





# RPF SI LIVE LEAK for CBT – English Answer and Solutions

	1	ı		ı			1	T	
1.	2	2.	1	3⋅	3	4.	4	5∙	3
6.	2	7•	1	8.	1	9.	2	10.	2
11.	1	12.	2	13.	4	14.	1	15.	2
16.	3	17.	3	18.	4	19.	3	20.	2
21.	1	22.	1	23.	1	24.	2	<b>25.</b>	2
26.	3	27.	2	28.	2	29.	1	30.	1
31.	1	32.	3	33.	1	34.	2	35∙	3
36.	3	<b>3</b> 7•	_3	38.	2	_ 39.	4	40.	3
41.	3	42.	2	43.	4	44.	3	45.	2
46.	1	47.	1	48.	1	49.	4	50.	4
51.	2	<b>52.</b>	3	53.	3	54.	3	55.	4
<b>56.</b>	3	<b>5</b> 7•	3	<b>58.</b>	2	59.	1	60.	4
61.	2	62.	4	63.	1	64.	1	65.	3
66.	1	67.	3	68.	2	69.	2	70.	3
71.	2	7 <b>2.</b>	3	<b>73</b> •	3	<b>74</b> •	2	<b>75</b> •	3
76	4	77•	2	<b>78</b>	1	<b>79.</b>	1	80	1
81.	4	82.	2	83.	2	84.	3	85.	4
86	4	87.	2	88	3	89.	3	90	3
91.	2	92.	4	93.	1	94.	1	95.	1
96.	3	97.	4	98.	1	99.	4	100.	1
101.	2	102.	3	103.	4	104.	3	105.	1
106.	3	107.	4	108.	2	109.	1	110.	1
111.	3	112.	3	113.	3	114.	1	115.	3
116.	2	117	1	118.	4	119.	1	120.	2







# Quant

#### 1.

$$\sqrt{405} - \frac{1}{2}\sqrt{80} - \sqrt{125}$$

$$\Rightarrow \sqrt{81 \times 5} - \frac{1}{2}\sqrt{16 \times 5} - \sqrt{25 \times 5}$$

$$\Rightarrow 9\sqrt{5} - \frac{1}{2} \times 4\sqrt{5} - 5\sqrt{5}$$

$$\Rightarrow 9\sqrt{5} - 2\sqrt{5} - 5\sqrt{5}$$

$$\Rightarrow 2\sqrt{5} = 2 \times 2.236 = 4.472$$

#### 2.

$$[376 \div 2 - 7 \times 18 \div 2 + \{(9+5) \times 19\} + 3] \times 7 - 9] \times 19 + 9 = ?$$

$$? = [188 - 7 \times 18 \div 2 + 266 + 3 \times 7 - 9] \times 10 + 0$$

? = 
$$[188 - 126 \div 2 + 266 + 3 \times 7 - 9] \times 19$$

$$? = [188 - 63 + 266 + 3 \times 7 - 9] \times 19 + 9$$

$$? = [188 - 63 + 266 + 21 - 9] \times 19 + 9$$

$$? = 7657 + 9$$

# 3.

$$x = 33.33\%$$
 of  $63 + 77.78\%$  of  $117 - 62.5\%$  of  $152$ 

$$\Rightarrow$$
 x = 1/3 × 63 + 7/9 × 117 - 5/8 × 152

$$\Rightarrow$$
 x = 21 + 91 - 95

$$\Rightarrow$$
 x = 112 - 95

$$\therefore x = 17$$

# 4.

Let the total no. of chairs = 8x + 13x + 4x = 25x

Cost of big chairs =  $8x \times 650 = 5200x$ 

Cost of medium chairs =  $13x \times 500 = 6500x$ 

Cost of small chairs =  $4x \times 400 = 1600x$ 

 $\therefore$  Average cost = (5200x + 6500x + 1600x)/25x = 13300/25 = 532

# 5.

Total weight of 26 girls =  $42 \times 26 = 1092$  kg

Total weight of 39 students =  $48 \times 39 = 1872 \text{ kg}$ 

Total weight of (39 - 26) = 13 boys = 1872 - 1092 = 780

 $\therefore$  Average weight of boys = 780/13 = 60 kg

# 6.

Valid votes of winning candidate = 70% Valid votes of losing candidate = 30%









Difference of valid votes of winning and losing candidates = 70% - 30% = 40%

$$\Rightarrow$$
 100% = 22500 = total valid votes

$$\therefore$$
 Total no. of votes polled = 22500  $\times$  100/90 = 25000

7.

Initial price of petrol = Rs. 60/lt

Let initial consumption = x lt

Total expenditure on petrol =  $60 \times x = Rs$ . 60x

New price of petrol = Rs. 75/lt

Let new reduced consumption = y lt

Total new expenditure on petrol =  $75 \times y$  = Rs. 75y

Increased expenditure =  $10\% \Rightarrow 0.1 = (75y - 60x)/60x \Rightarrow x = 75y/66$ 

⇒ The reduced consumption of petrol = (x - y)/x = 9/75 = 12%

 $\therefore$  The consumption of petrol should be reduced by 12%.

8.

Let the initial shares of X, Y, Z be x, y, z respectively

Given the total amount with them together is Rs. 3170

Therefore 
$$x + y + z = 3170$$
 ----(1)

Given that after diminishing the share by certain amount, the remaining amount with X, Y, Z will be in the ratio 20:18:21

Let us consider the amount with each of them is X = 20k, Y = 18k, Z = 21k

The actual share left over with each of them after diminishing is x - 13, y - 12 and z - 18 with X, Y, Z respectively

Substituting the new values in Equation 1 we get,

$$\Rightarrow$$
 (x - 13) + (y - 12) + (z - 18) = 20k + 18k + 21k

$$\Rightarrow$$
 (x + y + z) - (13 + 12 + 18) = 59k

$$\Rightarrow$$
 3170 - 43 = 59k

$$\Rightarrow$$
 k = 3127/59 = 53

Initial share with  $Z = 21k + 18 = (21 \times 53) + 18 = 1113 + 18 = 1131$ 

 $\therefore$  Initial share with Z = Rs. 1131

9.

$$M : N = 3 : 5$$

$$\Rightarrow$$
 M/N = 3/5

$$\Rightarrow$$
 N = 5M/3

$$M : O = 3 : 7$$







$$\Rightarrow$$
 M/O = 3/7

$$\Rightarrow$$
 O = 7M/3

$$(M + N) : (N + O) = (M + N)/(N + O) =$$
  
 $(M + 5M/3)/(5M/3 + 7M/3) =$   
 $(8M/3)/(12M/3) = 8/12 = 2/3 = 2 : 3$ 

Let Income of S and T are 3a and 4a respectively and the expenditure of both S and T is b

Saving of S = Income of S - Expenditure of S

$$\Rightarrow$$
 4000 = 3a - b ----(1)

Saving of T = Income of T - Expenditure of T

$$\Rightarrow$$
 22000 = 4a - b ----(2)

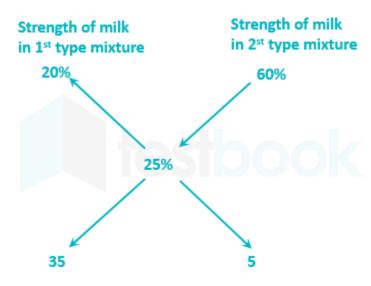
Solving eq.(2) – eq.(1).

$$\Rightarrow$$
 22000 - 4000 = 4a - 3a - b + b

$$\Rightarrow$$
 18000 = a

: Income of S = 
$$3a = 3 \times 18000 = 5400$$

#### 11.



 $\therefore$  Required ratio = 35:5 = 7:1

# **12.**

 $\Rightarrow$  When we divide 744 by 59 then we get quotient = 12 and remainder = 36

 $\Rightarrow$  If we subtract 59 - 36 = 23

 $\therefore$  23 should be added to 744 to get completely divisible by 59

# 13.

$$HCF = 42$$

Let the numbers are 42a and 42b

$$\Rightarrow 42a + 42b = 336$$

$$\Rightarrow$$
 a + b = 336/42 = 8

Possible factors are = (1,7), (5,3), (3,5), (7,1)



ATTEMPT ALL TESTS









∴ Total number of such pairs of number = 4

⇒ 
$$abc = 30/3 = 10$$
  
∴  $(abc)^{-1} = 1/10$ 

# 14.

We know that,

$$(A + B)^3 = A^3 + B^3 + 3A^2B + 3AB^2$$

$$(A - B)^3 = A^3 - B^3 - 3A^2B + 3AB^2$$

$$\Rightarrow$$
 (A + B)<sup>3</sup> - (A - B)<sup>3</sup> = 2B<sup>3</sup> + 6A<sup>2</sup>B

$$\Rightarrow (A + B)^3 - (A - B)^3 - 6B(A^2 - B^2) = 2B^3 + 6A^2B - 6B(A^2 - B^2) = 8B^3$$

 $\therefore \text{ Required value} = 8 \times 8^3 = 8 \times 512 = 4096$ 

# 16.

Let the cost of 1 chair be Rs. x and 1 table be Rs. y

$$3x + 2y = 700$$
 ----(1)

$$5x + 3y = 1100$$
 ----(2)

By solving (1) and (2), x = 100 and y = 200

$$\therefore$$
 x + 2y = 100 + 400 = Rs. 500

# **15.**

Given, a + b + c = 8, a2 + b2 + c2 = 30and a3 + b3 + c3 = 134

 $(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$ 

$$\Rightarrow$$
 8<sup>2</sup> = 30 + 2(ab + bc + ca)

$$\Rightarrow$$
 2(ab + bc + ca) = 64 - 30

$$\Rightarrow (ab + bc + ca) = 34/2 = 17$$

We know that,

$$a^3 + b^3 + c^3 - 3abc = (a + b + c) (a^2 + b^2 + c^2 - (ab + bc + ca))$$

$$\Rightarrow$$
 134 - 3abc = 8 × (30 - 17) = 104

$$\Rightarrow$$
 3abc = 134 - 104 = 30

# 17.

Unit digit of 311<sup>n</sup> is always 1, where n is any natural number.

∴ Unit digit of 31151 is 1

Unit digits of  $25^n$  is always 5, where n is any natural number

∴ Unit digit of 25<sup>36</sup> is 5

So, Unit digit of  $(311)^{51} \times (25)^{36}$  is the same as the unit digit of  $(1 \times 5)$ 

: Unit digit of  $(311)^{51} \times (25)^{36} = 5$ 

#### 18.

Initial SP = 11.2

Loss % = 20%







$$\Rightarrow$$
 CP = SP + 0.2 × CP

$$\Rightarrow$$
 0.8 CP = 11.2

$$\Rightarrow$$
 CP = 11.2/0.8 = 14

Now, for 10% profit SP should be:

New SP = CP + 0.1 CP = 
$$14 + 0.1 \times 14 = 14 + 1.4 = Rs. 15.4$$

$$\therefore$$
 SP = Rs. 15.4

# 19.

Marked price = M.P = Rs. 7500

After discount of 12%

Purchase price =  $(1 - 0.12) \times 7500 = Rs.$  6600

After spending Rs. 250 on repair

Cost price = 
$$C.P = Rs. (6600 + 250) = Rs. 6850$$

To gain a profit of 20%

: Selling price = 
$$(1 + 0.20) \times C.P = 1.2 \times 6850 = Rs. 8220$$

# **Shortcut method:**

Selling price = (1 + profit percent/100) × {(1 - discount percent/100) × marked price + repair cost}

: Selling price = 
$$1.2 \times \{(1 - 0.12) \times 7500 + 250\} = \text{Rs. } 8220$$

# 20.

Let, investment of A = Rs. 4x

# **6** | Page



ATTEMPT ALL TESTS ACROSS ALL EXAMS

Investment of B = Rs. 7x

Thus, Investment of C = Rs. 7x

The weighted ratio of investment of A, B, and C

$$\Rightarrow$$
 4x × 12 : 7x × 12 : 7x × 6

$$\Rightarrow$$
 48x : 84x : 42x

$$\Rightarrow$$
 8:14:7

∴ The ratio of their profit after one year = 8:14:7

#### 21.

Marked price of the Helmet = Selling price + Discount = 744 + 36 = Rs. 780

130% of C.P of the helmet = Rs. 780

 $\Rightarrow$  C.P of the helmet  $\times$  130/100 = Rs. 780

 $\Rightarrow$  C.P of the helmet = Rs. 600

 $\therefore$  Profit % =  $(744 - 600)/600 \times 100 = 144/600 \times 100 = 24\%$ 

#### 22.

Formula for Simple Interest (SI) = PTR/100 (where 'P' = Principal, 'T' = Time Period, 'R' = Rate of Interest)

Given 'T' = 4 years, P/SI = 5/1

Rate of Interest (R) = 100 SI/PT =  $100/(5 \times 4) = 100/20 = 5\%$ 

 $\therefore$  Rate of Interest (R) = 5%











$$C = P[(1 + r/100)^n - 1]$$

$$S = P + C$$

Where

C = compound interest

P = Principal

r = rate

n = number of period

S = sum after n periods

In 2 years,

P = 1000

S = 1210

$$\Rightarrow$$
 P + C = 1210

$$\Rightarrow$$
 1000 + C = 1210

$$\Rightarrow P[(1 + r/100)^n - 1] = 210$$

$$\Rightarrow 1000 \times [(1 + r/100)^2 - 1] = 210$$

$$\Rightarrow (1 + r/100)^2 - 1 = 0.210$$

$$\Rightarrow (1 + r/100)^2 = 1.21$$

$$\Rightarrow$$
 r/100 = (1.21)<sup>1/2</sup> - 1 = 1.1 - 1 = 0.1

 $\Rightarrow$  r = 10%

# 24.

We know the formula for simple interest-

$$SI = (P \times T \times R)/100$$

**7 |** Page

# Where,

SI = Simple interest

P = Principal

R = Rate of interest

T = Time period

$$\Rightarrow$$
 3200 = (P × 2 × 20)/100

$$\Rightarrow$$
 P = Rs. 8000

: The principal amount = Rs. 8000

# **25.**

Let speed of the boat =  $u \, km/hr$ 

Distance upstream = Distance downstream = 24 km

Total time = 6 hours

Speed of stream = 3 km/hr

 $\Rightarrow$  Speed upstream = u - 3

⇒ Speed downstream = u + 3

 $\Rightarrow$  Time taken to go upstream = 24/(u -

 $3) = t_1$ 

 $\Rightarrow$  Time taken to go downstream = 24/(u

 $+3)=t_2$ 

 $\Rightarrow$  t<sub>1</sub> + t<sub>2</sub> = 6

 $\Rightarrow 24/(u-3) + 24/(u+3) = 6$ 

 $\Rightarrow$  (24u + 24u + 72 - 72)/(u<sup>2</sup> - 9) = 6

 $\Rightarrow$  48u = 6u<sup>2</sup> - 54







$$\Rightarrow 6u^2 - 48u - 54 = 0$$

$$\Rightarrow$$
  $u^2 - 8u - 9 = 0$ 

$$u = 9$$
 or  $u = -1$ (discarded)

$$\therefore$$
 Speed of boat in still water = 9 km/hr

Let the length of platform be 'l'

$$\Rightarrow$$
 Distance crossed by train = 250 + 1

$$\Rightarrow$$
 Distance = Speed  $\times$  time

Speed = 
$$72 \times 5/18 \text{ m/s} = 20 \text{ m/s}$$

$$\Rightarrow$$
 250 + l = 20 × 50

$$\Rightarrow$$
 250 + l = 1000

# 27.

Time taken in walking from both sides = 75 min.

Time taken in walking from one side = 75/2 = 37.5 min.

Time taken in walking from one side + cycling from one side = 46 min

Time taken in cycling from one side = 46 - 37.5 = 8.5 min.

 $\therefore$  Time taken in cycling from both sides = 2(8.5) = 17 min.

# 28.

# **8** | Page



ATTEMPT ALL TESTS ACROSS ALL EXAMS

We know that,

If 'x' km/hr is the speed from A to B and 'y' km/hr is the speed from B to A then,

Average speed = 2xy/(x + y)

$$\Rightarrow 30 = (2 \times 24 \times y)/(24 + y)$$

$$\Rightarrow 15(24 + y) = 24y$$

$$\Rightarrow$$
 9y = 24 × 15

$$\Rightarrow$$
 y = 40 km/hr

∴ The speed of the person while coming back from B to A = 40 km/hr

# 29.

Let x be the number of days in which the work will be completed by Z.

- $\Rightarrow$  Z will do 1/x amount of work in 1 day.
- ⇒ X and Y respectively will do 1/10 and 1/15 amount of work in 1 day.
- $\Rightarrow$  Total work done by all three in 1 day = 1/3

$$\Rightarrow 1/10 + 1/15 + 1/x = 1/3$$

$$\Rightarrow 1/x = 1/3 - 1/10 - 1/15 = 1/6$$

 $\therefore$  Z will take 6 days to complete the work alone.

# 30.

Pipe A can fill (1/16)<sup>th</sup> of the tank in 1 hr. Pipe B can fill (1/18)<sup>th</sup> of the tank in 1 hr.









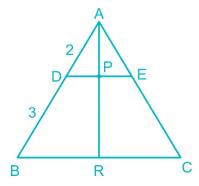
Pipe C can empty  $(1/72)^{th}$  of the tank in 1 hr.

In 1 hr, all 3 pipes fill,

$$(1/16 + 1/18 - 1/72) = (9 + 8 - 2) = (15/144)$$
<sup>th</sup> of tank

 $\therefore$  In 2 hrs, (15/72)<sup>th</sup> of the tank is filled =  $15 \times 28800/72 = 6000$  litres

31.



Here  $\triangle$ ADE and  $\triangle$ ABC are similar triangles

Given: AD/AB = 2/5

So, DE/BC = 2/5

Let DE be 2a. Then, BC will be 5a

Make an altitude from A on BC and mark the points P and R when it cuts DE and BC respectively.

So,  $\triangle$ APD and  $\triangle$ ARB are also similar triangles

 $\Rightarrow$  AP/AR = 2/5

Let AP be 2b. Then, AR will be 5b

**9** | Page

# Since,

$$\Rightarrow$$
 Area of  $\triangle$ ADE = 1/2  $\times$  2a  $\times$  2b = 2ab

$$\Rightarrow$$
 Area of  $\triangle$ ABC =  $1/2 \times 5a \times 5b = 25ab/2$ 

So, area of quadrilateral BDEC = 25ab/2 - 2ab = 21ab/2

 $\therefore$  Required ratio = 2ab/(21ab/2) = 4:21

# 32.

Ratio of radius of the base and height = 2:3;

Let the radius and height be 2x and 3x respectively;

Given that volume is 1617 cm<sup>3</sup>;

 $\Rightarrow \pi r^2 h = 1617$ 

 $\Rightarrow (22/7) \times 4x^2 \times 3x = 1617$ 

 $\Rightarrow$  x<sup>3</sup> = 42.875

 $\Rightarrow$  x = 3.5 cm

 $\Rightarrow$  Radius = 7 cm and Height = 10.5 cm;

∴ Total surface area of the cylinder =  $(2\pi r^2 + 2\pi rh)$ 

 $\Rightarrow 2 \times 22/7 \times (7^2 + 7 \times 10.5)$ 

⇒ 770 cm<sup>2</sup>

33.









Average number of students in school B = (392 + 410 + 423 + 428 + 456 + 450)/6 = 426.5

In all the years the number of students in school A is greater than the average number of students in school B.

∴ Number of years for which the number of students in school A was less than the average number of students in school B = 0

#### 34.

The difference between the numbers of students in both schools in the year 2010 = 428 - 392 = 36

The difference between the numbers of students in both schools in the year 2011 = 442 - 410 = 32

The difference between the numbers of students in both schools in the year 2012 = 480 - 423 = 57

The difference between the numbers of students in both schools in the year 2013 = 436 - 428 = 8

The difference between the numbers of students in both schools in the year 2014 = 465 - 456 = 9

The difference between the numbers of students in both schools in the year 2015 = 452 - 450 = 2

 $\div$  The difference between the numbers of students in both schools is maximum in the year 2012

# 35.

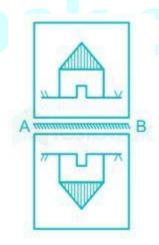
The average difference of the number of students in school A and B in the given period =

$$[(428 - 392) + (442 - 410) + (480 - 423) + (436 - 428) + (465 - 456) + (452 - 450)]/6 = 144/6 = 24$$

# **Logical Reasoning**

# **36.**

If a mirror is placed along AB line, we will get the following mirror image



Hence, the image given below is the mirror image of the given figure.

**10** | Page



ATTEMPT ALL TESTS











# **37**•

Here,

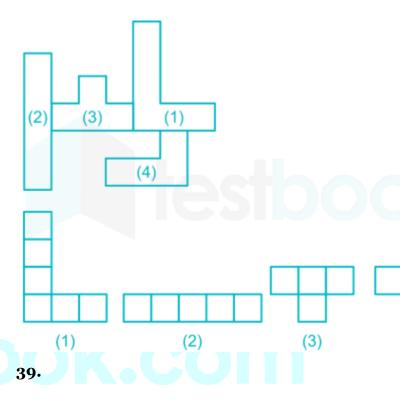
From first to the second figure, the image is a mirror image.

So, the answer will be option 3 i.e. mirror image of the first image in the second part.

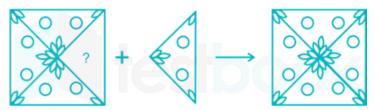
Hence, the answer is option 3.

# 38.

Hence the answer is



From the given figures, the figure given in option b completes the pattern.



40.



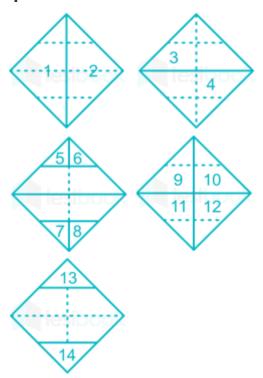






Hence, option 3 is the correct figure.

# 41.



Hence, the answer is 14 triangles.

# **42.**

Distress is a synonym of Agony where both symbolize situations of extreme pain. Similarly, Misery is a synonym of Torment which also means the same.

# 43.

$$1)14 - 209$$

$$\rightarrow 14^2 + (14 - 1) \rightarrow 196 + 13 \rightarrow 209$$

$$2)19 - 379$$

$$\rightarrow 19^2 + (19 - 1) \rightarrow 361 + 18 \rightarrow 379$$

$$3)26 - 701$$

$$\rightarrow 26^2 + (26 - 1) \rightarrow 676 + 25 \rightarrow 701$$

$$4)29 - 871$$

$$\rightarrow$$
 29<sup>2</sup> + (29 – 1)  $\rightarrow$  841 + 28  $\rightarrow$  869  $\neq$  871

Hence, the answer is  $^{29} - 871^{\circ}$ .

# 44.

The pattern followed here is,

$$(16+1)^2 = 289;$$

Similarly,

$$(22+1)^2 = 529$$

Hence, 22 is the correct answer.

# 45.

The pattern followed here is,

even numbers starting from 6 are added to the series consecutively

$$16 + 6 = 22$$

$$22 + 8 = 30$$

$$30 + 10 = 40$$

$$40 + 12 = 52$$

$$52 + 14 = 66$$



ATTEMPT ALL TEST









Hence, 45 is an incorrect number in the series.

46.

$$\Rightarrow$$
 W - 4 = S

$$\Rightarrow$$
 S - 4 = O

$$\Rightarrow$$
 O  $-4 = K$ 

$$\Rightarrow$$
 K  $-$  4 = G

Hence, "G" is the next term of the series.

47.



Similarly,



Thus, VHCU is the correct code for "TEAR."

48.

**13** | Page







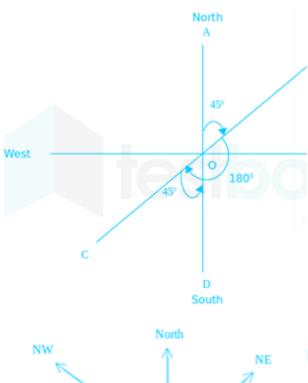
Using the above codes for Mammoth, we get,

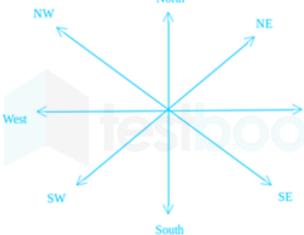


Hence, the answer is 4344681.

49.





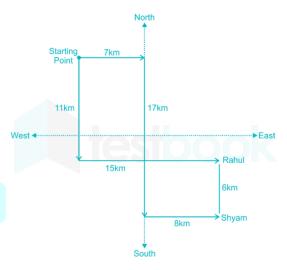


The man firstly faces the direction OA (North). On moving 45 degrees clockwise, he faces the direction OB. Now again he moved 180 degrees clockwise, now he will be facing OC. From here he moved 45 degrees

anticlockwise. Finally, he is facing OD, which is in South direction.

Therefore, now the man is facing towards the South.

# **50.**



Hence Shyam is 6 km South with respect to Rahul.

# **51.**

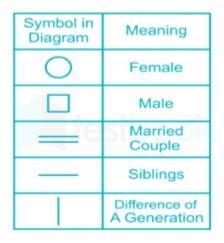
From the given information,

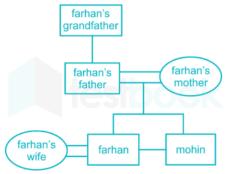










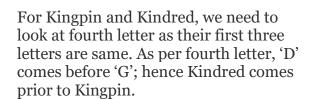


Hence, Mohin is the brother in law of Farhan's wife.

# **52.**

First letter for all the worlds are same. Hence, we need to look at next letter.

As per second letter, 'E' comes before 'I', 'I' comes before 'U'; hence, Keratitis would come first, while Kingpin and Kindred would come second and third in some order, while Kudzu will come last.



Words in alphabetical order will be Keratitis, Kindred, Kingpin, Kudzu.

Thus, the word that comes second is Kindred.

#### **53**·

	Given Words	Suffixed with D
	WAR	WARD
7	CAR	CARD
	BEAR	BEARD
	TEN	TEND
	BAN	BAND

Clearly, the words are suffixed with D to form a meaningful word otherwise, with the other letters the words are meaningless.

#### 54.

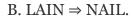
Let's **unjumble** the given options:

A. POAS  $\Rightarrow$  SOAP.









C. RETWA  $\Rightarrow$  WATER  $\Rightarrow$  a beverage.

D. PTELRO  $\Rightarrow$  PETROL

Clearly, WATER i.e. RETWA is the odd-one out.

# 55.

1) 14, 21, 24, 58, 32 → TXACK

2) 76, 13, 23, 58, 65  $\rightarrow$  TRCCK

3) 14, 98, 24, 76, 32  $\rightarrow$  TRATK

4) 76, 13, 55, 85, 32  $\rightarrow$  TRACK

Clearly, the number set for the word "TRACK" is '76, 13, 55, 85, 32.

# **56.**

1) SORT: MONTESSORI, hence, the word can be formed.

2) MORE: **MO**NTES**S**O**R**I, hence, the word can be formed.

3) **MOUSE**: 'U' in 'MOUSE' does not come in the word "MONTESSORI".

4) NEST: MONTESSORI, hence, the word can be formed.

Hence, 'MOUSE' is the word which cannot be formed using the given word.

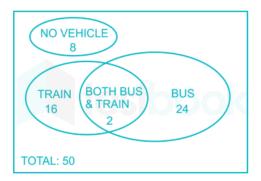
# **5**7•

Venn diagram is given below:

**16** | Page



ATTEMPT ALL TESTS ACROSS ALL EXAMS



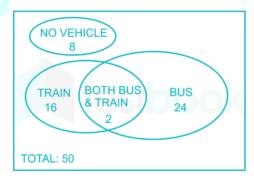
Using above diagram, we can say that 16 people travel only by train and total number of people is 50.

$$(16 \div 50) * 100 = 32\%.$$

Hence, 32% is the correct answer.

# **58.**

Venn diagram is given below.



From the diagram, 2 is the correct answer.

#### 59.

The pattern is:

0 is opposite to 1 so,  $1^2 - 1 = 0$ .









3 is opposite to 2 so,  $2^2 - 1 = 4 - 1 = 3$ .

8 is opposite to 3 so,  $3^2 - 1 = 9 - 1 = 8$ .

Similarly,

 $4^2 - 1 = 16 - 1 = 15$ , so 15 is opposite to 4.

Hence, the missing number in the figure is 15.

# 60.

Alphabets: A, B, C, D, E, F and G

Numbers: 1 to 10

Condition:

1. They stand for 7 consecutive integers.

2. D is 3 less than  $A \Rightarrow A - D = 3 \Rightarrow A > D$ 

3. B is the middle term.

4. F is as much less than B as C is greater than  $D \Rightarrow B - F = C - D \Rightarrow B > F$  and C > D

5. G is greater than  $F \Rightarrow G > F$ 

Since we don't know the first number for given consecutive number. So, we'll arrange the alphabets using given order but wouldn't assign numbers.

1) B is the middle term.

$$2) A - D = 3$$

# Possibility 1

Alphabet		D		В	A		
Position	1 <sup>st</sup>	2 <sup>nd</sup>	$3^{\rm rd}$	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

# Possibility 2

Alphabet			D	В		A	
Position	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

3) 
$$B - F = C - D$$

# Possibility 1

Alphabet		D	F	В	A		
Position	1 <sup>st</sup>	2 <sup>nd</sup>	$3^{\rm rd}$	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

But no place for C. Hence this possibility is eliminated.

Possibility 2

Alphabet		F	D	В	С	A	
Position	1 <sup>st</sup>	2 <sup>nd</sup>	$3^{\rm rd}$	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

Alphabet						A	
Position	1 <sup>st</sup>	2 <sup>nd</sup>	$3^{\rm rd}$	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

$$A - F = G - x$$

$$\Rightarrow$$
 6 - 2 = 7 - x

$$\Rightarrow$$
 x = 3<sup>rd</sup> = D.

#### 61.

Alphabets: A, B, C, D, E, F and G





FASTEST WAY TO PREPARE CURRENT AFFAIRS







Numbers: 1 to 10

Condition:

- 1. They stand for 7 consecutive integers.
- 2. D is 3 less than  $A \Rightarrow A D = 3 \Rightarrow A > D$
- 3. B is the middle term.
- 4. F is as much less than B as C is greater than  $D \Rightarrow B F = C D \Rightarrow B > F$  and C > D
- 5. G is greater than  $F \Rightarrow G > F$

Since we don't know the first number for given consecutive number. So, we'll arrange the alphabets using given order but wouldn't assign numbers.

- 1) B is the middle term.
- 2) A D = 3

# Possibility 1

Alphabet		D		В	A		
Position	1 <sup>st</sup>	2 <sup>nd</sup>	$3^{\rm rd}$	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

# Possibility 2

Alphabet			D	В		A	
Position	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

3) 
$$B - F = C - D$$

# Possibility 1

Alphabet		D	F	В	A		
Position	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

But no place for C. Hence this possibility is eliminated. Possibility 2

Alphabet		F	D	В	С	A	
Position	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

# 4) G > F

Alphabet						A	
Position	1 <sup>st</sup>	2 <sup>nd</sup>	$3^{\rm rd}$	Middle	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>

If 
$$A = 7(6 + 1)$$
 then  $E = 1 + 1 = 2$ 

$$G = 7 + 1 = 8$$

$$\Rightarrow$$
 E + G = 8 + 2 = 10

#### 62.

- 1) Six friends, J, K, L, M, N, and O are sitting around a circular table facing the center.
- 2) N sits opposite to L.
- 3) K sits immediate left of N.
- 4) J sits second to the left of L.
- 5) M sits opposite to J.

**18** | Page

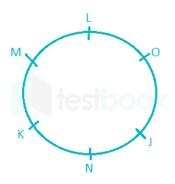












Clearly, K sits opposite of O.

# 63.

$$8 \div 4 + 15 \times 3 - 4 = 43$$

However, after interchanging the equation ÷ and ×

$$8 \times 4 + 15 \div 3 - 4 = 33$$

$$32 + 15 \div 3 - 4 = 33$$

$$32 + 5 - 4 = 33$$

Hence  $\div$  and  $\times$  is the correct answer.

# 64.

The pattern followed here is,

$$(2 \times 7) + (3 \times 4) = 14 + 12 = 26 = 2 + 6 = 8;$$

$$(3 \times 9) + (4 \times 2) = 27 + 8 = 35 = 3 + 5 = 8;$$

Similarly,

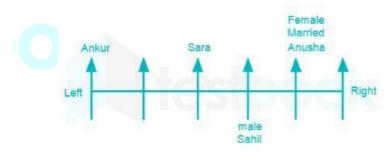
$$(8 \times 8) + (1 \times 3) = 64 + 3 = 67 = 6 + 7 = 13$$

**19** | Page

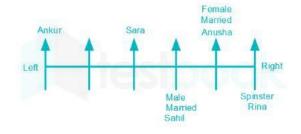


# **65.**

- i) There is a group of six persons Sara, Ankur, Sahil, Rina, Anusha, Anita.
- ii) There are four females, two males, two married couples in the group.
- 1) Ankur sits at extreme left while Sara is seated 2<sup>nd</sup> to the right of Ankur.
- 2) Sahil is seated immediate next to Sara but he is not a neighbour of Ankur.
- 3) Anusha is married and she is seated 2nd from the right end.



- 4) Sahil is married to Anusha.
- 5) Rina sits at extreme end of the row and she is spinster.







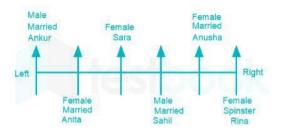


6) Ankur is Anita's husband and also is her neighbour.

(Since the only person left is Sara so she will be female.)

Thus Anita, Anusha, Sara, Rina are females and Ankur and Sahil are males.

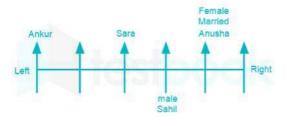
Thus final arrangement is as follows.



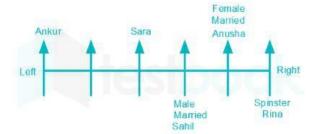
Thus Sara is seated immediate left to Sahil.

# 66.

- i) There is a group of six persons Sara, Ankur, Sahil, Rina, Anusha, Anita.
- ii) There are four females, two males, two married couples in the group.
- 1) Ankur sits at extreme left while Sara is seated 2<sup>nd</sup> to the right of Ankur.
- 2) Sahil is seated immediate next to Sara but he is not a neighbour of Ankur.
- 3) Anusha is married and she is seated 2nd from the right end.



- 4) Sahil is married to Anusha.
- 5) Rina sits at extreme end of the row and she is spinster.

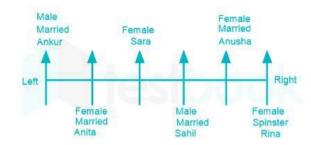


6) Ankur is Anita's husband and also is her neighbour.

(Since the only person left is Sara so she will be female.)

Thus Anita, Anusha, Sara, Rina are females and Ankur and Sahil are males.

Thus final arrangement is as follows.



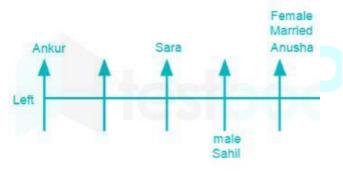
Thus Anusha is Sahil's wife.







- i) There is a group of six persons Sara, Ankur, Sahil, Rina, Anusha, Anita.
- ii) There are four females, two males, two married couples in the group.
- 1) Ankur sits at extreme left while Sara is seated 2<sup>nd</sup> to the right of Ankur.
- 2) Sahil is seated immediate next to Sara but he is not a neighbour of Ankur.
- 3) Anusha is married and she is seated 2nd from the right end.

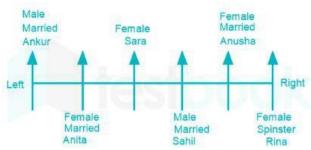


- 4) Sahil is married to Anusha.
- 5) Rina sits at extreme end of the row and she is spinster.



- 6) Ankur is Anita's husband and also is her neighbour.
- (Since the only person left is Sara so she will be female.)
- Thus Anita, Anusha, Sara, Rina are females and Ankur and Sahil are males.

Thus final arrangement is as follows.



Thus, Anita is seated immediate next to Sara.

#### 68.

The statement states that humanity has displayed progress 'in terms of engineering' from building the old











pyramids by hand to building the tallest structure, Burj Khalifa, with machines.

Let us examine the conclusions one by one.

Conclusion I: Conclusion I may, in fact, be true. But as far as the knowledge of the statement goes, it cannot be inferred. This is because nothing in the argument points to the fact that all buildings between the age of the pyramids and Burj Khalifa were built by man. This is an assumption and not a conclusion.

Conclusion II: This says that the engineering techniques or mentalities have progressed over the centuries and this is displayed using the buildings as a reference. It is also mentioned that pyramids were built by hand and the Burj Khalifa with machines. These are building techniques and thus it can be concluded that buildings are a demonstration of engineering.

Thus, only conclusion II follows.

# 69.

Since it is given that due to the lack of atmosphere, sound cannot be heard on the moon, II is implicit as there must be a medium for sound to travel. From the statement I, it can be inferred that it is impossible for people to talk on the surface of the moon but it is not an assumption.

# 70.

The statement asserts that books should contain the knowledge of life. It cannot be inferred whether it is true for all books. Thus inference I does not follow. Inference II also does not follow because the statement does not relate to people in any way.

GK

# 71.

- The temples of Dilwara are a sacred pilgrimage place for the Jains.
- Dilwara Jain Temples are one of the finest Jain temples known for their extraordinary architecture and marvelous marble stone carvings.
- These temples were built by Vimal Shah between the 11<sup>th</sup> and 13<sup>th</sup>centuries AD.

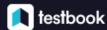
# **72.**

 Ramcharitmanas is an epic poem written in Awadhi, a local dialect of Hindi, which was popular in North India during that time.

**22** | Page











- It was composed by the 16<sup>th</sup>century Indian bhakti poet Goswami Tulsidas.
- The literal translation of the word Ramchartimanas is 'Lake of the deeds of Rama'.
- Even though Tulsidas was a Sanskrit scholar, he wrote Ramcharitmanas in Awadhi as he wanted it to be accessible to the masses.

- Turkmenistan, Uzbekistan, Iran, and Oman.
- The agreement gives India an access to connect with Central Asia and the Persian Gulf.
- The agreement came into force on 3<sup>rd</sup> February 2018.
- Accession to the agreement would diversify India's connectivity options with Central Asia and have a positive influence on India's trade and commercial ties.

# **73**•

- The Arunachal Pradesh government signed a MoU with the British Council to strengthen educational and cultural cooperation.
- As per the MOU, as many as 50 faculty members from government higher education institutions will be trained by the British Council every year, starting from December 2018.
- 50 students of higher and technical education institutes will be trained in English language skills.

# **75**•

- Kashmir Daily is the first Kashmiri movie released throughout India.
- It is an Urdu language film directed by Kashmiri filmmaker Hussein Khan.
- The story of this film is based on drug abuse and unemployment in the state of Jammu and Kashmir.

# **76.**

 National Projects Construction Corporation Limited (NPCC) has been conferred with the status of 'Miniratna' by the Government of India.

# 74.

• The founding members of 'Ashgabat' agreement are









- The empowerment of 'Miniratna' status to NPCC will help the company in taking speedy decisions by enhancing the delegation of powers to the Board.
- NPCC comes under the Ministry of Water Resources, River Development and Ganga Rejuvenation.

- Kurien towards the Milk Revolution in India.
- Dr. Verghese Kurien played a key role in the formation of the milk co-operative 'Amul'.
- He is also known as the 'Father of the White Revolution' in India.

# 77•

- A book titled 'Radio Kashmir In Times of Peace & War' was released by the Union Minister Dr. Jitendra Singh on 20 November 2018.
- The book is written by Dr. Rajesh
- The book depicts a unique distinction earned by 'Radio Kashmir' by serving people and the nation.
- The author, Dr. Rajesh Bhat is currently posted in the Policy Division of Directorate General, All India Radio, New Delhi.

# 79.

- The International Day for the Elimination of Violence Against Women is observed on 25 November.
- The aim of the day is to raise public awareness of the fact that women around the world are subject to various forms of violence.
- The theme for 2018 was 'Orange the World: #HearMeToo'.

# **80.**

- The North Atlantic Treaty
   Organisation's (NATO) biggest
   military exercise, 'Trident
   Juncture 2018', took place in
   Norway on 25 October 2018.
- The exercise brought together around 50,000 personnel from all 29 NATO allies, with partners Finland and Sweden.
- The exercise continued till 7 November 2018 in Central and

# **78.**

- National Milk Day is observed every year on 26 November.
- The day commemorates the contribution of Dr. Verghese

**24** | Page













Eastern Norway, the North Atlantic, and the Baltic Sea. The 'Mo Cycle' system will help in reducing traffic congestion, enhance space efficiency, and improve air quality.

# 81.

- New deep-sea shark species named 'Pygmy false catshark' has been found in the Northern Indian Ocean.
- It was found off the southwestern coast of India and north of Sri Lanka.
- It is about 65 cm long and dark brown in colour without any prominent pattern.
- Its scientific name is 'Planonasus indicus'.
- It is the first such discovery in India since the 'Mangalore houndshark' in 2011.

# 83.

- The Himachal Pradesh government has decided to set up a 'Gau Sewa Aayog' for the preservation, protection, and welfare of cows in the state.
- The Aayog will regulate institutions like cow sheds and shelters, besides the 'Gau Vigyan Kendras' and the community animal-rearing centres.
- The Aayog would also cater to the problem of abandoned cows.

#### 82.

- Odisha's Chief Minister Naveen Patnaik launched a public bicycle sharing project and a mobile app on 26 November 2018.
- The bicycle sharing project and the mobile app is named 'Mo Cycle'.
- The project will provide mobile app-based services to users to locate and use a bicycle.

# 84.

- The 27th BASIC (Brazil, South Africa, India and China) Ministerial Meeting on Climate Change held in New Delhi on 19-20 November 2018.
- The meeting was chaired by Dr Harsh Vardhan, Minister of Environment, Forest and Climate Change.
- The BASIC group was formed by an agreement on 28 November 2009.









- The '12<sup>th</sup> World Congress on Mountain Medicine' held in Kathmandu in November 2018.
- The theme of the 4-day congress was 'Mountain Medicine in the Heart of the Himalayas'.
- The event mainly focused on science and research aspects of high altitude medicine.
- The event held for the first time in Nepal and hosted by Mountain Medicine Society of Nepal (MMSN).

- Prof Punyasloke Bhaduri of the Indian Institute of Science, Education and Research Kolkata was awarded the prestigious 'Swarnajayanti Fellowship' by the government of India for 2017-18.
- Under this fellowship, scientists are provided with generous support to pursue research in the frontier areas of science and technology.
- It is awarded for a period of 5 years.

# 88.

- The three-day 'Jangalmahal Festival' was inaugurated in Kolkata, West Bengal, on 23 November 2018.

  The aim of the festival is to refer the festival in the festival is to refer the festival in the festival is to refer the festival in the festival in the festival is to refer the festival in th
  - The aim of the festival is to revive and popularise the culture and heritage of the Jangalmahal area.
  - The forested areas of West Midnapore, Jhargram, Bankura, and Purulia districts in the southern part of the West Bengal form the Jangalmahal area.

# 89.

According to article 243-T of the Indian Constitution, not less than one-third of the total number of seats to be filled by

# 86.

- Azim Premji will be conferred 'Chevalier de la Legion d'Honneur' (Knight of the Legion of Honour).
- Alexandre Ziegler, Ambassador of France to India, will confer the award to Premji.
- The award comes in recognition of his outstanding contribution to developing the information technology industry in India, his economic outreach in France, and his contribution to society as a philanthropist.

87.



**26** | Page

testbook PASS











direct election in every Municipality shall be reserved for women.

# 90.

- Article 32 is the most important article of the Indian Constitution.
- Article 32 was called the "soul of the constitution and very heart of it" by Dr. Ambedkar.
- Article 32 of the Indian
   Constitution gives the right to individuals to move to the Supreme Court to seek justice when they feel that their right has been 'unduly deprived'.

- The Deputy Prime Minister of India is a member of the Union Cabinet in the Government of India. It is not technically a constitutional office as it seldom carries any specific powers.
- The first Deputy Prime Minister of India was Sardar Vallabhbhai Patel.
- All except Lal Bahadur Shastri have served as the Deputy Prime Minister of India.
- Moraji Desai served as Second Deputy Prime Minister of India (1967 – 1969)
- Jagjivan Ram served as Deputy Prime Minister of India (1977 – 1979)
- Yashwantrao Chavan served as Deputy Prime Minister of India (1979 – 1980)

#### 91.

- The legislative sections are divided into three lists: The Union List, The State List and the Concurrent List.
- It is under the power of the parliament to make laws on any subject given in these lists especially laws related to the Union Territories.

# 93.

- The latitude of Equator is o°
- Tropic of Cancer is 23.5° N
- Tropic of Capricorn is 23.5° S
- Prime meridian is o° longitude

# 94.

92.

 Stromboli volcano of Italy is one of the most active volcanoes on Earth.









- It has been active for the last 2,000 years and its eruptions are visible from long distances at night.
- This is the reason because of which it is also known as the 'Lighthouse of the Mediterranean'.
- Sedimentary rocks are types of rock that are formed by the deposition and subsequent cementation of mineral or organic particles on the floor of oceans or other bodies of water at the Earth's surface.
- Some examples of sedimentary rocks are mud rock, sandstone etc.

- The "Taklamakan" desert is situated in the northwest China.
- It is bounded by the Kunlun Mountains to the south, the Pamir Mountains and the Tian Shan to the west and north and the Gobi desert to the east.
- It is the world's second largest shifting sand desert.

# 98.

- Lignite is also known as 'brown coal'.
- It is a soft brown combustible sedimentary rock formed from naturally compressed peat.
- It is considered the lowest rank of coal due to its relatively low heat content.

# 96.

- Jhum cultivation, also known as Shifting cultivation is mainly practised in tribal areas.
- In this system of agriculture, lands are cultivated temporarily, then abandoned while cultivators shift to another plot.
- In some areas, they use a practice of 'slash-and-burn' as their farming style.

# 99.

- Neem is the state tree of Andhra Pradesh.
- Sal is the state tree of Chhattisgarh.
- Peepal is the state tree of Bihar.
- Mango tree is the state tree of Chandigarh.

97.











- Irrawaddy is the longest river of Myanmar, with a drainage basin of about 404,200 square kilometres.
- Irrawaddy River flows into the Andaman Sea.

1	0	1	•

- The strait of Gibraltar separates Spain in Europe from Morocco in Africa.
- It connects the Atlantic Ocean to the Mediterranean Sea.

- The Hump of the camel is made up of adipose tissue.
- Adipose tissue is primarily located beneath the skin but is also found around internal organs.
- Its main role is to store energy in the form of fat, it also cushions and insulates the body.

# 103.

Chicken Pox is caused by virus **Varicella zoster** 

Micro- organisms	Diseases
Bacteria	Cholera, Typhoid
Fungus	Aspergillosis, Fungal Eye Infections
Protozoa	Diarrhoea, Malaria
Virus	Chicken Pox, Hepatitis B, measles

# 104.

Chemical Name	Vitamin	
Pyridoxine	$B_6$	
Riboflavin	$B_2$	
Thiamine	$B_1$	
Phylloquinone	$K_1$	

# 105.

- According to Newton's law of gravitation, every body in the universe attracts every other body with a force which is known as gravitational force.
- The gravitational pull of the moon is about one-sixth of that of the earth, therefore, the weight of an object on the moon will be one-sixth of what is on the earth.

106.









- The phenomenon of electromagnetic induction is the current induced in a coil due to relative motion between a magnet and the coil.
- It was discovered by Michael Faraday.
- Electrical equipment like motor, generators, and transformer are based on the phenomena of electromagnetic induction.

- King Gondophernes belonged to the Parthians Dynasty.
- He was the founder of the Indo-Parthian Kingdom in western Pakistan.
- The Parthians came to the throne after the Shakas and were followed by the Kushanas.

- Satavahana Dynasty had built their capital at Pratishtana.
- The Dynasty was based in the Deccan region.
- The Satavahanas are also known as 'Andhras' in the 'Puranas'.

#### 110.

- Amoghavarsa I was the Rashtrakuta king who composed 'Kavirajamarga', 'Ratnamalika' and 'Passanotaramalika'.
- He was an accomplished poet and scholar.
- His reign of 64 years is one of the longest precisely dated monarchical reigns on record.
- Many Kannada and Sanskrit scholars prospered during his rule.

# 111.

- Sangama literature is one of the main sources used for documenting the early history of the ancient Tamil country.
- The ancient Sangam poems mention numerous kings and princes, the existence of some of whom have been confirmed through archaeological evidence.

#### 108.

- Chandragupta II erected the Iron Pillar of Delhi after defeating Vahilakas.
- The pillar was erected in honour of Lord Vishnu and also in the memory of Chandragupta II and his victory.

# 109.

**30 |** Page













- The Jallianwala Bagh massacre, also known as the Amritsar massacre, took place on April 13, 1919.
- On this day, around 50 troops of the British Indian Army, under the command of Colonel Reginald Dyer, fired on a crowd of Baishakhi pilgrims, who had gathered in Jallianwala Bagh, Amritsar, Punjab.

# 113.

- Simon Commission was a group of seven British Members of Parliament of United Kingdom, under the chairmanship of Sir John Allsebrook Simon.
- The commission arrived in British India in 1928 to study constitutional reform in India.

# 114.

- Champaran Satyagraha was the first civil disobedience movement which was launched by Mahatma Gandhi in 1917.
- It was done to protest against the injustice meted out to tenant

- farmers in Champaran district of Bihar.
- During British rule, many tenant farmers were forced to grow indigo on some part of their land.

# 115.

- Atomic Number is defined as the number of protons and neutrons in the nucleus of an element.
- It is used to determine the characteristics of an element and it is also referred for placing an element in the Periodic Table.
- The Atomic Number of Zinc (Zn) is 30 whereas the Mass Number is 65 i.e. it has 35 neutrons.

#### 116.

- Supply means the goods offered for sale at a price during a specific period of time.
- The Law of supply establishes a direct relationship between price and supply.
- In this as the price of commodity rises, its supply expands and as the price falls, its supply contracts.









- The pluralist theory tries to establish that there is no single source of authority that is all competent and comprehensive.
- The theory believes in the association.

#### 120.

Oligopoly is a market structure with a small number of firms, none of which can keep the others from having significant influence.

#### 118.

- The tertiary industry is the segment of the economy that provides services to its consumers, including a wide range of businesses such as financial institutions, schools, and restaurants.
- Sales, repair services, banking, and insurance are all part of the tertiary industry.



# 119.

- The free market is an economic system based on the supply and demand with little or no government control.
- Free markets are associated with capitalism.
- Capitalism is an economic system based on private ownership of the means of production and their operation for profit.







