CA Foundation Test Chapter-4 Mathematics of Finance (13.08.2024)

[1] Find the present value of ₹15,000 to be received 4 years from now, if the discount rate is 7% per annum compounded annually.

(a) ₹11,430.55
(b) ₹11,917.58
(c) ₹12,343.67
(d) ₹12,789.00

[2] What will be the amount of ₹50,000 after 6 years, if the interest rate is 8% per annum compounded quarterly?

(a) ₹80,085.29
(b) ₹79,850.60
(c) ₹79,784.70
(d) ₹79,842.00

[3] Calculate the future value of an annuity of ₹7,000 invested annually for 5 years at an interest rate of 10% per annum.

(a) ₹42,985.00
(b) ₹42,125.76
(c) ₹44,835.29
(d) ₹45,317.34

[4] The present value of an annuity of ₹8,000 received annually for 7 years at an interest rate of 9% per annum is:

(a) ₹46,733.20
(b) ₹48,195.90
(c) ₹44,187.45
(d) ₹45,212.30

[5] The effective annual rate of interest for a nominal rate of 12% per annum compounded monthly is:

(a) 12.68%
(b) 12.34%
(c) 12.89%
(d) 12.75%

[6] If ₹5,000 is invested at an interest rate of 6% per annum compounded semi-annually, what will be the value after 3 years?

(a) ₹5,955.08
(b) ₹5,941.16
(c) ₹5,921.05
(d) ₹5,987.54

[7] The compound interest on ₹20,000 for 3 years at 10% per annum is:

(a) ₹6,620
(b) ₹6,720
(c) ₹6,810
(d) ₹6,620

[8] Find the present value of ₹1,00,000 receivable at the end of 10 years, if the interest rate is 5% per annum compounded annually.

(a) ₹61,391
(b) ₹62,300
(c) ₹63,025
(d) ₹64,031

[9] Calculate the present value of an annuity due of ₹12,000 per year for 5 years at 8% per annum.

(a) ₹49,925.08
(b) ₹50,185.00
(c) ₹50,678.67
(d) ₹51,301.12

[10] What is the amount of ₹25,000 after 8 years if the interest rate is 7% per annum compounded annually?

(a) ₹42,876.18
(b) ₹41,742.14
(c) ₹40,327.61
(d) ₹39,875.92

[11] Calculate the present value of ₹50,000 to be received 8 years from now if the discount rate is 10% per annum.

(a) ₹23,348.87
(b) ₹25,000.00
(c) ₹26,885.68
(d) ₹27,982.00

[12] The future value of ₹20,000 invested today at 12% per annum compounded semi-annually for 5 years is:

(a) ₹35,523.58
(b) ₹35,190.34
(c) ₹36,000.00
(d) ₹37,827.13

[13] An annuity of ₹10,000 is deposited at the end of each year for 7 years in a savings account earning 8% interest per annum. What will be the accumulated amount at the end of 7 years?

(a) ₹89,180.02
(b) ₹85,767.84
(c) ₹86,250.65
(d) ₹87,746.98

[14] What is the effective annual rate (EAR) if the nominal rate is 9% per annum compounded quarterly?

(a) 9.31%
(b) 9.19%
(c) 9.41%
(d) 9.28%

[15] The present value of an annuity due of ₹5,000 per year for 10 years at an interest rate of 5% per annum is:

(a) ₹38,556.05
(b) ₹38,956.28
(c) ₹40,249.24
(d) ₹41,554.87

[16] If ₹30,000 is invested at an interest rate of 8% per annum compounded annually, what will be the amount after 4 years?

(a) ₹39,650.56
(b) ₹38,980.32
(c) ₹40,707.04
(d) ₹41,372.29

[17] Find the compound interest on ₹10,000 for 2 years at 10% per annum, compounded half-yearly.

(a) ₹2,104
(b) ₹2,050
(c) ₹2,090
(d) ₹2,100

[18] The present value of ₹75,000 to be received 6 years from now at a discount rate of 7% per annum is:

(a) ₹49,939.70
(b) ₹51,072.18
(c) ₹50,012.15
(d) ₹50,987.26

[19] Calculate the future value of an annuity due of ₹8,000 invested annually for 5 years at an interest rate of 6% per annum.

(a) ₹45,155.68
(b) ₹46,778.00
(c) ₹44,183.49
(d) ₹47,600.72

[20] If the present value of ₹20,000 to be received 3 years from now is ₹15,873, what is the discount rate used?

(a) 6%
(b) 8%
(c) 9%
(d) 10%

[21] What is the present value of a perpetuity that pays Rs. 500 annually with a discount rate of 8%?

(a) 5000
(b) 6000
(c) 6250
(d) 6520

[22] 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?

(a) 7 years

(b) 8 years

(c) 9 years

(d) 10 years

[23] A sinking fund is created for redeeming debentures worth Rs 5lakhs at the end of 25 years. How much provision needs to be made out of profits each year provided sinking fund investments can earn interest at 4% p.a.?

(a) Rs 12,006

(b) Rs 12,040

(c) Rs 12,039

(d) Rs 12,035

[24] A machine costs Rs 5,20,000 with an estimated life of 25 years. A sinking fund is created to replace it by a new model at 25% higher cost after 25 years with a scrap value realization of Rs 25000. what amount should be set aside every year if the sinking fund investments accumulate at 3.5% compound interest p.a.?

(a) Rs 16,000

(b) Rs 16,500

(c) Rs 16,050

(d) Rs 16,005

[25] Alibaba borrows Rs 6 lakhs Housing Loan at 6% repayable in 20 annual installments commencing at the end of the first year. How much annual payment is necessary.

(a) Rs 52,420

(b) Rs 52,419

(c) Rs 52,310

(d) Rs 52,320