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NABARD Grade A Previous Year Paper 2020

NABARD Grade A Phase 1 Previous Year Questions

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Quantitative Aptitude

2020 (Q. 81 to Q.100)

Q.81) The ratio of the volume of two cylinders C1 & C2 is 4:1. Their height is same and radius of C1 is 7cm more than that of C2. What will be the radius of C2?

(a) 4cm
(b) 7cm
(c) 14cm
(d) 18cm
(e) 21cm

Answer – (b)

Explanation -

Let radius of C2 = R, so radius of C1 = (R + 7)cm & let height of both cylinders = H

So V1/V2 = 4/1

$\pi (R+7)^2H / \pi R^2H = 4/1$

$R^2 + 14R + 49 = 4R^2$

$3R^2 – 14R – 49 = 0$

$3R^2 – 21R + 7R – 49 = 0$

$3R(R – 7) + 7(R – 7) = 0$

$(R – 7)(3R + 7) = 0$

R = 7cm

Q.82)Two pipes A & B can fill a tank in 16 hours and 20 hours respectively. The tank is already 1/4th full. A is opened for first 6 hours and then it is closed. How much time will B take to fill the remaining tank?

(a) 5 hours
(b) 6 hours
(c) 7.5 hours
(d) 10 hours
(e) 9 hours

Answer – (c)

Explanation -

Tank filled by A in 6 hours = 6/16 = 3/8

Remaining tank to be filled = 1 – 1/4 – 3/8 = 3/8

Time taken by B = (3/8)/(1/20) = 3 x 20/8 = 7.5 hours

Q.83)A started a business. B replaced A after 4 months and A & B invested in the ratio 7:3. If the total annual profit earned by them was Rs. 1,43,000, then find the difference of profit earned by them.

(a) Rs. 11000
(b) Rs. 22000
(c) Rs. 25000
(d) Rs. 10000
(e) Rs. 16500

Answer – (a)

Explanation -

Let investment of A be 7P and investment of B be 3P
Total investment of A = 7P x 4 = 28P
Total investment of B = 3P x 8 = 24P
Total profit = 28P + 24P = 143000
52P = 143000
P = 2750
Difference between profits of A and B = 28P – 24P = 4P = 4 x 2750 = 11000

Q.84)If an article is sold at 13% discount still a person gets a gain of 30.5%. If it is sold at 30% discount then find gain/loss%.

(a) loss 5%
(b) gain 5%
(c) gain 15%
(d) loss 10%
(e) gain 10%

Answer – (b)
Explanation -
Let MP = Rs 100
After 13% discount, SP = Rs 87
CP = 87 x (100/130.5) = Rs 200/3
Now, if discount is 30%, then SP = Rs 70
Now profit % = {[70 – (200/3)]/(200/3)} x 100 = 5%

Q.85)In a 240 L Mixture of Milk & water, Milk is 200L. Now 40L of water is added in to it and then 35L of mixture is drawn out of it then the resultant quantity of milk is approximately how much % of new mixture?

(a) 68%
(b) 65%
(c) 55%
(d) 76%
(e) 71%

Answer – (e)
Explanation -
Original Mixture = 240 L, Milk = 200 L & water = 40 L
Now, 40 L water is added, so water = 40 + 40 = 80 L
Total mixture = 280 L
Ratio of milk and water = 200 : 80 = 5 : 2
35 L mixture is taken out, so milk taken out = 5/7 x 35 = 25 L & water taken out = 2/7 x 35 = 10 L
Now, milk left in the mixture = 200 – 25 = 175 L & water left in the mixture = 80 – 10 = 70 L
Total mixture = 175 + 70 = 245 L
Required percentage = 175/245 x 100 = 71% approx.

Q.86)The income of Sargun is 30% more than that of Wasim. They save an equal amount of money. The savings of Wasim is Rs. 12000. If income of Wasim is Rs. 60,000 then what is the amount spent by Sargun in Rs.?

(a) 40000
(b) 48000
(c) 66000
(d) 10000
(e) 55000

Answer – (c)
Explanation -
Income of Wasim = Rs 60,000
Income of Sargun = 130% of 60000 = 78,000
Savings of Wasim = 12,000 = Savings of Sargun
Amount spent by Sargun = 78000 – 12000 = 66000

Q.87)If Simple interest earned on a sum of money is 37.5% of Amount earned on same money for 4 years at R% per annum Simple Interest, what is the value of R?

(a) 10%
(b) 12%
(c) 15%
(d) 20%
(e) 18%

Answer – (c)
Explanation -
We know SI = PRT/100 and A = SI + P
So, 4PR/100 = 37.5% of [P + (4PR/100)]
400PR = 3750P + 150PR
250PR = 3750P
250R = 3750
R = 15%

Q.88)The present ages of A & B are in the ratio of 4:5. 8 years hence A's age is equal to sum of age of B, 8 years ago and age of C, 8 years ago. If the average of present age of B and C is 30 then what is the present age of C in years?

(a) 10 years
(b) 12 years
(c) 15 years
(d) 18 years
(e) 20 years

Answer – (c)
Explanation -
Let present age of A be 4Y and present age of B be 5Y
Also, (B + C) /2 = 30
Or, B + C = 60
C = 60 – B
C = 60 – 5Y
4Y + 8 = 5Y – 8 + 60 – 5Y – 8

4Y = 36
Y = 9
Present age of C = 60 – 5Y = 60 – 45 = 15 years

Instructions for Q.89 to Q.94
Study the following information given below in the table and answer the given questions:

Day	Total people (male + female) who registered for a seminar	Ratio of male & female out of total people who registered for a seminar	% of people (out of total male + female registered) who attended seminar
Monday	875	4 : 3	80%
Tuesday	1250	12 : 13	70%
Wednesday	1100	3 : 8	50%
Thursday	1500	3 : 2	60%

Q.89)If number of people (male + female) registered on Friday is 20% more than the total number of people (male + female) registered on Monday. If there were 40% females among those who registered on Friday, then find the number of male who registered on Friday.

(a) 700
(b) 420
(c) 840
(d) 1000
(e) 630

Answer – (e)
Explanation -
Number of people who registered on Friday = 875 x 1.2 = 1050
Males who registered on Friday = 60% x 1050 = 630

Q.90)Find difference between the total number of people registered on Tuesday & Wednesday and total number of people attended on Monday & Thursday.

(a) 550
(b) 750
(c) 600
(d) 850
(e) 650

Answer – (b)
Explanation -
Total people registered on Tuesday and Wednesday = 1250 + 1100 = 2350
Total people attended on Monday & Thursday = (875 x 80%) + (1500 x 60%) = 700 + 900 = 1600
Required difference = 2350 – 1600 = 750

Q.91)If on Wednesday, the ratio of number of male and female who attended seminar is 4:1 then find the number of female who registered for seminar but not attended the seminar.

(a) 710
(b) 650
(c) 670
(d) 690
(e) 110

Answer – (d)

Explanation -

Total people registered on Wednesday = 1100
Males registered = 3/11 x 1100 = 300
Females registered = 8/11 x 1100 = 800
People who attended on Wednesday = 1100 x 50% = 550
Female who attended seminar = 1/5 x 550 = 110
Female registered but did not attend = 800 – 110 = 690

Q.92)The number of female registered for seminar on Thursday is what percentage more than the number of male registered for seminar on Monday.

(a) 10%
(b) 20%
(c) 30%
(d) 15%
(e) 25%

Answer – (b)

Explanation -

Number of female registered on Thursday = 1500 x 2/5 = 600
Number of male registered on Monday = 875 x 4/7 = 500
Required percentage = ((600 – 500) / 500) x 100 = 20%

Q.93)The ratio of number of people who attended the seminar on Tuesday and number of people who attended the seminar on Wednesday is

(a) 11:34
(b) 25:16
(c) 13:11
(d) 40:37
(e) 35:22

Answer – (e)

Explanation -

Number of people who attended on Tuesday = 1250 x 70% = 875
Number of people who attended on Wednesday = 1100 x 50% = 550
Ratio = 875 : 550 = 35:22

Q.94)If on Thursday, 40% of females who registered for the seminar attended it, then find out the number of males who attended the seminar.

(a) 720
(b) 640
(c) 540
(d) 660
(e) 690

Answer – (d)
Explanation -
Females registered on Thursday = 1500 x 2/5 = 600
Females attended on Thursday = 40% x 600 = 240
Total people attended on Thursday = 1500 x 60% = 900
Males attended on Thursday = 900 – 240 = 660

Instructions for 95 to Q.97
Find the missing number in the following series of numbers:
Q.95)8, ? , 45, 110, 236, 453
(a) 15
(b) 18
(c) 19
(d) 25
(e) 17
Answer – (e)
Explanation -
$8 + 2^3 + 1 = 17$
$17 + 3^3 + 1 = 45$
$45 + 4^3 + 1 = 110$
$110 + 5^3 + 1 = 236$
$236 + 6^3 + 1 = 453$

Q.96)1, 3, 9, 31, ? , 651
(a) 125
(b) 129
(c) 126
(d) 130
(e) 128
Answer – (b)
Explanation -
1 x 1 + 2 = 3
3 x 2 + 3 = 9
9 x 3 + 4 = 31
31 x 4 + 5 = 129
129 x 5 + 6 = 651

Q.97)28, 29, 27, 33, 9, ?
(a) 129
(b) 127
(c) 130
(d) 150
(e) 135
Answer – (a)
Explanation -
29 – 28 = 1 = 1!
27 – 29 = -2 = -(2!)

33 – 27 = 6 = 3!
9 – 33 = -24 = -(4!)
Missing term = 9 + 5! = 9 + 120 = 129

Instruction for Q.98 to Q.100

In the following questions, two equations numbered I and II are given in variables x and y. You have to solve both the equations and find out the relationship between x and y. Then give answer accordingly:

Q.98)

I. $x^2 + 7x + 12 = 0$

II. $y^2 + 5y + 6 = 0$

(a) x > y
(b) x < y
(c) x ≥ y
(d) x ≤ y
(e) x = y or no relation can be established

Answer – (d)

Explanation -

$x^2 + 7x + 12 = 0$
$x^2 + 3x + 4x + 12 = 0$
$x(x + 3) + 4(x + 3) = 0$
$(x + 3)(x + 4) = 0$
$x = -3, -4$
$y^2 + 5y + 6 = 0$
$y^2 + 2y + 3y + 6 = 0$
$y(y + 2) + 3(y + 2) = 0$
$(y + 2)(y + 3) = 0$
$y = -2, -3$
Hence, x ≤ y

Q.99)

I. $3x^2 + 8x + 4 = 0$

II. $6y^2 + 7y + 2 = 0$

(a) x > y
(b) x < y
(c) x ≥ y
(d) x ≤ y
(e) x = y or no relation can be established

Answer – (d)

Explanation -

$3x^2 + 8x + 4 = 0$
$3x^2 + 6x + 2x + 4 = 0$
$3x(x + 2) + 2(x + 2) = 0$
$(3x + 2)(x + 2) = 0$
$x = -2, -2/3$
$6y^2 + 7y + 2 = 0$

$6y^2 + 3y + 4y + 2 = 0$
$3y(2y + 1) + 2(2y + 1) = 0$
$(2y + 1)(3y + 2) = 0$
$y = -1/2, -2/3$
So, $x \leq y$

Q.100)
I. $x^2 - 5x - 84 = 0$
II. $y^2 - 9y - 52 = 0$
(a) $x > y$
(b) $x < y$
(c) $x \geq y$
(d) $x \leq y$
(e) $x = y$ or no relation can be established

Answer – (e)
Explanation -
$x^2 - 5x - 84 = 0$
$x^2 + 7x – 12x + 84 = 0$
$x(x + 7) – 12(x + 7) = 0$
$(x – 12)(x – 7) = 0$
$x = -7, 12$
$y^2 - 9y – 52 = 0$
$y^2 + 4y – 13y – 52 = 0$
$y(y + 4) – 13(y + 4) = 0$
$(y – 13)(y + 4) = 0$
$y = -4, 13$
So, no relation can be established between x and y.