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18 QUESTIONS ON INTEREST COMPUTATIONS

1.	Find the simple interest earned in 6 years when $10,000 is invested at a rate of 10% per annum. What is the total amount at the end of 6 years?
2.	Find the principal invested if the simple interest earned in 5 years by an investment at 5% per annum is $100
3.	How long an investment of $5,000 will yield a simple interest of $250 at 8% per annum?
4.	Calculate the amount due on a loan of $10,000 for 4 years at an interest rate of 8% per annum
5.	Find the compound interest due on a loan of $20,000 for 5 years if the rate of interest is at 10% per annum
6.	Find the compound interest on a loan of $10,000 for 5 years if interest is added: (a) semi-annually at 10% per annum (b) quarterly at 16% per annum
7.	Calculate the compound interest due on a loan of $5,000 for two years if: (a) interest is added annually at 6% per annum (b) interest is added quarterly at 1 ½% per quarter
8.	A man inherited $6,000 which he deposited in a bank on January 1 st 1975. Interest on the amount in the bank was added at the end of each year at 6 ½%. The man withdrew $500 on January 1 st 1976, 1977 and 1978 but made no additional deposits. How much had he to his credit on January 1 st 1980 when interest for 1979 had been added?

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9.	An insurance fund invests $1 million at the beginning of each ear for 10 years. Allowing compound interest at 7 ½ % per annum, what is the value of the fund at the end of ten years?
10.	A man borrows $2,000 for improvements to his house, and agrees to discharge the debt by repaying the bank $100 a month for two years; the first payment to be made in a month's time. Allowing simple interest, find the rate per cent per annum the bank has charged for the loan.
11.	Find, correct to the nearest cents, the compound interest on a loan of $6,000 for ten years at 8% per annum.
12.	When invested at a certain rate per cent per annum Compound Interest, $200 amounts to $261 after five years. What is the value of this investment of $200 (at the same rate of compound interest) after twenty years?
13.	When a man retires, he invests $20,000 in a bank, interest at 8% per annum of the amount to his credit to be added at the end of each year. When the interest for each year has been added, he withdraws $1,000 to augment his pension during the following year. How much, to the nearest cents, has he to his credit in the bank, eight years after he retired, when interest for eight years has been added and seven withdrawals have been made?
14.	Find the compound interest on a loan of $6,000 for four years when the interest is at: (i) 18% per annum added annually (ii) 9% half-year, added half-yearly (iii) 1.5% per month, added monthly
15.	What will a sum of $15,000 amount to in six years' at 8% compound interest paid half-yearly?
16.	(i) What will an investment of $7,500 amount to in five years' at 7.5% compound interest per annum? (ii) What would be the difference in the amount if the sum had been invested at simple interest for the same time and at the same rate?

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Questions & Answers
On
Financial Mathematics/Advanced Business Calculations
" TOPIC- INTEREST COMPUTATIONS "

17.	An office suite is rented for $8,000 per annum from a property agent who has taken out a lease on the property for ten years, the purchase price being calculated at 10% per annum Compound Interest. What is the value of the lease?
18.	Calculate the extra compound interest received when $20,000, invested at 8% per annum for three years, interest paid annually, is invested instead at the same rate with interest paid half-yearly

Refer to Answers

1	$1,600.00
2	$ 400.00
3	7 ½ months
4	$13,604.89
5	$12,210.20
6	(a) $6,288.95 (b) $6,386.16
7	(i) $618.00 (ii) $632.46
8	$6,406.22
9	$15,208,119.60
10	23.53%
11	$6,953.55
12	$580.00
13	$27,381.00
14	(i) $5,633 (ii) $5,955

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	(iii) $6,261
15	**$24,015**
16	**$10,767.22**
17	**$54,072.20**
18	**$112.14**