Annuities

<div align="right">⬖ 9 ⬗</div>

1m	2m	3m	4m	5m	6m	Total
1(U)	–	1(U)	–	1(A)	–	9

1 MARK QUESTIONS

1. Define annuity.
2. Define perpetuity.
3. Define annuity due.
4. What is the present value of an income of 3,000 to be received forever if the interest rate is 14% p.a.

2 MARKS QUESTIONS

1. A schlorship of ₹2,000 every year has to be instituted. How much should be invested today if theinterest rate is 8% p.a.?

2. Find the future value of an annuity of ₹5,000 at 12% p.a for 6 years.
3. Find the present value of an annuity of ₹500 at 6% p.a for 7 years.
4. Find the present value of an annuity due of 8000 for 5 years at 5% p.a.
5. Find the future value of an annuity of ₹2,000 for 6 years, if the payment is made at the beginning of each year, interest rate being 10% p.a.

4 MARKS QUESTIONS

1. If person wants ₹25,000 after 8 years, how much should he invest in an annuity due each year at 6% p.a?
2. Find the present value of an annuity of ₹2,000 payable at the beginning of each quarter for the next 3 years if the rate of interest is 4% p.a compounded quarterly.
3. What is the present value of ₹2,000 receivable for 20 years, if the annuity is deferred for 10 years if the interest rate is 10%?
4. Find the present value of an annuity of ₹2,500 payable at the end of each 6 months for 5 years if money is worth 10% converted semi annually.

5 MARKS QUESTIONS

1. A person wants to buy a house after 5 years when it is expected cost 50 lakhs. How much should be saved annually if her savings earn a compound interest of 12 percent.

2. Mr. Ashok has 20 more years to retire. He decides to save some money for his retirement. If he saves ₹9000 every year, how much will he have when he retires if the interest rate is 18% p.a?

3. A father wants to send his child for higher studies after 15 years. He expects the cost of higher studies to be 1,00,000. How much should he save annually to have 1,00,000 after 15 years if interest rate is 12% p.a?

4. Vani decides to save ₹10,000 every six months for the next 5 years and deposit it in a bank which offers 7% p.a interest compounded half yearly. How much will vani have in her account after 5 years?

5. Mrs. Arpan deposits 4,00,000 on retirement in a bank which pays 10% p.a interest. How much can be drawn annually for a period of 10 years?

6. Find the present value of annuity of ₹3000 for 12 years at 6% p.a computed half yearly.

7. Uma bought a TV costing ₹21000 by making a down payment of 5000 and agreeing to repay the balance amount in equal annual payments for five years. How much would be each payment if the interest rate is 14% p.a?

8. Ayush purchases a car for ₹5,50,000. He gets a loan of ₹5,00,000 at 15% p.a from a bank and balance amount he pays as down payment. He has to pay whole amount of loan in 12 equal monthly installments. Find the money he has to pay at the end of everymonth.

9. How much should you invest today at 8% p.a compound interest computed quarterly so that you get ₹3000 every 3 months for the next 7 years.

10. Sharan borrows a sum of ₹2,00,000 and promises to repay in 20 equal annual installments at the beginning of each year. What is the annual installment to be paid if the interest rate is 16% computed quarterly.

11. A person purchases a house for ₹25 lakhs with ₹5 lakhs as down payment. The rest of the amount he loans from a bank which offers 16% p.a. C.I and has to repay the loan in 20 equal annual installments. If the first installment is paid at the end of the third year, find how much he has to pay each year.

12. What is the present value of an perpetuity of ₹5000 to be received forever if the first receipt occurs at the end of the sixth year from now. Interest rate being 8% p.a? [Hing: d = 5 use perpetuity formula].

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