

VCD210423 FYBAF BUSINESS MATHS SEM II REGULAR EXAM 75 M 2^{1/2} HOURS

1. All questions are compulsory.
2. Figure to the right indicate full marks.
3. Use of non-programmable calculator is allowed.

Q.1) Attempt Both Sup-part (A) and(B):

A) Write the appropriate answer (Any 8)

08

1. If the angles of a triangle are in the ratio 3:8:9 then their respective degree measures are
a) 27 degree, 72 degree, 81 degree. b) 32 degree, 70 degree, 78 degree.
c) 24 degree, 64 degree, 92 degree. d) None of these.
2. The ratio between the speed of two trains is 4:5. If the second train runs 500 km in 5 hours, the speed of the first train is
a) 40 km/hr. b) 45 km/hr. c) 100 km/hr. d) 80 km/hr.
3. The triplicate ratio of 1:3 is
a) 1:27 b) 1:9 c) 1:3 d) None of these
4. If $19-x$, $26-x$, $35-x$ and $50-x$ are in proportion, then x is.
a) 2 b) 4 c) 5 d) 8
5. If $a/b = c/d$ then $k \cdot a/b =$ _____.
a) $k \cdot c/d$ b) $1/b$ c) d/c d) $k \cdot b/c$
6. If the net selling price exceeds the cost price then there is
a) profit b) loss c) no profit no loss d) net selling price
7. The percentage profit is calculated on ____ of an article
a) list price b) selling price c) Discount price d) cost price
8. The brokerage from buyer and seller are _____ while calculating total brokerage in a deal of the brokerage in a deal of the seller.
a) added b) subtract c) multiplied d) division
9. Purchaser may be given
a) Trade discount b) Cash discount. c) Both (a) and (b) d) none of these
10. The list price of a book is ₹ 500 and its net selling price, after allowing a Trade discount of 10% and a further cash discount of 2% is.
a) ₹ 450. b) ₹ 441. c) ₹ 430. d) none of these

B) State whether the following statements true or false

07

1. When the ratio of two quantities is expressed as $a:b$, then b is called antecedent
2. The duplicate ratio of $2:5$ is $4:25$
3. The product of ratio and its inverse ratio is always one
4. If a, b, c are in continued proportion, then c is called mean proportional
5. If the ratio $a:b$ is less than 1 then consequent is less than antecedent.
6. The liability of mutual fund include all expense, payable and other liability for the mutual fund scheme
7. If x, y, z are 3 number such that $x/y = 2/5$ and $y/z = 10/13$, then x/z is $4/13$
8. If $x:y:z$, y is known as mean proportional
9. In Reducing Balance method, the EMI's are calculated amount compound interest.
10. An agent may charge commission for the purchase and sales the same commodity from his principle

Q.2. Answer either question (A), (B) or (C), (D) of the following

- A. A prize amount of ₹ 1200 is to be divided among 12 men, 5 women, 8 children find their individual shares if the ratio of amount is $9:8:4$. 08
- B. Swati gets interest of rupees 340 on rupees 4000 in her credit bank account if the interest directly with the amount deposited how much her friend Abhishek should put in his account to get an interest of rupees 500 for the same amount of time 07

OR

- C. The number of litres of water required to fill a circular tank jointly varies with the square of radius and the depth d . If for a tank of radius 3 m and depth 2 m the water required is 30 litres how much water required to fill the tank of a radius 5 m and depth 4 m. 08
- D. The ratio of man to women employee in a company is $5:3$ if the total number of employee in the company is 24 find the number of man and the woman employee 07

Q.3. Answer either question (A), (B) or (C), (D) of the following

- A. Find the agent's commission at 25% on the first year premium for a policy premium for a policy of Rs 50,000 the rate of premium being Rs 38.25 per thousand. 08
- B. A salesman's salary is reduced by Rs 300, but the rate of his commission on sales increased by $(\frac{1}{2})\%$. If this results in a net increase of Rs 250 to him, find the value of sales made by him 07

OR

C. A company fixed the rate of commission to its salesman as follows:

08

i) 5% on the first ₹ 10,000 of sales

ii) 6% on the next ₹ 5000

iii) 9% on the next ₹ 5000

iv) 10% on the balance.

In addition, $1\frac{1}{4}\%$ bonus is paid on all sales over ₹20000. If a salesman secure ₹ 28000 worth of sales, find his total earnings. What is his average rate of commission, bonus included?

D. An agent who was given commission at the rate of 4% on goods sold, received ₹ 1120 for certain deal. what was the value of the goods sold in a deal? 07

Q.4. Answer either questions (A) , (B) or (C) ,(D)

A. Mr. Sumit Rajput has taken a loan of Rs. 50,000 from a money lender who charged a high interest at 10 % per month. She returns the loan in equal installments in 4 months, find EMI. Calculate the interest component and the principal repayment component of EMI for each month. 08

B. In how many years, the amount of money will be double the principal at s.i of 12% per annum 07

OR

C. Mr. Shirodkar invested Rs. 7000 at the end of each year at 9% compounded interest rate for some years and received Rs. 32011.9 as Accumulated amount. For how many years did he invest? 08

D. A person wants to set up an education account for his child who would like to have Rs. 75000 after 15 years. He gets an account that pays 5.6% interest compounded half yearly and he would like to deposit money in the account every six months. How large each deposit be in order to reach his goal? 07

Q.5 Answer the following question either (A) and (B) or (C)

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A. The Rising Star Company's capital consists of 60,000 Preference shares with 9% dividend and 2 lakh ordinary shares. The per value of both types of shares is rupees 100 each. The company made a total profit of 50,70,000 in 2012-13 of which ₹ 10,00,000 were kept in reserved fund and remaining amount was distributed among the shareholders. Calculate the rate of dividend for ordinary shareholders of the company.

B. Karan sold his mutual fund unit at NAV ₹ 175 exit load at 0.5%. If he received ₹ 35591.15, find the number of units sold. 07

OR

Q.5. C) Short Notes (Any Three)

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1. Write difference between ratio and proportion.
2. Annuity and it's type.
3. Bonus shares and split of shares.
4. Break- even point.
5. Dividend and rate of return.

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