## $Paper \, / \, Subject \,\, Code; \, 81602 \, / \,\, Business \,\, Mathematics.$

Marks: 75

(2.30 Hours)

NB: (1) All ques	tions are Compulsory.		
(2) Attempt	either <b>A</b> and <b>B</b> or <b>P</b> and	1 Q	
Q.1.A) fill in the blank	s by choosing correct opt	ion: (Attempt any 8)	(8 marks)
1) The duplicate ratio	of 3:2 is		
a) 6:4	b) 9:4	c) 5:2	d) 6:1
2) 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
3) Commission is usua	ally calculated as a percen	tage of	
a) Cost price	b) net selling price	c) list price	d) Invoice price
4) List price minus tra	de discount is called the _		
a) Invoice price	b) net selling price	c) reduced cost price	d) cost price
5) Which of the follow	ving terms is not used for	the future value?	
a) Discounted value	`b) Sum Due	c) Accumulated value	d) Amount
6) The present value i	s always	the future value.	
a) More than	b) Less than	c) equal to	d) independent of
7) If the payments of	an annuity are made at th	e end of periods, the an	nuity is called.
a) Uniform annuity	b) Immediate Annuity	c) Due annuity	d) None of these
8) The full form of SEBI is			
a) Stock Exchange Board of India		b) Securities and Excha	ange Board of India
c) Systematic Exit Benchmark of Investment		d) Stock Exchange Board of Investment	
9) An investment plan	which allows an investor	to invest a fixed sum of	money at regular intervals is
a) SIP	b) NAV	c) FSP	d) none of these
10) The price at which	a share is sold on the sto	ock exchange is called	
a) Off-line price	b) Stock price	c) face value	d) market price
Q.1.B) State whether	the following statements	are true or false: (attem	pt any seven) 7 marks
	Pa	age <b>1</b> of <b>4</b>	

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- 1) The fourth proportional to 1, 3 and 9 is 12.
- 2) Percentage is a ration with denominator 100.
- 3) A del credere agent is an agent who does not charge any commission from the seller.
- 4) EMI stands for expected monthly instalments.
- 5) Simple interest is always less than compound interest.
- 6) Nominal rate of interest is an stated rate of interest per annum.
- 7) Cost Price + Profit = Net selling Price
- 8) A mutual fund can never make a loss.
- 9) Par value and nominal value of a share are same.
- 10) The dividend given is calculated as a percentage of the face value of a share.

Q.2.A) 8 marks

A, B & C started a business with a total capital of Rs. 3,00,000. At the end of the year, the profits received by A, B and C were Rs. 10,000, Rs. 25,000 and Rs. 15,000 respectively. Find the amounts of Capital invested by A, B and C.

Q.2.B) 7 marks

An agent was paid Rs. 22,275/- as commission on the sale of certain brand of TVs. If the rate of commission was 12% and the price of each TV was Rs. 6,875, Find the number of TVs he sold.

OR

Q.2.P) 8 marks

A merchant gives 30% trade discount and a further 2% discount for cash payment and still makes 37.2% profit on cost. If the listed price of an item is Rs. 4,000, find the merchant's cost price.

Mother divided the money among Ron, Sam and Maria in the ratio 2:3:5. If Maria got Rs. 150, find the total amount and the money received by Ron and Sam.

Q.3.A) 8 marks

The difference between simple interest and compound interest on a principal for 2 years is Rs. 76.8. The simple interest on the same principal for 4 years is Rs. 3,840. Find the principal and the rate of interest.

Q.3.B) 7 marks

What is the accumulated value after 4 years of an immediate annuity of Rs. 8,000/-p.a., the rate of interest being 8% p.a.?

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OR

Q.3.P) 8 marks

Anurag took a loan of Rs. 60,000 with 10% interest per month, to be repayment in 5 months. Calculate the EMI using reducing balance. Also calculate interest and the principal repayment components for each EMI.

Q.3.Q) 7 months

Find the effective equivalent to the nominal rate 16% per annum when compounded (i) half- yearly (ii) quarterly

Q.4.A) 8 marks

Anuj invested Rs. 12,000 on 10<sup>th</sup> August, 2008 at NAV of Rs. 43.378. Afterwards he redeemed all his units on 27<sup>th</sup> October, 2008, with total gain of Rs. 875.15. if the entry load was 2.25% and exit load was 1%, find the NAV on 27<sup>th</sup> October, 2008.

Q.4.B) 7 marks

Find the market value of a shares if an investment of Rs. 1,09,350 in 20% Rs.100 shares gave a total dividend of Rs. 9000.

OR

Q.4.P) 8 marks

Mr. Ashok purchased 400 shares of a company of face value Rs. 10, at a market price of Rs. 120 each. After 3 months he received dividend at 40%. After 6 months, he sold the shares at a market price of Rs. 160. He paid brokerage at 0.4% for both the transaction. Find his gain.

Samar invested 2,00,000 in a Mutual Fund on 20<sup>th</sup> January, 2011 at NAV of Rs. 54.8. He redeemed all units on 30<sup>th</sup> April, 2011 with NAV of 70.2. There was neither entry load nor exit load. Find his gain, rate of return and annualized rate of return.

Q.5.A) 8 marks

Define Annuity and explain the types of Annuity?

Q.5.B) 7 marks

What is Systematic Investment Plan?

OR

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15 marks

- Q.5) write any three short notes
- a) Simple and compound interest
- b) Types of Annuity
- c) Trade discount and cash discount
- d) Mutual Funds
- e) Continued ratio

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