Quantitative Aptitude

1) A and B started the business with the investment of Rs.2000 and Rs.4000 respectively and after 6 months, C joined with 25% more than the initial investment of B. After 2 more months, A added Rs.------ to its initial investment. At the end of one year, the total profit is Rs.11000 and the profit share of C is Rs.------.

i) Rs.2000, Rs.3000

ii) Rs.2500, Rs.4200

iii) Rs.1000, Rs.2800

A. Only (i)

B. Only (i) and (iii)

C. Only (ii)

D. Only (i) and (ii)

E. None of these

2) The selling price of two articles A and B is Rs.------ and Rs.3600 respectively and the Selling price of article A is 15% above its cost price and marked price of article B is 10% above its cost price. If the cost price of article B is 50% of the cost price of article A and the discount amount of article B is Rs.------.

a) Rs.8970, Rs.680

b) Rs.9200, Rs.800

c) Rs.9430, Rs.1000

d) Rs.9545, Rs.960

A. Only B

B. Only A, B

C. Only C

D. Only B, D

E. Only A

3) The ratio of the present ages Ram to Sunil is 3:4 and the product of the ages of Sunil and Rahul is 864 years. If the ratio of the ages of Ram to Shon is 3:2 and the product of the ages of Shon and Sunil is 648 years.

From the given statement in the above question which of the following can be determined.

a) Age of Ram

b) Age of Rahul

c) If the ratio of the ages of Rahul to Surya is 4:3, then the age of Surya.

d) If the sum of the ages of Shon and Nitish is 30 years, then the age of Nitish.

A. All A, B, C and D

B. Only B and C

C. Only D and B

D. Only A

E. Cannot be determined

4) Area of the circle is 154 cm^2 and the radius of the cone is equal to the radius of the circle. Height of the cone is double of the height of the cylinder whose volume is 7392 cm^3 and the curved surface area of the cone is 550 cm^2.

From the statement given in the above question which of the following can be determined.

a) Slanting height of the cone

b) Radius of the cylinder

c) Total surface area of the cylinder

d) If the radius of the cylinder is equal to the breadth of the rectangle whose perimeter is 68 cm, then find the area of the rectangle?

A. Only A
B. Only A and B
C. Only A, B and C
D. All A, B, C and D
E. None of these

5) A boat, whose speed in still water is 25% more than the speed of the current, covers 720 km downstream in _ hours. The speed of the boat in still water is __ km/h
The value given in which of the following options will fill the blank in the same order in which it is given to make the statement true.
I. 20, 20
II. 10, 15
III. 10, 40
A. Only I
B. Only II
C. Only I and II
D. Only I and III
E. All of these

6) A milkman has ------ liters of the mixture of milk and water in the ratio of 4:3. ---- liters of mixture sold and it is replaced with 18 liters of milk and 27 liters of water. Now the ratio of the milk to water in the final mixture is 3:2.
a) 120 liters, 15 liters
b) 100 liters, 10 liters
c) 90 liters, 20 liters
d) 130 liters, 25 liters
A. Only B
B. Only A, B
C. Only C
D. Only A, D
E. Only A

7) The train A is running at the speed of 36 kmph crosses another train B running in opposite direction at 27 kmph in 24 seconds. If the length of train A is three times that of train B and train A also crosses the tunnel in 40 seconds.
From the given statement in the above question which of the following can be determined.
a) Length of Tunnel
b) Length of train A
c) Time taken by train B crosses the pole
d) Time taken by train B crosses the bridge
A. All A, B, C and D
B. Only B and C
C. Only D and B
D. Only A, B and C
E. Only A, B and D

8) Ramu invested Rs.1000 and Rs.1300 in two different schemes which offers 15% and 10% rate of interest per annum respectively for 5 years. After 2 years, he received the simple interest from both schemes. Then he added 25% of the total interest received into the first scheme and 50% of the total interest received in the second scheme.
From the given statement in the above question which of the following can be determined.
a) Interest received from first scheme in last three years

b) Interest received from second scheme in last three years

c) Ratio of the interest received by after 2 years in first scheme to second scheme.

d) Total amount received by Ram after 5 years in first scheme.

A. All A, B, C and D

B. Only B and C

C. Only D and B

D. Only A, B and C

E. Only A, B and D

9) Ram spends 30% of his salary to education fees. He spends 20% of the remaining in Transport and the 25% of the remaining spends on house rent. Then the remaining amount invests in insurance and mutual funds in the ratio of 1:2. Find Ram's salary?

Which of the following option is sufficient to find the answer?

A. He spends on Mutual fund is twice of the amount spends on transport.

B. Ram invests his mutual amount on the scheme S which is offer simple interest at the rate of 18% and at the end of scheme he received Rs.2000.

C. The education fee is increased by 20% compared to that of previous amount and then he spends Rs.1200 more than compared with previous amount.

D. He spends Rs.4000 for shopping which is 20% more than that of the amount spends on other expenses.

E. none of these

10) The income of A and B are in the ratio__ respectively. The income of C is 20% more than that of A. A, B and C save 25% of their respective incomes. The difference between the savings of B and C is Rs.2000. Then, the income of A will be Rs. __ (approximately)

I. 5:8, Rs.20000

II. 2:5, Rs.6150

III. 6:3, Rs.9000

A. only I

B. only II

C. only I and II

D. only I and III

E. all of these

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Answer Key with Explanation

1) Answer: A

Profit share of A, B and C =(2000 * 8 + (x + 2000) * 4):4000 * 12: (4000 * 125/100 * 6)

= (24000 + 4x):48000:30000

From (i),

Profit ratio of A, B and C = (24000 + 4 * 2000):48000:30000

= 32:48:30

= 16:24:15

Profit share of C = 15/55 * 11000 = Rs.3000

This is satisfied.

From (ii),

Profit share of A, B and C = (24000 + 4 * 2500):48000:30000

= 34:48:30

= 17:24:15

Profit share of C = 15/56 * 11000 = Rs.2946.42

This is not satisfied.

From (iii),

Profit share of A, B and C = (24000 + 4 * 1000):48000:30000

= 28:48:30

= 14:24:15

Profit share of C = 15/53 * 11000 = Rs.3113.20

This is not satisfied.

2) Answer: A

From option (A)

CP of article A = x

CP of article B = x/2

SP of article A = 115/100 * x = 8970

x = 7800

CP of article B =7800/2 = Rs.3900

MP of article B = 3900 * 110/100 = Rs.4290

Discount amount = 4290 – 3600 = Rs.690

This is not satisfied the given condition.

From Option (B)

CP of article A = x

CP of article B = x/2

SP of article A = 115/100 * x = 9200

x = 8000

CP of article B = Rs.4000

MP of article B = 4000 * 110/100 = Rs.4400

Discount amount = 4400 – 3600 = Rs.800

This satisfies the given condition.

From Option (C)

CP of article A = x

CP of article B = x/2

SP of article A = 115/100 * x = 9430

x = 8200

CP of article B = Rs.4100

MP of article B = 4100 * 110/100 = Rs.4510

Discount amount = 4510 – 3600 = Rs.910

This is not satisfied the given condition.

From Option (D)

CP of article A = x

CP of article B = x/2

SP of article A = 115/100 * x = 9545

x = 8300

CP of article B = Rs.4150

MP of article B = 4150*110/100 = Rs.4565

Discount amount = 4565 – 3600 = Rs.965

This is not satisfied the given condition.

3) Answer: A

Ram: Sunil: Shon = 3:4:2

4x * 2x = 648

x = 9 years

Shon's age = 2 * 9 = 18 years

Sunil's age = 4 * 9 = 36 years

Ram's age = 3 * 9 = 27 years

Rahul age = 864/36 = 24 years

Surya's age = 3/4 * 24= 18 years

Nitish age = 30 – 18 = 12 years

We can find all the given questions.

4) Answer: D

Area of the circle = 154 cm

22/7 * r * r = 154

Radius of the circle = 7 cm

550 = 22/7 * l * 7

Slanting height of the cone = 25 cm

Height of the cone = $\sqrt{25^2 - 7^2}$ = 24 cm

Height of the cylinder = 24/2 = 12 cm

7392 = 22/7 * R * R * 12

Radius of the cylinder = 14 cm

Total surface area of the cylinder = 2 * 22/7 * 14 * (12 + 14)

= 2288 cm^2

2 * (14 + l) = 68

l = 20

Area of the rectangle = 20 * 14 = 280 cm^2

5) Answer: D

Let the speed of the boat in still water= 5x

Speed of current= 4x

9x = 720/T

For I

9x= 720/20=36

9x=36

x=4

speed of the boat in still water=5x=20km/hr

Therefore I is true

For II

9x = 720/T

9x = 720/10

X = 8

speed of the boat in still water=5x=5*8=40km/hr

Therefore II is false

For III,

9x= 720/T

9x= 720/10

x= 8

speed of the boat in still water=5x=5*8=40km/hr

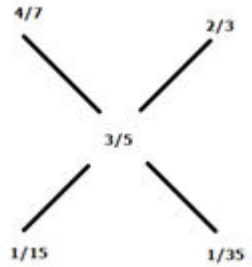
Therefore III is true

6) Answer: D

1st mixture ratio = 4:3

2nd mixture ratio = 18:27 = 2:3

Final mixture ratio = 3:2



=7:3

After sold the mixture and then the quantity of the mixture = 7/3 * (18 + 27)

= 105 liters

From option (A)

Sold mixture = 15 liters.

Volume of the initial mixture = 105 + 15

= 120 liters

This satisfied the given condition.

From option (B)

Sold mixture = 10 liters

Initial volume of the mixture = 10 + 105 = 115 liters

This is not satisfied the given condition.

From option (C)

Sold mixture = 20 liters.

Volume of the initial mixture = 105 + 20
= 125 liters
This is not satisfied the given condition.
From option (D)
Sold mixture = 25 liters.
Volume of the initial mixture = 105 + 25 = 130 liters
This satisfied the given condition.

7) Answer: D
Length of train B = x
Length of train A = 3x
4x = (36+27) * 5/18 * 24
x = 105m
Length of train A = 105 * 3 = 315 m
Length of tunnel = y
315 + y = 36 * 5/18 * 40
y = 85 m
Time taken by train B crosses the pole=z
105 = 27 * 5/18 * z
z = 14 seconds
Length of bridge does not given.

8) Answer: A
Interest for first 2 years in first scheme = 1000 * 2 * 15/100 = Rs.300
Interest of first 2 years in second scheme = 1300 * 2* 10/100 = Rs.260
Amount added after 2 years in first scheme = 25/100 * (300 + 260) = Rs.140
Amount added after 2 years in second scheme = 50/100 * (300 + 260) = Rs.280
Last three years the interest received by first scheme = (1000 + 140) * 15 * 3/100
= Rs.513
Last three years the interest received by second scheme = (1300 + 280)* 10*3/100 = Rs.474
Ratio of interest received by after 2 years = 300:260 = 15:13

9) Answer: C
From option (A)
Amount is not given.
This not satisfied the given condition.
From option (B)
Period of the investment is not given.
This not satisfied the given condition.
From option (C)
x * 120/100 – x = 1200
x = 1200*5
x = 6000
Education fee = Rs.6000
Salary = 100/30 * 6000 = Rs.20000
From option (D)
He spends Rs.4000 for shopping which is 20% more than that of the amount spends on other expenses.
This is not satisfied the given condition.

10) Answer: A
For I,
Let the income of A and B be Rs.5x and Rs.8x respectively
Income of C = 1.2×5x = 6x
ATQ,

0.25×(8x - 6x) = 2000

X = 4000

Income of A = 4000×5 = Rs.20000

Therefore I is true

For II,

Let the income of A and B be Rs.2y and Rs.5y respectively

Income of C = 1.2×2y= 2.4 y

ATQ,

0.25×(5Y -2.4Y) = 2000

Y= 3076.92

Income of A= 2×3076.92= Rs.6153.84

Therefore, II is false

For III,

Let the income of A and B be Rs. 6z and Rs. 3z respectively

Income of C = 1.2×6z = 7.2z

ATQ,

0.25×(7.2z - 3z) = 2000

Z= 1904.76

Income of A = 6 × 1904.76= Rs.11428 (approx.)