

## RRB NTPC Previous Year Paper 08\_(Solutions)

**S1. Ans.(d):**

**Sol.** Product of two no. s = LCM  $\times$  HCF

$$2522 = 97 \times x \Rightarrow x = 26$$

**S2. Ans.(d):**

**Sol.** Fish bones are not regarded as helpful to compost as given to other option.

**S3. Ans.(a):**

**Sol.** The functioning of a very old model pendulum clock was completely mechanical rather than electrical or electronic

**S4. Ans.(c):**

$$\text{Sol. } \frac{1}{3} = 0.33, \frac{2}{5} = 0.4, \frac{1}{5} = 0.2$$

$$\therefore \frac{1}{5} < \frac{1}{3} < \frac{2}{5}$$

**S5. Ans.(b):**

**Sol.** The current president is Bidhya Devi Bhandari, elected in October 2015. She is the first female Nepali head of state.

**S6. Ans.(d):**

**Sol.** It was decided to add the implementation of a uniform civil code in Article 44 of the Directive principles of the Constitution specifying, "The State shall endeavour to secure for citizens a uniform civil code throughout the territory of India."

**S7. Ans.(a):**

$$\text{Sol. } 19 \text{ min} \rightarrow \text{Rs } 13 \Rightarrow 1 \text{ min} \rightarrow \frac{13}{19}$$

$$1 \text{ sec} \rightarrow \frac{13}{19 \times 60}$$

$$\therefore 15 \text{ min } 50 \text{ sec} = 15 \times \frac{13}{19} + \frac{13}{19 \times 60} \times 50$$

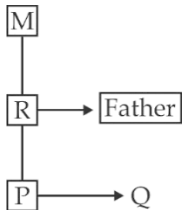
$$= 10.26 + 0.57 = 10.83$$

**S8. Ans.(b):**

**Sol.** only 2 has a horizontal main line

**S9. Ans.(c):**

**Sol.**



Father is son in law of M

**S10. Ans.(d):**

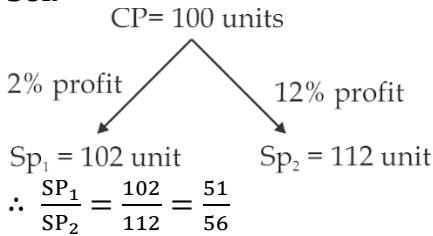
**Sol.**  $11 + 14 \times 7 - 5 \div 29$

$11 \times 14 \div 7 + 5 - 29$

$11 \times 2 - 24 = -2$

**S11. Ans.(a):**

**Sol.**



**S12. Ans.(c):**

**Sol.**  $(25)^{\frac{3}{2}} = 125$

**S13. Ans.(c):**

**Sol.** Each exterior angle =  $\frac{360}{x} \Rightarrow 40 = \frac{360}{x} \Rightarrow x = 9$

**S14. Ans.(c):**

**Sol.** The medal has no post-nominal initials. Its most famous recipient is Mohandas Gandhi, who was awarded the Kaisar-i-Hind in 1915 by The Lord Hardinge of Peshhurst for his contribution to ambulance services in South Africa.

**S15. Ans.(b):**

**Sol.** Total gain % =  $8 + 8 + \frac{8 \times 8}{100} = 16.64\%$

**S16. Ans.(b):**

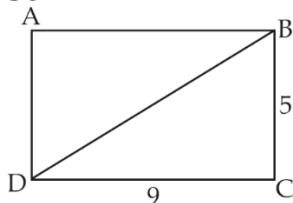
**Sol.** The war was fought for 18 long days. The Kurukshetra War is a war described in the Indian epic Mahabharata as a conflict that arose from a dynastic succession struggle between two groups of cousins of an Indian kingdom called Kuru, the Kauravas and Pandavas, for the throne of Hastinapura.

**S17. Ans.(b):**

**Sol.** Humayun's tomb is the tomb of the Mughal Emperor Humayun in Delhi, India.

**S18. Ans.(a):**

**Sol.**



$$BD = \sqrt{81 + 25} = \sqrt{106}$$

**S19. Ans.(a):**

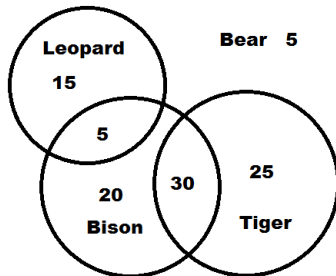
**Sol.** Only conclusion I follows.

**S20. Ans.(b):**

**Sol.**  $2.31 \times 0.34 = 0.7854$

**S21. Ans.(b):**

**Sol.**



Only one animal =  $15 + 20 + 25 + 5 = 65$

**S22. Ans.(c):**

**Sol.**  $\frac{\text{Tiger}}{\text{Bear}} = \frac{55}{5} = \frac{11}{1}$

**S23. Ans.(c):**

**Sol.** See bison not leopard =  $20 + 30 = 50$

**S24. Ans.(d):**

**Sol.** High quality water is not assured in Bio-sand Water Filter.

**S25. Ans.(b):**

**Sol.** Except caffeine, all others are toxic.

**S26. Ans.(d):**

**Sol.** Air is considered as a mixture because its a mixture of different gases. The composition of air is- 78% Nitrogen, 21% Oxygen and 1% Other inert gases like Hydrogen, Argon, Helium, Neon, etc.

**S27. Ans.(c):**

**Sol.** The Pashupatinath Temple is a famous and sacred Hindu temple complex that is located on the banks of the Bagmati River, Kathmandu in the eastern part of Kathmandu Valley, the capital of Nepal.

**S28. Ans.(b):**

**Sol.** Standard deviation =  $\sqrt{\text{variance}} = \sqrt{121} = 11$

**S29. Ans.(a):**

**Sol.**  $CI = 180 + 180 + 7.2 = 367.2$

**S30. Ans.(c):**

**Sol.**  $SI = \frac{650 \times 6 \times 4}{100} = \text{Rs } 156$

Amount =  $650 + 156 = \text{Rs } 806$

**S31. Ans.(b):**

**Sol.**  $4082 \div 157 - 23 = 3$

**S32. Ans.(b):**

**Sol.** Efficiency of Manoj =  $2x$

And efficiency of Anuraj =  $x$

Total work =  $(2x + x) \times 22 = 66x$

Days taken by Anuraj =  $\frac{66x}{x} = 66$  days

**S33. Ans.(d):**

**Sol.** 'Operation Smile-II' operated from January 1 to January 31, 2016, with the Home Ministry having decided to come up with the initiative following the success of two similar programmes earlier this year when 9,146 children were rescued and rehabilitated under 'Operation Smile' with a further 1,972 children recovered under 'Operation Muskan'.

**S34. Ans.(d):**

**Sol.** No. of sides written inside

**S35. Ans.(b):**

**Sol.** Scanning is often painful is not true with CT Scan.

**S36. Ans.(b):**

**Sol.** -3, 4, 0, 4, -2, -5, 1, 7, 10, 5

= -5, -3, -2, 0, 1, 4, 4, 5, 7, 10

$N = \text{even}$

$$\begin{aligned} \text{median} &= \frac{\left(\frac{n}{2}\right)^{\text{th}} \text{ term} + \left(\frac{n}{2} + 1\right)^{\text{th}} \text{ term}}{2} \\ &= \frac{\left(\frac{10}{2}\right)^{\text{th}} \text{ term} + \left(\frac{10}{2} + 1\right)^{\text{th}} \text{ term}}{2} \\ &= \frac{5^{\text{th}} \text{ term} + 6^{\text{th}} \text{ term}}{2} = \frac{1 + 4}{2} = 2.5 \end{aligned}$$

**S37. Ans.(b):**

**Sol.** ISRO built India's first satellite, Aryabhata, which was launched by the Soviet Union on 19 April 1975. In 1980 and Rohini became the first satellite to be placed in orbit by an Indian-made launch vehicle, SLV-3.

**S38. Ans.(d):**

**Sol.** Anand is grandson of Chandra's father.

**S39. Ans.(d):**

**Sol.**  $CP = \frac{20400}{0.85} = \text{Rs } 24000$

$SP_{15\% \text{ profit}} = \text{Rs } 27600$

**S40. Ans.(b):**

**Sol.**  $\frac{5}{28} \div \frac{28}{35} \div \frac{20}{112}$

$$\frac{5}{28} \times \frac{35}{28} \times \frac{112}{20} = \frac{5}{4}$$

**S41. Ans.(b):**

**Sol.** The Berlin-based corruption watchdog Transparency International (TI) has put India at rank 76 out of 168 countries in its Corruption Perception Index.

**S42. Ans.(b):**

**Sol.** Acid rain is caused by a chemical reaction that begins when compounds like sulfur dioxide and nitrogen oxides are released into the air.

**S43. Ans.(c):**

**Sol.** The positive impact of internet in life best source of knowledge through a click.

**S44. Ans.(b):**

**Sol.** Borosilicate is a special type of glass that consists of silica and boron oxide besides laboratory glassware, borosilicate glassware is also used to make microwave glass cookware, due to its resistance to heat.

**S45. Ans.(a):**

$$\text{Sol. AK} = \frac{15}{100} \times 40 = 6$$

$$\text{VD} = \frac{10}{100} \times 40 = 4$$

$$\therefore \text{Difference} = 2$$

**S46. Ans.(b):**

$$\text{Sol. Sector angle} = \frac{20}{100} \times 360^\circ = 72^\circ$$

**S47. Ans.(b):**

$$\text{Sol. } \frac{\text{SRK}}{\text{SK}} = \frac{25}{30} = \frac{5}{6}$$

**S48. Ans.(a):**

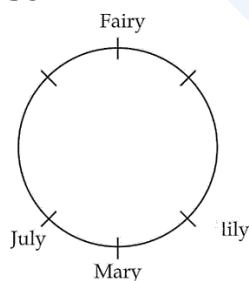
**Sol.**  $\therefore$  interesting  $\rightarrow 3$

**S49. Ans.(c):**

**Sol.** Rhesus (Rh) factor is an inherited protein found on the surface of red blood cells. If your blood has the protein, you're Rh positive.

**S50. Ans.(b):**

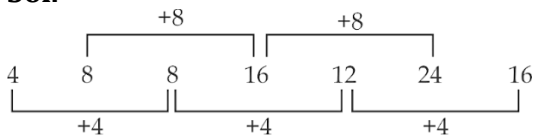
**Sol.**

**S51. Ans.(d):**

**Sol.** 52. (d);

**S53. Ans.(d):**

**Sol.**



**S54. Ans.(b):**

**Sol.** Ravi = 10hrs/day

Yuvi = 9 hrs/day

Meera = 8 hrs/day

**S55. Ans.(c):**

**Sol.** 17 units → 221

1 unit → 13

1	:	3	:	6	:	7
↓		↓		↓		↓
13		39		78		91

**S56. Ans.(b):**

**Sol.** Voice recognition does not related to mobile phone touch panel sensing methods.

**S57. Ans.(a):**

**Sol.** Walking in one way =  $\frac{11 \text{ hr } 15 \text{ min}}{2} = 5 \text{ hr } 37.5 \text{ min}$

∴ Time of riding one way = 9 hrs 20 min

Ans.(minus) 5 hrs 37.5 min = 3 hr 42.5 min

Time for riding both ways = 7 hr 25 min

**S58. Ans.(b):**

**Sol.** Synonyms

**S59. Ans.(c):**

**Sol.** Hb is the standard abbreviation for hemoglobin it does not relate to measurement of memory capacity.

**S60. Ans.(c):**

**Sol.** They are weightless because there is no external contact force pushing or pulling upon their body. In each case, gravity is the only force acting upon their body.

**S61. Ans.(b):**

**Sol.** -2 & +2 series

**S62. Ans.(c):**

**Sol.** Mount Everest, known in Nepali as Sagarmatha and in Tibetan as Chomolungma, is Earth's highest mountain above sea level, located in the Mahalangur Himal sub-range of the Himalayas.

**S63. Ans.(c):**

**Sol.**

P	Q	R	S	T	→	S	P	T	R	Q
1	2	3	4	5		4	1	5	3	2

H	I	J	K	L	→	K	H	L	J	I
1	2	3	4	5		4	1	5	3	2

**S64. Ans.(a):**

$$\begin{aligned} \text{Sol. } \tan A &= \frac{15}{8} \tan B = \frac{7}{24} \\ \tan(A - B) &= \frac{\tan A - \tan B}{1 + \tan A \tan B} \\ &= \frac{\frac{15}{8} - \frac{7}{24}}{1 + \frac{15}{8} \times \frac{7}{24}} = \frac{304}{297} \end{aligned}$$

**S65. Ans.(b):**

**Sol.** India's first war of independence, better known as the Indian Rebellion of 1857, began on this day, May 10 in the year 1857. The first martyr of the revolt was Mangal Pandey and the war was the result of accumulation of many factors over time.

**S66. Ans.(d):**

**Sol.** 31st Constitutional Amendment Act, 1973 - By this amendment the seats of Lok Sabha was increased from 525 to 545 but reduced the representation of UT's.

**S67. Ans.(c):**

**Sol.** 1

**S68. Ans.(c):**

**Sol.**  $28854 \div 458 \div 9 = 7$

**S69. Ans.(a):**

**Sol.** Let the no. be  $4x$  &  $5x$

HCF =  $x = 13$

$\therefore$  numbers = 52 & 65

LCM = 260

**S70. Ans.(d):**

**Sol.** ATQ,

$$\frac{d}{3} + \frac{d}{4} + \frac{d}{8} = \frac{42.5}{60} \Rightarrow \frac{8d + 6d + 3d}{24} = \frac{42.5}{60} \Rightarrow d = 1$$

$\therefore$  total distance = 3

**S71. Ans.(b):**

**Sol.** It is run by the International Tennis Federation (ITF) and is contested annually between teams from competing countries in a knock-out format. It is described by the organisers as the "World Cup of Tennis", and the winners are referred to as the World Champion team. ITF Davis Cup is structured with a 18 nation World Group.

**S72. Ans.(b):**

**Sol.** The Executive Board of the International Monetary Fund (IMF) today selected Christine Lagarde to serve as IMF Managing Director for a second five-year term starting on July 5, 2016.

**S73. Ans.(b):**

$$\text{Sol. Mean} = \frac{2 + 9 + 9 + 3 + 6 + 9 + 4}{7} = \frac{42}{7} = 6$$

**S74. Ans.(a):**

$$\text{Sol. } w = -2, x = 3, y = 0, z = \frac{-1}{2}$$

$$\frac{z}{w} + x = \frac{\frac{-1}{2}}{-2} + 3 = 3\frac{1}{4}$$

**S75. Ans.(b):**

**Sol.** Camphor is a waxy, flammable, transparent solid with a strong aroma. It is a terpenoid with the chemical formula  $C_{10}H_{16}O$ .

**S76. Ans.(c):**

**Sol.** Expedition 26 was the 26th long-duration mission to the International Space Station. The expedition's first three crew members – one US astronaut and two Russian cosmonauts – arrived at the station on board Soyuz TMA-01M on 10 October 2010.

**S77. Ans.(c):**

**Sol.** Including the FIFA Ballon d'Or Lionel Messi has won the award five times, with Cristiano Ronaldo having won it four times.

**S78. Ans.(d):**

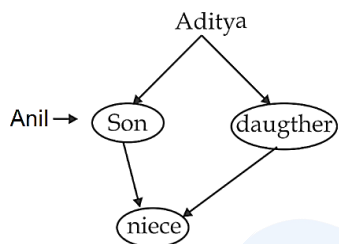
**Sol.**  $\sin x = \frac{4}{5}, \cos x = \frac{3}{5}$   
 $\therefore \frac{\sec x}{\sin x} = \frac{1}{\cos x \sin x} = \frac{25}{12}$

**S79. Ans.(c):**

**Sol.** Ghoomar is a traditional folk dance of Bhil tribe performed to worship Goddess Sarasvati which was later embraced by other Rajasthani communities.

**S80. Ans.(b):**

**Sol.**



**S81. Ans.(c):**

**Sol.** C → satisfies all 3 criteria.

**S82. Ans.(b):**

**Sol.** When you melt an ice cube ( $H_2O$ ), you have a physical change because you add energy. No chemical changes took place when you melted the ice.

**S83. Ans.(d):**

**Sol.** The Physical Research Laboratory (PRL) was founded on 11 November 1947 by Dr. Vikram Sarabhai. PRL had a modest beginning at his residence, the RETREAT, with research on cosmic rays. The institute was formally established at the M.G.

**S84. Ans.(d):**

**Sol.**  $5x - 2x(x - 1) = 5x - 2x^2 + 2x = -2x^2 + 7x$

**S85. Ans.(d):**

**Sol.** Dravid is the fifth India cricketer to be formally inducted into the ICC Cricket Hall of Fame after Bishen Singh Bedi, Kapil Dev, Sunil Gavaskar and Anil Kumble.



**S86. Ans.(b):**

**Sol.** -1 & +1 series

**S87. Ans.(c):**

**Sol.** The river is worshipped as a Hindu goddess called Yamuna. In the Vedas, Yamuna is known as Yami, while in later literature, she is called Kalindi.

**S88. Ans.(a):**

**Sol.** CMOS (complementary metal-oxide semiconductor) offers relatively high speed, low power dissipation, high noise margins in both states, and will operate over a wide range of source and input voltages (provided the source voltage is fixed). It is Battery-powered memory chip.

**S89. Ans.(c):**

**Sol.** The Western blot test separates the blood proteins and detects the specific proteins (called HIV antibodies) that indicate an HIV infection. The Western blot is used to confirm a positive ELISA, and the combined tests are 99.9% accurate.

**S90. Ans.(b);**

**S91. Ans.(d):**

**Sol.** Sardar Patel Stadium is one of the premier cricket stadiums of India in the Motera locality of Ahmedabad.

**S92. Ans.(b):**

**Sol.**  $4 \times 12 = 6 \times x \Rightarrow x = 8$  days

**S93. Ans.(c):**

**Sol.** Function key F8 in a Windows keyboard can perform several functions and does not have an assigned Windows default.

**S94. Ans.(a):**

**Sol.** The spine, also known as the vertebral column or spinal column, is a column of 26 bones in an adult body - 24 separate vertebrae interspaced with cartilage, and then additionally the sacrum and coccyx...Prior to adolescence, the spine consists of 33 bones.

**S95. Ans.(b):**

**Sol.**  $O = 15$

STAR

$19 + 20 + 1 + 18 = 58$

C A M E L

$3 + 1 + 13 + 5 + 12 = 34$

**S96. Ans.(a):**

**Sol.**  $0.0\overline{18} = 0.0181818n$

$= \frac{18}{990} = \frac{1}{55}$

**S97. Ans.(b):**

**Sol.**  $1000x - 5 = -6$

$\Rightarrow x = -\frac{1}{1000}$

**S98. Ans.(d);**

**S99. Ans.(c):**

**Sol.** K. P. Sharma Oli was elected as the Prime Minister of Nepal in 2015.

**S100. Ans.(b):**

**Sol.** GIANTLER = TRIANGLE

NILE = LINE

MUBORSH = RHOMBUS

RASQUE = SQUARE

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