VCD 6/12/23 FYFMG SEM: I SUB: BUSINESS MATHEMATICS TIME 2:30 HRS MARKS: 75

NOTE: (1) All questions are compulsory.
(2) All questions carry equal marks.
(3) Figure to the right indicate full marks

Q.1 A) Fill in the blanks by choosing the correct option: (Any Eight) (8)

1) If A : B =3 : 4 and B : C = 8 : 9, then A : C is _____
a) 2 : 3 b) 3 : 2 c) 6 : 1 d) 4: 6
2) The percentage profit is calculated on the _____ of an article.
a) List price b) Discount price c) selling price d) None of these
3) The difference between the market value and the net worth of a business is its_____
a) Profit b) Loss c) No profit no loss d) None of these
4) Which of the following terms is not used for the future value?
a) Dicounted value b) Sum due c) Accumulated value d) Amount
5) Nominal interest rate and Effective interest rate are same for _____
a) No compounding b) Quarterly Compounding
c) Half-yearly compounding d) None of these
6) An annuity in which each payment is made at end of the time period is called_____
a) Annuity due b) Annuity certain
c) Immediate Annuity d) Uniform annuity
7) A sequence of payments made at successive time periods or intervals of time is called _____
a) Annuity b) Net present value c) Internal rate of return d) None of these
8) The price at which a share is traded in the stock exchange is called _____
a) Market value b) Discount price c) Dividend d) None of these
9) If the face value of a share is less than its face value, then the share is said to be____
a) At a premium b) At par c) Below par d) None of these
10) The units of a mutual fund must be purchased or redeemed in _____
a) Whole numbers b) Fractions c) a) or b) d) None of these

B) State whether the following statements are true or false (Any Seven) (7)

1) 2 : 3 and 3 : 2 are inverse ratios of each other.
2) Cash discount is always given on the cost price
3) Printed price of goods are called invoice price.
4) The buyer has to pay the seller and broker both.
5) An annuity is an annual payment of simple interest.
6) The brokerage for a seller is added to the sales value while calculating the total amount the seller receives.
7) Net assets are calculated as difference between total assets and liabilities of the scheme.
8) If the interest is charged only on the principal, then it is called simple interest.
9) The dividend given is calculated as a percentage of the face value of a shares.
10) A mutual fund must have an entry load and an exit load.

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Q.2 A) Find three numbers in the ratio 2 : 3 : 5 such that the sum of their product taken two at a time is 1116. (8)

B) An article was sold for Rs. 312 and 20% profit was earned on it. Find the cost price at which it was bought. (7)

OR

P) After allowing a 15% trade discount and a further 5% cash discount, a manufacturer sold a pen set for Rs. 4,522. Find the list price. (8)

Q) A marchant marks his goods 70% above cost and then allows 20% trade discount and a further 1% cash discount. Find his profit percentage. (7)

Q.3 A) The simple interest at 10% p.a. on a cetain sum of money for 4 years is Rs. 8,000. Find the compound interest on the sum at the same rate for the same period. (8)

B) What is the accumulated value after 4 years of an immediate annuity of Rs. 8,000 p.a with interest compounded annually at 8% p.a. (7)

OR

P) A loan of Rs. 10,000 is to returned in 4 equal monthly instalments at the rate of 12% p.a. Calculate EMI using the reducing balance method. (8)

Q) Find the present value of of Rs. 40,00,000 required 4 years from now if the compound interest rate is 5% (7)

Q4. A) Hitesh invested Rs. 20,000 in a mutual fund with NAV = Rs. 15.75,Find the number of units acquired by him if i) There is no entry load ii) The entry load is 2% (8)

B) Vimal Industries has issued 60,000 ordinary shares of par value Rs. 10 each. The company declared a total divided of Rs. 72,000. Find the rate of dividend paid by the company. (7)

OR

P) Mr. Daler Singh bought 200 Rs. 5 shares of Self Help Ltd. at Rs. 40 each. After getting a 10% dividend, he sold them at Rs. 41 each. Find his rate of return on investment. (8)

Q) A mutual fund's scheme shows the following on 01/01/2007 :

Total value of securities (Equity, bond, etc.)	Rs. 1,500 crores
Cash	Rs. 100 crores
Liabilities	Rs. 200 crores
Total Number of units outstanding	Rs.100 crores

Find the NAV of the mutual fund. (7)

Q5. A) Explain briefly proportion and its types (8)

B) Explain briefly commission agent, del credere. (7)

OR

P) **Short notes (Any three)** (15)

1) Properties of variation
2) Trade discount and cash discount
3) List price and net selling price
4) Types of interest
5) Mutual fund