***IQRA NATIONAL UNIVERSITY***

***PESHAWAR***

 ***Mid Exam for Summer Semester BBA***

***Business Mathematics Max Time: 4 Hrs. (Part –I Time: 1Hr) Marks: 20***

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***Note: Attempt all questions. Mobile phones and Programmable calculators are not allowed.***

***Question No.1 30***

 i The solutions of  are

 (a)  (b)  (c)  (d) only (e) None of them 

 ii A man is going from the point  to the point then the increments in the x- and y-coordinates are

 (a) ( b )  (c)  (d)  (e) None of them

iii A stair make an angle of inclination  with the horizontal then its slope is

 (a) ( b )  (c)  (d) None of them

iv A painter can paint 100 wall in 10 hours. Then the time required to paint 4000  wall will be .

is (a) 60 hours(b) 90 hours (c) 30 hours (d) 50 hours (e) None of them

v If  of sale price  is equal to 50% of cost price then the cost price will be

 (a)  (b)  (c)  (d) None of Them

vi If  and then  is

(a)  ( b )  (c)  (d)  (e) None of them

vii The domain of a curve 

is (a)  ( b )  (c)  (d)  (e) None of them

viii The net cost equivalent for  (a) .72 (b) .56 (c) .44 (d) .11 (e) None of them

ix The equation shows (a)Linear cost function (b) Linear profit function (c) Linear revenue function (d) None of them

x The sum of two numbers is 30 and difference is 10 then the numbers are = (a) (33,10) (b) (30,10) (c) (60,30) (d) 53 (e)None of them

***IQRA NATIONAL UNIVERSITY***

 ***PESHAWAR***

 ***Mid paper for Summer Semester BBA***

***Business Mathematics Max Time: 4 Hrs (Part –II Time: 3 Hr) Marks: 40***

***Note: Attempt all questions. Mobile phones and Programmable calculators are not allowed.***

***Question No.2 (5+5)=10***

1. Bismark Tractor put a markup of 26% on cost on some parts for which they paid $4.50. Find (a) selling price as % of cost (b) the selling price (c) the markup..

**Part A**

Markup

 Cost

 **b) Selling price**

 Solution

As we have formula

By cross multiplications

 **Selling Price**

**a) Selling Price as Percentage of cost?**

Selling Price

Percentage of cost

 So,

 Selling price as % of cost or 5.67%

c) Markup

1. Solve for x in the following equation

 

**SOLUTION:**

* 2(x-3) = (4x-3)x
* 2x – 6 =
* -8x+3x+6=0
* 4x(x-2)-3(x-2)=0
* (4x-3)(x-2)=0
* 4x=3 , x = 2

x=4/3 ANSWER x=2 ANSWER

***Question No.3 (5+5=10)***

1. The sum of the ages of a girl and her brother is 60 years. Two years ago her age was three times the age of her brother. Find the present age of girl and her brother.

**ANSWER :**

Let Age of girl = x

Age of boy = y

**According to 1st condition:**

 x + y = 60 ……..(1)

**Two years ago:**

Age of girl = x – 2

Age of boy = y – 2

**According to 2nd condition:**

* (x – 2 ) = 3 ( y – 2 )
* x – 2 = 3y – 6
* x – 3y = - 6 + 2
* x – 3y = - 4 ……(2)

**Solving eq(1) and eq(2) :**

* **x + y = 60**

**x – y = 4**

 4y= 64

 **Dividing 4 on both sides to get the value of y:**

* y = 64÷4 = 16
* x = 60 – 16 = 44
* Age of girl = 44 years
* Age of brother = 16 years Answer

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1. Selling price = $18.75

Cost = $15

Markup based on cost = ?

Percent markup based on cost = ?

**ANSWER:**

 Cost = $15

 Sale Price = $18.75

 Profit = $3.75

* Percentage of Markup =
* Percentage Markup =

* Percentage Markup =

* Percentage Markup =  **25% Answer**

***Question No.4 (5+5)=10***

1. List price = $150

Trade discount = 20%

Find the net cost =?

**Solution**

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1. Heat and electricity together cost a company Rs: 1080 for the month of January. If the consumption for heating purposes is three times as much as light, how much each expense cost to the company?

**Solution:**

So, the expenses of light =

 **Expenses of light = 270**

 **Now the expenses of heat?**

Expenses of Heat =

 For simplification first we will multiply 1080 by 3 and then the total of them will be divided by 4

* 3240
* = 810

  **Expenses of heat = 810**

 **For Verification: 810+270 = 1080**

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***Question No.5 (5+5)=10***

1. 4 men and 6 boys can finish a piece of work in 5 days while 3 men and 4 boys can finish it in 7 days. Find the time taken by 1 man alone or than by 1 boy alone.

    LET 1 man alone can finish work in x days

* 1 boy Can finish it y day let say

**Then according to the situation the following is the equation**

* 1 MAN 1 DAYS WORK=
* 1 BOY 1 DAYS WORK =

**According to this situation:**

Let say

**According to this 1st condition**

2nd condition

**On multiplying equation 1 and 2 we get the following solution**

* 12u + 18v=
* 12u+ 16v=

**By subtracting the above equation we get**

* 12u+18v=
* 12u+16v= -
* 2v=
* 2v =
* 2v =

As v= so 1/y = 1/70

 **So putting v=1/70 in equation 1 we get**

* 4u+
* 4u=1/5-1/60

=14-6

 70

=

**As u=1/x so 1/x=1/35**

X= 35 days

Therefore man alone can finish the work in 70 days and boys can finish the work alone in just 35 days

1. List price = $150 Trade discount = 20%

Find the net cost.

**Solution**