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CFA Level 1

Curriculum Changes (2011-2012)

LOS Detail June 2011 (Old)					LOS Detail June 2012 (New)				
SS	**LOS**	**LOS Description**	**Sub LOS**	**Sub LOS Description**	**SS**	**LOS**	**LOS Description**	**Sub LOS**	**Sub LOS Description**
1	1	Code of Ethics and Standards of Professional Conduct	a	describe the structure of the CFA Institute Professional Conduct Program and the process for the enforcement of the Code and Standards;	**1**	1	Code of Ethics and Standards of Professional Conduct	a	describe the structure of the CFA Institute Professional Conduct Program and the process for the enforcement of the Code and Standards;
			b	state the six components of the Code of Ethics and the seven Standards of Professional Conduct;				b	state the six components of the Code of Ethics and the seven Standards of Professional Conduct;
			c	explain the ethical responsibilities required by the Code and Standards, including				c	explain the ethical responsibilities required by the Code and Standards, including

				the multiple sub-sections of each Standard.						the multiple sub-sections of each Standard.
	2	Guidance for Standards I–VII	a	demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to situations involving issues of professional integrity;		2	Guidance for Standards I–VII	a		demonstrate and explain the application of the Code of Ethics and Standards of Professional Conduct to situations involving issues of professional integrity;
			b	distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards;				b		distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and Standards;
			c	recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct.				c		recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct.
	3	Introduction to the Global Investment Performance Standards (GIPS)	a	explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards;		3	Introduction to the Global Investment Performance Standards (GIPS)	a		explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards;
			b	explain the construction and purpose of composites in				b		explain the construction and purpose of composites in

				performance reporting;					performance reporting;
			c	explain the requirements for verification.				c	explain the requirements for verification.
	4	Global Investment Performance Standards (GIPS)	a	describe the key characteristics of the GIPS standards and the fundamentals of compliance;		4	Global Investment Performance Standards (GIPS)	a	describe the key features of the GIPS standards and the fundamentals of compliance;
			b	describe the scope of the GIPS standards with respect to an investment firm's definition and historical performance record;				b	describe the scope of the GIPS standards with respect to an investment firm's definition and historical performance record;
			c	explain how the GIPS standards are implemented in countries with existing standards for performance reporting and describe the appropriate response when the GIPS standards and local regulations conflict;				c	explain how the GIPS standards are implemented in countries with existing standards for performance reporting and describe the appropriate response when the GIPS standards and local regulations conflict;
			d	characterize the nine major sections of the GIPS standards.				d	describe the nine major sections of the GIPS standards.
2	5	The Time Value of Money	a	interpret interest rates as required rate of return, discount rate, or opportunity cost;	**2**	5	The Time Value of Money	a	interpret interest rates as required rate of return, discount rate, or opportunity cost;
			b	explain an interest				b	explain an interest

				rate as the sum of a real risk-free rate, expected inflation, and premiums that compensate investors for distinct types of risk;					rate as the sum of a real risk-free rate, expected inflation, and premiums that compensate investors for distinct types of risk;
			c	calculate and interpret the effective annual rate, given the stated annual interest rate and the frequency of compounding;				c	calculate and interpret the effective annual rate, given the stated annual interest rate and the frequency of compounding;
			d	solve time value of money problems when compounding periods are other than annual;				d	solve time value of money problems for different frequencies of compounding;
			e	calculate and interpret the future value (FV) and present value (PV) of a single sum of money, an ordinary annuity, an annuity due, a perpetuity (PV only), and a series of unequal cash flows;				e	calculate and interpret the future value (FV) and present value (PV) of a single sum of money, an ordinary annuity, an annuity due, a perpetuity (PV only), and a series of unequal cash flows;
			f	draw a time line and solve time value of money applications (for example, mortgages and savings for college tuition or retirement).				f	demonstrate the use of a time line in modeling and solving time value of money problems.

	6	Discounted Cash Flow Applications	a	calculate and interpret the net present value (NPV) and the internal rate of return (IRR) of an investment;		6	Discounted Cash Flow Applications	a	calculate and interpret the net present value (NPV) and the internal rate of return (IRR) of an investment;
			b	contrast the NPV rule to the IRR rule, and identify problems associated with the IRR rule;				b	contrast the NPV rule to the IRR rule, and identify problems associated with the IRR rule;
			c	define, calculate, and interpret a holding period return (total return);				c	calculate and interpret a holding period return (total return);
			d	calculate, interpret, and distinguish between the money-weighted and time-weighted rates of return of a portfolio, and appraise the performance of portfolios based on these measures;				d	calculate, interpret, and distinguish between the money-weighted and timeweighted rates of return of a portfolio, and evaluate the performance of portfolios based on these measures;
			e	calculate and interpret the bank discount yield, holding period yield, effective annual yield, and money market yield for a U.S. Treasury bill;				e	calculate and interpret the bank discount yield, holding period yield, effective annual yield, and money market yield for a U.S. Treasury bill;
			f	convert among holding period yields, money market yields, effective annual yields, and bond				f	convert among holding period yields, money market yields, effective annual yields, and bond

				equivalent yields.					equivalent yields.
	7	Statistical Concepts and Market Returns	a	differentiate between descriptive statistics and inferential statistics, between a population and a sample, and among the types of measurement scales;		7	Statistical Concepts and Market Returns	a	distinguish between descriptive statistics and inferential statistics, between a population and a sample, and among the types of measurement scales;
			b	define a parameter, a sample statistic, and a frequency distribution;				b	define a parameter, a sample statistic, and a frequency distribution;
			c	calculate and interpret relative frequencies and cumulative relative frequencies, given a frequency distribution;				c	calculate and interpret relative frequencies and cumulative relative frequencies, given a frequency distribution;
			d	describe the properties of a data set presented as a histogram or a frequency polygon;				d	describe the properties of a data set presented as a histogram or a frequency polygon;
			e	define, calculate, and interpret measures of central tendency, including the population mean, sample mean, arithmetic mean, weighted average or mean (including a portfolio return viewed as a weighted mean), geometric mean, harmonic mean, median, and mode;				e	calculate and interpret measures of central tendency, including the population mean, sample mean, arithmetic mean, weighted average or mean (including a portfolio return viewed as a weighted mean), geometric mean, harmonic mean, median, and mode;

			f	describe, calculate, and interpret quartiles, quintiles, deciles, and percentiles;				f	calculate and interpret quartiles, quintiles, deciles, and percentiles;
			g	define, calculate, and interpret 1) a range and a mean absolute deviation and 2) the variance and standard deviation of a population and of a sample;				g	calculate and interpret 1) a range and a mean absolute deviation and 2) the variance and standard deviation of a population and of a sample;
			h	calculate and interpret the proportion of observations falling within a specified number of standard deviations of the mean using Chebyshev's inequality;				h	calculate and interpret the proportion of observations falling within a specified number of standard deviations of the mean using Chebyshev's inequality;
			i	define, calculate, and interpret the coefficient of variation and the Sharpe ratio;				i	calculate and interpret the coefficient of variation and the Sharpe ratio;
			j	define and interpret skewness, explain the meaning of a positively or negatively skewed return distribution, and describe the relative locations of the mean, median, and mode for a nonsymmetrical distribution;				j	explain skewness and the meaning of a positively or negatively skewed return distribution;

			k	define and interpret measures of sample skewness and kurtosis;				k	describe the relative locations of the mean, median, and mode for a unimodal, nonsymmetrical distribution;
			l	discuss the use of arithmetic mean or geometric mean when determining investment returns.				l	explain measures of sample skewness and kurtosis;
			-	-				m	explain the use of arithmetic and geometric means when analyzing investment returns.
	8	Probability Concepts	a	define a random variable, an outcome, an event, mutually exclusive events, and exhaustive events;		8	Probability Concepts	a	define a random variable, an outcome, an event, mutually exclusive events, and exhaustive events;
			b	explain the two defining properties of probability and distinguish among empirical, subjective, and a priori probabilities;				b	explain the two defining properties of probability and distinguish among empirical, subjective, and a priori probabilities;
			c	state the probability of an event in terms of odds for or against the event;				c	state the probability of an event in terms of odds for and against the event;
			d	distinguish between unconditional and conditional probabilities;				d	distinguish between unconditional and conditional probabilities;
			e	define and explain the multiplication, addition, and total				e	explain the multiplication, addition, and total

				probability rules;					probability rules;
			f	calculate and interpret 1) the joint probability of two events, 2) the probability that at least one of two events will occur, given the probability of each and the joint probability of the two events, and 3) a joint probability of any number of independent events;				f	calculate and interpret 1) the joint probability of two events, 2) the probability that at least one of two events will occur, given the probability of each and the joint probability of the two events, and 3) a joint probability of any number of independent events;
			g	distinguish between dependent and independent events;				g	distinguish between dependent and independent events;
			h	calculate and interpret, using the total probability rule, an unconditional probability;				h	calculate and interpret an unconditional probability using the total probability rule;
			i	explain the use of conditional expectation in investment applications;				i	explain the use of conditional expectation in investment applications;
			j	diagram an investment problem using a tree diagram;				j	explain the use of a tree diagram to represent an investment problem;
			k	calculate and interpret covariance and correlation;				k	calculate and interpret covariance and correlation;
			l	calculate and interpret the expected value, variance, and standard deviation				l	calculate and interpret the expected value, variance, and standard deviation

				of a random variable and of returns on a portfolio;					of a random variable and of returns on a portfolio;
			m	calculate and interpret covariance given a joint probability function;				m	calculate and interpret covariance given a joint probability function;
			n	calculate and interpret an updated probability using Bayes' formula;				n	calculate and interpret an updated probability using Bayes' formula;
			o	identify the most appropriate method to solve a particular counting problem, and solve counting problems using the factorial, combination, and permutation notations.				o	identify the most appropriate method to solve a particular counting problem, and solve counting problems using the factorial, combination, and permutation notations.
3	9	Common Probability Distributions	a	explain a probability distribution and distinguish between discrete and continuous random variables;	**3**	9	Common Probability Distributions	a	define a probability distribution and distinguish between discrete and continuous random variables and their probability functions;
			b	describe the set of possible outcomes of a specified discrete random variable;				b	describe the set of possible outcomes of a specified discrete random variable;
			c	interpret a probability function, a probability density function, and a cumulative distribution function;				c	interpret a cuulative distribution function;
			d	calculate and interpret				d	calculate and interpret

				probabilities for a random variable, given its cumulative distribution function;					probabilities for a random variable, given its cumulative distribution function;
			e	define a discrete uniform random variable and a binomial random variable;				e	define a discrete uniform random variable, a Bernoulli random variable, and a binomial random variable;
			f	calculate and interpret probabilities given the discrete uniform and the binomial distribution functions;				f	calculate and interpret probabilities given the discrete uniform and the binomial distribution functions;
			g	construct a binomial tree to describe stock price movement;				g	construct a binomial tree to describe stock price movement;
			h	define, calculate, and interpret tracking error;				h	calculate, and interpret tracking error;
			i	describe the continuous uniform distribution and calculate and interpret probabilities, given a continuous uniform probability distribution;				i	define the continuous uniform distribution and calculate and interpret probabilities, given a continuous uniform distribution;
			j	explain the key properties of the normal distribution, distinguish between a univariate and a multivariate distribution, and explain the role of correlation in				j	explain the key properties of the normal distribution;

				the multivariate normal distribution;					
			k	determine the probability that a normally distributed random variable lies inside a given interval;				k	distinguish between a univariate and a multivariate distribution, and explain the role of correlation in the multivariate normal distribution;
			l	define the standard normal distribution, explain how to standardize a random variable, and calculate and interpret probabilities using the standard normal distribution;				l	determine the probability that a normally distributed random variable lies inside a given interval;
			m	define shortfall risk, calculate the safety-first ratio, and select an optimal portfolio using Roy's safety-first criterion;				m	define the standard normal distribution, explain how to standardize a random variable, and calculate and interpret probabilities using the standard normal distribution;
			n	explain the relationship between normal and lognormal distributions and why the lognormal distribution is used to model asset prices;				n	define shortfall risk, calculate the safety-first ratio, and select an optimal portfolio using Roy's safety-first criterion;
			o	distinguish between				o	explain the

			discretely and continuously compounded rates of return, and calculate and interpret a continuously compounded rate of return, given a specific holding period return;				relationship between normal and lognormal distributions and why the lognormal distribution is used to model asset prices;
		p	explain Monte Carlo simulation and historical simulation, and describe their major applications and limitations.			p	distinguish between discretely and continuously compounded rates of return, and calculate and interpret a continuously compounded rate of return, given a specific holding period return;
		-	-			q	explain Monte Carlo simulation and describe its major applications and limitations;
		-	-			r	compare Monte Carlo simulation and historical simulation.
10	Sampling and Estimation	a	define simple random sampling, sampling error, and a sampling distribution, and interpret sampling error;	10	Sampling and Estimation	a	define simple random sampling and a sampling distribution;
		b	distinguish between simple random and stratified random sampling;			b	explain sampling error;
		c	distinguish between			c	distinguish between

				time-series and cross-sectional data;					simple random and stratified random sampling;
			d	interpret the central limit theorem and describe its importance;				d	distinguish between time-series and cross-sectional data;
			e	calculate and interpret the standard error of the sample mean;				e	explain the central limit theorem and its importance;
			f	distinguish between a point estimate and a confidence interval estimate of a population parameter;				f	calculate and interpret the standard error of the sample mean;
			g	identify and describe the desirable properties of an estimator (unbiased, efficient, consistent);				g	identify and describe desirable properties of an estimator;
			h	explain the construction of confidence intervals;				h	distinguish between a point estimate and a confidence interval estimate of a population parameter;
			i	describe the properties of Student’s t-distribution and calculate and interpret its degrees of freedom;				i	describe the properties of Student’s t-distribution and calculate and interpret its degrees of freedom;
			j	calculate and interpret a confidence interval for a population mean, given a normal distribution				j	calculate and interpret a confidence interval for a population mean, given a normal distribution

				with 1) a known population variance, 2) an unknown population variance, or 3) an unknown variance and a large sample size;					with 1) a known population variance, 2) an unknown population variance, or 3) an unknown variance and a large sample size;
			k	discuss the issues regarding selection of the appropriate sample size, data-mining bias, sample selection bias, survivorship bias, look-ahead bias, and time-period bias.				k	discuss the issues regarding selection of the appropriate sample size, data-mining bias, sample selection bias, survivorship bias, look-ahead bias, and time-period bias.
	11	Hypothesis Testing	a	define a hypothesis, describe the steps of hypothesis testing, interpret and discuss the choice of the null hypothesis and alternative hypothesis, and distinguish between one-tailed and two-tailed tests of hypotheses;		11	Hypothesis Testing	a	define a hypothesis, describe the steps of hypothesis testing, describe and interpret the choice of the null and alternative hypotheses, and distinguish between one-tailed and two-tailed tests of hypotheses;
			b	define and interpret a test statistic, a Type I and a Type II error, and a significance level, and explain how significance levels are used in hypothesis testing;				b	explain a test statistic, Type I and Type II errors, a significance level, and how significance levels are used in hypothesis testing;
			c	define and interpret a decision rule and the power of a test, and explain the relation between				c	explain a decision rule, the power of a test, and the relation between confidence intervals and

				confidence intervals and hypothesis tests;					hypothesis tests;
			d	distinguish between a statistical result and an economically meaningful result;				d	distinguish between a statistical result and an economically meaningful result;
			e	explain and interpret the p-value as it relates to hypothesis testing;				e	explain and interpret the p-value as it relates to hypothesis testing;
			f	identify the appropriate test statistic and interpret the results for a hypothesis test concerning the population mean of both large and small samples when the population is normally or approximately distributed and the variance is 1) known or 2) unknown;				f	identify the appropriate test statistic and interpret the results for a hypothesis test concerning the population mean of both large and small samples when the population is normally or approximately distributed and the variance is 1) known or 2) unknown;
			g	identify the appropriate test statistic and interpret the results for a hypothesis test concerning the equality of the population means of two at least approximately normally distributed populations, based on independent random samples with 1) equal or 2) unequal assumed variances;				g	identify the appropriate test statistic and interpret the results for a hypothesis test concerning the equality of the population means of two at least approximately normally distributed populations, based on independent random samples with 1) equal or 2) unequal assumed variances;

			h	identify the appropriate test statistic and interpret the results for a hypothesis test concerning the mean difference of two normally distributed populations (paired comparisons test);				h	identify the appropriate test statistic and interpret the results for a hypothesis test concerning the mean difference of two normally distributed populations;
			i	identify the appropriate test statistic and interpret the results for a hypothesis test concerning 1) the variance of a normally distributed population, and 2) the equality of the variances of two normally distributed populations based on two independent random samples;				i	identify the appropriate test statistic and interpret the results for a hypothesis test concerning 1) the variance of a normally distributed population, and 2) the equality of the variances of two normally distributed populations based on two independent random samples;
			j	distinguish between parametric and nonparametric tests and describe the situations in which the use of nonparametric tests may be appropriate.				j	distinguish between parametric and nonparametric tests and describe the situations in which the use of nonparametric tests may be appropriate.
	12	Technical Analysis	a	explain the principles of technical analysis, its applications, and its underlying assumptions;	12	Technical Analysis		a	explain the principles of technical analysis, its applications, and its underlying assumptions;
			b	discuss the construction and interpretation of				b	describe the construction of and interpret different

				different types of technical analysis charts;					types of technical analysis charts;
			c	demonstrate the uses of trend, support, and resistance lines, and change in polarity;				c	demonstrate the uses of trend, support, and resistance lines, and change in polarity;
			d	identify and interpret common chart patterns;				d	identify and interpret common chart patterns;
			e	discuss common technical analysis indicators: price-based, momentum oscillators, sentiment, and flow of funds;				e	describe common technical analysis indicators: price-based, momentum oscillators, sentiment, and flow of funds;
			f	explain the use of cycles by technical analysts;				f	explain the use of cycles by technical analysts;
			g	discuss the key tenets of Elliott Wave Theory and the importance of Fibonacci numbers;				g	describe the key tenets of Elliott Wave Theory and the importance of Fibonacci numbers;
			h	describe intermarket analysis as it relates to technical analysis and asset allocation.				h	describe intermarket analysis as it relates to technical analysis and asset allocation.
4	13	Elasticity	a	calculate and interpret the elasticities of demand (price elasticity, cross elasticity, and income elasticity) and the elasticity of supply	**4**	13	Demand and Supply Analysis: Introduction	a	distinguish among types of markets;

				and discuss the factors that influence each measure;					
			b	calculate elasticities on a straight-line demand curve, differentiate among elastic, inelastic, and unit elastic demand, and describe the relation between price elasticity of demand and total revenue.				b	explain the principles of demand and supply;
			-	-				c	describe causes of shifts in and movements along demand and supply curves;
			-	-				d	describe the process of aggregating demand and supply curves, including the concept of equilibrium and mechanisms by which markets achieve equilibrium;
			-	-				e	distinguish between stable and unstable equilibria and identify instances of such equilibria;
			-	-				f	calculate and interpret individual and aggregate inverse demand and supply functions and individual and aggregate demand

									and supply curves;
			-	-				g	calculate and interpret the amount of excess demand or excess supply associated with a non-equilibrium price;
			-	-				h	describe the types of auctions and calculate the winning price(s) of an auction;
			-	-				i	analyze the causes of a demand or supply imbalance that affects a good or service;
			-	-				j	describe the impact of government regulation and intervention on demand and supply;
			-	-				k	forecast the effect of the introduction and removal of a market interference (e.g., a price floor or ceiling) on price and quantity;
			-	-				l	calculate and interpret consumer surplus, producer surplus, and total surplus;
			-	-				m	calculate and interpret price, income, and cross-price elasticities of demand

									including factors that affect each measure.
	14	Efficiency and Equity	a	explain the various means of markets to allocate resources, describe marginal benefit and marginal cost, and demonstrate why the efficient quantity occurs when marginal benefit equals marginal cost;		14	Demand and Supply Analysis: Consumer Demand	a	describe consumer choice theory and utility theory;
			b	distinguish between the price and the value of a product and explain the demand curve and consumer surplus;				b	describe the use of indifference curves, opportunity sets, and budget constraints in decision making;
			c	distinguish between the cost and the price of a product and explain the supply curve and producer surplus;				c	calculate and interpret a budget constraint;
			d	discuss the relationship between consumer surplus, producer surplus, and equilibrium;				d	determine a consumer's equilibrium bundle of goods based on utility analysis;
			e	explain 1) how efficient markets ensure optimal resource utilization and 2) the obstacles to efficiency and the resulting underproduction or overproduction				e	compare substitution and income effects;

				including the concept of deadweight loss;					
			f	explain the two groups of ideas about the fairness principle (utilitarianism and the symmetry principle) and discuss the relation between fairness and efficiency.				f	distinguish between normal goods and inferior goods, and explain Giffen goods and Veblen goods in this context.
	15	Markets in Action	a	explain market equilibrium, distinguish between long-term and short-term effects of outside shocks, and describe the effects of rent ceilings on the existence of black markets in the housing sector and on the market's efficiency;		15	Demand and Supply Analysis: The Firm	a	calculate, interpret, and compare accounting profit, economic profit, normal profit, and economic rent;
			b	describe labor market equilibrium and explain the effects and inefficiencies of a minimum wage above the equilibrium wage;				b	calculate and interpret total, average, and marginal revenue;
			c	explain the impact of taxes on supply, demand, and market equilibrium, and describe tax incidence and its relation to demand and supply elasticity;				c	describe the firm's factors of production;

			d	discuss the impact of subsidies, quotas, and markets for illegal goods on demand, supply, and market equilibrium.				d	calculate and interpret total, average, marginal, fixed, and variable costs;
			-	-				e	describe breakeven and shutdown points of production;
			-	-				f	explain how economies of scale and diseconomies of scale affect costs;
			-	-				g	describe approaches to determining the profit-maximizing level of output;
			-	-				h	distinguish between short-run and long-run profit maximization;
			-	-				i	distinguish among decreasing-cost, constant-cost, and increasing-cost industries and describe the long-run supply of each;
			-	-				j	calculate and interpret total, marginal, and average product of labor;
			-	-				k	describe the phenomenon of diminishing marginal returns and calculate and interpret the profit-maximizing utilization level of an

									input;
			-	-				l	describe the optimal combination of resources that minimizes cost.
	16	Organizing Production	a	explain the types of opportunity cost and their relation to economic profit, and calculate economic profit;		16	The Firm and Market Structures	a	describe the characteristics of different market structures: perfect competition, monopolistic competition, oligopoly, and pure monopoly;
			b	discuss a firm's constraints and their impact on achievability of maximum profit;				b	explain the relationships between price, marginal revenue, marginal cost, economic profit, and the elasticity of demand under each market structure;
			c	differentiate between technological efficiency and economic efficiency and calculate economic efficiency of various firms under different scenarios;				c	describe the firm's supply function under each market structure;
			d	explain command systems and incentive systems to organize production, the principal-agent problem, and measures a firm uses to reduce the principal-agent				d	describe and determine the profit-maximizing price and output for firms under each market structure;

				problem;					
			e	describe the different types of business organization and the advantages and disadvantages of each;				e	explain the effects of demand changes, entry and exit of firms, and other factors on long-run equilibrium under each market structure;
			f	calculate and interpret the four-firm concentration ratio and the Herfindahl-Hirschman Index, and discuss the limitations of concentration measures;				f	describe the use and limitations of concentration measures in identifying market structure;
			g	explain why firms are often more efficient than markets in coordinating economic activity.				g	identify the type of market structure within which a firm is operating.
	17	Output and Costs	a	differentiate between short-run and long-run decision time frames;	**5**	17	Aggregate Output, Prices, and Economic Growth	a	calculate and explain gross domestic product (GDP) using expenditure and income approaches;
			b	describe and explain the relations among total product of labor, marginal product of labor, and average product of labor, and describe increasing and decreasing marginal returns;				b	compare the sum-of-value-added and value-of-final-output methods of calculating GDP;
			c	distinguish among total cost (including				c	compare nominal and real GDP and

				both fixed cost and variable cost), marginal cost, and average cost, and explain the relations among the various cost curves;					calculate and interpret the GDP deflator;
			d	explain the firm's production function, its properties of diminishing returns and diminishing marginal product of capital, the relation between short-run and long-run costs, and how economies and diseconomies of scale affect long-run costs.				d	compare GDP, national income, personal income, and personal disposable income;
			-	-				e	explain the fundamental relationship among saving, investment, the fiscal balance, and the trade balance;
			-	-				f	explain the IS and LM curves and how they combine to generate the aggregate demand curve;
			-	-				g	explain the aggregate supply curve in the short run and long run;
			-	-				h	describe the causes of shifts in and movements along aggregate demand and

									supply curves;
			-	-				i	describe how fluctuations in aggregate demand and aggregate supply cause short-run changes in the economy and the business cycle;
			-	-				j	describe the sources, measurement, and sustainability of economic growth;
			-	-				k	describe the production function approach to analyzing the sources of economic growth;
			-	-				l	distinguish between input growth and growth of total factor productivity as components of economic growth.
5	18	Perfect Competition	a	describe the characteristics of perfect competition, explain why firms in a perfectly competitive market are price takers, and differentiate between market and firm demand curves;		18	Understanding Business Cycles	a	describe the business cycle and its phases;
			b	determine the profit maximizing (loss minimizing) output for a perfectly competitive firm				b	describe what typically happens to inventory levels and labor and physical capital

				and explain marginal cost, marginal revenue, and economic profit and loss					utilization levels as an economy moves through the business cycle;
			-	-				c	describe theories of the business cycle;
			-	-				d	explain the types of unemployment and describe measures of unemployment;
			-	-				e	explain inflation, disinflation, and deflation;
			-	-				f	explain the construction of indices used to measure inflation;
			-	-				g	compare inflation measures, including their uses and limitations;
			-	-				h	describe factors that affect price levels;
			-	-				i	describe economic indicators, including their uses and limitations;
			-	-				j	identify the past, current, or expected future business cycle phase of an economy based on economic indicators.
	19	Monopoly	a	describe the characteristics of a monopoly, including factors that allow a monopoly to arise, and monopoly price-		19	Monetary and Fiscal Policy	a	compare monetary and fiscal policy;

				setting strategies;					
			b	explain the relation between price, marginal revenue, and elasticity for a monopoly, and determine a monopoly's profit-maximizing price and quantity;				b	explain the definition, qualities, and functions of money, and the money creation process;
			c	explain price discrimination and why perfect price discrimination is efficient;				c	describe theories of the demand for and supply of money;
			d	explain how consumer and producer surplus are redistributed in a monopoly, including the occurrence of deadweight loss and rent seeking;				d	describe the Fisher effect;
			e	explain the potential gains from monopoly and the regulation of a natural monopoly.				e	describe the roles and objectives of central banks;
			-	-				f	describe the implementation of monetary policy;
			-	-				g	describe the qualities of effective central banks;
			-	-				h	explain the relationships between monetary policy and economic growth, inflation, interest

									and exchange rates;
			-	-				i	determine whether a monetary policy is expansionary or contractionary;
			-	-				j	describe the limitations of monetary policy;
			-	-				k	describe the roles and objectives of fiscal policy;
			-	-				l	describe the tools of fiscal policy including their advantages and disadvantages;
			-	-				m	describe the arguments for and against being concerned with the size of a fiscal deficit (relative to GDP);
			-	-				n	explain the implementation of fiscal policy and the difficulties of implementation;
			-	-				o	determine whether a fiscal policy is expansionary or contractionary;
			-	-				p	explain the interaction of monetary and fiscal policy.
	20	Monopolistic Competition and Oligopoly	a	describe the characteristics of monopolistic competition and an oligopoly;	**6**	20	International Trade and Capital Flows	a	describe the benefits and costs of international trade;

			b	determine the profit-maximizing (loss-minimizing) output under monopolistic competition, explain why long-run economic profit under monopolistic competition is zero, and determine if monopolistic competition is efficient;				b	distinguish between comparative advantage and absolute advantage;
			c	compare and contrast monopolistic competition and perfect competition;				c	explain the Ricardian and Heckscher–Ohlin models of trade and the source(s) of comparative advantage in each model;
			d	explain the importance of innovation, product development, advertising, and branding under monopolistic competition;				d	compare types of trade and capital restrictions and their economic implications;
			e	explain the kinked demand curve model and the dominant firm model, and determine the profit-maximizing (loss-minimizing) output under each model;				e	explain motivations for and advantages of trading blocs, common markets, and economic unions;
			f	describe oligopoly games including the Prisoners' Dilemma.				f	describe the balance of payments accounts including their components;

			-	-			g	explain how decisions by consumers, firms, and governments influence the balance of payments;
			-	-			h	describe functions and objectives of the international organizations that facilitate trade, including the World Bank, the International Monetary Fund, and the World Trade Organization.
21	Markets for Factors of Production	a	explain why demand for the factors of production is called derived demand, differentiate between marginal revenue and marginal revenue product (MRP), and describe how the MRP determines the demand for labor and the wage rate;		21	Currency Exchange Rates	a	define an exchange rate, and distinguish between nominal and real exchange rates and spot and forward exchange rates;
		b	describe the factors that cause changes in the demand for labor and the factors that determine the elasticity of the demand for labor;				b	describe functions of and participants in the foreign exchange market;
		c	describe the factors determining the supply of labor, including the				c	define direct and indirect foreign exchange quotations, and

				substitution and income effects, and discuss the factors related to changes in the supply of labor, including capital accumulation;					convert direct (indirect) foreign exchange quotations into indirect (direct) foreign exchange quotations;
			d	describe the effects on wages of labor unions and of a monopsony and explain the possible consequences for a market that offers an efficient wage;				d	calculate and interpret the percentage change in a currency relative to another currency;
			e	differentiate between physical capital and financial capital and explain the relation between the demand for physical capital and the demand for financial capital;				e	calculate and interpret currency cross-rates;
			f	explain the factors that influence the demand and supply of capital;				f	convert forward quotations expressed on a points basis or in percentage terms into an outright forward quotation;
			g	differentiate between renewable and nonrenewable natural resources and describe the supply curve for each;				g	calculate and interpret a forward discount or premium;
			h	differentiate				h	calculate and

				between economic rent and opportunity costs.					interpret the forward rate consistent with the spot rate and the interest rate in each currency;
	22	Monitoring Jobs and the Price Level	a	define an unemployed person and interpret the main labor market indicators;				i	describe exchange rate regimes;
			b	define aggregate hours and real wage rates and explain their relation to gross domestic product (GDP);				j	explain the impact of exchange rates on countries' international trade and capital flows.
			c	explain the types of unemployment, full employment, the natural rate of unemployment, and the relation between unemployment and real GDP;				-	-
			d	explain and calculate the consumer price index (CPI) and the inflation rate, describe the relation between the CPI and the inflation rate, and explain the main sources of CPI bias.				-	-
	23	Aggregate Supply and Aggregate Demand	a	explain the factors that influence real GDP and long-run and short-run aggregate supply, explain movement along the				-	-

				long-run and short-run aggregate supply curves (LAS and SAS), and discuss the reasons for changes in potential GDP and aggregate supply;					
			b	explain the components of and the factors that affect real GDP demanded, describe the aggregate demand curve and why it slopes downward, and explain the factors that can change aggregate demand;				-	-
			c	differentiate between short-run and long-run macroeconomic equilibrium and explain how economic growth, inflation, and changes in aggregate demand and supply influence the macroeconomic equilibrium;				-	-
			d	compare and contrast the classical, Keynesian, and monetarist schools of macroeconomics.				-	-
6	24	Money, the Price Level, and Inflation	a	explain the functions of money;				-	-
			b	describe the components of the				-	-

				M1 and M2 measures of money and discuss why checks and credit cards are not counted as money;					
			c	describe the economic functions of and differentiate among the various depository institutions and explain the impact of financial regulation, deregulation, and innovation;				-	-
			d	explain the goals of the U.S. Federal Reserve (Fed) in conducting monetary policy and how the Fed uses its policy tools to control the quantity of money, and describe the assets and liabilities on the Fed's balance sheet;				-	-
			e	discuss the creation of money, including the role played by excess reserves, and calculate the amount of loans a bank can generate, given new deposits;				-	-
			f	describe the monetary base and explain the relation among the monetary base, the money multiplier, and the				-	-

				quantity of money;					
			g	explain the factors that influence the demand for money and describe the demand for money curve, including the effects of changes in real GDP and financial innovation;				-	-
			h	explain interest rate determination and the short-run and long-run effects of money on real GDP;				-	-
			i	discuss the quantity theory of money and its relation to aggregate supply and aggregate demand.				-	-
	25	U.S. Inflation, Unemployment, and Business Cycles	a	differentiate between inflation and the price level;				-	-
			b	describe and distinguish among the factors resulting in demand-pull and cost-push inflation and describe the evolution of demand-pull and cost-push inflationary processes;				-	-
			c	explain the costs of anticipated inflation;				-	-
			d	explain the relation among inflation, nominal interest rates, and the				-	-

				demand and supply of money;					
			e	explain the impact of inflation on unemployment and describe the short-run and long-run Phillips curve, including the effect of changes in the natural rate of unemployment;				-	-
			f	explain how economic growth, inflation, and unemployment affect the business cycle;				-	-
			g	describe mainstream business cycle theory and real business cycle (RBC) theory and distinguish between them, including the role of productivity changes.				-	-
	26	Fiscal Policy	a	explain supply side effects on employment, potential GDP, and aggregate supply, including the income tax and taxes on expenditure, and describe the Laffer curve and its relation to supply side economics;				-	-
			b	discuss the sources of investment				-	-

				finance and the influence of fiscal policy on capital markets, including the crowding-out effect;					
			c	discuss the generational effects of fiscal policy, including generational accounting and generational imbalance;				-	-
			d	discuss the use of fiscal policy to stabilize the economy, including the effects of the government expenditure multiplier, the tax multiplier, and the balanced budget multiplier;				-	-
			e	explain the limitations of discretionary fiscal policy, and differentiate between discretionary fiscal policy and automatic stabilizers.				-	-
	27	Monetary Polic	a	discuss the goals of U.S. monetary policy and the Federal Reserve's (Fed's) means for achieving the goals, including how the Fed operationalizes those goals;				-	-

			b	describe how the Fed conducts monetary policy and explain the Fed's decision-making strategy, including an instrument rule, a targeting rule, open-market operations, and the market for reserves;				-	-
			c	discuss monetary policy's transmission mechanism (chain of events) between changing the federal funds rate and achieving the ultimate monetary policy goal when fighting either inflation or recession, and explain loose links and time lags in the adjustment process;				-	-
			d	describe alternative monetary policy strategies and explain why they have been rejected by the Fed.				-	-
	28	An Overview of Central Banks	a	identify the functions of a central bank;				-	-
			b	discuss monetary policy and the tools utilized by central banks to carry out monetary policy.				-	-
7	29	Financial Statement	a	discuss the roles of financial reporting	**7**	22	Financial Statement	a	describe the roles of financial reporting

		Analysis: An Introduction		and financial statement analysis;			Analysis: An Introduction		and financial statement analysis;
			b	discuss the role of key financial statements (income statement, balance sheet, statement of cash flows, and statement of changes in owners' equity) in evaluating a company's performance and financial position;				b	describe the roles of the key financial statements (statement of financial position, statement of comprehensive income, statement of changes in equity, and statement of cash flows) in evaluating a company's performance and financial position;
			c	discuss the importance of financial statement notes and supplementary information, including disclosures of accounting methods, estimates, and assumptions, and management's discussion and analysis;				c	describe the importance of financial statement notes and supplementary information—including disclosures of accounting policies, methods, and estimates—and management's commentary;
			d	discuss the objective of audits of financial statements, the types of audit reports, and the importance of effective internal controls;				d	describe the objective of audits of financial statements, the types of audit reports, and the importance of effective internal controls;
			e	identify and explain information sources other than annual financial statements				e	identify and explain information sources that analysts use in financial statement

				and supplementary information that analysts use in financial statement analysis					analysis besides annual financial statements and supplementary information;
			f	describe the steps in the financial statement analysis framework.				f	describe the steps in the financial statement analysis framework.
	30	Financial Reporting Mechanics	a	explain the relationship of financial statement elements and accounts, and classify accounts into the financial statement elements;	23	Financial Reporting Mechanics		a	explain the relationship of financial statement elements and accounts, and classify accounts into the financial statement elements;
			b	explain the accounting equation in its basic and expanded forms;				b	explain the accounting equation in its basic and expanded forms;
			c	explain the process of recording business transactions using an accounting system based on the accounting equations;				c	explain the process of recording business transactions using an accounting system based on the accounting equation;
			d	explain the need for accruals and other adjustments in preparing financial statements;				d	explain the need for accruals and other adjustments in preparing financial statements;
			e	explain the relationships among the income statement, balance sheet, statement of cash flows, and statement of owners' equity;				e	explain the relationships among the income statement, balance sheet, statement of cash flows, and statement of owners' equity;

			f	describe the flow of information in an accounting system;				f	describe the flow of information in an accounting system;
			g	explain the use of the results of the accounting process in security analysis.				g	explain the use of the results of the accounting process in security analysis.
	31	Financial Reporting Standards	a	explain the objective of financial statements and the importance of reporting standards in security analysis and valuation;		24	Financial Reporting Standards	a	describe the objective of financial statements and the importance of financial reporting standards in security analysis and valuation;
			b	explain the role of standard-setting bodies, such as the International Accounting Standards Board and the U.S. Financial Accounting Standards Board, and regulatory authorities such as the International Organization of Securities Commissions, the U.K. Financial Services Authority, and the U.S. Securities and Exchange Commission in establishing and enforcing financial reporting standards;				b	describe the roles and desirable attributes of financial reporting standard-setting bodies and regulatory authorities in establishing and enforcing reporting standards, and describe the role of the International Organization of Securities Commissions;
			c	discuss the ongoing barriers to developing one				c	describe the status of global convergence of

				universally accepted set of financial reporting standards;					accounting standards and ongoing barriers to developing one universally accepted set of financial reporting standards;
			d	describe the International Financial Reporting Standards (IFRS) framework, including the qualitative characteristics of financial statements, the required reporting elements, and the constraints and assumptions in preparing financial statements;				d	describe the International Accounting Standards Board's conceptual framework, including the objective and qualitative characteristics of financial statements, required reporting elements, and constraints and assumptions in preparing financial statements;
			e	explain the general requirements for financial statements;				e	describe general requirements for financial statements under IFRS;
			f	compare and contrast key concepts of financial reporting standards under IFRS and alternative reporting systems, and discuss the implications for financial analysis of differing financial reporting systems;				f	compare key concepts of financial reporting standards under IFRS and U.S. GAAP reporting systems;
			g	identify the				g	identify the

				characteristics of a coherent financial reporting framework and barriers to creating a coherent financial reporting network;					characteristics of a coherent financial reporting framework and the barriers to creating such a framework;
			h	discuss the importance of monitoring developments in financial reporting standards and of evaluating company disclosures of significant accounting policies.				h	explain the implications for financial analysis of differing financial reporting systems and the importance of monitoring developments in financial reporting standards;
			-	-				i	analyze company disclosures of significant accounting policies.
8	32	Understanding the Income Statements	a	describe the components of the income statement, and construct an income statement using the alternative presentation formats of that statement;	**8**	25	Understanding Income Statements	a	describe the components of the income statement and alternative presentation formats of that statement;
			b	explain the general principles of revenue recognition and accrual accounting, demonstrate specific revenue recognition applications (including accounting for long-term contracts, installment sales, barter transactions				b	describe the general principles of revenue recognition and accrual accounting, specific revenue recognition applications (including accounting for long-term contracts, installment sales

				and gross and net reporting of revenue), and discuss the implications of revenue recognition principles for financial analysis;					barter transactions, and gross and net reporting of revenue), and the implications of revenue recognition principles for financial analysis;
			c	discuss the general principles of expense recognition, such as the matching principle, specific expense recognition applications (including depreciation of long-term assets and inventory methods), and the implications of expense recognition principles for financial analysis;				c	calculate revenue given information that might influence the choice of revenue recognition method;
			d	demonstrate the appropriate method of depreciating long-term assets, accounting for inventory, or amortizing intangibles, based on facts that might influence the decision;				d	describe the general principles of expense recognition, specific expense recognition applications, and the implications of expense recognition choices for financial analysis;
			e	distinguish between the operating and nonoperating components of the income statement;				e	describe the financial reporting treatment and analysis of non-recurring items (including discontinued operations, extraordinary items

									and unusual or infrequent items) and changes in accounting standards;
			f	discuss the financial reporting treatment and analysis of nonrecurring items (including discontinued operations, extraordinary items, and unusual or infrequent items) and changes in accounting standards;				f	distinguish between the operating and non-operating components of the income statement;
			g	describe the components of earnings per share and calculate a company's earnings per share (both basic and diluted earnings per share) for both a simple and complex capital structure;				g	describe how earnings per share is calculated and calculate and interpret a company's earnings per share (both basic and diluted earnings per share) for both simple and complex capital structures;
			h	differentiate between dilutive and antidilutive securities, and discuss the implications of each for the earnings per share calculation;				h	distinguish between dilutive and antidilutive securities, and describe the implications of each for the earnings per share calculation;
			i	describe and calculate comprehensive income;				i	convert income statements to common-size income statements;
			j	state the accounting				j	evaluate a

				classification for items that are excluded from the income statement but affect owners' equity, and list the major types of items receiving that treatment.					company's financial performance using common-size income statements and financial ratios based on the income statement;
			-	-				k	describe, calculate, and interpret comprehensive income;
			-	-				l	describe other comprehensive income, and identify the major types of items included in it.
	33	Understanding the Balance Sheet	a	illustrate and interpret the components of the balance sheet and discuss the uses of the balance sheet in financial analysis;		26	Understanding Balance Sheets	a	describe the elements of the balance sheet: assets, liabilities, and equity;
			b	describe the various formats of balance sheet presentation;				b	describe the uses and limitations of the balance sheet in financial analysis;
			c	explain how assets and liabilities arise from the accrual process;				c	describe alternative formats of balance sheet presentation;
			d	compare and contrast current and noncurrent assets and liabilities;				d	distinguish between current and non-current assets, and current and non-current liabilities;
			e	explain the measurement bases				e	describe different types of assets and

				(e.g., historical cost and fair value) of assets and liabilities, including current assets, current liabilities, tangible assets, and intangible assets;				liabilities and the measurement bases of each;
			f	demonstrate the appropriate classifications and related accounting treatments for marketable and nonmarketable financial instruments held as assets or owed by the company as liabilities;			f	describe the components of shareholders' equity;
			g	list and explain the components of owners' equity;			g	analyze balance sheets and statements of changes in equity;
			h	interpret balance sheets and statements of changes in equity.			h	convert balance sheets to common-size balance sheets and interpret the common-size balance sheets;
			-	-			i	calculate and interpret liquidity and solvency ratios.
	34	Understanding the Cash Flow Statement	a	compare and contrast cash flows from operating, investing, and financing activities and classify cash flow items as relating to one of these three categories		27	Understanding Cash Flow Statements	a	compare cash flows from operating, investing, and financing activities and classify cash flow items as relating to one of those three categories given a description of the

				given a description of the items;					items;
			b	describe how noncash investing and financing activities are reported;				b	describe how non-cash investing and financing activities are reported;
			c	compare and contrast the key differences in cash flow statements prepared under international financial reporting standards and U.S. generally accepted accounting principles;				c	contrast cash flow statements prepared under International Financial Reporting Standards (IFRS) and U.S. generally accepted accounting principles (U.S. GAAP);
			d	demonstrate the difference between the direct and indirect methods of presenting cash from operating activities and explain the arguments in favor of each;				d	distinguish between the direct and indirect methods of presenting cash from operating activities and describe the arguments in favor of each method;
			e	demonstrate the steps in the preparation of direct and indirect cash flow statements, including how cash flows can be computed using income statement and balance sheet data;				e	describe how the cash flow statement is linked to the income statement and the balance sheet;
			f	describe the process of converting a cash flow statement from				f	describe the steps in the preparation of direct and indirect

				the indirect to the direct method of presentation;					cash flow statements, including how cash flows can be computed using income statement and balance sheet data;
			g	analyze and interpret a cash flow statement;				g	convert cash flows from the indirect to the direct method;
			h	explain and calculate free cash flow to the firm, free cash flow to equity, and other cash flow ratios.				h	analyze and interpret both reported and common-size cash flow statements;
			-	-				i	calculate and interpret free cash flow to the firm, free cash flow to equity, and performance and coverage cash flow ratios.
	35	Financial Analysis Techniques	a	evaluate and compare companies using ratio analysis, common-size financial statements, and charts in financial analysis;		28	Financial Analysis Techniques	a	describe the tools and techniques used in financial analysis, including their uses and limitations;
			b	describe the limitations of ratio analysis;				b	classify, calculate, and interpret activity, liquidity, solvency, profitability, and valuation ratios;
			c	describe the various techniques of common-size analysis and				c	describe the relationships among ratios and evaluate a company using ratio

				interpret the results of such analysis;					analysis;
			d	calculate, classify, and interpret activity, liquidity, solvency, profitability, and valuation ratios;				d	demonstrate the application of the DuPont analysis of return on equity, and calculate and interpret the effects of changes in its components;
			e	demonstrate how ratios are related and how to evaluate a company using a combination of different ratios;				e	calculate and interpret ratios used in equity analysis, credit analysis, and segment analysis;
			f	demonstrate the application of and interpret changes in the component parts of the DuPont analysis (the decomposition of return on equity);				f	describe how ratio analysis and other techniques can be used to model and forecast earnings.
			g	calculate and interpret the ratios used in equity analysis, credit analysis, and segment analysis;				-	-
			h	describe how ratio analysis and other techniques can be used to model and forecast earnings.				-	-
9	36	Inventories	a	distinguish between costs included in inventories and costs recognized as expenses in the period in which they are incurred;	**9**	29	Inventories	a	distinguish between costs included in inventories and costs recognized as expenses in the period in which they are incurred;

			b	describe different inventory valuation methods (cost formulas);				b	describe different inventory valuation methods (cost formulas);
			c	calculate cost of sales and ending inventory using different inventory valuation methods and explain the impact of the inventory valuation method choice on gross profit;				c	calculate cost of sales and ending inventory using different inventory valuation methods and explain the impact of the inventory valuation method choice on gross profit;
			d	calculate, compare, and contrast cost of sales, gross profit, and ending inventory using perpetual and periodic inventory systems;				d	calculate and compare cost of sales, gross profit, and ending inventory using perpetual and periodic inventory systems;
			e	compare and contrast cost of sales, ending inventory, and gross profit using different inventory valuation methods;				e	compare cost of sales, ending inventory, and gross profit using different inventory valuation methods;
			f	discuss the measurement of inventory at the lower of cost and net realisable value;				f	describe the measurement of inventory at the lower of cost and net realisable value;
			g	describe the financial statement presentation of and disclosures relating to inventories;				g	describe the financial statement presentation of and disclosures relating to inventories;
			h	calculate and interpret ratios used				h	calculate and interpret ratios used

			to evaluate inventory management.					to evaluate inventory management.
37	Long-lived Assets	a	distinguish between costs that are capitalised and costs that are expensed in the period in which they are incurred;		30	Long-lived Assets	a	distinguish between costs that are capitalised and costs that are expensed in the period in which they are incurred;
		b	distinguish between intangible assets with finite and indefinite useful lives;				b	compare the financial reporting of the following classifications of intangible assets: purchased, internally developed, acquired in a business combination;
		c	discuss the different depreciation methods for property, plant, and equipment, and the effect of the choice of depreciation method on the financial statements, and the assumptions concerning useful life, and residual value on depreciation expense;				c	describe the different depreciation methods for property, plant, and equipment, the effect of the choice of depreciation method on the financial statements, and the effects of assumptions concerning useful life and residual value on depreciation expense;
		d	calculate depreciation expense given the necessary information;				d	calculate depreciation expense;

			e	discuss the different amortisation methods for intangible assets with finite lives, the effect of the choice of amortisation method, and the assumptions concerning useful life and residual value on amortisation expense;				e	describe the different amortisation methods for intangible assets with finite lives, the effect of the choice of amortisation method on the financial statements, and the effects of assumptions concerning useful life and residual value on amortisation expense;
			f	calculate amortisation expense given the necessary information;				f	calculate amortisation expense;
			g	discuss the revaluation model;				g	describe the revaluation model;
			h	discuss the impairment of property, plant, and equipment, and intangible assets;				h	explain the impairment of property, plant, and equipment, and intangible assets;
			i	discuss the derecognition of property, plant, and equipment, and intangible assets;				i	explain the derecognition of property, plant, and equipment, and intangible assets;
			j	discuss the financial statement presentation of and disclosures relating to property, plant, and				j	describe the financial statement presentation of and disclosures relating to property, plant, and

				equipment, and intangible assets.					equipment, and intangible assets;
			-	-				k	compare the financial reporting of investment property with that of property, plant, and equipment.
	38	Income Taxes	a	explain the differences between accounting profit and taxable income, and define key terms, including deferred tax assets, deferred tax liabilities, valuation allowance, taxes payable, and income tax expense;		31	Income Taxes	a	describe the differences between accounting profit and taxable income, and define key terms, including deferred tax assets, deferred tax liabilities, valuation allowance, taxes payable, and income tax expense;
			b	explain how deferred tax liabilities and assets are created and the factors that determine how a company's deferred tax liabilities and assets should be treated for the purposes of financial analysis;				b	explain how deferred tax liabilities and assets are created and the factors that determine how a company's deferred tax liabilities and assets should be treated for the purposes of financial analysis;
			c	determine the tax base of a company's assets and liabilities;				c	determine the tax base of a company's assets and liabilities;
			d	calculate income tax expense, income taxes payable, deferred tax assets, and deferred tax				d	calculate income tax expense, income taxes payable, deferred tax assets, and deferred tax

	liabilities, and calculate and interpret the adjustment to the financial statements related to a change in the income tax rate;		liabilities, and calculate and interpret the adjustment to the financial statements related to a change in the income tax rate;
e	evaluate the impact of tax rate changes on a company’s financial statements and ratios;	e	evaluate the impact of tax rate changes on a company’s financial statements and ratios;
f	distinguish between temporary and permanent items in pre-tax financial income and taxable income;	f	distinguish between temporary and permanent differences in pre-tax accounting income and taxable income;
g	discuss the valuation allowance for deferred tax assets—when it is required and what impact it has on financial statements;	g	describe the valuation allowance for deferred tax assets—when it is required and what impact it has on financial statements;
h	compare and contrast a company’s deferred tax items;	h	compare a company’s deferred tax items;
i	analyze disclosures relating to deferred tax items and the effective tax rate reconciliation, and discuss how information included in these disclosures affects a company’s	i	analyze disclosures relating to deferred tax items and the effective tax rate reconciliation, and explain how information included in these disclosures affects a company’s

			financial statements and financial ratios;					financial statements and financial ratios;
			j	identify the key provisions of and differences between income tax accounting under IFRS and U.S. GAAP.				j	identify the key provisions of and differences between income tax accounting under IFRS and U.S. GAAP.
39	Non-current (Long-term) Liabilities	a	determine the initial recognition and measurement and subsequent measurement of bonds;		32	Non-current (Long-term) Liabilities	a	determine the initial recognition, initial measurement, and subsequent measurement of bonds;
		b	discuss the effective interest method and calculate interest expense, amortisation of bond discounts/premiums, and interest payments;				b	describe the effective interest method and calculate interest expense, amortisation of bond discounts/premiums, and interest payments;
		c	discuss the derecognition of debt;				c	explain the derecognition of debt;
		d	explain the role of debt covenants in protecting creditors;				d	describe the role of debt covenants in protecting creditors;
		e	discuss the financial statement presentation of and disclosures relating to debt;				e	describe the financial statement presentation of and disclosures relating to debt;
		f	discuss the motivations for leasing assets instead of purchasing them;				f	explain the motivations for leasing assets instead of purchasing them;
		g	distinguish between				g	distinguish between

				a finance lease and an operating lease from the perspectives of the lessor and the lessee;					a finance lease and an operating lease from the perspectives of the lessor and the lessee;
			h	determine the initial recognition and measurement and subsequent measurement of finance leases;				h	determine the initial recognition, initial measurement, and subsequent measurement of finance leases;
			i	compare and contrast the disclosures relating to finance and operating leases;				i	compare the disclosures relating to finance and operating leases;
			j	describe defined contribution and defined benefit pension plans;				j	describe defined contribution and defined benefit pension plans;
			k	compare and contrast the presentation and disclosure of defined contribution and defined benefit pension plans;				k	compare the presentation and disclosure of defined contribution and defined benefit pension plans;
			l	calculate and interpret leverage and coverage ratios.				l	calculate and interpret leverage and coverage ratios.
10	40	Financial Reporting Quality: Red Flags and Accounting Warning Signs	a	describe incentives that might induce a company's management to overreport or underreport earnings;	10	33	Financial Reporting Quality: Red Flags and Accounting Warning Signs	a	describe incentives that might induce a company's management to overreport or underreport earnings;
			b	describe activities that will result in a low quality of earnings;				b	describe activities that will result in a low quality of earnings;

			c	describe the “fraud triangle”;				c	describe the three conditions that are generally present when fraud occurs, including the risk factors related to these conditions;
			d	describe the risk factors that may lead to fraudulent accounting related to 1) incentives and pressures, 2) opportunities, and 3) attitudes and rationalizations;				d	describe common accounting warning signs and methods for detecting each.
			e	describe common accounting warning signs and methods for detecting each.				-	-
	41	Accounting Shenanigans on the Cash Flow Statement	-	analyze and discuss the following ways to manipulate the cash flow statement: _ stretching out payables; _ financing of payables; _ securitization of receivables; and _ using stock buybacks to offset dilution of earnings.		34	Accounting Shenanigans on the Cash Flow Statement	-	analyze and describe the following ways to manipulate the cash flow statement: _ stretching out payables; _ financing of payables; _ securitization of receivables; and _ using stock buybacks to offset dilution of earnings.
	42	Financial Statement Analysis: Applications	a	evaluate a company’s past financial performance and explain how a company’s strategy is reflected in past financial performance;		35	Financial Statement Analysis: Applications	a	evaluate a company’s past financial performance and explain how a company’s strategy is reflected in past financial performance;

			b	prepare a basic projection of a company’s future net income and cash flow;				b	forecast a company’s future net income and cash flow;
			c	describe the role of financial statement analysis in assessing the credit quality of a potential debt investment;				c	describe the role of financial statement analysis in assessing the credit quality of a potential debt investment;
			d	discuss the use of financial statement analysis in screening for potential equity investments;				d	describe the use of financial statement analysis in screening for potential equity investments;
			e	determine and justify appropriate analyst adjustments to a company’s financial statements to facilitate comparison with another company.				e	explain appropriate analyst adjustments to a company’s financial statements to facilitate comparison with another company.
	43	International Standards Convergence	a	identify and explain the major international accounting standards for each asset and liability category on the balance sheet and the key differences from U.S. generally accepted accounting principles (GAAP);				-	-
			b	identify and explain the major international accounting standards for major				-	-

				revenue and expense categories on the income statement and the key differences from U.S. GAAP;					
			c	identify and explain the major differences between international and U.S. GAAP accounting standards concerning the treatment of interest and dividends on the statement of cash flows;				-	-
			d	interpret the effect of differences between international and U.S. GAAP accounting standards on the balance sheet, income statement, and the statement of changes in equity for some commonly used financial ratios				-	-
11	44	Capital Budgeting	a	explain the capital budgeting process, including the typical steps of the process, and distinguish among the various categories of capital projects;	**11**	36	Capital Budgeting	a	describe the capital budgeting process, including the typical steps of the process, and distinguish among the various categories of capital projects;
			b	discuss the basic principles of capital budgeting, including				b	describe the basic principles of capital budgeting, including

				the choice of the proper cash flows;					cash flow estimation;
			c	explain how the following project interactions affect the evaluation of a capital project: 1) independent versus mutually exclusive projects, 2) project sequencing, and 3) unlimited funds versus capital rationing;				c	explain how the evaluation and selection of capital projects is affected by mutually exclusive projects, project sequencing, and capital rationing;
			d	calculate and interpret the results using each of the following methods to evaluate a single capital project: net present value (NPV), internal rate of return (IRR), payback period, discounted payback period, and profitability index (PI);				d	calculate and interpret the results using each of the following methods to evaluate a single capital project: net present value (NPV), internal rate of return (IRR), payback period, discounted payback period, and profitability index (PI);
			e	explain the NPV profile, compare and contrast the NPV and IRR methods when evaluating independent and mutually exclusive projects, and describe the problems associated with each of the evaluation methods;				e	explain the NPV profile, compare the NPV and IRR methods when evaluating independent and mutually exclusive projects, and describe the problems associated with each of the evaluation methods;
			f	describe and				f	describe and

				account for the relative popularity of the various capital budgeting methods and explain the relation between NPV and company value and stock price.					account for the relative popularity of the various capital budgeting methods and explain the relation between NPV and company value and stock price;
			-	-				g	describe the expected relations among an investment's NVP, company value, and share price.
	45	Cost of Capital	a	calculate and interpret the weighted average cost of capital (WACC) of a company;	37	Cost of Capital	a	calculate and interpret the weighted average cost of capital (WACC) of a company;
			b	describe how taxes affect the cost of capital from different capital sources;			b	describe how taxes affect the cost of capital from different capital sources;
			c	describe alternative methods of calculating the weights used in the WACC, including the use of the company's target capital structure;			c	explain alternative methods of calculating the weights used in the WACC, including the use of the company's target capital structure;
			d	explain how the marginal cost of capital and the investment opportunity schedule are used to determine the optimal capital			d	explain how the marginal cost of capital and the investment opportunity schedule are used to determine the optimal capital

				budget;					budget;
			e	explain the marginal cost of capital’s role in determining the net present value of a project;				e	explain the marginal cost of capital’s role in determining the net present value of a project;
			f	calculate and interpret the cost of fixed rate debt capital using the yield-to-maturity approach and the debt-rating approach;				f	calculate and interpret the cost of fixed rate debt capital using the yield-tomaturity approach and the debt-rating approach;
			g	calculate and interpret the cost of noncallable, nonconvertible preferred stock;				g	calculate and interpret the cost of noncallable, nonconvertible preferred stock;
			h	calculate and interpret the cost of equity capital using the capital asset pricing model approach, the dividend discount model approach, and the bond-yield-plus risk-premium approach;				h	calculate and interpret the cost of equity capital using the capital asset pricing model approach, the dividend discount model approach, and the bond-yield-plus risk-premium approach;
			i	calculate and interpret the beta and cost of capital for a project;				i	calculate and interpret the beta and cost of capital for a project;
			j	explain the country equity risk premium in the estimation of the cost of equity for a company located in a developing market;				j	explain the country equity risk premium in the estimation of the cost of equity for a company located in a developing market;

		k	describe the marginal cost of capital schedule, explain why it may be upward-sloping with respect to additional capital, and calculate and interpret its breakpoints;			k	describe the marginal cost of capital schedule, explain why it may be upwardsloping with respect to additional capital, and calculate and interpret its breakpoints;
		l	explain and demonstrate the correct treatment of flotation costs.			l	explain and demonstrate the correct treatment of flotation costs.
46	Measures of Leverage	a	define and explain leverage, business risk, sales risk, operating risk, and financial risk, and classify a risk, given a description;	38	Measures of Leverage	a	define and explain leverage, business risk, sales risk, operating risk, and financial risk, and classify a risk, given a description;
		b	calculate and interpret the degree of operating leverage, the degree of financial leverage, and the degree of total leverage;			b	calculate and interpret the degree of operating leverage, the degree of financial leverage, and the degree of total leverage;
		c	describe the effect of financial leverage on a company's net income and return on equity;			c	describe the effect of financial leverage on a company's net income and return on equity;
		d	calculate the breakeven quantity of sales and determine the company's net income at various sales levels;			d	calculate the breakeven quantity of sales and determine the company's net income at various sales levels;
		e	calculate and			e	calculate and

			interpret the operating breakeven quantity of sales.					interpret the operating breakeven quantity of sales.
47	Dividends and Share Repurchases: Basics	a	explain regular cash dividends, extra dividends, stock dividends, stock splits, and reverse stock splits, including their expected effect on a shareholder's wealth and a company's financial ratios;		39	Dividends and Share Repurchases: Basics	a	describe regular cash dividends, extra dividends, stock dividends, stock splits, and reverse stock splits, including their expected effect on a shareholder's wealth and a company's financial ratios;
		b	describe dividend payment chronology, including declaration, holder-of-record, ex-dividend, and payment dates, and indicate when a dividend is reflected in the share price;				b	describe dividend payment chronology, including the significance of declaration, holder-of-record, ex-dividend, and payment dates;
		c	compare and contrast share repurchase methods;				c	compare share repurchase methods;
		d	calculate and compare the effects of a share repurchase on earnings per share when 1) the repurchase is financed with the company's excess cash and 2) the company uses funded debt to finance the				d	calculate and compare the effects of a share repurchase on earnings per share when 1) the repurchase is financed with the company's excess cash and 2) the company uses funded debt to finance the

			repurchase;					repurchase;
		e	calculate and describe the effect of a share repurchase on book value per share;				e	calculate the effect of a share repurchase on book value per share;
		f	explain why a cash dividend and a share repurchase of the same amount are equivalent in terms of the effect on shareholders' wealth, all else being equal.				f	explain why a cash dividend and a share repurchase of the same amount are equivalent in terms of the effect on shareholders' wealth, all else being equal.
48	Working Capital Management	a	describe primary and secondary sources of liquidity and factors that influence a company's liquidity position;	40	Working Capital Management		a	describe primary and secondary sources of liquidity and factors that influence a company's liquidity position;
		b	compare a company's liquidity measures with those of peer companies;				b	compare a company's liquidity measures with those of peer companies;
		c	evaluate overall working capital effectiveness of a company, using the operating and cash conversion cycles, and compare its effectiveness with other peer companies;				c	evaluate working capital effectiveness of a company based on its operating and cash conversion cycles, and compare the company's effectiveness with that of peer companies;
		d	identify and evaluate the necessary tools to use in managing a company's net daily cash position;				d	explain the effect of different types of cash flows on a company's net daily cash position;
		e	compute and				e	calculate and

			interpret comparable yields on various securities, compare portfolio returns against a standard benchmark, and evaluate a company's short-term investment policy guidelines;				interpret comparable yields on various securities, compare portfolio returns against a standard benchmark, and evaluate a company's short-term investment policy guidelines;
		f	assess the performance of a company's accounts receivable, inventory management, and accounts payable functions against historical figures and comparable peer company values;			f	evaluate a company's management of accounts receivable, inventory, and accounts payable over time and compared to peer companies;
		g	evaluate the choices of short-term funding available to a company and recommend a financing method.			g	evaluate the choices of short-term funding available to a company and recommend a financing method.
49	Financial Statement Analysis	-	demonstrate the use of pro forma income and balance sheet statements.	41	Financial Statement Analysis	-	demonstrate the use of pro forma income and balance sheet statements.
50	The Corporate Governance of Listed Companies: A Manual for Investors	a	define and describe corporate governance;	42	The Corporate Governance of Listed Companies: A Manual for Investors	a	define corporate governance;
		b	discuss and critique characteristics and practices related to board and committee independence, experience, compensation			b	describe practices related to board and committee independence, experience, compensation, external consultants, and frequency of

				external consultants, and frequency of elections, and determine whether they are supportive of shareowner protection;					elections, and determine whether they are supportive of shareowner protection;
			c	describe board independence and explain the importance of independent board members in corporate governance;				c	describe board independence and explain the importance of independent board members in corporate governance;
			d	identify factors that indicate a board and its members possess the experience required to govern the company for the benefit of its shareowners;				d	identify factors that an analyst should consider when evaluating the qualifications of board members;
			e	explain the provisions that should be included in a strong corporate code of ethics and the implications of a weak code of ethics with regard to related-party transactions and personal use of company assets;				e	describe the responsibilities of the audit, compensation, and nominations committees and identify factors an investor should consider when evaluating the quality of each committee;
			f	state the key areas of responsibility for which board committees are typically created and explain the criteria for assessing whether				f	explain the provisions that should be included in a strong corporate code of ethics;

				each committee is able to adequately represent shareowner interests;					
			g	evaluate, from a shareowner’s perspective, company policies related to voting rules, shareowner-sponsored proposals, common stock classes, and takeover defenses.				g	evaluate, from a shareowner’s perspective, company policies related to voting rules, shareowner sponsored proposals, common stock classes, and takeover defenses.
12	51	Portfolio Management: An Overview	a	explain the importance of the portfolio perspective;	**12**	43	Portfolio Management: An Overview	a	describe the portfolio approach to investing;
			b	discuss the types of investment management clients and the distinctive characteristics and needs of each;				b	describe types of investors and distinctive characteristics and needs of each;
			c	describe the steps in the portfolio management process;				c	describe the steps in the portfolio management process;
			d	describe, compare, and contrast mutual funds and other forms of pooled investments.				d	describe mutual funds and compare them with other investment products.
	52	Portfolio Risk and Return: Part I	a	calculate and interpret major return measures and describe their applicability;		44	Portfolio Risk and Return: Part I	a	calculate and interpret major return measures and describe their appropriate uses;

			b	describe the characteristics of the major asset classes that investors would consider in forming portfolios according to mean–variance portfolio theory;			b	describe the characteristics of the major asset classes that investors consider in forming portfolios;
			c	calculate and interpret the mean, variance, and covariance (or correlation) of asset returns based on historical data;			c	calculate and interpret the mean, variance, and covariance (or correlation) of asset returns based on historical data;
			d	explain risk aversion and its implications for portfolio selection;			d	explain risk aversion and its implications for portfolio selection;
			e	calculate and interpret portfolio standard deviation;			e	calculate and interpret portfolio standard deviation;
			f	describe the effect on a portfolio's risk of investing in assets that are less than perfectly correlated;			f	describe the effect on a portfolio's risk of investing in assets that are less than perfectly correlated;
			g	describe and interpret the minimum-variance and efficient frontiers of risky assets and the global minimum-variance portfolio;			g	describe and interpret the minimum-variance and efficient frontiers of risky assets and the global minimum-variance portfolio;
			h	discuss the selection of an optimal portfolio, given an investor's utility (or risk aversion) and the capital allocation line			h	describe the selection of an optimal portfolio, given an investor's utility (or risk aversion) and the capital allocation

							line.
53	Portfolio Risk and Return: Part II	a	discuss the implications of combining a risk-free asset with a portfolio of risky assets;	45	Portfolio Risk and Return: Part II	a	describe the implications of combining a risk-free asset with a portfolio of risky assets;
		b	explain and interpret the capital allocation line (CAL) and the capital market line (CML);			b	explain the capital allocation line (CAL) and the capital market line (CML);
		c	explain systematic and nonsystematic risk, and why an investor should not expect to receive additional return for bearing nonsystematic risk;			c	explain systematic and nonsystematic risk, including why an investor should not expect to receive additional return for bearing nonsystematic risk;
		d	explain return generating models (including the market model) and their uses;			d	explain return generating models (including the market model) and their uses;
		e	calculate and interpret beta;			e	calculate and interpret beta;
		f	explain the capital asset pricing model (CAPM), including the required assumptions, and the security market line (SML);			f	explain the capital asset pricing model (CAPM), including the required assumptions, and the security market line (SML);
		g	calculate and interpret the expected return of an asset using the CAPM;			g	calculate and interpret the expected return of an asset using the CAPM;
		h	illustrate			h	describe and

			applications of the CAPM and the SML.					demonstrate applications of the CAPM and the SML.
54	Basics of Portfolio Planning and Construction	a	explain the reasons for a written investment policy statement (IPS);		46	Basics of Portfolio Planning and Construction	a	describe the reasons for a written investment policy statement (IPS);
		b	list and explain the major components of an IPS;				b	describe the major components of an IPS;
		c	discuss risk and return objectives, including their preparation;				c	describe risk and return objectives and how they may be developed for a client;
		d	distinguish between the willingness and the ability (capacity) to take risk inanalyzing an investor's financial risk tolerance;				d	distinguish between the willingness and the ability (capacity) to take risk in analyzing an investor's financial risk tolerance;
		e	describe the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique circumstances and their implications for the choice of portfolio assets;				e	describe the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique circumstances and their implications for the choice of portfolio assets;
		f	explain the definition and specification of asset classes in relation to asset allocation;				f	explain the specification of asset classes in relation to asset allocation;
		g	discuss the principles of portfolio				g	describe the principles of

				construction and the role of asset allocation in relation to the IPS.					portfolio construction and the role of asset allocation in relation to the IPS.
13	55	Market Organization and Structure	a	explain and illustrate the main functions of the financial system;	**13**	47	Market Organization and Structure	a	explain the main functions of the financial system;
			b	describe classifications of assets and markets;				b	describe classifications of assets and markets;
			c	describe the major types of securities, currencies, contracts, commodities, and real assets that trade in organized markets, including their distinguishing characteristics and major subtypes;				c	describe the major types of securities, currencies, contracts, commodities, and real assets that trade in organized markets, including their distinguishing characteristics and major subtypes;
			d	describe the types of financial intermediaries and the services that they provide;				d	describe the types of financial intermediaries and the services that they provide;
			e	compare and contrast the positions an investor can take in an asset;				e	compare the positions an investor can take in an asset;
			f	calculate and interpret the leverage ratio, the rate of return on a margin transaction, and the security price at which the investor would receive a margin call;				f	calculate and interpret the leverage ratio, the rate of return on a margin transaction, and the security price at which the investor would receive a margin call;

			g	compare and contrast execution, validity, and clearing instructions;				g	compare execution, validity, and clearing instructions;
			h	compare and contrast market orders with limit orders;				h	compare market orders with limit orders;
			i	describe the primary and secondary markets and explain how secondary markets support primary markets;				i	describe the primary and secondary markets and explain how secondary markets support primary markets;
			j	describe how securities, contracts, and currencies are traded in quote-driven markets, order-driven markets and brokered markets;				j	describe how securities, contracts, and currencies are traded in quote-driven markets, order-driven markets and brokered markets;
			k	describe the characteristics of a well-functioning financial system;				k	describe the characteristics of a well-functioning financial system;
			l	describe the objectives of market regulation.				l	describe the objectives of market regulation.
	56	Security Market Indices	a	describe a security market index;		48	Security Market Indices	a	describe a security market index;
			b	calculate and interpret the value, price return, and total return of an index;				b	calculate and interpret the value, price return, and total return of an index;
			c	discuss the choices and issues in index construction and management;				c	describe the choices and issues in index construction and management;

		d	compare and contrast the different weighting methods used in index construction;			d	compare the different weighting methods used in index construction;
		e	calculate and interpret the value and return of an index on the basis of its weighting method;			e	calculate and analyze the value and return of an index given its weighting method;
		f	discuss rebalancing and reconstitution;			f	describe rebalancing and reconstitution of an index;
		g	discuss uses of security market indices;			g	describe uses of security market indices;
		h	discuss types of equity indices;			h	describe types of equity indices;
		i	discuss types of fixed-income indices;			i	describe types of fixed-income indices;
		j	discuss indices representing alternative investments;			j	describe indices representing alternative investments;
		k	compare and contrast the types of security market indices.			k	compare types of security market indices.
57	Market Efficiency	a	discuss market efficiency and related concepts, including their importance to investment practitioners;	49	Market Efficiency	a	explain market efficiency and related concepts, including their importance to investment practitioners;
		b	explain the factors affecting a market's efficiency;			b	distinguish between market value and intrinsic value;
		c	distinguish between			c	explain factors

				market value and intrinsic value;					affecting a market's efficiency;
			d	compare and contrast the weak-form, semi-strong form, and strong-form market efficiency;				d	contrast the weak-form, semi-strong form, and strong-form market efficiency;
			e	explain the implications of each form of market efficiency for fundamental analysis, technical analysis, and the choice between active and passive portfolio management;				e	explain the implications of each form of market efficiency for fundamental analysis, technical analysis, and the choice between active and passive portfolio management;
			f	discuss identified market pricing anomalies and explain possible inconsistencies with market efficiency;				f	describe identified market pricing anomalies and explain possible inconsistencies with market efficiency;
			g	compare and contrast the behavioral finance view of investor behavior to that of traditional finance in regards to market efficiency.				g	contrast the behavioral finance view of investor behavior to that of traditional finance.
14	58	Overview of Equity Securities	a	discuss the importance and relative performance of equity securities in global financial markets;	**14**	50	Overview of Equity Securities	a	describe characteristics of types of equity securities;
			b	discuss the characteristics of various types of				b	describe differences in voting rights and other ownership

				equity securities;					characteristics among different equity classes;
			c	distinguish between public and private equity securities;				c	distinguish between public and private equity securities;
			d	discuss the differences in voting rights and other ownership characteristics among various equity classes;				d	describe methods for investing in non-domestic equity securities;
			e	discuss the methods for investing in non-domestic equity securities;				e	compare the risk and return characteristics of types of equity securities;
			f	compare and contrast the risk and return characteristics of various types of equity securities;				f	explain the role of equity securities in the financing of a company's assets;
			g	explain the role of equity securities in the financing of a company's assets and creating company value;				g	distinguish between the market value and book value of equity securities;
			h	distinguish between the market value and book value of equity securities;				h	compare a company's cost of equity, its (accounting) return on equity, and investors' required rates of return..
			i	compare and contrast a company's cost of equity, its				-	-

				(accounting) return on equity, and investors' required rates of return. equity, and investors' required rates of return.					
	59	Introduction to Industry and Company Analysis	a	explain the uses of industry analysis and the relation of industry analysis to company analysis;		51	Introduction to Industry and Company Analysis	a	explain the uses of industry analysis and the relation of industry analysis to company analysis;
			b	compare and contrast the methods by which companies can be grouped, current industry classification systems, and classify a company, given a description of its activities and the classification system;				b	compare methods by which companies can be grouped, current industry classification systems, and classify a company, given a description of its activities and the classification system;
			c	explain the factors that affect the sensitivity of a company to the business cycle and the uses and limitations of industry and company descriptors such as "growth," "defensive," and "cyclical";				c	explain factors that affect the sensitivity of a company to the business cycle and the uses and limitations of industry and company descriptors such as "growth," "defensive," and "cyclical";
			d	explain the relation of "peer group," as used in equity valuation, to a company's industry classification;				d	explain the relation of "peer group," as used in equity valuation, to a company's industry classification;

			e	discuss the elements that need to be covered in a thorough industry analysis;				e	describe the elements that need to be covered in a thorough industry analysis;
			f	illustrate demographic, governmental, social, and technological influences on industry growth, profitability, and risk;				f	describe demographic, governmental, social, and technological influences on industry growth, profitability, and risk;
			g	describe product and industry life cycle models, classify an industry as to life cycle phase (e.g., embryonic, growth, shakeout, maturity, or decline) based on a description of it, and discuss the limitations of the life-cycle concept in forecasting industry performance;				g	describe product and industry life cycle models, classify an industry as to life cycle phase (e.g., embryonic, growth, shakeout, maturity, or decline) based on a description of it, and describe the limitations of the life-cycle concept in forecasting industry performance;
			h	explain the effects of industry concentration, ease of entry, and capacity on return on invested capital and pricing power;				h	explain effects of industry concentration, ease of entry, and capacity on return on invested capital and pricing power;
			i	discuss the principles of strategic analysis of an industry;				i	describe the principles of strategic analysis of an industry;
			j	compare and				j	compare

				contrast the characteristics of representative industries from the various economic sectors;					characteristics of representative industries from the various economic sectors;
			k	describe the elements that should be covered in a thorough company analysis.				k	describe the elements that should be covered in a thorough company analysis.
	60	Equity Valuation: Concepts and Basic Tools	a	evaluate whether a security, given its current market price and a value estimate, is overvalued, fairly valued, or undervalued by the market;	52	Equity Valuation: Concepts and Basic Tools	a	evaluate whether a security, given its current market price and a value estimate, is overvalued, fairly valued, or undervalued by the market;
			b	describe major categories of equity valuation models;			b	describe major categories of equity valuation models;
			c	explain the rationale for using present-value of cash flow models to value equity and describe the dividend discount and free-cash-flow-to-equity models;			c	explain the rationale for using present-value of cash flow models to value equity and describe the dividend discount and free-cash-flow-to-equity models;
			d	calculate the intrinsic value of a non-callable, non-convertible preferred stock;			d	calculate the intrinsic value of a non-callable, non-convertible preferred stock;
			e	calculate and interpret the intrinsic value of an equity security based on the Gordon (constant) growth			e	calculate and interpret the intrinsic value of an equity security based on the Gordon (constant)

				dividend discount model or a two-stage dividend discount model, as appropriate;					growth dividend discount model or a two-stage dividend discount model, as appropriate;
			f	identify companies for which the constant growth or a multistage dividend discount model is appropriate;				f	identify companies for which the constant growth or a multistage dividend discount model is appropriate;
			g	explain the rationale for using price multiples to value equity and distinguish between multiples based on comparables versus multiples based on fundamentals;				g	explain the rationale for using price multiples to value equity and distinguish between multiples based on comparables versus multiples based on fundamentals;
			h	calculate and interpret the following multiples: price to earnings, price to an estimate of operating cash flow, price to sales, and price to book value;				h	calculate and interpret the following multiples: price to earnings, price to an estimate of operating cash flow, price to sales, and price to book value;
			i	explain the use of enterprise value multiples in equity valuation and demonstrate the use of enterprise value multiples to estimate equity value;				i	explain the use of enterprise value multiples in equity valuation and demonstrate the use of enterprise value multiples to estimate equity value;
			j	explain asset-based valuation models and demonstrate the use of asset-based				j	explain asset-based valuation models and demonstrate the use of asset-based

				models to calculate equity value;					models to calculate equity value;
			k	explain the advantages and disadvantages of each category of valuation model.				k	explain advantages and disadvantages of each category of valuation model. 2012 Level
15	61	Features of Debt Securities	a	explain the purposes of a bond's indenture and describe affirmative and negative covenants;	**15**	53	Features of Debt Securities	a	explain the purposes of a bond's indenture and describe affirmative and negative covenants;
			b	describe the basic features of a bond, the various coupon rate structures, and the structure of floating-rate securities;				b	describe the basic features of a bond, the various coupon rate structures, and the structure of floating-rate securities;
			c	define accrued interest, full price, and clean price;				c	define accrued interest, full price, and clean price;
			d	explain the provisions for redemption and retirement of bonds;				d	explain the provisions for redemption and retirement of bonds;
			e	identify the common options embedded in a bond issue, explain the importance of embedded options, and state whether such options benefit the issuer or the bondholder;				e	identify common options embedded in a bond issue, explain the importance of embedded options, and identify whether an option benefits the issuer or the bondholder;
			f	describe methods used by institutional investors in the bond market to finance the purchase of a				f	describe methods used by institutional investors in the bond market to finance the purchase of a

			security (i.e., margin buying and repurchase agreements).				security (i.e., margin buying and repurchase agreements).
62	Risks Associated with Investing in Bonds	a	explain the risks associated with investing in bonds;	54	Risks Associated with Investing in Bonds	a	explain the risks associated with investing in bonds;
		b	identify the relations among a bond's coupon rate, the yield required by the market, and the bond's price relative to par value (i.e., discount, premium, or equal to par);			b	identify the relations among a bond's coupon rate, the yield required by the market, and the bond's price relative to par value (i.e., discount, premium, or equal to par);
		c	explain how features of a bond (e.g., maturity, coupon, and embedded options) and the level of a bond's yield affect the bond's interest rate risk;			c	explain how a bond maturity, coupon, embedded options and yield level affect its interest rate risk;
		d	identify the relationship among the price of a callable bond, the price of an option-free bond, and the price of the embedded call option;			d	identify the relation of the price of a callable bond to the price of an option-free bond and the price of the embedded call option;
		e	explain the interest rate risk of a floating-rate security and why such a security's price may differ from par value;			e	explain the interest rate risk of a floating-rate security and why its price may differ from par value;
		f	calculate and			f	calculate and

				interpret the duration and dollar duration of a bond;					interpret the duration and dollar duration of a bond;
			g	describe yield-curve risk and explain why duration does not account for yield-curve risk for a portfolio of bonds;				g	describe yield-curve risk and explain why duration does not account for yieldcurve risk;
			h	explain the disadvantages of a callable or prepayable security to an investor;				h	explain the disadvantages of a callable or prepayable security to an investor;
			i	identify the factors that affect the reinvestment risk of a security and explain why prepayable amortizing securities expose investors to greater reinvestment risk than nonamortizing securities;				i	identify the factors that affect the reinvestment risk of a security and explain why prepayable amortizing securities expose investors to greater reinvestment risk than nonamortizing securities;
			j	describe the various forms of credit risk and describe the meaning and role of credit ratings;				j	describe types of credit risk and the meaning and role of credit ratings;
			k	explain liquidity risk and why it might be important to investors even if they expect to hold a security to the maturity date;				k	explain liquidity risk and why it might be important to investors even if they expect to hold a security to the maturity date;
			l	describe the exchange rate risk an investor faces when a bond makes				l	describe the exchange rate risk an investor faces when a bond makes

				payments in a foreign currency;				payments in a foreign currency;
			m	explain inflation risk;			m	explain inflation risk;
			n	explain how yield volatility affects the price of a bond with an embedded option and how changes in volatility affect the value of a callable bond and a putable bond;			n	explain how yield volatility affects the price of a bond with an embedded option and how changes in volatility affect the value of a callable bond and a putable bond;
			o	describe the various forms of event risk and the origins of sovereign risk.			o	describe sovereign risk and types of event risk.
	63	Overview of Bond Sectors and Instruments	a	describe the features, credit risk characteristics, and distribution methods for government securities;	55	Overview of Bond Sectors and Instruments	a	describe features, credit risk characteristics, and distribution methods for government securities;
			b	describe the types of securities issued by the U.S. Department of the Treasury (e.g. bills, notes, bonds, and inflation protection securities), and differentiate between on-the-run and off-the-run Treasury securities;			b	describe the types of securities issued by the U.S. Department of the Treasury (e.g. bills, notes, bonds, and inflation protection securities), and distinguish between on-the-run and off-the-run Treasury securities;
			c	describe how stripped Treasury securities are created and distinguish between coupon strips and principal strips;			c	describe how stripped Treasury securities are created and distinguish between coupon strips and principal strips;

			d	describe the types and characteristics of securities issued by U.S. federal agencies;				d	describe the types and characteristics of securities issued by U.S. federal agencies;
			e	describe the types and characteristics of mortgage-backed securities and explain the cash flow, prepayments, and prepayment risk for each type;				e	describe the types and characteristics of mortgage-backed securities and explain the cash flow and prepayment risk for each type;
			f	state the motivation for creating a collateralized mortgage obligation;				f	state the motivation for creating a collateralized mortgage obligation;
			g	describe the types of securities issued by municipalities in the United States and distinguish between tax-backed debt and revenue bonds;				g	describe the types of securities issued by municipalities in the United States and distinguish between tax-backed debt and revenue bonds;
			h	describe the characteristics and motivation for the various types of debt issued by corporations (including corporate bonds, medium-term notes, structured notes, commercial paper, negotiable CDs, and bankers acceptances);				h	describe the characteristics and motivation for the various types of debt issued by corporations (including corporate bonds, medium-term notes, structured notes, commercial paper, negotiable CDs, and bankers acceptances);
			i	define an asset-backed security, describe the role of a special purpose vehicle in an asset-				i	define an asset-backed security, describe the role of a special purpose vehicle in

				backed security's transaction, state the motivation for a corporation to issue an asset-backed security, and describe the types of external credit enhancements for asset-backed securities;					an asset-backed security's transaction, state the motivation for a corporation to issue an asset-backed security, and describe the types of external credit enhancements for asset-backed securities;
			j	describe collateralized debt obligations;				j	describe collateralized debt obligations;
			k	describe the mechanisms available for placing bonds in the primary market and differentiate the primary and secondary markets in bonds.				k	describe the mechanisms available for placing bonds in the primary market and distinguish between the primary and secondary markets for bonds.
	64	Understanding Yield Spreads	a	identify the interest rate policy tools available to a central bank (e.g., the U.S. Federal Reserve);		56	Understanding Yield Spreads	a	identify the interest rate policy tools available to a central bank;
			b	describe a yield curve and the various shapes of the yield curve;				b	describe a yield curve and the various shapes of the yield curve;
			c	explain the basic theories of the term structure of interest rates and describe the implications of each theory for the shape of the yield curve;				c	explain the basic theories of the term structure of interest rates and describe the implications of each theory for the shape of the yield curve;
			d	define a spot rate;				d	define a spot rate;

			e	calculate, compare, and contrast the various yield spread measures;				e	calculate and compare yield spread measures;
			f	describe a credit spread and discuss the suggested relation between credit spreads and the well-being of the economy;				f	describe a credit spread and the suggested relation between credit spreads and the well-being of the economy;
			g	identify how embedded options affect yield spreads;				g	describe how embedded options affect yield spreads;
			h	explain how the liquidity or issue-size of a bond affects its yield spread relative to risk-free securities and relative to other securities;				h	explain how liquidity and issue-size affects the yield spread of a bond relative to other similar securities;
			i	calculate the after-tax yield of a taxable security and the tax-equivalent yield of a tax-exempt security;				i	calculate the after-tax yield of a taxable security and the tax-equivalent yield of a tax-exempt security;
			j	define LIBOR and explain its importance to funded investors who borrow short term.				j	define LIBOR and explain its importance to funded investors who borrow short term.
16	65	Introduction to the Valuation of Debt Securities	a	explain the steps in the bond valuation process;	16	57	Introduction to the Valuation of Debt Securities	a	explain the steps in the bond valuation process;
			b	identify the types of bonds for which estimating the expected cash flows is difficult, and explain the problems				b	describe types of bonds for which estimating the expected cash flows is difficult;

	encountered when estimating the cash flows for these bonds;		
c	explain the importance of reinvestment income in generating the yield computed at the time of purchase, calculate the amount of income required to generate that yield, and discuss the factors that affect reinvestment risk;	c	calculate the value of a bond (coupon and zero-coupon);
d	calculate and interpret the bond equivalent yield of an annual-pay bond and the annual-pay yield of a semiannual-pay bond;	d	explain how the price of a bond changes if the discount rate changes and as the bond approaches its maturity date;
e	describe the methodology for computing the theoretical Treasury spot rate curve and calculate the value of a bond using spot rates;	e	calculate the change in value of a bond given a change in its discount rate;
f	differentiate between the nominal spread, the zero-volatility spread, and the option-adjusted spread;	f	explain and demonstrate the use of the arbitrage-free valuation approach and describe how a dealer can generate an arbitrage profit if a bond is mispriced.
g	describe how the	-	-

				option-adjusted spread accounts for the option cost in a bond with an embedded option;					
			h	explain a forward rate and calculate spot rates from forward rates, forward rates from spot rates, and the value of a bond using forward rates.				-	-
	66	Yield Measures, Spot Rates, and Forward Rates	a	explain the sources of return from investing in a bond;		58	Yield Measures, Spot Rates, and Forward Rates	a	describe the sources of return from investing in a bond;
			b	calculate and interpret the traditional yield measures for fixed-rate bonds and explain their limitations and assumptions;				b	calculate and interpret traditional yield measures for fixed-rate bonds and explain their limitations and assumptions;
			c	explain the importance of reinvestment income in generating the yield computed at the time of purchase, calculate the amount of income required to generate that yield, and discuss the factors that affect reinvestment risk;				c	explain the reinvestment assumption implicit in calculating yield to maturity and describe the factors that affect reinvestment risk;
			d	calculate and interpret the bond equivalent yield of an annual-pay bond and the				d	calculate and interpret the bond equivalent yield of an annual-pay bond and the

			annual-pay yield of a semiannual-pay bond;				annual-pay yield of a semiannual-pay bond;
		e	describe the methodology for computing the theoretical Treasury spot rate curve and calculate the value of a bond using spot rates;			e	describe the calculation of the theoretical Treasury spot rate curve and calculate the value of a bond using spot rates;
		f	differentiate between the nominal spread, the zero-volatility spread, and the option-adjusted spread;			f	distinguish the relations among the nominal spread, the zero-volatility spread, the option-adjusted spread, and option cost;
		g	describe how the option-adjusted spread accounts for the option cost in a bond with an embedded option;			g	explain a forward rate and calculate spot rates from forward rates, forward rates from spot rates, and the value of a bond using forward rates.
		h	explain a forward rate and calculate spot rates from forward rates, forward rates from spot rates, and the value of a bond using forward rates.			-	-
67	Introduction to the Measurement of Interest Rate Risk	a	distinguish between the full valuation approach (the scenario analysis approach) and the duration/convexity approach for measuring interest	59	Introduction to the Measurement of Interest Rate Risk	a	distinguish between the full valuation approach (the scenario analysis approach) and the duration/convexity approach for

		rate risk, and explain the advantage of using the full valuation approach;			measuring interest rate risk, and explain the advantage of using the full valuation approach;
	b	demonstrate the price volatility characteristics for option-free, callable, prepayable, and putable bonds when interest rates change;		b	describe the price volatility characteristics for option-free, callable, prepayable, and putable bonds when interest rates change;
	c	describe positive convexity, negative convexity, and their relation to bond price and yield;		c	describe positive convexity, negative convexity, and their relation to bond price and yield;
	d	calculate and interpret the effective duration of a bond, given information about how the bond's price will increase and decrease for given changes in interest rates;		d	calculate and interpret the effective duration of a bond, given information about how the bond's price will increase and decrease for given changes in interest rates;
	e	calculate the approximate percentage price change for a bond, given the bond's effective duration and a specified change in yield;		e	calculate the approximate percentage price change for a bond, given the bond's effective duration and a specified change in yield;
	f	distinguish among the alternative definitions of duration and explain why effective duration is the most		f	distinguish among the alternative definitions of duration and explain why effective duration is

				appropriate measure of interest rate risk for bonds with embedded options;					the most appropriate measure of interest rate risk for bonds with embedded options;
			g	calculate the duration of a portfolio, given the duration of the bonds comprising the portfolio, and explain the limitations of portfolio duration;				g	calculate the duration of a portfolio, given the duration of the bonds comprising the portfolio, and explain the limitations of portfolio duration;
			h	describe the convexity measure of a bond and estimate a bond's percentage price change, given the bond's duration and convexity and a specified change in interest rates;				h	describe the convexity measure of a bond and estimate a bond's percentage price change, given the bond's duration and convexity and a specified change in interest rates;
			i	differentiate between modified convexity and effective convexity;				i	distinguish between modified convexity and effective convexity;
			j	calculate the price value of a basis point (PVBP), and explain its relationship to duration;				j	calculate the price value of a basis point (PVBP), and explain its relationship to duration;
			k	discuss the impact of yield volatility on the interest rate risk of a bond.				k	describe the impact of yield volatility on the interest rate risk of a bond.
17	68	Derivative Markets and Instruments	a	define a derivative and differentiate between exchange-traded and over-thecounter	17	60	Derivative Markets and Instruments	a	define a derivative and distinguish between exchange-traded and over-thecounter

				derivatives;					derivatives;
			b	define a forward commitment and a contingent claim;				b	define forward contracts, futures contracts, options (calls and puts), and swaps and compare their basic characteristics;
			c	differentiate among the basic characteristics of forward contracts, futures contracts, options (calls and puts), and swaps;				c	describe the purposes and criticisms of derivative markets;
			d	discuss the purposes and criticisms of derivative markets;				d	explain arbitrage and the role it plays in determining prices and promoting market efficiency.
			e	explain arbitrage and the role it plays in determining prices and promoting market efficiency.				-	-
	69	Forward Markets and Contracts	a	explain delivery/settlement and default risk for both long and short positions in a forward contract;		61	Forward Markets and Contracts	a	explain delivery/settlement and default risk for both long and short positions in a forward contract;
			b	describe the procedures for settling a forward contract at expiration, and discuss how termination alternatives prior to expiration can affect credit risk;				b	describe the procedures for settling a forward contract at expiration, and how termination prior to expiration can affect credit risk;
			c	differentiate				c	distinguish between

				between a dealer and an end user of a forward contract;					a dealer and an end user of a forward contract;
			d	describe the characteristics of equity forward contracts and forward contracts on zero-coupon and coupon bonds;				d	describe the characteristics of equity forward contracts and forward contracts on zero-coupon and coupon bonds;
			e	describe the characteristics of the Eurodollar time deposit market, and define LIBOR and Euribor;				e	describe the characteristics of the Eurodollar time deposit market, and define LIBOR and Euribor;
			f	describe the characteristics and calculate the gain/loss of forward rate agreements (FRAs);				f	describe forward rate agreements (FRAs) and calculate the gain/loss on a FRA;
			g	calculate and interpret the payoff of an FRA, and explain each of the component terms;				g	calculate and interpret the payoff of a FRA and explain each of the component terms of the payoff formula;
			h	describe the characteristics of currency forward contracts.				h	describe the characteristics of currency forward contracts.
	70	Futures Markets and Contracts	a	describe the characteristics of futures contracts;		62	Futures Markets and Contracts	a	describe the characteristics of futures contracts;
			b	distinguish between futures contracts and forward contracts;				b	compare futures contracts and forward contracts;
			c	differentiate				c	distinguish between

				between margin in the securities markets and margin in the futures markets, and explain the role of initial margin, maintenance margin, variation margin, and settlement in futures trading;					margin in the securities markets and margin in the futures markets, and explain the role of initial margin, maintenance margin, variation margin, and settlement in futures trading;
			d	describe price limits and the process of marking to market, and calculate and interpret the margin balance, given the previous day's balance and the change in the futures price;				d	describe price limits and the process of marking to market, and calculate and interpret the margin balance, given the previous day's balance and the change in the futures price;
			e	describe how a futures contract can be terminated at or prior to expiration;				e	describe how a futures contract can be terminated at or prior to expiration;
			f	describe the characteristics of the following types of futures contracts: Treasury bill, Eurodollar, Treasury bond, stock index, and currency.				f	describe the characteristics of the following types of futures contracts: Treasury bill, Eurodollar, Treasury bond, stock index, and currency.
	71	Option Markets and Contracts	a	describe call and put options;		63	Option Markets and Contracts	a	describe call and put options;
			b	distinguish between European and American options;				b	distinguish between European and American options;
			c	define the concept of moneyness of an option;				c	define the concept of moneyness of an option;

			d	differentiate between exchange-traded options and over-the-counter options;				d	compare exchange-traded options and over-the-counter options;
			e	identify the types of options in terms of the underlying instruments;				e	identify the types of options in terms of the underlying instruments;
			f	compare and contrast interest rate options with forward rate agreements (FRAs);				f	compare interest rate options with forward rate agreements (FRAs);
			g	define interest rate caps, floors, and collars;				g	define interest rate caps, floors, and collars;
			h	calculate and interpret option payoffs, and explain how interest rate options differ from other types of options;				h	calculate and interpret option payoffs and explain how interest rate options differ from other types of options;
			i	define intrinsic value and time value, and explain their relationship;				i	define intrinsic value and time value, and explain their relationship;
			j	determine the minimum and maximum values of European options and American options;				j	determine the minimum and maximum values of European options and American options;
			k	calculate and interpret the lowest prices of European and American calls and puts based on the rules for minimum values and lower bounds;				k	calculate and interpret the lowest prices of European and American calls and puts based on the rules for minimum values and lower

								bounds;
		l	explain how option prices are affected by the exercise price and the time to expiration;				l	explain how option prices are affected by the exercise price and the time to expiration;
		m	explain put–call parity for European options, and relate put–call parity to arbitrage and the construction of synthetic options;				m	explain put–call parity for European options, and explain how put–call parity is related to arbitrage and the construction of synthetic options;
		n	contrast American options with European options in terms of the lower bounds on option prices and the possibility of early exercise;				n	explain how cash flows on the underlying asset affect put–call parity and the lower bounds of option prices;
		o	explain how cash flows on the underlying asset affect put–call parity and the lower bounds of option prices;				o	determine the directional effect of an interest rate change or volatility change on an option's price.
		p	indicate the directional effect of an interest rate change or volatility change on an option's price.				-	-
72	Swap Markets and Contracts	a	describe the characteristics of swap contracts and explain how swaps are terminated;	64	Swap Markets and Contracts		a	describe the characteristics of swap contracts and explain how swaps are
		b	define, calculate, and interpret the				b	describe, calculate, and interpret the

				payments of currency swaps, plain vanilla interest rate swaps, and equity swaps.					payments of currency swaps, plain vanilla interest rate swaps, and equity swaps.
	73	Risk Management Applications of Option Strategies	a	determine the value at expiration, the profit, maximum profit, maximum loss, breakeven underlying price at expiration, and general shape of the graph of the strategies of buying and selling calls and puts, and indicate the market outlook of investors using these strategies;		65	Risk Management Applications of Option Strategies	a	determine the value at expiration, the profit, maximum profit, maximum loss, breakeven underlying price at expiration, and payoff graph of the strategies of buying and selling calls and puts and determine the potential outcomes for investors using these strategies;
			b	determine the value at expiration, profit, maximum profit, maximum loss, breakeven underlying price at expiration, and general shape of the graph of a covered call strategy and a protective put strategy, and explain the risk management application of each strategy.				b	determine the value at expiration, profit, maximum profit, maximum loss, breakeven underlying price at expiration, and payoff graph of a covered call strategy and a protective put strategy, and explain the risk management application of each strategy.
18	74	Alternative Investments	a	differentiate between an open-end and a closed-end fund, and explain how net asset value of a fund is calculated and the	**18**	66	Alternative Investments	a	distinguish between an open-end and a closed-end fund, and explain how net asset value of a fund is calculated and the nature of fees

				nature of fees charged by investment companies;					charged by investment companies;
			b	distinguish among style, sector, index, global, and stable value strategies in equity investment and among exchange traded funds (ETFs), traditional mutual funds, and closed-end funds;				b	distinguish among style, sector, index, global, and stable value strategies;
			c	explain the advantages and risks of ETFs;				c	distinguish among equity investment and exchange traded funds (ETFs), traditional mutual funds, and closed-end funds;
			d	describe the forms of real estate investment and explain their characteristics as an investable asset class;				d	explain the advantages and risks of ETFs;
			e	describe the various approaches to the valuation of real estate;				e	describe the forms of real estate investment and explain their characteristics as an investable asset class;
			f	calculate the net operating income (NOI) from a real estate investment, the value of a property using the sales comparison				f	describe the various approaches to the valuation of real estate;

				and income approaches, and the aftertax cash flows, net present value, and yield of a real estate investment;					
			g	explain the stages in venture capital investing, venture capital investment characteristics, and challenges to venture capital valuation and performance measurement;				g	calculate the net operating income (NOI) from a real estate investment, the value of a property using the sales comparison and income approaches, and the aftertax cash flows, net present value, and yield of a real estate investment;
			h	calculate the net present value (NPV) of a venture capital project, given the project's possible payoff and conditional failure probabilities;				h	explain the stages in venture capital investing, venture capital investment characteristics, and challenges to venture capital valuation and performance measurement;
			i	discuss the objectives, legal structure, and fee structures typical of hedge funds, and describe the various classifications of hedge funds;				i	calculate the net present value (NPV) of a venture capital project, given the project's possible payoff and conditional failure probabilities;
			j	explain the benefits and drawbacks to fund of funds investing;				j	describe the objectives, legal structure, and fee structures typical of hedge funds, and describe the

									various classifications of hedge funds;
			k	discuss the leverage and unique risks of hedge funds;				k	explain the benefits and drawbacks to fund of funds investing;
			l	discuss the performance of hedge funds, the biases present in hedge fund performance measurement, and explain the effect of survivorship bias on the reported return and risk measures for a hedge fund database;				l	describe the leverage and unique risks of hedge funds;
			m	explain how the legal environment affects the valuation of closely held companies;				m	describe the performance of hedge funds, the biases present in hedge fund performance measurement, and explain the effect of survivorship bias on the reported return and risk measures for a hedge fund database;
			n	describe alternative valuation methods for closely held companies, and distinguish among the bases for the discounts and premiums for these companies;				n	explain how the legal environment affects the valuation of closely held companies;

			o	discuss distressed securities investing, and compare venture capital investing with distressed securities investing;				o	describe alternative valuation methods for closely held companies, and distinguish among the bases for the discounts and premiums for these companies;
			p	discuss the role of commodities as a vehicle for investing in production and consumption;				p	describe distressed securities investing and compare venture capital investing with distressed securities investing;
			q	explain the motivation for investing in commodities, commodities derivatives, and commodity-linked securities;				q	explain the motivation for investing in commodities, commodities derivatives, and commodity-linked securities;
			r	discuss the sources of return on a collateralized commodity futures position.				r	describe the sources of return on a collateralized commodity futures position.
	75	Investing in Commodities	a	explain the relationship between spot prices and expected future prices in terms of contango and backwardation;		67	Investing in Commodities	a	explain the relationship between spot prices and expected future prices in terms of contango and backwardation;
			b	describe the sources of return and risk for a commodity investment and the effect on a portfolio of adding an allocation to				b	describe the sources of return and risk for a commodity investment and the effect on a portfolio of adding an allocation to

				commodities;					commodities;
			c	explain why a commodity index strategy is generally considered an active investment.				**c**	explain why a commodity index strategy is generally considered an active investment.

Source; FinQuiz.com