Chapter-4
Time Value of Money (Maths of Finance)

MTP-March '20

1. A sum of Rs. 46,875 was lent out at simple interest and at the end of 1 year 8months the total amount was Rs. 50,000. Find the rate of interest percent per annum.
   (a) 5%   (b) 6%   (c) 4%   (d) 8%

2. A = Rs. 5,200, R = 5% p.a., T = 6 years, P will be (use C.I.)
   (a) Rs. 2,000   (b) Rs. 3,880   (c) Rs. 3,000   (d) none of these

3. The time by which a sum of money would treble itself at 8% p. a C. I is
   (a) 14.28 years   (b) 14 years   (c) 12 years   (d) none of these.

4. The present value of an annuity of Rs. 80 for 20 years at 5% p.a is [Given $(1.05)^{20}$= 2.6533]
   (a) Rs. 997 (appx.)   (b) Rs. 900   (c) Rs. 1,000   (d) none of these

5. A person bought a house paying Rs. 20,000 cash down and Rs. 4,000 at the end of each year for 25 yrs. at 5% p.a. C.I. The cash down price is[Given $(1.05)^{25}$= 3.386355]
   (a) Rs. 75,000   (b) Rs. 76,000   (c) Rs. 76,375.80   (d) none of these.

6. A man purchased a house valued at Rs. 3,00,000. He paid Rs. 2,00,000 at the time of purchase and agreed to pay the balance with interest at 12% per annum compounded half yearly in 20 equal half yearly instalments. If the first instalment is paid after six months from the date of purchase then the amount of each instalment is.
   (a) Rs. 8,718.45   (b) Rs. 8,769.21   (c) Rs. 7,893.13   (d) none of these

7. A person desires to create a fund to be invested at 10% CI per annum to provide for a prize of Rs. 300 every year. Using V = a/I find V and V will be
   (a) Rs. 2,000   (b) Rs. 2,500   (c) Rs. 3,000   (d) none of these.

8. A person invests Rs. 500 at the end of each year with a bank which pays interest at 10% p.a C.I. annually. The amount standing to his credit one year after he has made his yearly investment for the 12th time is.[Given $(1.1)^{12}$= 3.1384]
   (a) Rs. 11,761.36   (b) Rs. 10,000   (c) Rs. 12,000   (d) none of these

9. A machine depreciates at 10% of its value at the beginning of a year. The cost and scrap value realized at the time of sale being Rs. 23,240 and Rs. 9,000 respectively. For how many years the machine was put to use?
   $S=C(1-u)^n$ $2.582 = (0.9)^n$
   (a) 7 years   (b) 8 years   (c) 9 years   (d) 10 years

10. The compound interest on half-yearly rests on Rs. 10,000 the rate for the first and second years being 6% and for the third year 9% p.a. is
    (a) Rs.2,200   (b) Rs.2,287   (c) Rs. 2,285   (d) Rs.2290.84

11. The present value of Rs. 10,000 due in 2 years at 5% p.a. compound interest when the interest is paid on half-yearly basis is
    (a) Rs. 9,070   (b) Rs. 9,069   (c) Rs. 9,060   (d) None

18

Chapter-3 : Linear Inequalities

$ERI = ((1+i_n)^n - 1$

12. The effective rate of interest corresponding to a nominal rate 3% p.a payable half yearly is
    (a) 3.2% p.a   (b) 3.25% p.a   (c) 3.0225% p.a   (d) none of these

MTP-October '19

13. Rs. 1000 is invested at annual rate of interest of 10% p.a. The amount after two years if compounding is done annually is _____

    (a) Rs. 121   (b) Rs. 1210   (c) Rs. 2110   (d) None of these

14. If A person invests Rs.3,000 in a three years' investment that pays you 12% per annum. Calculate the future value of the investment.

    (a) Rs.4214.78   (b) Rs. 4124.78   (c) Rs.4324.48   (d) Rs.4526.48

15. A person deposited a sum of Rs. 10,000 in a bank. After 2 years, he withdrew Rs. 4,000 and at the end of 5 years, he received an amount of Rs. 7,900; then the rate of simple interest is:

    (a) 6%   (b) 5%   (c) 10%   (d) None of these

16. A company is considering proposal of purchasing a machine either by making full payment of Rs.4000 or by leasing it for four years at an annual rate of Rs.1250. Which course of action is preferable if the company can borrow money at 14% compounded annually? [P (4,0.14) = 2.9137]

    (a) leasing is not preferable   (b) leasing is preferable

    (c) cannot determined   (d) none of these

17. Anil bought a motor cycle costing Rs.1,30,000 by making a down payment of Rs.30, 000 and agreeing to make equal annual payment for five years. How much would be each payment if the interest on unpaid amount be 10% compounded annually? [P (5, 0.10) = 3.7908]

    (a) Rs.28379.70   (b) Rs.26300.70   (c) Rs.26500.70   (d) Rs.26379.70

18. Shoba borrows Rs.50,00,000 to buy a house. If he pays equal instalments for 20 years and 10% interest on outstanding balance, what will be the equal annual instalment? [Given : P(20,0.10) =8.51356]

    (a) Rs.687298.4   (b) Rs.685298.4   (c) Rs.585298.4   (d) Rs.587298.4

19. A trust fund has invested Rs. 30,000 in two different types of bonds which pays 5% and 7% interest respectively. Determine how much amount is invested in 2nd type of bond if trust obtains an annual total interest of Rs. 1600.

    (a) Rs.5000   (b) Rs.6000   (c) Rs.7000   (d) Rs. 8000

20. An overdraft of Rs. 50,000 to be paid back in equal annual installments over a period of 20 years. Find the value of Installment, if interest is compounded annually at 14% per annum. [Given $(1.14)^{20} = 13.74349$]

    (a) Rs .7550.50   (b) Rs .7549.30   (c) Rs .7559.50   (d) Rs .7560.50

21. At six months' intervals A deposited of Rs. 1000 in a savings account which credit interest at 10% p.a., compounded semi-annually. The first deposit was made when A's son was 6 months old and last deposit was made when his son was 8 years old. The money remained in the account and was presented to the son on his 10th birthday. How much did he receive? $(1.05)^{16} = 2.1829$

    (a) Rs.25740   (b) Rs.28756   (c) Rs.25860   (d) Rs.25760

22. What is the effective rate of interest if the nominal rate 5 % p.a converted quarterly?

    (a) 6.09 %   (b) 5.09 %   (c) 5.55%   (d) 5.60 %

23. A sum of money doubles itself at compound interest in 10 years. In how many years will it become eight times?

    (a) 20   (b) 30   (c) 40   (d) 35

24. Certain sum of money borrowed at simple interest amount to Rs.2688 in three years and to Rs.2784 in four years at the rate per annum equal to

$96 = \frac{1}{4}$

    (a) 7 %   (b) 6%   (c) 5%   (d) 4%

MTP-March '19

25. A certain money doubles itself in 10 years when deposited on simple interest. It would triple itself in

    (a) 30 years   (b) 20 years   (c) 25 years   (d) 15 years

26. A man deposited Rs. 8, 000 in a bank for 3 years at 5% per annum compound interest, after 3 years he will get

    (a) Rs. 9,000   (b) Rs.8, 800   (c) Rs. 9,200   (d) Rs. 9261

27. The effective rate of interest for one year corresponding to a nominal at 7% rate of interest per annum convertible quarterly is

    (a) 7.1%   (b) 7.2%   (c) 7.25%   (d) 7.18%

28. The value of furniture depreciates by 10% a year, if the present valu e of the furniture in an office is Rs. 21870, calculate the value of furniture 3 years ago. $S = C(1-a)^n$

    (a) Rs. 30,000   (b) Rs. 35,000   (c) Rs. 40,000   (d) Rs. 45,000

29. The population of a town increases every year by 2 % of the population beginning of that year. The number of years by which the total increase of population be 40% is

    (a) 7 years   (b) 10 years   (c) 17 years (approximately)

    (d) none of these

$140 = 100(1 + 2/100)^n$ $1.4 = (1.02)^n$

30. Find the future value of an annuity of Rs. 500 made annually for 7 years at interest rate of 14 % per annum [Given that $(1.14)^7 = 2.5023$]

    (a) Rs. 5365.35   (b) Rs. 5000   (c) Rs. 5325.65   (d) Rs.6000.35

31. Rs. 200 invested at the end of each month in an account paying interest 6% per year compounded monthly.

What is the future value of this annuity after 10th payment? [Given that $(1.005)^{10} = 1.0511$]

    (a) Rs. 2045   (b) Rs.5055   (c) Rs.2044   (d) Rs.2065

32. Suppose your father decides to gift you Rs. 10,000 every year starting from today for the next five years, you deposit this amount in a bank as and when you receive and get 10% per annum interest rate compounded annually. What is the present value of this annuity?

    (a) Rs.41,698.70   (b) Rs.45,698.70   (c) Rs.42, 698.70   (d) Rs.43, 698.70

33. Nominal Rate of Return = Real Rate of return + Inflation

    (a) Real Rate of Return − Inflation

    (c) Inflati on -Real Rate of return

    (b) Real Rate of Return + Inflation

    (d) None of the above

34. Net Present Value (NPV)

    (a) Present value of net cash Inflow − Total net Investment

    (b) Present value of net cash Inflow − Present value of cash outflow

    (c) Total net Investment- Present value of net cash Inflow

    (d) a or b

35. The annual birth rates per 1,000 are 39.4 and 19.4 respectively. The number of years which the population will be doubled assuming there is no immigration or emigration is

    (a) 35 years   (b) 30 years   (c) 25 years   (d) none of these

Chapter-4 . Tim

36. Y bought Motor Bike Costing 80,000 by making down payment of Rs. 30000 and agreeing to make annual payment for four years. How much would be each payment if the interest on unpaid amount be 14% compounded annually.

[Given P (4, 0.14) = 2.91371]

(a) Rs. 17160.25   (b) Rs. 17600.25   (c) Rs.15600.25   (d) Rs. 16600.25

MTP-April '19

37. Mr. A plans to invest up to Rs. 30,000 in two stocks X and Y. Stock X(x) is priced at Rs.175 and Stock Y(y) at Rs.95 per share. This can be shown by

(a) $175x + 95y \leq 30,000$ (b) $175x + 95y > 30,000$

(c) $175x + 95y = 30,000$ (d) None of these

38. A sum of money doubles itself at compounded interest in 10 years in how many years will it becomes eight times?

(a) 20   (b) 30   (c) 40   (d) 35

39. A machine costs Rs .1,00, 000. The depreciation rate is 10% per annum. The scrap value of the machine at the end of 5 years is $S = C(1-r)^n$

(a) Rs.49490   (b) Rs.59049   (c) Rs.61029   (d) Rs.51049

40. Rs. 10,000 is invested at annual rate of interest of 10% p.a. The amount after two years at annual compounding is

(a) Rs. 21100   (b) Rs. 12100   (c) Rs. 12110   (d) None of these

41. If the effective rate of interest is 12% per annum and the interest is compounded quarterly, the nominal rate of interest per annum $ERI = (1+n)^n - 1$ 12.55%

(a) 11.78 %   (b) 11.21 %   (c) 11.89%   (d) 11.49 %

42. A machine can be purchased for Rs. 50, 000. Machine will be contributing Rs. 12, 000 per year for the next five years. Assuming borrowing cost is 10% per annum. Determine whether machine should be purchased or not

(a) Should be purchased   (b) Should not be purchased

(c) Can't say about purchase   (d) none of the above

43. X bought a T V costing 25,000 making down payment of Rs. 5000 and agreeing to make equal annual payment for four years. How much would be each payment if the interest on unpaid amount be 14% compounded annually? [P(4, 0.14) = 2.91371] $20,000$

(a) Rs.6864.10   (b) Rs.6850.63   (c) Rs.6859   (d) Rs.6871

44. The future value of annuity on Rs. 5000 a year for 7 years at 14% per annum compound interest is given $(1.14)^7 = 2.5023$

(a) Rs.5300   (b) Rs.53653.57   (c) Rs.5480   (d) Rs.5465.23

45. Rs.5000 paid for ten years to off a loan. What is the loan amount if interest rate be 14% per annum compounded annually? (Given P (10, 0.14) = 5.21611 X 5000

(a) Rs.26080.55   (b) Rs.26580.55   (c) Rs.26280.55   (d) Rs.27080.55

46. Rs.1000 is invested at the end of each month in an account paying interest 6% per year compounded monthly. What is the future value of annuity after 10th payment? (Given that $(1.005)^{10} = 1.0511$)

(a) Rs.10220   (b) Rs.1022   (c) Rs.20000   (d) Rs.1020

47. The difference between CI and SI on a certain money invested for three years at 6% per annum is Rs. 110.16. The sum is

(a) Rs. 3000   (b) Rs.3700   (c) Rs.12000   (d) Rs.10000

48. Simple interest on Rs.3500 for 3 years at 12% per annum is
(a) Rs.1200   (b) Rs.1260   (c) Rs.2260   (d) Rs. 2000

49. A sum of money triples itself in 18 years under simple interest. what is the rate of interest per annum?
(a) 9 %   (b) 9.09 %   (c) 11.11 %   (d) 13%

50. What time will be required for a sum of money to double itself at 8 % Simple interest?
(a) 8 Years   (b) 8.5 Years   (c) 12.5 Years   (d) 12 Years

51. The difference between simple interest and compound interest on a sum of ₹ 6,00,000 for two years is ₹ 6000. What is the annual rate of interest?
(a) 8 %   (b) 10 %   (c) 6 %   (d) 12 %

52. What is the sum of money will amount to ₹ 11035.50 in four years at compound interest for 1st , 2nd, 3rd and 4th years being 4% , 3% , 2% and 1% respectively.
(a) ₹ 10,000   (b) ₹ 11,000   (c) ₹ 1035   (d) ₹ 11,305

53. Find the present value of ₹ 10,000 to be required after 5 years, if the interest rate be 9 per cent compounded annually (Given: (1.09) -5 = 0.65)
(a) ₹ 5500   (b) ₹ 5600   (c) ₹ 6000   (d) ₹ 6500

54. A Machine was purchased for ₹ 10,000. Its rate of depreciation is 10% in the first year and 5 % per annum afterwards. Find the depreciated value of Machine after 7 years of purchase (Given (0.95)6 = 0.7351)
(a) ₹ 6606   (b) ₹ 6616   (c) ₹ 6660   (d) ₹ 6661

55. A man borrows ₹4000 from a bank at 10% compound interest. At the end of every year ₹ 1,500 as part of repayment of loan and interest. How much is still owe to the bank after three such instalments [Given: (1.1)3 = 1.331]
(a) ₹ 359   (b) ₹ 820   (c) ₹ 724   (d) ₹ 720.

56. The effective rate of interest for one-year deposit corresponding to a nominal 7 % rate of interest per annum convertible quarterly. is
(a) 7 %   (b) 7.5   (c) 7.4 %   (d) 7.18 %

57. The future value of annuity of ₹1,000, made annually for 5 years at the interest of 14% compounded annually is (Given (1.14)5 = 1.925410)
(a) ₹ 5610   (b) ₹ 6610   (c) ₹ 6160   (d) ₹ 6160

58. What will be the population after three years when present population is ₹25,000 and population increases at the rate of 3 % in first year, 4 % in second year and 5 % in third year?
(a) 28119   (b) 29118   (c) 27000   (d) 30000

59. SI = 0.125 P at 10% p.a find the time
(a) 1.25 years Q   (b) 25 Years   (c) 0.25 Years   (d) none

60. Rs. 8,000 becomes Rs. 10,000 in two years at simple interest. The amount that will become Rs. 6,875 in 3 years at the same rate of interest is:
(a) Rs. 4,850   (b) Rs. 5,000   (c) Rs. 5,500   (d) Rs. 5,275

61. The difference between the simple and compound interest on a certain sum for 3 year at 5% p.a. is Rs 228.75. The compound interest on the sum for 2 years at 5% p.a. is:
(a) Rs. 3,175   (b) Rs. 3,075   (c) Rs. 3,275   (d) Rs. 2,975

22

62. A sum of money doubles itself in 10 years. The number of years it would treble itself is:

 (a) 25 years   (b) 15 years   (c) 20 years   (d) None

63. The effective rate equivalent to nominal rate of 6% compounded monthly is:

 (a) 6.05   (b) 6.17   (c) 6.26   (d) 6.07

64. A person borrows Rs. 5,000 for 2 years at 4% p.a. simple interest. He immediately lends to another person at $6\frac{1}{4}$ % p.a. for 2 years. Find his gain in the transaction per year:

 (a) Rs. 112.50   (b) Rs. 125   (c) Rs. 225   (d) Rs. 167.50

65. Future value of an ordinary annuity

 (a) $A (n, i) = A\left[\dfrac{(1+i)^n -1}{i}\right]$ (b) $A (n, i) = A\left[\dfrac{(1+i)^n +1}{i}\right]$

 (c) $A (n, i) = A\left[\dfrac{1-(1+i)^n}{i}\right]$ (d) $A (n, i) = A\left[\dfrac{(1+i)^n -1}{i(1+i)^n}\right]$

66. The cost of machinery is Rs. 1,25,000/- if its useful life is estimated to be 20 years and the rate of depreciation of its cost is 10% p.a., then the scrap value of the Machinery is [given that $(0.9)^{20}$ = 0.12158] $S = C(1-n)^n$

 (a) 15,197   (b) 15,400   (c) 15,300   (d) 15,250

67. If A person invests Rs.5,000 in a three years' investment that pays you 12% per annum. Calculate the future value of the investment.

 (a) Rs.7024.64   (b) Rs. 7124.78   (c) Rs.7324.48   (d) Rs.7526.48

68. Anil bought a motor cycle costing Rs.1,50,000 by making a down payment of Rs.50,000 and agreeing to make equal annual payment for five years. How much would be each payment if the interest on unpaid amount be 10% compounded annually? [P (5, 0.10) = 3.7908]

 (a) Rs.26379.66   (b) Rs.26300.70   (c) Rs.26500.70   (d) Rs.26370.70

69. Shoba borrows Rs.50,00,000 to buy a house. If he pays equal instalments for 20 years and 10% interest on outstanding balance, what will be the equal annual instalment?

 [Given : P(20,0.10) =8.51356]

 (a) Rs.687298.4   (b) Rs.685298.4   (c) Rs.585298.4   (d) Rs.587298.4

70. How much money is to be invested every year so to accumulate Rs. 3,00,000 at the end of 10 years if interest is compounded annually at 10% [A (10,0.1) = 15.9374)

 (a) Rs.18823.65   (b) Rs.18833.64   (c) Rs.18223.60   (d) Rs.16823.65

MTP-March'22

71. In what time will be a sum of money doubles itself at 6.25% p.a simple interest ?

 (a) 5 years   (b) 8 years   (c) 12 years   (d) 16 years

72. Mr. X invests ₹ 10,000 every year starting from today for next 10 years suppose interest rate is 8% per annum compounded annually. Calculate future value of the annuity: (Given that $(1+0.08)^{10}$ = 2.158925]

 (a) ₹ 156454.88   (b) ₹ 144865.625   (c) ₹ 156554.88   (d) none of these

73. How much time would the simple interest on a certain sum be 0.125 times the principal at 10% per annum

(a) $1\frac{1}{4}$ Years   (b) $1\frac{3}{4}$ Years   (c) $2\frac{1}{4}$ Years   (d) $2\frac{3}{4}$ Years

74. The time in by which a sum of money is 8 times of itself if it doubles itself in 15 years interest compounded annually.

(a) 42 years   (b) 43 years   (c) 45 years   (d) 46 years

75. Present value of a scooter is ₹ 7290, if its value decreases every year by 10% then the value before 3 years is equal to

(a) 10,000   (b) 10,500   (c) 20,000   (d) 20,500

76. Find the effective rate of interest at 10% p.a when the interest is payable quarterly.

(a) 10.38%   (b) 5%   (c) 5.04%   (d) 4%

77. The difference between in simple interest on a sum invested of ₹ 1500 for 3 years is ₹ 18. The difference in their rate is

(a) 0.4   (b) 0.6   (c) 0.8   (d) 0.10

78. If population is 25,000 then What will be the population after 3 years . When the population increases at the rate 3 % in 1 year, 4 % in II year and 5% in III year.

(a) 28,119   (b) 29,118   (c) 27,000   (d) 30,000

79. If ₹10,000 is invested at 8 % per annum, then compounded quarterly.Then value of investment after 2 years is

(a) ₹ 11,716.59   (b) ₹ 10,716.59   (c) ₹ 12,715.59   (d) none of these

80. In how many years will a sum of money become double at 5% p.a compound interest

(a) 14 years   (b) 15 years   (c) 16 years   (d) 14.3 Years

MTP-Oct '21

81. The future value of an annuity of ₹1,000 is made annually for 5 years at interest rate of 14% compounded annually [Given that $(1.14)^5$ = 1.92541] is

(a) ₹5610   (b) ₹ 6610   (c) ₹6160   (d) ₹ 5160

82. A sum of ₹46,875 was lent out at simple interest and at the end of 1 year 8 months, the total amount was ₹ 50,000. Find the rate of interest per annum.

(a) 8%   (b) 4%   (c) 12%   (d) None

83. A sum of money amount to ₹ 6,200 in 2 years and ₹ 7,400 in 3 years. The principal and rate of interest are

(a) ₹3,800, 31.57%   (b) ₹3,000, 20%   (c) ₹ 3,500, 15%   (d) none of these

84. The effective rate of interest corresponding to a nominal rate 3% p.a payable half yearly is

(a) 3.2% p.a   (b) 3.25% p.a   (c) 3.0225% p.a   (d) none of these

85. A sum of money gets doubled in 5 years at X% simple interest. If the interest was Y%, the sum of money would have become ten-fold in thirty years. What is Y – X (in %)

(a) 10   (b) 5   (c) 8   (d) None

86. The nominal rate of growth is 17% and inflation is 9% for the five years. Let P be the Gross Domestic Product (GDP) amount at the present year then the projected real GDP after 6 years is

(a) 1.587P   (b) 1.921 P   (c) 1.403 P   (d) 2.51 P

87. The difference between Compound Interest and Simple Interest on a certain sum for 2 years at 6% p.a. is ₹ 13.50. Find the sum

(a) 3750   (b) 2750   (c) 4750   (d) none

88. The sum required to earn a monthly interest of Rs 1200 at 18% per annum Simple Interest is

(a) ₹ 50,000   (b) ₹ 60,000   (c) ₹ 80,000   (d) none

89. The compound interest earned by a money lender on ₹ 7,000 for 3 years if the rate of interest for 3 years are 7%, 8% and 8.5% respectively is

(a) ₹ 1750   (b) ₹ 1800   (c) ₹ 1776   (d) none

90. Find the present value of an annuity of ₹ 1,000 payable at the end of each year for 10 years, if the money is worth 5% effective.

(a) ₹ 7,724   (b) ₹ 7000   (c) ₹ 8000   (d) none

91. The present value of annuity of ₹ 3,000 per annum for 15 years at 4.5% p.a C.I. annually is

(a) ₹ 23,809.41   (b) ₹ 32,214.60   (c) ₹ 32,908.41   (d) none

92. A person desires to create a fund to be invested at 10% CI per annum to provide for a prize of ' 300 every year. Using V = a/I find V and V will be

(a) ₹ 2,000   (b) ₹ 2,500   (c) ₹ 3,000   (d) none of these

93. The future value of annuity of ₹ 2000 for 5 years at 5 % compounded annually is given (in nearest ') as

(a) ₹ 11,051   (b) ₹ 21,021   (c) ₹ 1,56,24   (d) ₹ 61254

94. A Maruti Zen cost ₹ 3,60,000. Its price depreciates at the rate of 10% of a year during the first two years and at the rate of 20% in third year. Find the total depreciation.

(a) ₹ 1,26,720   (b) ₹ 1,15,620   (c) ₹ 1,25,000   (d) ₹ 1,10,520

MTP-Nov '21

95. Arun purchased a vaccum cleaner by giving ₹ 1700 as cash down payment, which will be followed by five EMIs of ₹ 480 each. The vaccum cleaner can also be bought by paying ₹ 3900 cash. What is the approx. rate of interest p.a. (at simple interest) under this instalment plan?

(a) 18%   (b) 19%   (c) 22%   (d) 20%

96. Present Value of a five year annuity is Rs. 2,000. If the rate of interest is 8% p.a., what is the amount of each annuity payment?

(a) Rs.500.9   (b) Rs.463.8   (c) Rs.363.1   (d) Rs.486.4

97. Abdul has taken a loan from Bahadur at 7% p.a. The loan has to be repaid in three equal yearly instalments of Rs. 10,000 each. What is the amount of loan taken?

(a) Rs.25,467   (b) Rs.26,897   (c) Rs.26,243   (d) None

98. A took a loan from B. The loan is to be repaid in annual installments of Rs. 2,000 each. The first instalment is to be paid three years from today and the last one is to be paid 8 years from today? What is the value of loan today, using a discount rate of eight percent?

(a) Rs.9,246   (b) Rs.7,927   (c) Rs.8,567   (d) None

99. If the cost of capital be 12% per annum, then the Net Present Value (in nearest Rs.) from the given cash flow is given as

Year	0	1	2	3
Operating Profit (in thousand Rs.)	(100)	60	40	50

(a) Rs.34048   (b) Rs.34185   (c) Rs.51048   (d) Rs.21048

100. Let the operating profit of a manufacturer for five years is given as

Year	1	2	3	4	5	6
Operating Profit (in lakh Rs.)	90	100	106.4	107.14	120.24	157.35

Calculate Compound Annual Growth Rate (CAGR)
- (a) 9%
- (b) 12%
- (c) 11%
- (d) 13%

101. If a sum triples itself in 15 years at simple rat of interest, the rate of interest per annum will be:
- (a) 13%
- (b) 13.3%
- (c) 13.5%
- (d) 18.0%

102. What will be population after 3 years when present population is 25, 000 and population increases at the rate of 3% in I year, at 4% in II year and 5% in III year?
- (a) Rs.28,119
- (b) Rs.29,118
- (c) Rs.27, 000
- (d) Rs.30, 000

103. The future value of an annuity of Rs.1500 made annually for five years at interest of 10% compounded annually is (Given that $(1.1)^5 = 1.61051$)
- (a) Rs.9517.56
- (b) Rs.9157.65
- (c) Rs.9715.56
- (d) Rs.9175.65

104. Find the effective rate of interest equivalent to the nominal rate of 7% converted monthly:
- (a) 7.26%
- (b) 7.22%
- (c) 7.02%
- (d) 7.20%

105. How much will be Rs.25,000 to in 2 years at compound interest if the rates for the successive years are at 4% and 5% per year
- (a) Rs.27,300
- (b) Rs.27,000
- (c) Rs.27,500
- (d) Rs.27,900

MTP-2 Nov'22

106. A man invests ₹ 12,000 at 10% p.a. and another sum of money at 20% p.a for one year. The total investment earns at 14% p.a. simple interest the total investment is:
- (a) ₹8,000
- (b) ₹20,000
- (c) ₹14,000
- (d) ₹16,000

107. The difference in simple interest of a sum invested of ₹ 1,500 for 3 years is ₹ 18. The difference in their rates is:
- (a) 0.4
- (b) 0.6
- (c) 0.8
- (d) 0.10

108. Find the effective rate of interest on ₹ 10,000 on which interest is payable half yearly at 5% p.a.
- (a) 5.06%
- (b) 4%
- (c) 0.4%
- (d) 3%

109. Find the effective rate of interest at 10% p.a. when interest is payable quarterly.
- (a) 10.38%
- (b) 5%
- (c) 5.04%
- (d) 4%

110. What will be the population after 3 years when present population is 25,000 and population increases at the rate of 3% in 1st year, at 4% in 2nd year and at 5% in 3rd year?
- (a) 28,119
- (b) 29,118
- (c) 27,000
- (d) 30,000

111. The value of scooter is ₹ 10,000. Find its value after 7 years if rate of depreciation is 10% p.a.
- (a) ₹4,782.96
- (b) ₹4,278.69
- (c) ₹42,079
- (d) ₹42,000

112. SI = 0.125 P at 10% p.a. Find Time.
- (a) 1.25 years
- (b) 25 years
- (c) 0.25 years
- (d) None of these

125. ₹ 800 is invested at the end of each month in account paying interest 6% per year compounded monthly. What is the future value of annuity after 10th payment ? [Given that $(1.005)^{10} = 1.0511$]

(a) ₹ 4444   (b) ₹ 8766   (c) ₹ 3491   (d) ₹ 8176

126. Certain sum of money borrowed at simple interest to ₹ 2688 in three years and to ₹ 2784 in four years at the rate per annum equal to

2496

(a) 4%   (b) 6%   (c) 5%   (d) 7%

127. Ravi made of an investment of ₹ 15,000 in a scheme and at the time of maturity the time of maturity the amount was ₹ 25,000. If Compound Annual Growth Rate (CAGR) for this investment is 8.88%. Calculate the approximate number of years for which he has invested the amount. $A = P(1+h)^n$

(a) 6   (b) 7.7   (c) 5.5   (d) 7

128. Madhu takes a loan of ₹ 50,000 from ABC Bank LTD.The rate of interest is 10% per annum. The first instalmennt will be paid at the end of five year. Determine the amount (in ₹) of equal instalments, if Madhu wishes to repay the amount in five years.

(a) ₹ 19,510   (b) ₹ 19,430   (c) ₹ 19,310   (d) ₹ 16,630

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129. Rajesh invests ₹ 20,000 per year in a stock index fund, with earns 9% per year, for the next ten years.What would be closest value of accumulated investment upon payment of the last installment?

[Given: $(1.09)^{10} = 2.36736$] $FV = A \times \left(\frac{(1+i)^n}{i}\right)$

(a) ₹ 3,88,764.968   (b) ₹ 3,03,858.564   (c) ₹ 2,68,728.484   (d) ₹ 4,08,718.364

130. An investment is earning compounded interest ₹ 100 invested in the year 2 accumulated to ₹ 105 by year 4. If ₹ 500 invested in the year 5, will become ₹ _____ by year 10.

(a) ₹ 364.80   (b) ₹ 564.80   (c) ₹ 464.80   (d) ₹ 664.80

131. An investor is saving to pay off an obligation of ₹ 15,250 which will due in seven years, if the investor is earning 7.5% simple interest rate per annum , he must deposit ₹ _____ to meet the obligation.

(a) ₹ 8,000   (b) ₹ 9,000   (c) ₹ 10,000   (d) ₹ 11,000

132. The value of scooter is ₹ 1,00,000 find its depreciation is 10% p.a. Calculte total depreciation value at the end of seven years.

(a) ₹ 47829.70   (b) ₹ 47000.90   (c) ₹ 42709   (d) ₹ 42,000

133. Effective rate of interest does not depend upon

(a) Amount of Principal   (b) Amount of Interest

(c) Number of conversion periods   (d) none of these

MTP-2 June'22

134. Find the effective rate of interest if an amount of 30,000 deposited in a bank. For 1 year at the rate of 10% per annum compounded semi-annually.

$ERI = (1+i)^n - 1$

(a) 10.05%   (b) 10.10%   (c) 10.20%   (d) 10.25%

135. The present population of a town is 25,000. If it grows at the rate of 4%, 5%, 8% during 1 st year, 2nd year, 3rd year respectively. Then find the population after 3 years.

(a) 29,484   (b) 29,844   (c) 29,448   (d) 28,944

136. The present value of a scooter is ₹ 7290. The rate of depreciation is 10%. What was its value 3 years ago?

(a) 10000   (b) 10010   (c) 9990   (d) 12000

Chapter-4 : Time Value of Money

137.

138.

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140.

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21	(b)	22	(b)	23	(b)	24	(d)
25	(b)	26	(d)	27	(d)	28	(a)
29	(c)	30	(a)	31	(c)	32	(a)
33	(b)	34	(d)	35	(a)	36	(a)
37	(a)	38	(b)	39	(b)	40	(b)
41	(d)	42	(b)	43	(a)	44	(b)
45	(a)	46	(a)	47	(d)	48	(b)
49	(c)	50	(c)	51	(b)	52	(a)
53	(d)	54	(b)	55	(a)	56	(d)
57	(b)	58	(a)	59	(a)	60	(b)
61	(b)	62	(c)	63	(b)	64	(a)
65	(a)	66	(a)	67	(a)	68	(a)
69	(d)	70	(a)	71	(d)	72	(a)
73	(a)	74	(c)	75	(a)	76	(a)
77	(a)	78	(a)	79	(a)	80	(d)
81	(b)	82	(b)	83	(a)	84	(c)
85	(a)	86	(a)	87	(a)	88	(c)
89	(c)	90	(a)	91	(b)	92	(c)
93	(a)	94	(a)	95	(c)	96	(a)
97	(c)	98	(b)	99	(d)	100	(b)
101	(b)	102	(a)	103	(b)	104	(b)
105	(a)	106	(b)	107	(a)	108	(a)

Chapter-4 : Time Value of Money (Math...

109	(a)	110	(a)	111	(a)	112	(a)
113	(c)	114	(d)	115	(a)	116	(b)
117	(a)	118	(b)				
119	(a)	120	(a)	121	(d)	122	(a)
123	(c)	124	(b)	125	(d)	126	(a)
127	(a)	128	(c)	129	(b)	130	(b)
131	(c)	132	(a)	133	(a)	134	(d)
135	(a)	136	(a)	137	(a)	138	(c)
139	(a)	140	(c)	141	(a)	142	(c)
143	(a)	144	(b)	145	(b)		

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