\frac{25 - (12 + 10)}{25} \times 100 = 12\%$$

### S102. Ans.(e)

**Sol.** Average number of animals sold in C & D =  $\frac{1800 \times \frac{(10+13)}{100}}{2}$ 

$$=\frac{414}{2}=207$$

Average number of animals sold in B & E =  $\frac{1800 \times \frac{(16+12)}{100}}{2}$ 

$$=\frac{504}{2}=252$$

Required difference = 252 - 207 = 45

### S103. Ans.(a)

**Sol.** Total two legs animals sold in A & F

$$= 1800 \times \frac{24}{100} \times \frac{5}{12} + 1800 \times \frac{25}{100} \times \frac{4}{9}$$

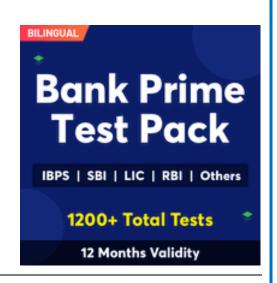
$$= 180 + 200 = 380$$

Total four legs animals sold in A & F

$$= 1800 \times \frac{24}{100} \times \frac{7}{12} + 1800 \times \frac{25}{100} \times \frac{5}{9}$$

$$= 252 + 250 = 502$$

Required difference = 502 - 380 = 122



### S104. Ans.(b)

Sol.

Required ratio = 
$$\frac{1800 \times \frac{(16+10)}{100}}{1800 \times \frac{(24+12)}{100}} = 13:18$$

Or, Alternative –

Required ratio = 
$$\frac{(16+10)\%}{(24+12)\%}$$
 = 13:18

### S105. Ans.(c)

Sol.

Required percentage = 
$$\frac{1800 \times \frac{16}{100} - 1800 \times \frac{13}{100}}{1800 \times \frac{13}{100}} \times 100$$
  
=  $\frac{288 - 234}{234} \times 100 = 23.07 \approx 23\%$ 

### Or alternative

$$= \frac{16-13}{13} \times 100$$
$$= \frac{300}{13} \approx 23\%$$

### Solutions (106-110):

For 2014

No. of article manufactured = 800

No. of article sold = 
$$800 \times \frac{80}{100} = 640$$

### For 2015

No. of article manufactured = 740

No. of article available for selling =  $740 + 800 \times \frac{20}{100} = 900$ 

No. of article sold = 
$$900 \times \frac{80}{100} = 720$$

No. of article unsold = 
$$900 \times \frac{20}{100} = 180$$

### For 2016

No. of article manufactured = 520

No. of article available for selling = 520 + 180 = 700

No. of article sold =  $700 \times \frac{70}{100} = 490$ 

No. of article unsold =  $700 \times \frac{30}{100} = 210$ 

### For 2017

No. of article manufactured = 490

No. of article available for selling = 490 + 210 = 700

No. of article sold =  $700 \times \frac{70}{100} = 490$ No. of article unsold =  $700 \times \frac{30}{100} = 210$ 

### For 2018

No. of article manufactured = 550

No. of article available for selling = 550 + 210 = 760

No. of article sold =  $760 \times \frac{80}{100} = 608$ 

No. of article unsold = 760 - 608 = 152

S106. Ans.(a)

**Sol.** required difference = 720 - 640 = 80

S107. Ans.(c)

**Sol.** in year 2017 no. of article sold are equal to no. of article sold in 2016.

S108. Ans.(b)

**Sol.** required percentage =  $\frac{490}{490} \times 100 = 100\%$ 

S109. Ans.(b)

**Sol.** required sum = 520 + 550 = 1070

S110. Ans.(b)

**Sol.** required ratio = 720: 760

= 18:19

S111. Ans.(c)

**Sol.** Total number of boys in school in 2017 & 2019 together =  $\left(6400 \times \frac{100-60}{100}\right) + \left(1600 \times \frac{100-60}{100}\right)$ 

$$= 2560 + 640$$

Required \% = 
$$\frac{3200}{4000} \times 100$$

= 80%



S112. Ans.(b)

**Sol.** Average number of girls in the school in 2015, 2016 & 2017

$$= \frac{1}{3} \times \left( \left( 3200 \times \frac{56}{100} \right) + \left( 5600 \times \frac{40}{100} \right) + \left( 6400 \times \frac{60}{100} \right) \right)$$

$$=\frac{1}{3}\times(1792+2240+3840)$$

= 2624

Required difference = 3200 - 2624

= 576

S113. Ans.(e)

**Sol.** Total number of students in the school in  $2020 = \frac{125}{100} \times 6400$ 

= 8,000

And, number of boys in the school in 2020 =  $\frac{150}{100} \times 5600 \times \frac{100-40}{100}$ 

= 5040

Hence, number of girls in the school in 2020 = 8000 - 5040

= 2960

### S114. Ans.(a)

**Sol.** Number of girls in the school in 2016 & 2019 together =  $\left(5600 \times \frac{40}{100}\right) + \left(1600 \times \frac{60}{100}\right)$ 

$$= 2240 + 960$$

$$= 3200$$

Number of boys in the school in 2014 & 2018 together =  $\left(4000 \times \frac{100 - 48}{100}\right) + \left(2000 \times \frac{100 - 36}{100}\right)$ 

$$=2080 + 1280$$

$$= 3360$$

Required ratio =  $\frac{3200}{3360}$ 

= 20:21

### S115. Ans.(e)

**Sol.** Required number of boys =  $\left(4000 \times \frac{100-48}{100}\right) + \left(3200 \times \frac{100-56}{100}\right) + \left(5600 \times \frac{100-40}{100}\right) + \left(6400 \times \frac{100-40}{100}\right)$ 

$$\frac{_{100-60}}{_{100}}\right) + \left(2000 \times \frac{_{100-36}}{_{100}}\right) + \left(1600 \times \frac{_{100-60}}{_{100}}\right)$$

$$= 2080 + 1408 + 3360 + 2560 + 1280 + 640$$

= 11328

### S116. Ans.(d)

**Sol.** Ratio of efficiency of A and B = 3:5

 $\Rightarrow$  Time taken be A and B alone to complete the work = 5 : 3

Ratio of time taken by B and C alone to complete the work = 4:5

 $\Rightarrow$  Ratio of time taken by A, B and C alone to complete the work = 20 : 12 : 15

Let, A, B and C alone can complete the work alone is 20x, 12x and 15x days respectively.

ATQ,

$$\frac{12}{20x} + \frac{12}{12x} = \frac{80}{100}$$

$$\Rightarrow \frac{144 + 240}{240x} = \frac{4}{5}$$

$$\Rightarrow \frac{5 \times 384}{4 \times 240} = X$$

$$\Rightarrow$$
 x = 2

Let in 'a' days 'B' and 'C' can complete 60% of work

ATQ,

$$\frac{a}{12\times 2} + \frac{a}{15\times 2} = \frac{60}{100}$$

$$\Rightarrow \frac{5a+4a}{120} = \frac{3}{5}$$

$$\Rightarrow$$
 a =  $\frac{3}{5} \times \frac{120}{9} = 8$  days

### S117. Ans.(a)

**Sol.** Let length of train = L meters

$$108 \times \frac{5}{18} = \frac{L + 240}{14}$$

$$30 \times 14 = L + 240$$

L = 180 meters

Let time taken by train be T sec to cross goods train

= 
$$(144 + 108) \times \frac{5}{18} = \frac{180 + 320}{T}$$

$$252 \times \frac{5}{18} = \frac{500}{T}$$

$$T = \frac{500}{70}$$

$$T = 7\frac{1}{7} sec.$$

### S118. Ans.(d)

Sol.

Total age of Satish, Sandy & Abhi

$$= 32 \times 3 = 96$$
 years

Total age 10 years ago = 96 - 30 = 66 years

Present age of Satish = 
$$\frac{66}{11} \times 2 + 10 = 22$$
 yrs

### **S118.** Ans.(b)

Sol.

Ratio of profit = Archit : Sandy

8:15Let profit of Archit be 8x and Sandy be 15x.
ATO.

ATQ,

$$15x - 8x = 420$$

$$7x = 420$$

$$x = 60$$

Required total =  $60 \times 23$  = Rs. 1380

### S119. Ans.(d)

Sol.

Let the quantity of milk in the original mixture be 3x. And the quantity of water be 2x.

ATQ,

$$\frac{3x+40}{2x} = \frac{2}{1}$$

$$\Rightarrow$$
 4x = 3x + 40

$$\Rightarrow$$
 x = 40

Quantity of new mixture =  $5 \times 40 + 40 = 240$  lit.

∴ Required quantity of water = 
$$(240 - 90) \times \frac{1}{3} = 50$$
 lit.



### S121. Ans.(c)

### Sol.

Let speed of current be x km/hr.

$$(240-x) \times \frac{60}{100} = x$$

$$144-0.6x=x$$

$$1.6x = 144$$

speed in upstream=250-90=150km/hr

### S122. Ans.(c)

### Sol.

Curved surface area of hemisphere

= 
$$2\pi r^2$$
 = 308 [r  $\rightarrow$  radius of hemisphere]

$$= 7 cm$$

Height of cylinder (h) = 7 cm

Radius of cylinder (R) = 
$$\frac{7}{7} \times 3 = 3$$
 cm

Total surface area of cylinder

$$=2\pi R(R+h)$$

$$= 2 \times 3 \times 10\pi = 60 \text{ m cm}^2$$

### \$123. Ans.(a)

### Sol.

Let cost price of article be Rs 100x

Marked price = 
$$100x \times \frac{152}{100} = 152x$$
  
Selling price after single discount of 30%

$$= 152x \times \frac{70}{100} = \text{Rs } 106.4x$$

Selling price after two successive discounts of 25% and 12%

$$= 152x \times \frac{75}{100} \times \frac{88}{100} = \text{Rs } 100.32x$$

$$106.4x - 100.32x = 76$$

$$x = 12.5$$

### S124. Ans.(c)

### Sol.

Let two numbers are x and y respectively

According to question.

$$\frac{70 \times x}{100} = \frac{30 \times y}{100}$$

$$\Rightarrow \frac{x}{y} = \frac{3}{7}$$

$$\Rightarrow x = \frac{3}{7}y$$
 ...(i)

Now Average of numbers =  $\frac{x+y}{2}$  = 24

$$\Rightarrow$$
 x + y = 48 ...(ii)

Put value of x from (i) into (ii)

$$\Rightarrow \frac{3}{7}y + y = 48$$

$$\Rightarrow \frac{10y}{7} = 48$$

$$\Rightarrow$$
 y = 33.6

$$\Rightarrow$$
 x = 48 - 33.6 = 14.4

Larger number = 33.6

### S125. Ans.(c)

Sol.

Let sum be Rs P

ATQ,

$$\frac{\text{CI}}{\text{P}} = \left[ \left( 1 + \frac{\text{R}}{100} \right)^2 - 1 \right]$$

$$\frac{24}{25} + 1 = \left(1 + \frac{R}{100}\right)^2$$

$$\frac{49}{25} = \left(1 + \frac{R}{100}\right)^2$$

$$R = 40\%$$

For time period of 2 years

$$\frac{PR^2}{100^2}$$
 = difference  $\Rightarrow 120 = \frac{P \times (40)^2}{(100)^2}$ 

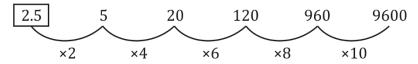
$$P = Rs 750$$

$$SI = \frac{P \times R \times Time}{100} = \frac{750 \times 40 \times 3}{100} = Rs \ 900$$

### S126. Ans.(b)

Sol.

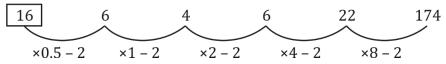
Pattern of series -



### S127. Ans.(a)

Sol.

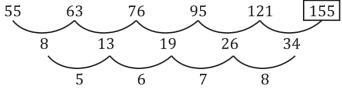
Pattern of series -



### S128. Ans.(b)

### Sol.

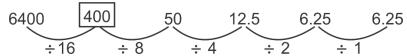
Pattern of series -



### S129. Ans.(b)

Sol

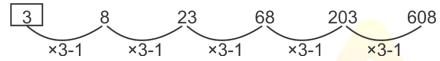
Pattern of series -



### \$130. Ans.(d)

Sol.

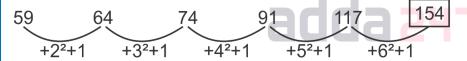
Pattern of series -



### S131. Ans.(b)

Sol.

Pattern of series -



### S132. Ans.(b)

Sol.

Pattern of series -

$$\times 0.5 + 1$$
,  $\times 1 + 1$ ,  $\times 2 + 1$ ,  $\times 4 + 1$ ,  $\times 8 + 1$   
So, ? =  $12 \times 0.5 + 1 = 7$ 

### \$133. Ans.(a)

Sol.

Pattern of series -

$$24 + (5^2 - 1) = 48$$

$$48 + (7^2 - 1) = 96$$

$$96 + (9^2 - 1) = 176$$

$$176 + (11^2 - 1) = 296$$

$$? = 296 + (13^2 - 1) = 464$$

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### S134. Ans.(b)

Sol.

Pattern of series -

$$63 = (4^3 - 1)$$

$$215 = (6^3 - 1)$$

$$511 = (8^3 - 1)$$

$$? = (10^3 - 1) = 999$$

$$1727 = (12^3 - 1)$$

$$2743 = (14^3 - 1)$$

### **S135.** Ans.(e)

Sol.

Pattern of series -

$$16 \times 5 + 5 = 85$$

$$85 \times 4 + 4 = 344$$

$$344 \times 3 + 3 = 1035$$

$$1035 \times 2 + 2 = 2072$$

$$2072 \times 1 + 1 = 2073$$

### S136. Ans.(b)

Sol.

$$\frac{40}{100} \times 750 + ?^2 = 624$$

$$?^2 = 624 - 300$$

$$?^2 = 324$$



### S137. Ans.(d)

Sol.

$$160 + ? = \frac{64}{100} \times 350$$

$$? = 224 - 160$$

### S138. Ans.(e)

Sol.

$$\frac{312}{?} + 169 = \frac{20}{100} \times 910$$

$$\frac{312}{?}$$
 = 182 - 169

$$\frac{312}{?}$$
 = 13

### S139. Ans.(d)

Sol.

$$? + 727 - 93 = 800$$

$$? = 800 - 634$$

? = 166

### S140. Ans.(d)

Sol.

$$\frac{?}{\frac{100}{100}} \times 1050 + 364 = (28)^{2}$$

$$\frac{?}{\frac{100}{100}} \times 1050 = 784 - 364$$

$$\frac{?}{\frac{100}{100}} \times 1050 = 420$$

$$? = \frac{420 \times 100}{\frac{1050}{1050}}$$



### S141. Ans.(d)

**Sol.** Required number = 
$$(82 \times 5) - (65 \times 2) - (100 \times 2)$$

$$=410-130-200$$

= 80

? = 40

### S142. Ans.(e)

**Sol.** Let initial income and expenditure of Veer be Rs.8x and Rs.5x respectively.

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So, savings of Veer = 8x - 5x

= Rs.3x

New income of Veer =  $8x \times \frac{150}{100}$ 

= Rs.12x

And, new/increased expenditure of Veer = 12x - 3x

= Rs.9x

Required ratio =  $\frac{9x}{5x}$ 

= 9:5

### S143. Ans.(a)

**Sol.** Let total quantity of each of vessel – A & B be 20x liters.

ATQ,

$$\left(20x \times \frac{2}{5}\right) + \left(20x \times \frac{3}{4}\right) = 92$$

$$8x + 15x = 92$$

$$x = 4$$

So, required quantity = 20x

= 80 liters

### S144. Ans.(b)

**Sol.** Let population of village in 2015 be 100x.

ATQ,

$$100x \times \frac{80}{100} \times \frac{80}{100} \times \frac{80}{100} = 7680$$

$$x = \frac{76800}{512}$$

$$x = 150$$

So, required population = 100x

= 15000

### S145. Ans.(a)

**Sol.** Let total capacity of the tank be 360 liters (LCM of 36 & 40).

And, let efficiency of pipe – C be 5x units/day.

So, efficiency of pipe – B = 4x units/day

ATQ,

$$(5x + 4x) = \frac{360}{40}$$

$$x = 1$$

So, efficiency of pipe – A = 
$$\frac{360}{36}$$
 – 4

Required time = 
$$\frac{360}{5+4+6}$$
 = 24 hours



### S146. Ans.(b)

Sol.

I. 
$$4x^2 - 12x + 5 = 0$$

$$4x^2 - 10x - 2x + 5 = 0$$

$$2x(2x-5)-1(2x-5)=0$$

$$(2x-5)(2x-1)=0$$

$$x = \frac{5}{2}, \frac{1}{2}$$

**II.** 
$$4y^2 + 8y - 5 = 0$$

$$4y^2 + 10y - 2y - 5 = 0$$

$$2y(2y+5)-1(2y+5)=0$$

$$(2y-1)(2y+5)=0$$

$$y = \frac{1}{2}, \frac{-5}{2}$$

So, 
$$x \ge y$$

### S147. Ans.(d)

### Sol.

$$I. x^2 - 11x + 28 = 0$$

$$x^2 - 7x - 4x + 28 = 0$$

$$x(x-7)-4(x-7)=0$$

$$(x-7)(x-4)=0$$

$$x = 7, 4$$

**II.** 
$$y^2 - 15y + 56 = 0$$

$$y^2 - 7y - 8y + 56 = 0$$

$$y(y-7)-8(y-7)=0$$

$$(y-7)(y-8)=0$$

$$y = 8, 7$$

$$x \le y$$

### S148. Ans.(a)

### Sol.

$$I. 3x^2 - 7x + 2 = 0$$

$$3x^2 - 6x - x + 2 = 0$$

$$3x(x-2)-1(x-2)=0$$

$$(x-2)(3x-1)=0$$

$$x = \frac{1}{3}, 2$$

II. 
$$4y^2 - y = 0$$

$$y(4y-1)=0$$

$$y = 0, \frac{1}{4}$$

So, 
$$x > y$$

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### S149. Ans.(a)

### Sol.

$$I. 10x^2 + 11x + 3 = 0$$

$$10x^2 + 6x + 5x + 3 = 0$$

$$2x(5x+3)+1(5x+3)=0$$

$$(5x + 3)(2x + 1) = 0$$

$$x = \frac{-3}{5}, \frac{-1}{2}$$

II. 
$$5v^2 + 9v + 4 = 0$$

$$5v^2 + 5v + 4v + 4 = 0$$

$$5y(y+1) + 4(y+1) = 0$$

$$(y + 1) (5y + 4) = 0$$

$$y = -1, \frac{-4}{5}$$

### S150. Ans.(c) Sol.

I. 
$$x + 10 = \sqrt[3]{3375}$$
  
 $x = 15 - 10$   
 $x = 5$   
II.  $y - 1 = \sqrt[2]{81} - 4$   
 $y = 6$   
So,  $y > x$ 







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