

## RRB NTPC Previous Year Paper 16\_(Solutions)

**1. Ans.(b);**

**Sol.** The Santosh Trophy is an association football knock-out competition contested by the regional state associations and government institutions under the All India Football Federation, the sport's governing body in India

**S2. Ans.(a);**

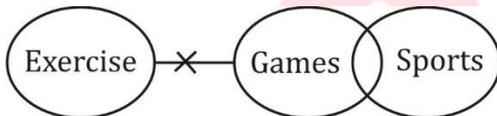
**Sol.** LCM = (21)(29)(8) = 4872

**S3. Ans.(a);**

**Sol.** Optical fiber is used in Medical, Used as light guides, imaging tools and also as lasers for surgeries, Defense, Data Storage, Telecommunications, Networking, Industrial/ Commercial, Broadcast/ CATV. But it can't be used for power generation.

**S4. Ans.(d);**

**Sol.**



I. ×    II. ×

Neither conclusion I nor conclusion II follows.

**S5. Ans.(d);**

**Sol.** Apollo 11 was the spaceflight that landed the first two people on the Moon. Commander Neil Armstrong and lunar module pilot Buzz Aldrin.

**S6. Ans.(c);**

**Sol.** Newton's third law is: For every action, there is an equal and opposite reaction.

**S7. Ans.(c);**

**Sol.**  $\frac{1}{2} = 50\% \Rightarrow \frac{2}{3} = 66.67\%$

$\frac{7}{12} = 58.33\% \Rightarrow \frac{1}{2} < \frac{7}{12} < \frac{2}{3}$

**S8. Ans.(b);**

**Sol.**  $\frac{1}{K} = \frac{2}{R} \Rightarrow \frac{1}{K} + \frac{1}{R} = \frac{1}{20}$

$\frac{3}{R} = \frac{1}{20} \Rightarrow R = 60 \text{ days}$

**S9. Ans.(d);**

**Sol.** Lion lives in a Den.



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**S10. Ans.(b);**

**Sol.** Arranging the data in ascending order

$$\frac{1}{4}, \frac{1}{4}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{3}{4}, \frac{3}{4}, 1, 2$$
$$\text{Median} = \frac{1}{2}$$

**S11. (a);**

**Sol.** MARS = 5426

YELLOW = 137789

Therefore, taking codes from the above two equations, ROSE = 2863

**S12. Ans.(a);**

**Sol.** Thomas Jeffrey Hanks is an American actor and filmmaker

**S13. (b);**

**Sol.** Delhi is the capital of India

**S14. Ans.(b);**

**Sol.** Dhyan Chand Award is the highest sports award in India, which is given by the government of India for lifetime achievement in sports. Sachin Tendulkar was not bestowed with this award.

**S15. Ans.(d);**

**Sol.**  $2446 = 42 \times \text{HCF}$

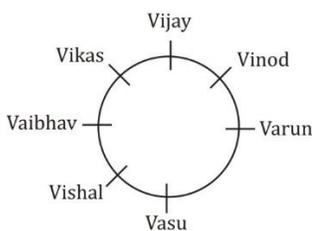
HCF = 63

**S16. Ans.(b);**

**Sol.** GSAT-8 or INSAT-4G is communication satellite. It was constructed by the Indian Space Research Organisation, as part of INSAT system.

**S17. Ans.(d);**

**Sol.**



**S18. Ans.(a);**

**Sol.**

**S19. Ans.(c);**

**Sol.**

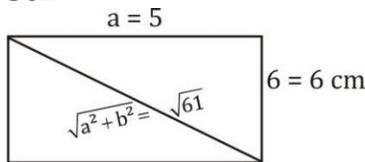
**S20. Ans.(b);**

**Sol.** 'Amitabh Bachchan replaces Aamir Khan as face of 'Incredible India!'. Amitabh Bachchan has been chosen as the new face for the campaign.

**S21. (d)** 566 is not a square of a perfect number.

**S22. Ans.(a);**

**Sol.**



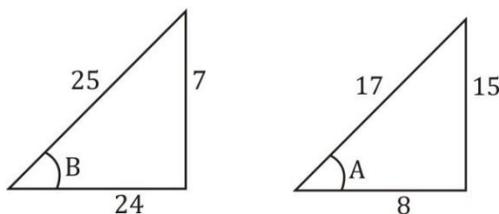
**S23. (a);**

**Sol.** Ratio of volumes =  $\frac{1}{3} \pi (2r)^2 h \div \pi r^2 h = 4/3$

**S24. (c);**

**Sol.** speed of boat =  $8 + 4/2 = 6$  kmph

**S25. Ans.(a)**



$\cos(A - B) = \cos A \cos B + \sin A \sin B$

$$= \frac{8}{17} \times \frac{24}{25} + \frac{15}{17} \times \frac{7}{25} = \frac{192 + 105}{425} = \frac{297}{425}$$

**S26. Ans.(c);**

**Sol.** Candela is not related to sound. It is unit of light intensity

**S27. Ans.(c);**

**Sol.** The chemical widely used for artificially ripening fruits is Calcium Carbide ( $\text{CaC}_2$ ).

**S28. Ans.(b);**

**Sol.**  $S.D = \sqrt{\text{Variance}} = \sqrt{169} = +13$

**S29. Ans.(c);**

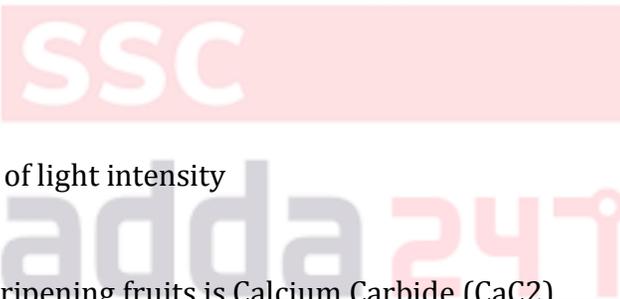
**Sol.** Lord Mahavir's preaching was methodically compiled by his followers into many texts. These texts are collectively known as Agams, the sacred books of the Jain religion. Hence, the Jain religion does not have one sacred book like the Bible or Koran, but it has many books compiled by many followers.

**S30. Ans.(b);**

**Sol.** The Internet is the global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to link devices worldwide.

**S31. Ans.(d);**

**Sol.** Interchange  $\div$  and  $+$   
 $42 + 4 \div 2 - 3 \times 5 = 42 + 2 - 15 = 29$



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**S32. Ans.(d);**

**Sol.** Phosphine is the compound with the chemical formula PH<sub>3</sub>. It is a colorless, flammable, toxic gas. It is not a Green house gas.

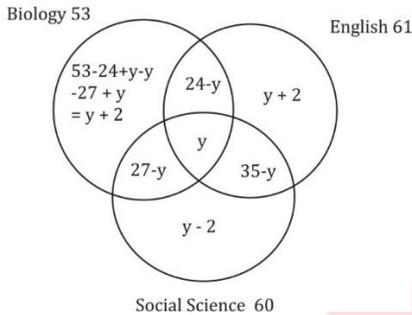
**S33. Ans.(d);**

**Sol.**  $4(x-1)-3x = x-4$

**S34. Ans.(c);**

**Sol.** Organs of excretion make up the excretory system. They include the kidneys, large intestine, liver, skin, and lungs. The kidneys filter blood and form urine. They are part of the urinary system, which also includes the ureters, bladder, and urethra.

**Direction (35 to 37):**



Only Biology =  $53 - 51 + y = y + 2\%$

Only English =  $(y + 2)\%$

Only in Social Science =  $(y - 2)\%$

ATQ,

$$(y + 2) + (y + 2) + (y - 2) + (27 - y) + (24 - y) + (35 - y) + y = 95$$

$$\Rightarrow y = 7$$

**S35. Ans.(b);**

**Sol.** Only one =  $2(3y + 2) = (3 \times 7 + 2) \times 2 = 46$

**S36. Ans.(c);**

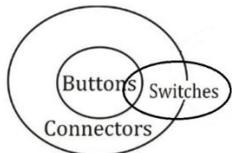
**Sol.**  $y = 7\%$

**S37. Ans.(a);**

$$\text{Sol. } \frac{20}{28} = \frac{5}{7}$$

**S38. Ans.(c);**

**Sol.**



I.  $\checkmark$     II.  $\checkmark$

Both conclusion I and II follows.

**S39. Ans.(b)** Since for a triangle to be formed, the sum of any two sides must be greater than the third side.

**S40. Ans.(c);**

**Sol.** NOTEBOOK → REGOLOEEN

SHIRT → XYZBG

T → G

O → E

R → B

N → R

**S41. Ans.(a);**

**Sol.**  $15 + 12 \div 6 \times 4 - 3 = 15 + 8 - 3 = 20$

**S42. Ans.(a);**

**Sol.** The other grounds for disqualification from contesting polls under the Haryana Panchayati Raj (Amendment) Act, 2015 are failure to pay arrears to any primary agriculture co-operative society or agriculture co-operative banks, failure to pay electricity bill arrears and not having a functional toilet at home.

**S43 (d);**

**Sol.**  $12 \times 14 \div 7 + 5 - 29 = 0$

**S44. Ans.(a);** As we know that,

$$\frac{CP}{100 - \text{Discount}} = \frac{MRP}{100 + \text{Profit}}$$
$$\Rightarrow CP : MRP = 70 : 133$$

$$\text{Required \%} = \frac{133 - 70}{70} \times 100 = \frac{63}{70} \times 100 = 90\%$$

**S45. Ans.(d);**

**Sol.** Modem is a combined device for modulation and demodulation, for example, between the digital data of a computer and the analogue signal of a telephone line.

**S46. Ans.(b);**

**Sol.** Vikramashila was established by King Dharmapala (783 to 820 AD) in response to a supposed decline in the quality of scholarship at Nalanda.

**S47. Ans.(a);**

**Sol.** Required ratio =  $\frac{102}{116} = \frac{51}{58}$

**48. Ans.(c);**

**Sol.** Perimeter of semicircle =  $\pi r + 2r$   
 $= r(\pi + 2) = r \left(\frac{36}{7}\right) = 14 \times \frac{36}{7} = 72 \text{ cm}$

**S49. Ans.(b);**

**Sol.** Kaveri and Godavari flow in the southern part of India.

**S50. Ans.(a);**

**Sol.** Mitosis is also used for repairing the injured tissues or replacing the worn-out tissue by regenerating new cells. Mitosis refers to the splitting of chromosomes in the eukaryotic cells during the cell division process

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**S51. Ans.(d);**

**Sol.** The 'Chittagong' armoury raid included mainly Anand Prasad Gupta, Tripura Sen, Bidhubhusan Bhattacharya, Pritilata Waddedar, Kalpana Dutta, Himangshu Sen, Binod Bihari Chowdhury, Subodh Roy, Monoranjan Bhattacharya.

**S52. Ans.(c);**

**Sol.** Bahadur Shah Zafar, also known as Bahadur Shah II, was the last Mughal emperor of India who reigned from 1837 to 1857 for a period of 20 years

**S53. Ans.(c);**

**Sol.**  $182 - 91 \div 7 \times 3 + 1$   
 $182 - 39 + 1 = 144$

**S54. Ans.(b);**

**Sol.** -2

**S55. Ans.(b);**

**Sol.** From (i) and (ii)  
STONE = 69784

**S56. Ans.(d);**

**Sol.** The members of the All India Services serve the both the Union and State Governments.

**S57. Ans.(d);**

**Sol.**

**S58. Ans.(d);**

**Sol.** Diamond has a very high refractive index (about 2.42 compared to about 1.5 for glass).

**S59. Ans.(b);**

**Sol.** About 93% of Tribal women cannot contest for the post of Sarpanch in Rajasthan as they are not educated enough. The educational qualifications necessary must be Minimum qualification is Class 5.

**S60. Ans.(d);**

**Sol.** Urban people change their environment through their consumption of food, energy, water, and land. Unsustainable development occurs when present progress is at the expense of future generations. For example, irresponsible planning and environmental degradation through exploitation of resources generates waste and pollution that damages ecosystems.

**S61. Ans.(c);**

**Sol.** Stream is connected to river.

**S62. Ans.(d);**

**Sol.** Let total units = 15  
Required time =  $\frac{15}{3+5} = \frac{15}{8}$   
 $1\frac{7}{8}$  minutes.

**S63. Ans.(a);**

**Sol.**  $4 \times 3 + 2 = 14$

**S64. Ans.(b);**

**Sol.** Mean =  $\frac{S}{n} = 7$

**S65. Ans.(a);**

**Sol.**  $2(4 + 9 + 0) = 26$

**S66. Ans.(c);**

**Sol.** SI =  $\frac{900 \times 6}{100} \times 4 = 216$

Amount =  $216 + 900 = 1116$

**S67. Ans.(c);**

**Sol.** No. of sides =  $\frac{360}{60} = 6$

**S68. Ans.(b);**

**Sol.** The Forbidden City is a palace complex in central Beijing, China. The former Chinese imperial palace from the Ming dynasty to the end of the Qing dynasty, it now houses the Palace Museum.

**S69. Ans.(c);**

**Sol.**  $16x = 288$

$x = 18$

Numbers = 36, 54, 90, 108

**S70. Ans.(a);**

**Sol.** Mercury is the smallest planet in our solar system

**S71. Ans.(c);**

**Sol.** The Pashupatinath Temple is a famous and sacred Hindu temple complex that is located on the banks of the Bagmati River, approximately 5 kilometres north-east of Kathmandu in the eastern part of Kathmandu Valley, the capital of Nepal.

**S72. Ans.(b);**

**Sol.** Colostrum contains antibodies to protect the newborn against disease. They receive no passive transfer of immunity via the placenta before birth, so any antibodies that they need have to be ingested (unless supplied by injection or other artificial means)

**S73. Ans.(c);**

**Sol.** 2

**S74. Ans.(a);**

**Sol.**  $0.126\overline{36} = \frac{12636 - 126}{99000} = \frac{139}{1100}$

**S75. Ans.(a);**

**Sol.** The main exocrine product of the stomach is gastric juice a mixture of mucus, hydrochloric acid, and digestive enzymes.

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**S76. Ans.(b);**

**Sol.** Benzene was first discovered by the English scientist Michael Faraday in 1825.

**S77. Ans.(c);**

**Sol.**

**S78. Ans.(d);**

**Sol.** There is no war Anglo-Bangla which was fought between British and Indians.

**S79. Ans.(b);**

**Sol.** By counting the number of tree rings one can the age of a tree in years.

**S80. Ans.(d);**

**Sol.**

**S81. Ans.(a);**

**Sol.** A galvanometer is an electromechanical instrument used for detecting and indicating an electric current.

**S82. Ans.(b);**

**Sol.**  $x = -7$

**S83. Ans.(a);**

**Sol.**  $\frac{502+500+508+444+512+499}{6} = \frac{2965}{6} = 494$

**S84. Ans.(a);**

**Sol.**  $\frac{20}{490} \times 100 = 4\%$

**S85. Ans.(b);**

**Sol.**  $480 + 495 + 464 + 508 + 488 + 518 = 2953$

**S86. Ans.(c);**

**Sol.**  $\frac{15872}{32 \times 4} = 124$

**S87. Ans.(d);**

**Sol.** As Pulley is a type of simple machine it helps to reverse the direction of lifting force. When one end of the rope is pulled downwards, the load on the other end of the rope is pulled upward.

**S88. Ans.(a);**

**Sol.** 340 Seconds  $\rightarrow$  8

260 Seconds =  $\frac{8}{340} \times 260$

=  $\frac{8 \times 13}{17} = \frac{104}{17} \approx 6.1$

**S89. Ans.(b);**

**Sol.** UPTO  $\rightarrow$  PTUO

1  $\rightarrow$  3

2  $\rightarrow$  1

3  $\rightarrow$  2

4  $\rightarrow$  4

CANT  $\rightarrow$  ANCT

**S90. Ans.(c);**

**Sol.** Lambasingi is a small village in the Chintapalli Mandal of Visakhapatnam district in the Indian state of Andhra Pradesh.

**S91. Ans.(c);**

**Sol.** Knife is used to cause Laceration.

**S92. Ans.(a);**

**Sol.** Both Assertion and Reason are true and Reason is the correct explanation of Assertion.

**S93. Ans.(c);**

**Sol.** DNA fingerprinting is a chemical test that shows the genetic makeup of a person or other living things. It's used as evidence in courts, to identify bodies, track down blood relatives, and to look for cures for disease

**S94. Ans.(d);**

**Sol.** The CPU (Central Processing Unit) is the part of a computer system that is commonly referred to as the "brains" of a computer. Computers cannot work without CPU.

**S95. Ans.(a);**

**Sol.** The capital of Syria is Damascus

**S96. Ans.(c);**

**Sol.**  $(27)^{-2/3} = (3)^{-2} = \frac{1}{9}$

**S97. Ans.(b);**

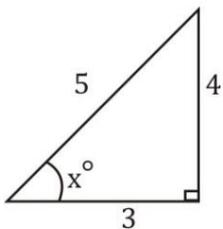
**Sol.** The second trophic level consists of herbivores, these organisms gain energy by eating primary producers and are called primary consumers. Caterpillars, insects, grasshoppers, termites and hummingbirds are all examples of primary consumers because they only eat producers (plants)

**S98. Ans.(b);**

**Sol.** The Razmnama (Book of War) is a Persian translation of the Mahabharata. In Persian, "Razm" means "war" and "nama" means "tale" or "epic"; the name Razmnamah, therefore, means a tale of war.

**S99. Ans.(d);**

**Sol.**



$$1 + \tan^2 x = \frac{25}{9}$$

**S100. Ans.(a);**

**Sol.** BOWLS  $\rightarrow$  76843

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