

Question Type 👢	Question 11	A J1	В ↓↑	c 11	D IT	Answer 11	Remark 1
FBQ	type of error cannot be avoided.	Random error	Indeterminate error				eExam
FBQ	help in eliminating the possible sources of contamination and sample degradation that could lead to sample destruction, and ensure the homogeneity of samples.	Treatment of sample	Preparation of sample				eExam
FBQ	Observing sudden colour change in the indicator is one of the methods of detecting completion of a	Titration reaction					eExam
FBQ	The decrease in power of the beam of a monochromatic radiation when it passes through absorbing specie depends upon the of the absorber and the length of the path transverse by the beam.	Concentration					eExam
FBQ	The device in which electrolysis of solution takes place is known as	Electrochemical cell					eExam
FBQ	In redox titration measures in voltage the concentration of species in solution.	Potentiometer					eExam

FBQ	The part of the component of a spectrometer that selects a narrow band of wavelength from the source spectrum is called	Monochromator				eExam
FBQ	reduce the water content of a sample material	Concentration				eExam
FBQ	In redox titration, half-cell reaction occur at each	Electrode				eExam
FBQ	is a compound with a physical property (colour) which changes abruptly near the equivalence end point.	Indicator				eExam
FBQ	type of error are indicated by small differences in successive measurements made by the same analyst under almost identical experimental conditions.	Random error	Indeterminate error			eExam
FBQ	is a method of sampling employed when population is heterogeneous with respect to the variables (parameters) under study.	Stratified sampling				еЕхат
FBQ	A typical electrolytic cell is made up of electrodes, salt bridge and	Electrolyte				eExam
FBQ	The process by which precipitates revert to the colloidal state is called	Peptization				eExam
FBQ	is defined as the maximum amount of an acid or base that can be added to a buffer system without causing a change or appreciable change in pH of a system.	Buffer capacity				eExam

FBQ	The process by which a precipitate is allowed to stand in the solution from which it was precipitated is known as	Digestion of precipitate	Digestion		eExam
FBQ	pH of 7.0 means the solution is	Neutral			eExam
FBQ	In volatilization gravimetric analysis, the substance to be determined is separated in a form from the reminder of the sample.	Gas			eExam
FBQ	On the pH scale acidity increases from	0.0, 6.00	0.0, 6.00		eExam
FBQ	Round off 9.43 to two significant figures	9.4			eExam
FBQ	affect the precision and accuracy of a measured quantity thereby raising questions on the integrity of the reported values.	Errors	Error		eExam
FBQ	is a process by which the precise concentration of a solution is determined.	Standardisation			eExam
FBQ	involves converting sample material in solid form to solution.	Dissolution			eExam
FBQ	The potential of hydrogen in a system is known as	pH			еЕхат
FBQ	can be described as the operations involved in procuring a laboratory size that is a true representative of "a whole lot" for a particular analytical exercise.	Sampling			eExam

FBQ	Precipitates are treated to have it in a form suitable for weighing by	Drying	heating		eExam
FBQ	types of sample provide more representative sampling of heterogeneous matrices in which the composition of the analyte of interest may vary over a period of time and or space.	Composite samples			еЕхат
FBQ	measures how closely the data cluster about the mean.	Standard deviation			eExam
FBQ	is a solution that resists changes in pH when small amount of acid or base is added or when dilution occurs.	Buffer solution			еЕхат
FBQ	involves heating the materials at high temperature \$\$\left(400 - 700^{0}\c\right)\$\$ In a muffle furnace until it is turned to ashes.	Dry ashing	Ashing		еЕхат
FBQ	is defined as the degree of agreement between replicate measurements of the same quantity.	Precision			eExam
FBQ	At elevated/high temperature in a fluid system the pH turns out to be	High			еЕхат
FBQ	pH of 5.4 means the solution is	Acidic			eExam
FBQ	Precipitates are washed after filtration so as to remove any	Coprecipitate impurities	Impurities		eExam

FBQ	The amount of radiation absorbed by a sample is determined by law.	Beer's			еЕхат
FBQ	The region of the electromagnetic spectrum that extends from about 200 – 380 nm is known as	Near ultraviolet region			eExam
FBQ	The statistical tool used most frequently to compare the mean value from experimental procedure is known as	Student's t Test	Student's t Test		eExam
FBQ	Alkalinity increases from on the pH scale.	8.0 – 14.0	Eight to fourteen		eExam
FBQ	During digestion of a precipitate, the process whereby precipitates carry down from the solution other constituent that cause contamination of the precipitate is called	Coprecipitation			eExam
FBQ	The type of titration used in determining the concentration of analyte which precipitate with the anion or titrant is known as	Precipitation titration			eExam
FBQ	is a method of sampling in which each item of the population has equal chance of being included in the samples.	Random sampling			еЕхат
FBQ	The tendency to oxidise or reduce depends on the of a substance.	Reduction potential			eExam
FBQ	The actual point when a reaction is observed to be complete is known as	End point			eExam

FBQ	is an analytical method which is used to determine larger number metals that form soluble salt or slightly dissociated complexes.	Complexometric titration			eExam
FBQ	is an analytical method that is based upon the measurement of the weight of known composition.	Gravimetry	Gravimetric analysis		eExam
FBQ	The sample container which holds the sample to be analysed by a spectrometer must be in the wavelength region being measured.	Transparent			eExam
FBQ	Ultraviolet region extends from	10 to 380 nm			eExam
FBQ	The end point of a can be determined by the use of electrode to measure potential, or use of self indicator or use of starch indicator.	Redox titration	Oxidation- reduction titration		eExam
FBQ	The difference between the equivalence point and end point is known as	Titration error			eExam
FBQ	is the purest form of reagent which is used to prepare a standard solution.	Primary standard			eExam
FBQ	In titration reaction, the end point should coincide with the	Equivalence point			eExam
FBQ	is an analytical technique that deals with reactions between measured volumes of a reagent against the test substance called analyte in a stoichiometric manner	Volumetric analysis			еЕхат

FBQ	brought to the laboratory require further treatment before analysis commences.	Sample	Samples				eExam
FBQ	Samples composed of mixture of grab samples collected from different points simultaneously or as nearly so as possible is known as	Integrated samples					eExam
FBQ	The nature of a must be the same with that of the population and must remain so throughout the analytical exercise.	Sample					eExam
FBQ	Errors inherent in the analytical method or procedure used is known as	Methodic error					eExam
FBQ	Mathematical error in the calculation of measurements or prejudice in estimating measurement is known as	Operative error					eExam
FBQ	occurs when faulty equipment, weight as well as glassware used are not well calibrated or wrongly calibrated.	Instrumental error					eExam
FBQ	Errors that can be determined and corrected are known as	Systematic error					eExam
FBQ	is termed controllable and uncontrollable variations observed when comparing the measured values to the true value.	Error					eExam
MCQ	Molecules can absorb radiation by	Molecular transition	Spectroscopic transition	Vibrational transition	Excitation transition	С	eExam

MCQ	The amount of radiation absorbed by a sample can be	Related quantitatively to the concentration of analyte in solution	Transmitted without absorption	None of the above	All of the above	В	eExam
MCQ	When atoms or molecules absorb radiation,	The atoms or molecules moves to lower internal energy level	There will be change in state in the number of the atoms or molecules	The atoms or molecules moves to higher internal energy level	The atoms or molecules remains in the same energy level	С	eExam
MCQ	is an example of a metal-ion indicator.	Methyl orange	Erichrome black T	Starch	Ferroin	В	eExam
MCQ	Upon absorbing a photon of energy from radiation, atoms or molecules	Loss back the photon	Moves to the transit state	Moves to the lowest electronic energy state	Moves to higher electronic energy state	D	eExam
MCQ	EDTA is hexaprotic \$\$H_{6}Y^{2+}\$\$ because 	The number of acidic hydrogen atom lost upon complete metal complex formation is six	The number of carboxyl lost upon complete metal complex formation is six	The number of ammonium lost upon complete metal complex formation is six	The number of nitrogen atom lost upon complete metal complex formation is six	A	eExam
MCQ	is a form of volumetric analysis in which the formation of a coloured complex is used to indicate the end point of the titration.	Precipitation titration	Complexometric titration	Acid-base titration	Oxidation- reduction titration	В	eExam
MCQ	Which of the following options below shows the correct arrangement of a spectrometer?	Read out, detector, sample, monochromator and source.	Sample, source, monochromator, detector and read-out.	Source, monochromator, sample, detector and read-out.	Monochromator, source, sample, detector and read-out.	С	eExam
MCQ	The region of the electromagnetic spectrum that extends from 380 nm to about 780 nm is called	Macrowave region	Visible region	Ultraviolet region	Infrared region	В	eExam
MCQ	In the titration of a strong acid against strong bases, before equivalence point	The pH is determined by the excess of OH in the solution.	The pH is determined by dissociation of water.	The pH is determined by the excess H+ in the solution.	The pH is determined by equilibrium between OH and H+.	A	eExam
MCQ	Good solvent for many organics is	Aqueous solutions	Water	Weak mineral acids	Strong mineral acids	D	eExam
MCQ	law states that "when a monochromatic radiation passes through absorbing specie, the power of the beam is progressively decreased as more energy is absorbed by the particle".	Rutherford's	Schroedinger's	Beer's	Hess	С	eExam

MCQ	consist of a mixture of a weak acid and its salt, or a weak base and its salt.	Buffer solution	Double salt	Acidic salt or basic salt	None of the above	A	eExam
MCQ	The pH of most solution is in the range of	0.0 – 0.7	0.0 -14.0	0.7 – 14.0	8.0 – 0.0	В	eExam
MCQ	When a precipitate is heated, it is continued until	It is completely dry	It decomposes	It is ashed	A constant weight is achieved	D	eExam
MCQ	Filterability of a precipitate obtained from gravimetric analysis is enhanced if the precipitate	Exist in solid form	Is devoid of impurities	Is soluble	Contain larger crystals	D	eExam
MCQ	What happens when the precipitate obtain from gravimetric analysis is allowed to stand?	The precipitate dissolves	Larger crystals grow at the expense of small crystals	Smaller crystals grow at the expense of larger crystals	The quantity of precipitate obtained increases	В	eExam
MCQ	Which of the following is not a step of gravimetric analysis?	Drying	Precipitation	Extraction	Washing	С	eExam
MCQ	Peptization of a precipitate can occur by	Washing the obtained precipitate with an electrolyte	Heating the precipitate	Filtering the precipitate	Washing the precipitate with water	D	eExam
MCQ	In gravimetry, precipitation occurs through	Supersaturation, crystal growth and nucleation	Crystal growth, nucleation and supersaturation	Nucleation, supersaturation, and crystal growth	Supersaturation, nucleation and crystal growth	D	eExam
MCQ	The commonest way of removing interferences in gravimetry is by	Dissolution	Introducing reagent that selectively mask the interfering substances	Dissolution	Heating the sample to remove interfering substances that are volatile	В	eExam
MCQ	The product obtained from gravimetric analysis is of limited	Solubility	Quantity	None of the above	All of the above	A	eExam
MCQ	Gravimetry is a method of analysis.	Qualitative	Quantitative	Qualitative and quantitative	Spectroscopic	В	eExam
MCQ	The component of a spectrometer that converts radiant energy to electrical energy is called	Detector	Read-out	Source	Monochromator	A	eExam
MCQ	The absorption of radiation can be used either for	Qualitative analysis	Qualitative or quantitative analysis	Quantitative analysis	Detection of atoms or molecules	В	eExam

MCQ	The second step of the process of absorption of electromagnetic radiation by some species is called	Absorption of radiation	Atomic or molecular transition	Relaxation	Transit state	С	eExam
MCQ	The absorption of electromagnetic radiation by some species is considered to undergo a process.	Four-step	Three-step	Five-step	Two -step	D	eExam
MCQ	The molecules at ordinary room temperature is considered to be at	Excited state	Transit state	Lowest electronic energy state	Atomic or molecular state	С	eExam
MCQ	There are how many basic processes by which molecules can absorb radiation?	Two	Three	Four	One	В	eExam
MCQ	is converting the accessible sample matrices to the form which is accessible to instrument.	Sampling	Mixing solids laboratory samples	Dissolution	Sample decomposition	D	eExam
MCQ	is a method of sample selection which involves pouring the sample so that it takes on a conical shape, flattening the conical shape out into a cake, the cake is then divided into quarters and two quarters which face opposite one another are discarded whilst the other two are combined and constitute the reduced sample.	Quartering	Coning	Quartering and coning	Flattening and quartering	С	eExam
MCQ	Grinding and crushing of a sample does which of the following?	Reduce the size of particles of sample materials and increase the surface area.	Mix the samples in order to ensure random distribution of the components in the analytical sample.	Convert sample material in solid form to solution.	Reduce the water content of a sample material.	A	еЕхат
MCQ	In gravimetric analysis, the sample to be determined is	Extracted with an organic solvent to obtain a precipitate	Chemically reacted with a reagent to yield a precipitate	Dissolved in an aqueous solvent and filtered to obtain the precipitate	Extracted with an inorganic solvent to obtain the precipitate	В	eExam
MCQ	Thecan be arbitrarily broken down into different region according to wavelength.	Frequency	Electromagnetic spectrum	Photon	Wave number	В	eExam

MCQ	is a branch of analytical chemistry that deals with the study of concentration of analyte as a function of amount of radiation absorbed when electromagnetic radiation from appropriate source is directed at it.	Titrimetry	Spectroscopy	Redox titration	Complexometry	В	еЕхат
MCQ	The number of that complexes metals depends on the coordination number of the metal.	Non metals	electrodes	ions	Ligands	D	eExam
MCQ	agents that bind with metals to form complexes.	Ligands	Electrodes	Salt	Electrolytes	A	eExam
MCQ	Which of the following is not among the chain of custody procedure?	Sample label	Sample collection	Assignment of sample for analysis	Sample delivery to the laboratory	В	eExam
MCQ	Which of these statements is true?	Precision helps in expressing confidence interval	Significant figure is a method of showing dispersion from central values.	The smaller the standard deviation, the more closely the data are clustered.	Average deviation is a method of expressing the minimum number of digit of a data.	С	eExam
MCQ	enables analytical chemist to accept conclusions that have high probability of being correct and to reject conclusions that are doubtful.	Performance of replicate measurements	Statistical analytical tools	None of the above	All of the above	В	еЕхап
MCQ	are single samples collected at specific spot at a site over a short period of time.	Composite samples	Integrated samples	Grab samples	Non composite samples	С	еЕхап
MCQ	is designed to investigate whether there is a significant difference between two method based on their standard deviation.	Correlation	Coefficient of variation	F-test	Variance	С	еЕхап
MCQ	cannot be predicted or estimated.	Random error	Determinate error	Systematic error	Controllable error	А	eExan
MCQ	is a form of volumetric analysis which involves the transfer of electrons from one substance to another.	Precipitation titration	Complexometric titration	Acid-base titration	Oxidation- reduction titration	D	еЕхап
MCQ	The magnitude of random errors can be reduced by	Using a well calibrated equipment	Replication of experiment	Exercising carefulness during the experiment	Using different analytical methods to perform the same experiment	В	eExam

MCQ	Co-precipitation with impurities, incomplete reaction, impurities in the reagents used is an example of	Operative error	Methodic error	Instrumental error	Random error	В	eExam
MCQ	Characteristics of a standard solution include	A method must exist for detecting the equivalence point between the standard solution and analyte.	The reaction of the standard solution with the analyte must be describable by equation.	Reaction of the standard solution with analyte should be rapid.	All of the above.	D	eExam
MCQ	are also known as indeterminate errors.	Random error	Systematic error	Uncontrollable error	Controllable error	A	eExam
MCQ	Which of the following is true?	Treatment or preparation of sample converts the sample from the nature in which it exists at the site of sampling to the form in which it can be analysed.	The chain of custody procedure is not helpful in identifying the source of contamination of a sample.	All of the above	None of the above	A	eExam
MCQ	The titrand is	The reagent added from burette to the analyte in a conical flask.	The solvent used in making a solution of the base.	The solvent used in diluting the acid.	The analyte in a conical flask to which reagent in the burette is added to.	D	eExam
MCQ	Completion of a titration reaction can be detected by	Increase in the volume of the analyte in the conical flask.	Decrease in the volume of the reagent in the burette	Observation of marked change of pH in the titration of an acid with a base.	All of the above.	С	eExam
MCQ	Using an incorrectly standardised pH meter in an experiment will introduce	Random error	Variation in measurement	Systematic error	Uncontrollable error	С	eExam
MCQ	Which of these statements is not true?	In titration reaction, there should be no side or parallel reaction.	In titration reaction, there should be known reaction pattern between the analyte and titrant.	Titration reaction need not be rapid.	Titration reaction should be quantitative.	С	eExam
MCQ	The titrant is	The reagent added from burette to the analyte in a conical flask.	The solvent used in making a solution of the base.	The solvent used in diluting the acid.	The analyte in a conical flask to which reagent in the burette is added to.	A	eExam
MCQ	The likelihood that the true value falls within a range is called	Confidence limit	Confidence level	Confidence interval	Accuracy	В	eExam

MCQ	Write 92500 as 3 significant	\$\$9.25 x	\$\$9.250 x	925	0.925	Α	eExam
	figures.	10^{4}\$\$	10^4\$\$	0=0	0.020		
MCQ	Which of the following is not a method used for the prediction and correction of systematic error.	Analysing samples of unknown composition	Analysing blank samples	Using different analytical methods to measure the same quantity	By operators of varying capabilities in different laboratories carrying out the same analyses.	Α	еЕхат
MCQ	A miniature replica of the bulk of materials to be analysed is called	Grab sample	Composite sample	Gross sample	Integrated sample	С	eExam
MCQ	A good must have the same characteristic or features with that of the original population from where it is selected.	Raw material	Sample	Analysis	Result	В	еЕхат
MCQ	The range within which the true value might fall within a given probability is known as?	Coefficient of variation	Accuracy	Confidence limit	Confidence interval	D	eExam