Daily Dose of Aptitude-5-07-2019

1.The average of 7 consecutive numbers is 20. The largest of these numbers is :

a. 22
b. 21
c. 23
d. 24

2. The greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively, is:

a. 123
b. 127
c. 235
d. 305

3. A mixture contains alcohol and water in the ratio 4 : 3. If 5 liters of water is added to the mixture, the ratio becomes 4: 5. Find the quantity of alcohol in the given mixture.

a. 15
b. 18
c. 10
d. 12

4. A, B, C started a business with their investments in the ratio 1:3 :5. After 4 months, A invested the same amount as before and B as well as C withdrew half of their investments. The ratio of their profits at the end of the year is :

a. 1 : 2 : 3
b. 3 : 5 : 10
c. 3 : 4 : 15
d. 5 : 6 : 10

5. Gaurav spends 30% of his monthly income on food articles, 40% of the remaining on conveyance and clothes and saves 50% of the remaining. If his monthly salary is Rs. 18,400, how much money does he save every month ?

a. 3864
b. 4903
c. 5849
d. 6789

6. What was the day of the week on 28th May, 2006?

a. Sunday
b. Friday
c. Wednesday
d. Tuesday

7. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the probability of getting a prize?

a. 2/7
b. 5/7
c. 1/5
d.1/2

8. Find compound interest on Rs. 8000 at 15% per annum for 2 years 4 months, compounded annually.

a. 2109
b. 6109
c. 3109
d. 4109

9. In a 100 m race, A beats B by 10 m and C by 13 m. In a race of 180 m, B will beat C by:

a. 5.4m
b. 4.5m
c. 5m
d. 6m

10. Salaries of Ravi and Sumit are in the ratio 2:3. If the salary of each is increased by Rs. 4000, the new ratio becomes 40:57. What is Sumit's salary?

a. 38000
b. 46800
c. 36700
d. 50000

Answers and Solutions

Ans 1: c

Sol: Let the numbers be x, x + 1, x + 2, x + 3, x + 4, x + 5 and x + 6,
Then (x + (x + 1) + (x + 2) + (x + 3) + (x + 4) + (x + 5) + (x + 6)) / 7 = 20.
or 7x + 21 = 140 or 7x = 119 or x =17.
Latest number = x + 6 = 23.

Ans 2: b

Sol: Required number = H.C.F. of (1657 - 6) and (2037 - 5)
= H.C.F. of 1651 and 2032 = 127.

Ans 3: c
Sol: Let the quantity of alcohol and water be 4x litres and 3x litres respectively
4x/(3x+5) = 4/5
20x = 4(3x+5)
8x = 20
x = 2.5
Quantity of alcohol = (4 x 2.5) litres = 10 litres.

Ans 4: d
Sol: Let their initial investments be x, 3x and 5x respectively. Then,
A:B:C = (x*4+2x*8) : (3x*4+(3x/2)*8) : (5x*4+(5x/2)*8)
20x : 24x : 40x = 5 : 6 : 10

Ans 5: a
Sol: Saving = 50% of (100 - 40)% of (100 - 30)% of Rs. 18,400 = Rs. (50/100 * 60/100 * 70/100 * 18400) = Rs. 3864.

Ans 6: a
Sol: 28 May, 2006 = (2005 years + Period from 1.1.2006 to 28.5.2006)
Odd days in 1600 years = 0
Odd days in 400 years = 0
5 years = (4 ordinary years + 1 leap year) = (4 x 1 + 1 x 2) = 6 odd days
(31[jan] + 28 [Feb]+ 31[Mar] + 30[April] + 28[May]) = 148 days = (21 weeks + 1 day) = 1 odd day.
Total number of odd days = (0 + 0 + 6 + 1) = 7 = 0 odd days.
Given day is Sunday.

Ans 7: a
Sol: Total number of outcomes possible, n(S) = 10 + 25 = 35
Total number of prizes, n(E) = 10
P(E)=n(E)/n(S)=10/35=2/7

Ans 8: c
Sol: Time = 2 years 4 months = 2(4/12) years = 2(1/3) years.
Amount = Rs'. [8000 X (1+(15/100))^2 X (1+((1/3)*15)/100)]
=Rs. [8000 * (23/20) * (23/20) * (21/20)]
= Rs. 11109. .
:. C.I. = Rs. (11109 - 8000) = Rs. 3109.

Ans 9: d
Sol: A : B = 100 : 90.
A : C = 100 : 87.
B/C = (B/A*A/C) = (90/100*100/87) = 30/29
When B runs 30 m, C runs 29 m.
When B runs 180 m, C runs (29/30*180)m =174m
B beats C by (180 - 174) m = 6 m.

Ans 10: a

Sol: Let the original salaries of Ravi and Sumit be Rs. 2x and Rs. 3x respectively.

Then,

(2x+4000) / (3x+4000) = 40 / 57

⇒ 57 × (2x + 4000) = 40 × (3x+4000)

⇒ 6x = 68,000

⇒ 3x = 34,000

Sumit's present salary = (3x + 4000) = Rs.(34000 + 4000) = Rs. 38,000