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 **Phase-II, Hayatabad, Peshawar**

 **Khyber Pukhtunkhwa**

**Paper : Computer Application to Business**

**Submitted By : Zaryab Amjad**

**ID : 14911**

**Submitted To : Ma’am Maryam Saleem**

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 **Business Administration**

**Question no 1(**part A)**:**

**Solution**

 **Given Data**

 PV=2000

FV=4765

K=8%

N=?

PV=FV × PVif(k,n)

Putting values in above formula

2000=4765×pvif(4%,n)

$\frac{2000}{4765}$ = Pvif (4%,n)

0.1497271773= Pvif (4%,n)

Checking 0.41372 in present values table under 4%

0.419 = 0.42

N = 22 years

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**Question No 1** (part b)

**Solution**

 PMT = 100

 i = 0.1

 PVP = ?

 PVP = PMT x $\frac{1}{i}$

 = 100 x $\frac{1}{0.1}$

 = 100 x 10

 PVP = 1000 answer

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**Question no 2** (part a)

**Answer**

**Nominal Interest Rate**

 The nominal interest rate is the percentage yield of a security or a loan without considering the effect of inflation.

• Nominal Rate does not have any effect of inflation.

• Nominal interest rate = interest + inflation

**For Example**

 If you have deposited $500 in your bank account and your bank is offering a 5% per annum interest rate then you will have $525 i.e. (500+25), in your account by the end of the year.

**Real Interest Rate**

Real interest rate represents the actual return of security or a loan calculated by subtracting the inflation rate from the nominal Rate.

• When inflation is greater than the nominal rate the rate will be negative and when the inflation is less than the nominal rate the rate will be positive.

• Real interest rate = nominal interest rate - inflation

**For Example**

 If you deposit $100 in your bank account and bank offers 5% per annum interest on our investment but after a year inflation rate is increased by 3% so we will subtract 3% from interest offered by the bank i.e. (5¬3) %. so, our real interest after a year will be 2%.

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**Question no 2** (part 2)

**Answer**

**Security Exchange Market:**

Every security market has its own advantages and disadvantages due to which people prefer any of them according to their accessibility. I as an investor choose Security Exchange due to following reasons:-

• Security exchange organizations facilitate trading of stocks and bonds among investors such markets help the investors in making their deals in an organized manner.

• Corporations arrange the stocks and bonds to be listed on an exchange so that investors may trade the company’s bonds and stocks at an organized trading location (such locations are known as posts) so that the investor feels ease in dealing.

• Corporations list their securities on exchanges because the believe that having their securities traded at such a location will make them easier to trade and as well boost the price due to which investors are more interested in such security shopping.

• Exchanges accept listings because they earn a fee for their services due to which they work more efficiently and effectively in making deals for the investor.

• Trading is supervised by specialized brokers (bringing together buyers and sellers) or dealer (buying and selling stocks themselves) to facilitate investors.

• Some security markets are New York Stock Exchange (NYSE), American Stock Exchange (AMEX), and major exchanges in Tokyo, London, Amsterdam, and Mexico.

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**Question 3**(part a)

**Solution**

 **Given**

 FV = 40,000

 n = 15

 K = 0.1

 PV = $\frac{FV}{(1+K)^{n}}$

 = $\frac{40,000}{(1+0.1)^{15}}$

 = $\frac{40000}{(1.1)^{15}}$

 = $\frac{40000}{4.177248169}$

 = 9575.681975 Answer

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**Question no 3** (part b)

**Answer**

 **Annuity Due**

 Annuity due deals with the annuities in which the payments occurs at the beginning of each period.

 **Examples**

1. A company enters into an office lease, under which the lessor requires the company to make monthly payments of 12000 for the next 24 months no later than the beginning of the month to which each payment applies.

2. Rent which landlords typically require at the beginning of each month is a common example of annuity due.

**Reason**

 In the above examples the payments are in the same amount, they are made at a regular intervals ( monthly) and the payments are made at the beginning of each period thus the above payments in the examples are of Annuity due.

**Ordinary Annuity**

 Ordinary Annuity deals with the annuities in which the payments occurred at the end of each period.

**Examples**

1. Home Mortgages, for which the homeowner makes payments at the end of each month

2. Another example of ordinary annuity is Bonds generally pay interest at the end of every six months.

**Reason**

 In these examples all the payments are in the same amount, they are made at regular interval of time (monthly, quarterly, yearly) and the payments are made at the end of each period. The home mortgages and interest on bonds payments are an ordinary annuity.

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