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TRB-BEO EXAM-2023

UNIT III – MATHEMATICAL APTITUDE & MENTAL ABILITY TESTS-

MODEL TEST-I

Duration:1/2 Hour   **Max.Marks:50**

****

1. What percent of 72 is 6 ?

   (a) 8 1/3%
   (b) 8 1/5%
   (c) 8%
   (d) 8 1/7%

2. What is 25% of 25% equal to

   (a) 6.251

   (b) .625

   (c).0625

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Page 1
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(d) .00635

3 . If A's income is 33% more than that of B, then how much percent is B's income less than that of A?

(a) 24.8%

(b) 26.7%

(c) 28.5%

(d) 24.3%

4. If the A's height is 24% less than that of B, then how much percent is B's height more than that of A?
(a) 30.61%

(b) 36.42%

(c)31.57%

(d) 31.88%

5. If the price of tea is increased by 20 % find by how much percent must a house holder reduce her consumption of tea so as not to increase the expenditure?

(a)16   2/3%

(b) 17 1/6%

(c) 16 1/7%

(d) 16 1/9%

6. If the price of sugar decreases by 20% find by how much percent must a house holder increase her consumption of sugar so as not to decrease the expenditure?

(a) 25%

(b)24%

(c)28%

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(d) 27%

7. The population of a town is 176400, if it increases at the rate of 5% annum, what will be it's population 2 years hence? What was it 2 years ago?

   (a) 194481 and 160000

   (b) 184488 and 160088

   (c) 195477 and 160968   `

   (d) 198897 and 160094

8. From the salary of an officer, 10% is deducted as house rent, 15% of the rest he spends on children's education and 10% of the balance he spends on clothes than he is left with ₹ 4131.Find his total salary?

   (a) 8000

   (b) 6000

   (c) 6060

   (d) 6600

9. If A's salary is 20% less than B's salary by how much percent is B's salary more than A's?

   (a) 16 2/3%

   (b) 20%

   (c) 25%

   (d) 33 1/3%

10. Which is greatest in 16 2/3% , 2/5 and 0.17?

   (a) 16 2/3

   (b) 2/5

   (c) 0.17

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Page 3
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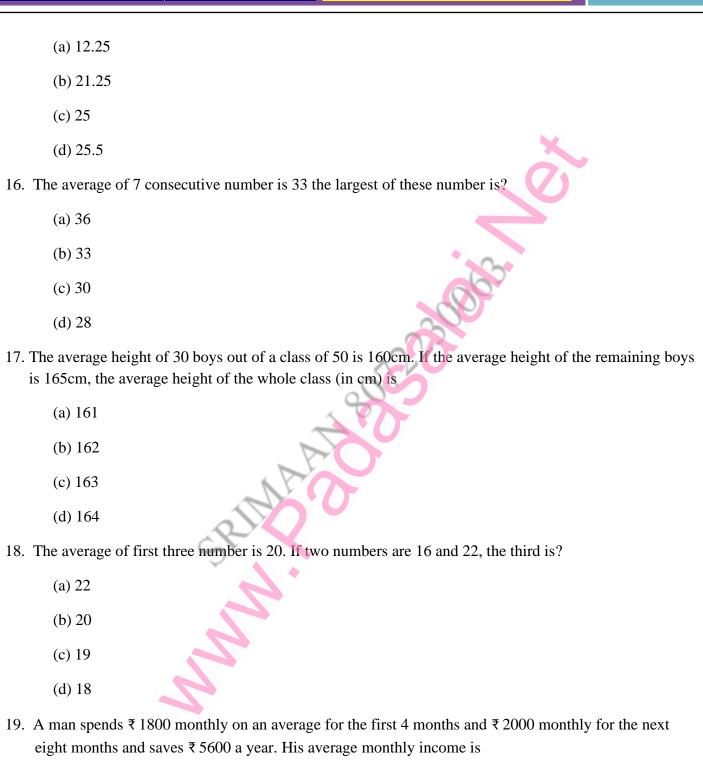
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(d) 0.99

11. 63% of 3 4/7 is

   (a) 2.25

   (b) 2.40

   (c) 2.50

   (d) 2.75

12. 40 quintals is what percent of 2 metric tons?

   (a) 20%

   (b) 2%

   (c) 200%

   (d) 150%

13.   Anis's height is 20% less than Deepak's. How much is Deepak's height more than Anil's?

   (a) 16 2/3%

   (b) 18%

   (c) 20%

   (d) 25%

14. The average of first five multiples of 3 is

   (a) 3

   (b) 9

   (c) 12

   (d) 15

15. The average of first 50 natural numbers is?

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Page 4
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(a) 12.25

(b) 21.25

(c) 25

(d) 25.5

16. The average of 7 consecutive number is 33 the largest of these number is?

    (a) 36

    (b) 33

    (c) 30

    (d) 28

17. The average height of 30 boys out of a class of 50 is 160cm. If the average height of the remaining boys is 165cm, the average height of the whole class (in cm) is

    (a) 161

    (b) 162

    (c) 163

    (d) 164

18. The average of first three number is 20. If two numbers are 16 and 22, the third is?

    (a) 22

    (b) 20

    (c) 19

    (d) 18

19. A man spends ₹ 1800 monthly on an average for the first 4 months and ₹ 2000 monthly for the next eight months and saves ₹ 5600 a year. His average monthly income is

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Page 5

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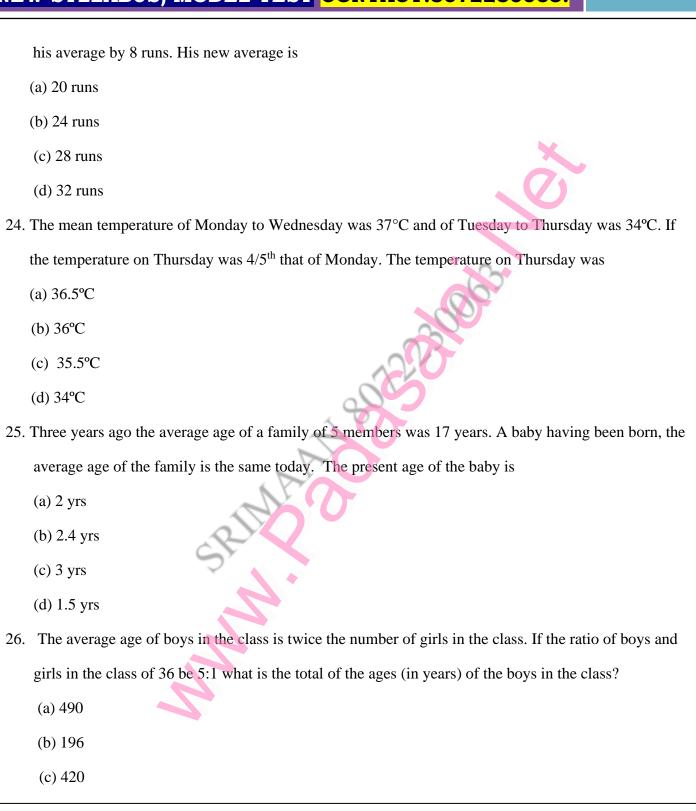
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(a) Rs.2000

(b) Rs. 2200

(c) Rs. 2400

(d) Rs. 2600

20. The average of six number is 30. If the average of first four is 25 and that of last three is 35. The fourth number is?

   (a) 25

   (b) 30

   (c) 35

   (d) 40

21. Mukesh has twice as much money as Sohan and Sohan has 150% more money than what Pankaj has if the average money with them is ₹ 110 then Mukesh has

   (a) Rs.55

   (b) Rs.60

   (c) Rs.90

   (d) Rs.180

22. The average age of 24 boys and the teacher is 15 years. When the teacher's age is excluded the average decreases by 1. What is the age of the teacher?

   (a) 38 years

   (b) 39 years

   (c) 40 years

   (d) data inadequacy

23. A cricketer has a certain average for 9 innings. In the 10th inning he scores 100 runs there by increasing

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his average by 8 runs. His new average is

(a) 20 runs

(b) 24 runs

(c) 28 runs

(d) 32 runs

24. The mean temperature of Monday to Wednesday was 37°C and of Tuesday to Thursday was 34ºC. If the temperature on Thursday was $4/5^{th}$ that of Monday. The temperature on Thursday was

(a) 36.5ºC

(b) 36ºC

(c) 35.5ºC

(d) 34ºC

25. Three years ago the average age of a family of 5 members was 17 years. A baby having been born, the average age of the family is the same today. The present age of the baby is

(a) 2 yrs

(b) 2.4 yrs

(c) 3 yrs

(d) 1.5 yrs

26. The average age of boys in the class is twice the number of girls in the class. If the ratio of boys and girls in the class of 36 be 5:1 what is the total of the ages (in years) of the boys in the class?

(a) 490

(b) 196

(c) 420

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Page 7

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(d) 360

27. A man buys an article for Rs. 27.50 and sells it for Rs.28.60. find his gain percent.

   (a) 3%

   (b) 2%

   (c) 4%

   (d) 6%

28. Find C.P when S.P = ₹ 40.60, gain = 16%

   (a) ₹ 25

   (b) ₹ 55

   (c) ₹ 45

   (d) ₹ 35

29. Find S.P when C.P = ₹ 80.40, loss = 15%

   (a) ₹ 63.58

   (b) ₹ 68.34

   (c) ₹ 60.53

   (d) ₹ 66.43

30. A man sold two houses for Rs. 675958 each. On one he gains 16% while on the other he loses 16% How much does he gain or loss in the whole transaction?

   (a) 3.26%

   (b) 3.28%

   (c) 2.56%

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Page 8

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(d) 2.86%

31. find the single discount equivalent to a series discount of 20%, 10% and 5%.

(a) 30.6%

(b) 31.6%

(c) 29.6%

(d) 28.6%

32. A bought a radio set and spend Rs.110 on it repairs. He then sold it to B at 20% profit, B sold it to C at a loss of 10% and C sold it for Rs.1188 at a profit of 10% what is the amount for which A bought the radio set?

(a) ₹ 850

(b) ₹ 890

(c) ₹ 930

(d) ₹ 950

33. The C.P of 12 articles is equal to S.P of 9 articles. Find the gain percent

(a) 22 ½%

(b) 33 1/3%

(c) 44 ¼%

(d) 55 1/5%

34. A man sold an article for ₹ 247.50, there by gaining 12 ½% . The cost of the article was

(a) ₹ 225

(b) ₹ 224

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Page 9
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(c) ₹ 220

(d) ₹ 210

35. A retailer buys a radio for ₹225. His overhead expenses are ₹ 15. He sells the radio for ₹ 300.The profit percent of the retailer is

   (a) 10

   (b) 25

   (c) 50

   (d) 52

36. A grain dealer cheats to the extent of 10% while buying as well as selling, by using false weights. His total gain is :

   (a) 22 2/9%

   (b) 21%

   (c) 20%

   (d) 10%

37. By selling an article, Sheetal earned a profit equal to ¼ th of the price he bought it. If he sold it for ₹ 375, what was the cost price?

   (a) ₹ 350

   (b) ₹ 312.50

   (c) ₹ 300

   (d) ₹ 281.75

38. A horse and a cow were sold for ₹ 12000 each. The horse was sold at a loss of 20% and the cow at a gain of 20%. The entire transaction resulted in :

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Page 10

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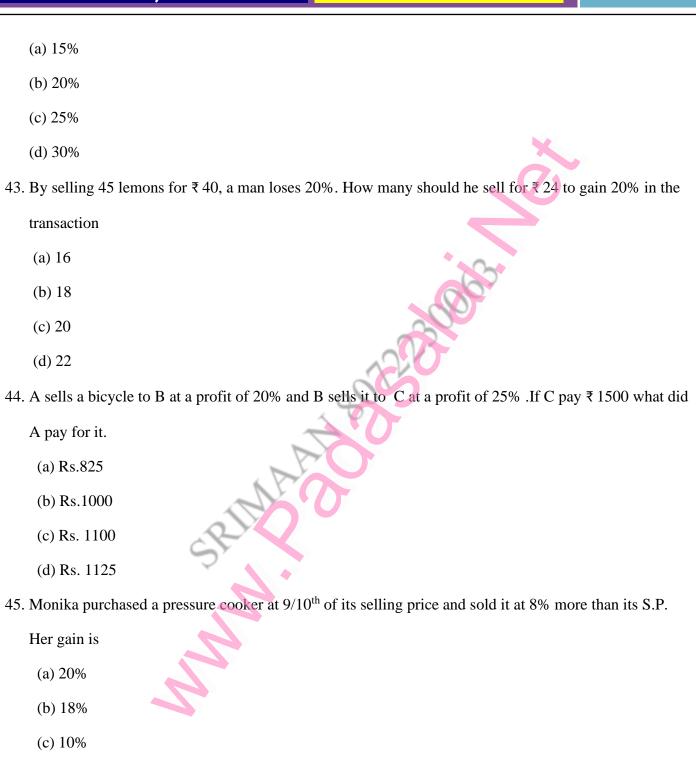**2023-24 SRIMAAN**

(a) no loss or gain

(b) loss of ₹1000

(c) gain of ₹ 1000

(d) gain of ₹ 2000

39. The original price of a T.V set is ₹ 9000. The price is discounted by 20% and then raised by 10% what is its new price.

   (a) 6420

   (b)7520

   (c)7900

   (d) 7920

40. If, by selling an article for ₹ 100 . A man gain ₹ 15 then his gain percent is

   (a) 15%

   (b) 12 2/3%

   (c) 17.11/17 %

   (d) 17 ¼%

41. There would be 10% loss if a toy is sold at ₹ 10.80 per piece at what price should it be sold

   to earn a profit of 20%

   (a) Rs.12

   (b) Rs.12.96

   (c) Rs.14.40

   (d) none

42. If the cost price of 12 tables is equal to the selling price of 16 tables, the loss percent is

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Page 11

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(a) 15%

(b) 20%

(c) 25%

(d) 30%

43. By selling 45 lemons for ₹ 40, a man loses 20%. How many should he sell for ₹ 24 to gain 20% in the transaction

(a) 16

(b) 18

(c) 20

(d) 22

44. A sells a bicycle to B at a profit of 20% and B sells it to C at a profit of 25% .If C pay ₹ 1500 what did A pay for it.

(a) Rs.825

(b) Rs.1000

(c) Rs. 1100

(d) Rs. 1125

45. Monika purchased a pressure cooker at $9/10^{th}$ of its selling price and sold it at 8% more than its S.P.

Her gain is

(a) 20%

(b) 18%

(c) 10%

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Page 12

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(d) 8%

46. The C.P of an article is 40% of the S.P. The percent that the S.P is of C.P is

    (a) 250

    (b) 240

    (c) 60

    (d) 40

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Page 13

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47. Rajesh buys an article with 25% discount on its marked price. He makes a profit of 10% by selling it at

₹ 600. The marked price is

(a) Rs. 600

(b) Rs. 685

(c) Rs.700

(d) Rs. 800

48. A dealer marks his goods 20% above C.P. He then allows some discount on it and makes a

profit of 8%. The rate of discount is

(a) 4%

(b) 6%

(c) 10%

(d) 12%

49. Anil bought a T.V with 20% discount on the labelled price. Had he bought it with 25% discount, he

would have saved ₹ 500. At what Price did he buy the T.V?

(a) ₹ 16000

(b) ₹ 12000

(c) ₹ 10000

(d) ₹ 5000

50. A Shopkeeper Professes to sell all things at a discount of 10% but increases the S.P of each article by 20%. His gain on each article is

(a) 6%   (b) 8%   (c) 10%   (d)12%

■■

ANSWERS WILL BE SHORTLY

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Page 14
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