

VCD - 20/11/19

F.Y.B.A.F.: Sem-II(A.T.K.T)/Sub.-Business Mathematics

Duration: 2 ½ hrs.

Max. Marks: 75

Q.1) (A) Choose the correct answer (attempt any 8).

(08)

- 1) If  $x : y = 2 : 3$  and  $y : z = 4 : 3$ , then  $x : y : z$  is
  - (a)  $7 : 11 : 10$
  - (b)  $8 : 11 : 9$
  - (c)  $10 : 12 : 11$
  - (d) none of these
- 2) If the net selling price exceeds the cost price then there is
  - (a) Profit
  - (b) Loss
  - (c) No profit no loss
  - (d) None of these
- 3) The cash discount is calculated on
  - (a) Net Selling price
  - (b) Cost price
  - (c) Discounted price
  - (d) None of these
- 4) The simple interest on 15000 for 8 months at 10% p.a. is
  - (a) 1000
  - (b) 1500
  - (c) 1050
  - (d) none of these
- 5) The compound interest on 10,000 at 5% p.a. for 3 years is
  - (a) 1500
  - (b) 1600
  - (c) 1400
  - (d) none of these
- 6) If the payment of annuity is made at the beginning of each period, the annuity is called
  - (a) Annuity due
  - (b) Immediate annuity
  - (c) Uniform annuity
  - (d) None of these
- 7) Price at which a share is traded in the stock exchange is called
  - (a) Market value
  - (b) Face value
  - (c) Discounted price
  - (d) None of these
- 8) The rate of dividend is given for ..... of a share.
  - (a) Market value
  - (b) face value
  - (c) (a) or (b)
  - (d) None of these
- 9) Mutual fund with no entry load or exit load is called

- (a) Zero load fund (b) New load fund  
 (c) (a) or (b) (d) None of these
- 10) If the cost price exceeds the net selling price then there is  
 (a) Profit (b) Loss  
 (c) No profit no loss (d) None of these

Q.1) (B) True or false (any 7)

(07)

- 1) The brokerage for a seller is to be added in the sales value while calculating total amount the seller receives.
- 2) The amount of commission an agent receives is directly proportional to total transaction amount.
- 3) The product of a ratio and its inverse ratio is always one.
- 4) if a,b,c are in continued proportion, then c is called mean proportional.
- 5) The effective rate of interest in an annuity is always less than its stated rate of interest.
- 6) The EMI increases if the total payment period is increased.
- 7) The open ended mutual funds have a fixed date of maturity.
- 8) The return on a shareholders investments is called dividend.
- 9) The Equity shares are sold in the market to the public.
- 10) The cash discount is calculated on cost price.

Q.2. (A) Yuvraj invested Rs. 80,000 in shares at market value Rs. 160 each with face

(08)

value Rs. 100. If company declare 3 bonus shares for every 10 shares, after he sold all shares at Rs. 140 each. Find his net gain in this transaction.

(B) Given the following information of the mutual fund : Total number of units=1,20,000,

(07)

market value of securities=Rs.25,00,000, market value of corporate bonds=Rs.30,00,000,  
 other assets of the fund=Rs.20,00,000, liabilities Rs.6,00,000, payable of fund=Rs.4,00,000.  
 Find the NAV of the mutual fund.

OR

(P) Mukesh invested Rs.15000 on 5<sup>th</sup> of every month for 5 months in a SIP of a mutual fund.

(08)

The NAVs on these dates were Rs.42.26, 40.25, 49.57, 51.48 & 39.26 respectively.

There was same entry load of 2.3% for all these months. Find the average price, including the entry load, using rupee cost averaging method.

(Q) Mr. Rahul has invested Rs.20,000 in a shares whose market value is Rs.40 and face value Rs.20. If he receives dividend at the rate of 12% find the amount of total dividend. (07)

Q.3. (A) Two partners A and B agree to divide 30% of total profits equally between them and the balance in the ratio 3:4. If total profit is rs. 30000 Find A's share of the profit. (08)

(B) An article is marked rs. 700. Trade discount of 25% is allowed and a further discount of 8% for cash payment t is also allowed. Find the Net selling price of an article. (07)

OR

(P) A company fixed the rate of commission to its salesman as follows: (08)  
4% of the first rs10000 , 6% on the next rs 10000, 8% of the next 10000, 10% on the balance. The company pays incentive at  $\frac{1}{2}\%$  of total sales if the total sales crossed rs 50000. Find the total earning of two salesmen who secured sales worth rs46000 and 59000.

(Q) Divide the number 20 into two parts such that their ratio is 9:1. Also. (07)  
Find the number which is mean proportional between these two parts.

Q.4 (A) A principal amounts to rs 11880 after 4 years and to rs 14040 after 7 Years. Find the principal and the rate of simple interest. (08)

(B) Mr. Joshi deposits rs 8000 at the end of every year for 5 years in a Bank. The bank charges the rate as 8% p.a., compounded quarterly. Find the effective rate of interest p.a. Also find the accumulated value. (07)

OR

(P) find the present value of an annuity of rs. 1331, paid at the end of each for 3 years, at 10% p.a. (08)

(Q) Mihir took a loan of rs 50000 from a company for a period of 1 year at 12% p.a. Find the EMI, using reducing method. Find the interest component and the principal component for first two years. (07)

Q.5) (a) Explain the term variation and it's type

(08)

(b) Explain ratio and types of ratio

Q.5) write short notes ( any three ) **OR**

(07)

a) Dividend and rate of return

(05)

b) preference share and bonus shares.

(05)

c) Annuity and it's types.

(05)

d) Trade discount and cash discount.

(05)

e) EMI and type.

(05)

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