

## RRB NTPC Previous Year Paper 09\_(Solutions)

**1. Ans.(c):**

**Sol.** Karnataka is the largest silk producing state in India, with over 9,800 metric tonnes of raw silk produced, representing nearly 35% of the country's total silk production.

**2. Ans.(b):**

**Sol.** Let  $x$  = number of months for which Sohan joined the bussiness

$$1,00,000 \times 12 : 40,000 \times x \Rightarrow 10 \times 12 : 4 \times x$$

ATQ,

$$\frac{10 \times 12}{4 \times x} = \frac{3}{1} \Rightarrow x = 10$$

$\therefore$  Number of months after which Sohan joined  
 $= 12 - 10 = 2$  months

**3. Ans.(b); Ans.( $4x + 5x$ ) = 90  $\Rightarrow x = 10$**

$\therefore$  greater angle =  $50^\circ$

**4. Ans.(c):**

**Sol.** +3, +5, +7, +9 series

**5. Ans.(d):**

**Sol.** 13<sup>th</sup> observation =  $16 + (16 - 15) \times 12 = 28$

**6. Ans.(d):**

**Sol.** Niccolao Manucci was an Italian writer and traveller. He worked in the Mughal court during Shah Jahan rule.

**7. Ans.(b):**

**Sol.** LCM of 12, 15, 18 and 27 = 540

$$\& 12 - 10 = 2, 15 - 13 = 2, 18 - 16$$

$$= 2 \text{ and } 27 - 25 = 2$$

$\therefore$  Required least number =  $540 - 2 = 538$

**8. Ans.(d):**

**Sol.** 7480. 81408

**9. Ans.(b):**

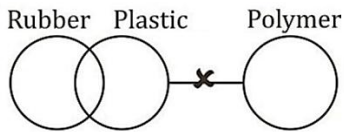
**Sol.** The President of India Pranab Mukherjee has declared Kerala as India's first digital state during the launch of digital empowerment campaign at Kozhikode.



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**10. Ans.(d):**

**Sol.**



I. x II. x

**11. Ans.(c):**

**Sol.** Saina Nehwal is an Indian professional badminton singles player. A former world no. 1, she has won over 24 international titles, which includes eleven Superseries titles.

**12. Ans.(c):**

**Sol.** Average =  $\frac{256+563+347+651+412+321}{6} = \frac{2550}{6} = 425$

**13. Ans.(a):**

**Sol.** Printer P =  $664 + 569 + 440 + 256 + 717 = 2646$

Printer U =  $419 + 537 + 742 + 321 + 693 = 2712$

Printer S =  $552 + 438 + 527 + 651 + 582 = 2750$

Printer T =  $638 + 621 + 541 + 412 + 519 = 2731$

**14. Ans.(b):**

**Sol.** Required ratio =  $\frac{441}{693} = \frac{7}{11}$

**15. Ans.(b):**

**Sol.** Rhythm is the key element for music.

Design is the key element for building

**16. Ans.(d):**

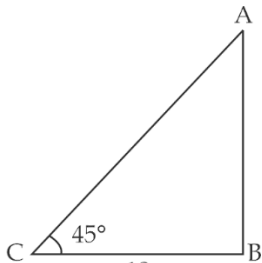
**Sol.** The Hotaki dynasty was founded in 1709 by Mirwais Hotak at Kandahar, Afghanistan.

**17. Ans.(b):**

**Sol.** Rhizobia are diazotrophic bacteria that fix nitrogen after becoming established inside the root nodules of legumes (Fabaceae)

**18. Ans.(a):**

**Sol.**



$\cos 45^\circ = \frac{10}{AC} \Rightarrow AC = 10\sqrt{2} \text{ m}$

**19. Ans.(b):**

**Sol.**  $3^2 + 5^2 = 34$

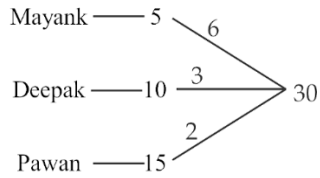
$4^2 + 7^2 = 65$

**20. Ans.(b):**

**Sol.** Article 21. Protection of Life And Personal Liberty: No person shall be deprived of his life or personal liberty except according to procedure established by law.

**21. Ans.(d):**

**Sol.**

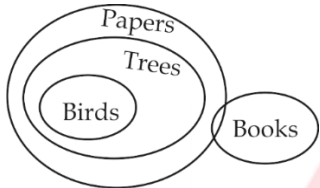


$$\therefore \text{Deepak's share} = \frac{3}{(6+3+2)} \times 11000$$

$$= \frac{3}{11} \times 11000 = 3000$$

**22. Ans.(c):**

**Sol.**



I. correct

II. ×

(c) only conclusion 1 follows

**23. Ans.(b):**

**Sol.**  $2x^2 + 7x + 6 = 0$

**Ans.**  $(2x + 3)(x + 2) = 0$

$x = -2$  and  $-\frac{3}{2}$

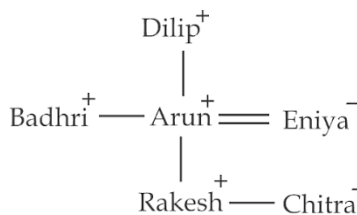
**24. Ans.(b):**

**Sol.** The Nobel Museum is located in the former Stock Exchange Building on the north side of the square Stortorget in Gamla Stan, the old town in central Stockholm, Sweden.

**25. Ans.(b):**

**Sol.**  $C.V = \frac{SD}{\text{mean}} = \frac{4}{20} = \frac{1}{5} = 20\%$

**Solutions (26-28):**



**26. Ans.(c):**

**Sol.** Four

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**27. Ans.(b):**

**Sol.** Arun, Badhri, Rakesh

**28. Ans.(a):**

**Sol.** Rakesh is the son of Eniya

**29. Ans.(c):**

**Sol.** Except horse, all three animals live in jungle.

**30. Ans.(d):**

**Sol.** The Kharosthi Script was more or less contemporarily with the Brahmi script, appearing around the 3rd century BCE mainly in modern-day northern Pakistan and eastern Afghanistan.

**31. Ans.(c):**

**Sol.** Human baby have around 300 bones at birth – this total decreases to around 206 bones by adulthood after some bones get fused together. The bone mass in the skeleton reaches maximum density around age 21.

**32. Ans.(c):**

**Sol.**  
$$\underbrace{11 : 13}_{+2} :: \underbrace{17 : 19}_{+2}$$

**33. Ans.(d); Ans.(2 + 5 + 8) → 180**

15 → 180

1 → 12

Smallest angle =  $2 \times 12 = 24$

**34. Ans.(b):**

**Sol.**  $4\% = (360 - 345)$

$4\% = 15$

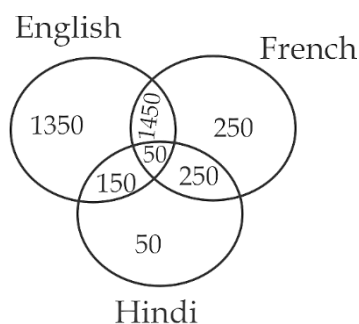
$\therefore 100\% = \frac{15}{4} \times 100$

CP = 375

**35. Ans.(c):**

**Sol.** Anil Kapoor receives Deenanath Mangeshkar Award in 2015.

**Solutions (36- 38):**



**36. Ans.(d):**

**Sol.** Do not know any of the three languages

$$= 4000 - (1350 + 1450 + 50 + 150 + 250 + 50 + 250) = 4000 - 3550 = 450$$

**37. Ans.(c):**

**Sol.** Students know only two languages

$$= 1450 + 250 + 150 = 1850$$

**38. Ans.(d):**

**Sol.** Students know atleast know one language

$$= 1350 + 50 + 1450 + 150 + 50 + 250 + 250$$

$$= 3550$$

**39. Ans.(c):**

**Sol.** Sum = 9 (1 + 2 + 3 + .....30)

$$\text{Average} = \frac{9 \times 30 \times 31}{30 \times 2} = \frac{279}{2} = 139.5$$

**40. Ans.(d):**

**Sol.** It is named after the Swedish astronomer Anders Celsius (1701–1744)

**41. Ans.(a):**

**Sol.**  $8 \times 12 + 16 \div 2 - 10$

$$= 96 + 8 - 10$$

$$= 104 - 10$$

$$= 94$$

**42. Ans.(c):**

**Sol.** The planets is Jupiter, the white bands are colored by ammonia clouds, while the orange comes from ammonium hydrosulfide clouds.

**43. Ans.(c):**

**Sol.** Lactobacillus is the bacteria which is used to convert milk into curd. Conversion of milk into curd is done by the process called fermentation.

**44. Ans.(a):**

**Sol.** Railway Minister Suresh Prabhu presented his second Budget in the Lok Sabha on February 25, 2016.

**45. Ans.(b):**

**Sol.** Suspended particulate matter (SPM) are finely divided solids or liquids that may be dispersed through the air from combustion processes, industrial activities or natural sources


**46. Ans.(d):**

**Sol.** LION, TIGER, GOAT, PEACOCK

Peacock is a bird and rest are animals



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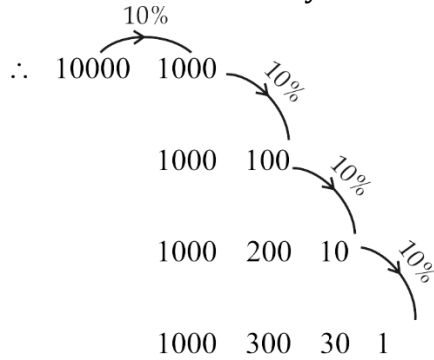
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**47. Ans.(d):**

**Sol.** For half yearly  
Rate = 10% and T = 4 yrs



∴ Total amount = 10000 + 4000 + 600 + 40 + 1  
= 14641

**48. Ans.(a):**

**Sol.** In 1327, Muhammad Bin Tughluq passed an order to move his capital from Delhi to Daulatabad (in present-day Maharashtra) in the Deccan region of India.

**49. Ans.(b):**

**Sol.**

F	H	N	P	K	M	E	G		
↓		↓		↓		↓			
G		O		L		F	(Middle letters)		
R	T	S	U	H	J	B	D	J	L
↓		↓		↓		↓		↓	
S		T		I		C		K	



**50. Ans.(a):**

**Sol.** S.D =  $\sqrt{\text{Variance}}$   
(4.5)<sup>2</sup> = Variance  
Variance = 20.25

**51. Ans.(b):**

**Sol.** The Millau Viaduct is a massive cable-stayed bridge crossing the River Tarn in southern France.

**52. Ans.(b):**

**Sol.** The Indra Gandhi canal is fed from the Sutlej, Beas and Ravi tributaries of the Indus River

**53. Ans.(c):**

**Sol.** The President of India is the Supreme Commander of the Indian Armed Forces. Ram Nath Kovind is the current supreme commander of Indian Defense forces

**54. Ans.(a):**

**Sol.** MAN = 13 + 1 - 14 = 0  
SIN = 19 + 9 - 14 = 14  
HOT = 8 + 15 - 20 = 3

**55. Ans.(a):**

**Sol.**  $0.08x + 0.04y = 10$

$4x + 2y = 500 \dots(i)$

$0.2(x - 1) + 0.4y = 24.8$

$2x + 4y = 250 \dots(ii)$

Eq<sup>n</sup> (i) × 2  $\Rightarrow 8x + 4y = 1000$

$\frac{2x + 4y = 250}{\underline{\hspace{1cm}}}$

$6x = 750$

$x = 125$

**56. Ans.(c):**

**Sol.** The history of candy bars actually began back in 1847. The first chocolate bar was made in Britain by Joseph Fry and his son, who pressed a paste made of cocoa powder and sugar into a bar shape.

**57. Ans.(a):**

**Sol.**  $\frac{63}{100}, \frac{105}{10}, \frac{21}{10}, \frac{42}{10}$

$\therefore \frac{\text{LCM of } (63, 105, 21, 42)}{\text{HCF of } (100, 10, 10, 10)} = \frac{630}{10} = 63$

LCM = 63

**58. Ans.(c):**

**Sol.** The Red Sea got its name because of a type of algae called *Trichodesmium erythraeum*, which is found in the sea.

**59. Ans.(c):**

**Sol.** Foot have toes

Hand have fingers

**60. Ans.(a):**

**Sol.** The pendulum clock was invented in 1656 by Dutch scientist and inventor Christiaan Huygens, and patented the following year.

**61. Ans.(a):**

**Sol.**  $y = \frac{P \times y \times y}{100} \Rightarrow P = \frac{100}{y}$

**62. Ans.(d):**

**Sol.** Everest is the highest peak

Jupiter is the biggest planet

**63. Ans.(c):**

**Sol.**  $15 - 3 + 10 \times 5 \div 5$

$\Rightarrow 15 \times 3 - 10 \div 5 + 5$

$\Rightarrow 45 - 2 + 5 \Rightarrow 48$

**64. Ans.(a):**

**Sol.**  $\frac{4^{13}}{3} = \frac{4^1}{3} = \frac{4}{3}$

$\therefore \text{Remainder} = 1$

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**65. Ans.(d):**

**Sol.**

T	A	B	L	E	C	H	I	R
8	4	9	7	3	5	1	6	2
∴	T	E	A	C	H	E	R	
	8	3	4	5	1	3	2	

**66. Ans.(c):**

**Sol.** ATQ,

$$\frac{D}{9+x} = 2 \left( \frac{D}{9-x} \right)$$

$$\Rightarrow 9 - x = 2(9 + x) \Rightarrow x = 3$$

∴ Rate of stream = 3 km/hr

**67. Ans.(b):**

**Sol.** Final loss % =  $\frac{60^2}{100} = 36\%$

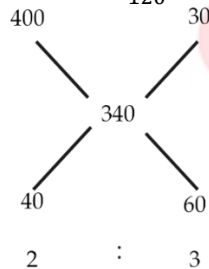
**68. Ans.(a):**

**Sol.** Distance =  $90 \times \frac{5}{18} \times 20 = 500$  m

**69. Ans.(b):**

**Sol.** 120% = 408

$$100\% = \frac{408}{120} \times 100 = 340$$



**70. Ans.(d):**

**Sol.** 1 is correct and 2 is incorrect

**71. Ans.(a):**

**Sol.** Java is the official language for Android development and is supported by Android Studio.

**72. Ans.(c):**

**Sol.** Ozone is a secondary pollutant that forms from the primary pollutants such as Volatile Organic Compounds (Hydrocarbons) and nitrogen oxides (NOx) in the presence of sunlight. Its formation is mainly from the automobile emissions.

**73. Ans.(c):**

**Sol.** Cricket, Hockey, Chess, Football

Chess is indoor game and rest are outdoor games.



**74. Ans.(c):**

**Sol.** A capacitor is a device for storing charge. It is usually made up of two plates separated by a thin insulating material known as the dielectric. One plate of the capacitor is positively charged, while the other has negative charge.

**75. Ans.(c):**

**Sol.** The computer mouse as we know it today was invented and developed by Douglas Engelbart, with the assistance of Bill English, during the 1960's and was patented on November 17, 1970.

**76. Ans.(c):**

**Sol.** The computer brain is a microprocessor called the central processing unit (CPU). The CPU is a chip containing millions of tiny transistors.

**77. Ans.(a):**

**Sol.** Shri Sunil Arora today assumed charge as the 23rd Chief Election Commissioner (CEC) of India succeeding Shri O.P.Rawat.

**78. Ans.(b):**

**Sol.**  $2 \downarrow 5 \rightarrow 6 \leftarrow 2 \wedge 6$   
 $\Rightarrow 2 \times 5 - 6 + 2 = 6$   
 $\Rightarrow 10 - 6 + 2 = 6$   
 $\Rightarrow 6 = 6$

**79. Ans.(c):**

**Sol.** In 1913 Bohr proposed his quantized shell model of the atom to explain how electrons can have stable orbits around the nucleus. The energy of an electron depends on the size of the orbit and is lower for smaller orbits. Radiation can occur only when the electron jumps from one orbit to another.

**80. Ans.(b):**

**Sol.**

	A	B	C
Efficiency	1	3	0.75
Days	$\frac{1}{1}$	$\frac{1}{3}$	$\frac{1}{0.75}$
	1	$\frac{1}{3}$	$\frac{4}{3}$
	3	1	4

**81. Ans.(d):**

**Sol.** There are 10 bio-geographical Zones in India. The bio-geographical province is an ecosystematic or biotic subdivision of realm. India is divided into 25 bio-geographic provinces

**82. Ans.(a):**

**Sol.** The varieties of Coal that are generally found in India are Anthracite, Bituminous, Lignite, and Peat.

**83. Ans.(b):**

**Sol.** Rani Lakshmbai of Jhansi, one of the most important figures of India's First War of Independence, died while fighting against the British in Gwalior.

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**84. Ans.(b):**

**Sol.** The queen is the most powerful piece in the game of chess, able to move any number of squares vertically, horizontally or diagonally. Each player starts the game with one queen, placed in the middle of the first rank next to the king.

**85. Ans.(d):**

**Sol.** Both A and R are true but R is not the correct explanation of A

**86. Ans.(c):**

**Sol.**

$$\begin{array}{l} - \rightarrow \times \quad | \quad \times \rightarrow - \\ \div \rightarrow + \end{array}$$

$$\begin{aligned} &100 - 10 \times 1000 \div 1000 + 100 \times 10 \\ \Rightarrow &100 \times 10 - 1000 + 1000 \div 100 - 10 \\ \Rightarrow &1000 - 1000 + 10 - 10 \Rightarrow 0 \end{aligned}$$

**87. Ans.(b):**

**Sol.** The most commonly used coffee beans are Arabica and Robusta grown in the hills of Karnataka (Kodagu, Chikkamagaluru and Hassan), Kerala (Malabar region) and Tamil Nadu (Nilgiris District, Yercaud and Kodaikanal).

**88. Ans.(b):**

**Sol.** Fa-Hien is the famous Chinese pilgrim who visited India during the rule of Chandra Gupta II. Fa-Hien started from China in 399 A.D. and covering all the way through the deserts came up to Peshawar.

**89. Ans.(b):**

**Sol.**

	Atul	Aaravya
Efficiency	100	150
Efficiency	2	3

$$\therefore \text{Total work done by Atul in 18 days} = 2 \times 18 = 36$$

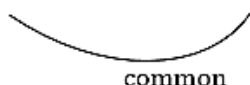
$$\therefore \text{number of days taken by Aaravya} = \frac{36}{3} = 12$$

$\therefore$  Atul take 6 more days than Aaravya to do the same piece of work

**90. Ans.(c):**

**Sol.**

$$\begin{array}{ll} 2x^2 + 5x - 12 & x^2 + x - 12 \\ \Rightarrow 2x^2 + 8x - 3x - 12 & \Rightarrow x^2 + 4x - 3x - 12 \\ \Rightarrow 2x(x+4) - 3(x+4) & \Rightarrow x(x+4) - 3(x+4) \\ \Rightarrow (2x-3)(x+4) & \Rightarrow (x-3)(x+4) \end{array}$$



$$\therefore \text{HCF} = (x + 4)$$

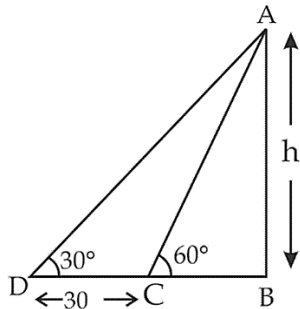
$$\therefore a = 4$$

91. Ans.(c):

Sol. Nasir-ud-Din Mahmud Shah Tughluq was the last ruler of the Tughlaq dynasty of the Delhi.

92. Ans.(d):

Sol.



$$CB = \frac{h}{\sqrt{3}}$$

$$BD = h\sqrt{3}$$

$$\therefore h\sqrt{3} - \frac{h}{\sqrt{3}} = 30$$

$$h\left(\sqrt{3} - \frac{1}{\sqrt{3}}\right) = 30$$

$$h\left(\frac{2}{\sqrt{3}}\right) = 30$$

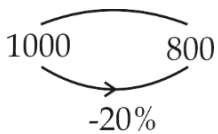
$$\Rightarrow h = 15\sqrt{3} \text{ m}$$

93. Ans.(a):

Sol. Nitrous oxide, commonly known as laughing gas or nitrous, is a chemical compound, an oxide of nitrogen with the formula  $N_2O$

94. Ans.(c):

Sol.



$$\text{Profit \%} = \frac{200}{800} \times 100 = 25\%$$

95. Ans.(c):

Sol. At present Kalyan Krishnamurthy holds the Flipkart CEO position

96. Ans.(d):

Sol. The planets' orbits are very nearly circular, but not quite. Each orbit has the shape of a slightly stretched-out circle, called an ellipse

97. Ans.(b):

Sol.  $(2 + 6 + 7 + Y + 2)$

Should be divisible by 3

If  $Y = 1$  (minimum)

Then 18 is divisible by 3

**98. Ans.(c):**

**Sol.**  $400 \times \frac{x}{100} \times \frac{80}{100} = 160$

$x = 50\%$

$\therefore 1^{\text{st}} \text{ Discount} = (100 - 50) = 50\%$

**99. Ans.(a):**

**Sol.** Gocha La is a high mountain pass in Sikkim, India in the Himalaya range.

**100. Ans.(d):**

**Sol.** Both A and R are true but R is not the correct explanation of A.

