Id	**1**
Question	Variables affecting the rate of homogeneous reactions are
A	Pressure and temperature
B	Temperature and composition
C	Pressure and composition only
D	Pressure , temperature and composition
Answer	
Marks	2
Unit	1

Id	**2**
Question	Rate determining step in a reaction consisting of a number of steps in series is the
A	Fastest step
B	Slowest step
C	intermediate step
D	data insufficient ; can’t be predicted
Answer	
Marks	2
Unit	2

Id	**3**
Question	Chemical Kinetics can predict the
A	Rate of reaction
B	Feasibility of reaction
C	both (A) and (B)
D	none of these
Answer	
Marks	2
Unit	2

Id	**4**
Question	Sum of the powers of the concentration terms in the rate equation is called the …… of the reaction .
A	Order
B	Overall order
C	Molecularity
D	none of these
Answer	
Marks	2
Unit	2

Id	**5**
Question	Molecularity of a reaction
A	Is always equal to the overall order of reaction
B	May not be equal to the order of reaction
C	Can’t have a fractional value
D	Both (B) and (C)
Answer	
Marks	2
Unit	2

Id	**6**
Question	Equilibrium of a chemical reaction as viewed by kinetics is a
A	dynamic steady state
B	static steady state
C	dynamic unsteady state
D	none of these
Answer	
Marks	2
Unit	1

Id	**7**
Question	For a zero order reaction, concentration of product increases with
A	Increase of reaction time
B	Increase in initial concentration
C	Total pressure
D	Decrease in total pressure
Answer	
Marks	2
Unit	3

Id	**8**
Question	Arrhenius equation shows the variation of …… with temperature
A	Reaction rate
B	Rate constant
C	energy of activation
D	frequency factor
Answer	
Marks	2
Unit	2

Id	**9**
Question	The energy of activation of a chemical reaction
A	is same as heat of reaction at constant pressure
B	is the minimum energy which the molecules must have before the reaction can take place
C	varies as fifth power of the temperature
D	both (B) and (C)
Answer	
Marks	2
Unit	2

Id	**10**
Question	Half-life period for a first order reaction is …….. the initial concentration of the reactant .
A	Directly proportional to
B	Inversely proportional
C	independent of
D	none of these
Answer	
Marks	2
Unit	3

Id	**11**
Question	Specific rate constant for a second order reaction
A	Is independent of temperature
B	Varies with temperature
C	Depends on the nature of the reactants
D	Both (B) and (C)
Answer	
Marks	2
Unit	2

Id	**12**
Question	Rate constant ‘ K’ and absolute temperature T are related by collision theory (for bimolecular) as
A	$k \alpha T^{1.5}$
B	$k \alpha \exp(- E/RT)$
C	$k\sqrt{T}$
D	$k \alpha T$
Answer	
Marks	2
Unit	2

Id	**13**
Question	Transition state theory relates the rate constant ‘K’ and absolute temperature T as
A	$k \alpha e^{-E/RT}$
B	$k \alpha T.e^{-E/RT}$
C	$k\sqrt{T}$
D	$k \alpha T^{1.5}$
Answer	
Marks	2
Unit	2

Id	**14**
Question	Reactions with high activation energy are
A	Very temperature sensitive
B	Temperature insensitive
C	always irreversible
D	always reversible
Answer	
Marks	2
Unit	2

Id	**15**
Question	With increase in temperature , the equilibrium conversion of a reversible exothermic reaction
A	Decreases
B	Increases
C	remains unaffected
D	decreases linearly with temperature
Answer	
Marks	2
Unit	3

Id	**16**
Question	The equilibrium constant of chemical reaction…… In the presence of catalyst.
A	Increases
B	Decrease
C	remains unaffected
D	Can either increase or decreases depend on catalyst
Answer	
Marks	2
Unit	2

Id	**17**
Question	Conversion increases with increases in temperature of
A	Autocatalytic reaction
B	Irreversible reaction
C	reversible endothermic reaction
D	reversible exothermic reaction
Answer	
Marks	2
Unit	3

Id	**18**
Question	Integral method for analyzing the kinetic data is used
A	when the data are scattered
B	for testing specific mechanisms with simple rate expressions
C	both (A) and (B)
D	none of these
Answer	
Marks	2
Unit	3

Id	**19**
Question	Rate of a chemical reaction is independent of the concentration of the concentration of reactants for …….. reaction.
A	Zero order
B	Third order
C	Consecutive
D	none of these
Answer	
Marks	2
Unit	3

Id	**20**
Question	Differential method for analysing the kinetic data is used
A	For testing complicated mechanism
B	when the data are scattered
C	when rate expressions are very simple
D	none of these
Answer	
Marks	2
Unit	3

Id	**21**
Question	According to Arrhenius equation of temperature dependency of rate constant for an Elementary reaction
A	$k \alpha \sqrt{T}$
B	$k \alpha T.e^{-E/RT}$
C	$k \alpha e^{-E/RT}$
D	none of these
Answer	
Marks	2
Unit	2

Id	**22**
Question	With increase in temperature, the rate of constant obeying Arrhenius equation
A	increases
B	decreases
C	decreases exponentially with temperature
D	can either increase or decrease, depends on the frequency factor
Answer	
Marks	2
Unit	2

Id	**23**
Question	Which is following is not definition of rate of reaction
A	moles formed/(surface of catalyst) (time)
B	moles formed/(volume of reactor) (time)
C	moles formed/(volume of catalyst) (time)
D	Moles formed /temperature
Answer	
Marks	2
Unit	1

Id	**24**
Question	Half life period of chemical reaction is
A	The time required to reduce the concentration of the reacting substance to half its initial value
B	Half of space time of reaction
C	Half of residence time of reaction
D	None of these
Answer	
Marks	2
Unit	3

Id	**25**
Question	Oxidation of sulphur dioxide to sulphur trioxide using catalyst is example of ……
A	Homogenous
B	heterogonous
C	Photochemical
D	none of these
Answer	
Marks	2
Unit	1

Id	**26**
Question	Catalyst is a substance which
A	Increase rate of reaction
B	Decrease rate of reaction
C	both A and B
D	None of these
Answer	
Marks	2
Unit	1

Id	**27**
Question	The rate of reaction proceeds by evolving heat is called in case of …… reactions.
A	Autocatalytic
B	**Exothermic**
C	endothermic
D	auto thermal
Answer	
Marks	2
Unit	1

Id	**28**
Question	The rate of a homogenous reaction is a function of
A	temperature and pressure
B	temperature and composition only
C	pressure and composition only
D	all temperature ,pressure and composition
Answer	
Marks	2
Unit	1

Id	**29**
Question	For any reaction , we may write conversion as a function of
A	time
B	temperature
C	concentration
D	all (A),(B) and (C)
Answer	
Marks	2
Unit	3

Id	**30**
Question	The rate constant of a reaction depends on the
A	initial concentration of reactants
B	time of reaction
C	temperature of the system
D	extent of reaction
Answer	
Marks	2
Unit	2

Id	**31**
Question	Rate of a chemical reaction is not influenced by
A	catalyst
B	temperature
C	reactants concentration
D	no. of molecules of reactants taking part in a reaction
Answer	
Marks	2
Unit	1

Id	**32**
Question	The rate constant of a chemical reaction decreases by decreasing the
A	pressure
B	concentration of reactants
C	temperature
D	duration of reaction
Answer	
Marks	2
Unit	2

Id	**33**
Question	When a catalyst increases the rate of chemical reaction , the rate constant
A	decreases
B	increases
C	remains constant
D	becomes infinite
Answer	
Marks	2
Unit	2

Id	**34**
Question	Rate of a chemical reaction is independent of the concentration of the reactants for ..... reaction.
A	zero order
B	third order
C	consecutive
D	none of these
Answer	
Marks	2
Unit	3

Id	**35**
Question	A catalyst initiates a chemical reaction. state true or false
A	true
B	false
C	Can’t say
D	None of these
Answer	
Marks	2
Unit	1

Id	**36**
Question	Rate of a chemical reaction
A	decreases with increase in temperature.
B	Increases with increase of pressure of reactants for all reactions.
C	decreases with increase of reactant concentration.
D	none of these
Answer	
Marks	2
Unit	1

Id	**37**
Question	The equilibrium constant of chemical reaction.....in the presence of catalyst.
A	increases
B	decreases
C	remains unaffected
D	can either increase or decrease
Answer	
Marks	2
Unit	1

Id	**38**
Question	The heat of reaction
A	depends on the pressure only.
B	depends on the mechanism of reaction only.
C	depends on both pressure and mechanism of reaction
D	is independent of the mechanism of reaction.
Answer	
Marks	2
Unit	1

Id	**39**
Question	…… method not easy for analyse kinetic data
A	half-life
B	differential
C	integral
D	none of these
Answer	
Marks	2
Unit	3

Id	**40**
Question	A reaction is ……..if take in one phase
A	Homogenous
B	Exothermic
C	endothermic
D	auto thermal
Answer	
Marks	2
Unit	1

Id	**41**
Question	Entropy measure ……. Energy of work
A	available
B	unavailable
C	electrical
D	none of these
Answer	
Marks	2
Unit	1

Id	**42**
Question	The concentration of A in a first order reaction
A	Linearly with time.
B	Exponentially with time.
C	very abruptly towards the end of the reaction
D	Logarithmically with time.
Answer	
Marks	2
Unit	3

Id	**43**
Question	Entropy is ……. property
A	extensive
B	intensive
C	mechanical
D	none of these
Answer	
Marks	2
Unit	1

Id	**44**
Question	Closed system exchange …… with its surroundings
A	Matter
B	energy
C	material
D	none of these
Answer	
Marks	2
Unit	1

Id	**45**
Question	Catalyst …… state of equilibrium.
A	change
B	not change
C	both A and B
D	none of these
Answer	
Marks	2
Unit	1

Id	**46**
Question	Catalyst carriers
A	have very high selectivity.
B	increase the activity of a catalyst.
C	provide large surface area with a small amount of active material.
D	inhibit catalyst poisoning
Answer	
Marks	2
Unit	1

Id	**47**
Question	Work done is a …….
A	path function
B	state function
C	intensive property
D	none of these
Answer	
Marks	2
Unit	1

Id	**48**
Question	Entropy measure disorder of system state true or false
A	true
B	false
C	can’t say
D	none of these
Answer	
Marks	2
Unit	1

Id	**49**
Question	Chemical kinetics can predict the.....of reaction
A	rate
B	feasibility
C	both (A) and (B)
D	neither (A) nor (B)
Answer	
Marks	2
Unit	1

Id	**50**
Question	Half-life period of decomposition of a liquid 'A' by irreversible first order reaction is 12 minutes. The time required for 75% conversion of' A' is.....minutes.
A	18
B	24
C	6
D	12
Answer	
Marks	2
Unit	3

Id	**51**
Question	If the activation energy is low, the reaction is relatively faster state true or false
A	true
B	false
C	Can’t say
D	None of these
Answer	
Marks	2
Unit	2

Id	**52**
Question	Reversible reaction proceeds in …….. direction
A	one
B	both
C	depend upon reaction
D	data insufficient, can't be predicted
Answer	
Marks	2
Unit	3

Id	**53**
Question	Entropy of universe remain constant state true or false
A	true
B	false
C	Can’t say
D	None of these
Answer	
Marks	2
Unit	1

Id	**54**
Question	Rate of a chemical reaction
A	decreases with increase in temperature.
B	increases with increase of pressure of reactants for all reactions.
C	decreases with increase of reactant concentration.
D	none of these
Answer	
Marks	2
Unit	2

Id	**55**
Question	The equilibrium constant of chemical reaction rate reaction.....in the presence of catalyst.
A	increases
B	decreases
C	remains unaffected
D	can either increase or decrease
Answer	
Marks	2
Unit	1

Id	**56**
Question	For reactant A, N_{AO} means
A	Final moles of A
B	Initial moles of A
C	Conversion of A
D	none of these
Answer	
Marks	2
Unit	1

Id	**57**
Question	For testing complicated rate expression …… method is useful
A	Half-life.
B	integral
C	differential
D	none of these
Answer	
Marks	2
Unit	3

Id	**58**
Question	In ……. reaction, the reaction mass is present in one phase only
A	Heterogeneous
B	homogenous
C	catalytic
D	reversible
Answer	
Marks	2
Unit	1

Id	**59**
Question	The unit of rate constant for first order reaction is
A	liter
B	time $^{-1}$
C	gm/cm^{3}
D	mol/lit
Answer	
Marks	2
Unit	3

Id	**60**
Question	In multiple reaction the …… determine overall order of reaction
A	Slowest step
B	Fast step
C	both
D	none of these
Answer	
Marks	2
Unit	2

Id	**61**
Question	In a reversible reaction, the rate of forward reaction is always …….. to that of the backward reaction.
A	less
B	more
C	equal
D	cants say
Answer	
Marks	2
Unit	3

Id	**62**
Question	Homogenous reaction take place in …… phase
A	one
B	two
C	three
D	none of these
Answer	
Marks	2
Unit	1

Id	**63**
Question	The unit of rate constant for……. order reaction is $time^{-1}$
A	second
B	third
C	first
D	irreversible
Answer	
Marks	2
Unit	3

Id	**64**
Question	With increase in temperature, the rate constant obeying Arrhenius equation
A	increases.
B	decreases
C	decreases exponentially.
D	can either increase or decrease ; depends on the frequency factor.
Answer	
Marks	2
Unit	2

Id	**65**
Question	The burning of a coal is an example of a ……..non-catalytic reaction
A	Homogenous
B	heterogeneous
C	autocatalytic
D	none of these
Answer	
Marks	2
Unit	1

Id	**66**
Question	Rate of a chemical reaction is independent of the concentration of the reactants for ..... reaction.
A	zero order
B	third order
C	consecutive
D	none of these
Answer	
Marks	2
Unit	2

Id	**67**
Question	In a ……reaction, the slowest step determines the overall rate of reaction.
A	Elementary
B	nonelementary
C	first order
D	Autocatalytic
Answer	
Marks	2
Unit	2

Id	**68**
Question	for any reaction, we may write conversion as a function of:
A	Concentration
B	All of these
C	Temperature
D	Time
Answer	
Marks	2
Unit	3

Id	**69**
Question	. ……. of a reaction is a theoretical quantity.
A	Molecularity
B	order
C	catalyst
D	none of these
Answer	
Marks	2
Unit	2

Id	**70**
Question	Rate of a reaction depends upon the
A	nature of the reactants.
B	concentration of the reactants.
C	temperature at which the reaction is carried.
D	all (A), (B) and (C).
Answer	
Marks	2
Unit	1

Id	**71**
Question	For a …… step reaction, the law of mass action and the law expressions are the same.
A	Single
B	two
C	three
D	four
Answer	
Marks	2
Unit	2

Id	**72**
Question	Method used to analyse kinetic data is …….
A	Integral
B	differential
C	half-life
D	all A,B,C
Answer	
Marks	2
Unit	3

Id	**73**
Question	Molecularity has the significance only for an elementary reaction. state true or false
A	true
B	false
C	data not sufficient
D	none of these
Answer	
Marks	2
Unit	2

Id	**74**
Question	The following is easy method to analyse kinetic data
A	Half-life
B	differential
C	integral
D	none of these
Answer	
Marks	2
Unit	3

Id	**75**
Question	Molecularity of reaction can have …….. value
A	Fractional
B	whole
C	Zero
D	none of these
Answer	
Marks	2
Unit	2

Id	**76**
Question	Catalyst has …… life state true or false
A	limited
B	unlimited
C	zero
D	none of these
Answer	
Marks	2
Unit	1

Id	**77**
Question	Chemical kinetics can predict the.....of reaction
A	rate
B	feasibility
C	both (a) & (b)
D	neither (a) nor (b)
Answer	
Marks	2
Unit	1

Id	**78**
Question	Catalyst may be solid or fluid.
A	true
B	false
C	Data insufficient
D	None of these
Answer	
Marks	2
Unit	1

Id	**79**
Question	Order of a reaction is always…….. quantity.
A	experimental
B	theoretical
C	both
D	none of these
Answer	
Marks	2
Unit	2

Id	**80**
Question	If the time required to complete a definite fraction of reaction varies inversely as the concentration of the reactants, then the order of reaction is
A	0
B	1
C	2
D	3
Answer	
Marks	2
Unit	3

Id	**81**
Question	Statement A) For first order reaction, half-life directly proportional to the rate constant B) For first order reaction, half-life not directly proportional to the rate constant
A	Statement A is correct
B	statement B is correct
C	both statement true
D	both statement false
Answer	
Marks	2
Unit	3

Id	**82**
Question	Higher free energy of activation of a chemical reaction (at a given temperature) implies
A	slower rate of reaction.
B	higher rate of reaction.
C	higher equilibrium conversion.
D	both (B) and (C).
Answer	
Marks	2
Unit	2

Id	**83**
Question	The rate of reaction does not decrease appreciably as the reaction proceeds in case of..... reactions.
A	autocatalytic
B	exothermic
C	endothermic
D	autothermal
Answer	
Marks	2
Unit	2

Id	**84**
Question	The rate of a homogeneous reaction is a function of
A	temperature and pressure only.
B	temperature and composition only.
C	pressure and composition only.
D	all temperature, pressure and composition.
Answer	
Marks	2
Unit	2

Id	**85**
Question	Half life period of a chemical reaction is proportional to CAO^{-1} , if the reaction is of..... order.
A	first
B	zero
C	second
D	third
Answer	
Marks	2
Unit	3

Id	**86**
Question	The knowledge of initial concentration and rate constant is necessary to determine the half life time of a reaction of.....order.
A	zero
B	first
C	second
D	none of these
Answer	
Marks	2
Unit	3

Id	**87**
Question	If free energy change for a chemical reaction is very large and negative, then the reaction is
A	not feasible.
B	just feasible.
C	very much feasible.
D	unpredictable as is no measure of feasibility of a reaction.
Answer	
Marks	2
Unit	1

Id	**88**
Question	The rate of the chemical reaction A→ B doubles as the concentration of A i.e.., CA is doubled. If rate of reaction is proportional to C^n, then what is the value of n for this reaction A
A	0.5
B	1
C	0
D	2
Answer	
Marks	2
Unit	3

Id	**89**
Question	Rate of a chemical reaction is not influenced by the
A	catalyst
B	temperature
C	reactants concentration
D	number of molecules of reactants taking part in a reaction
Answer	
Marks	2
Unit	2

Id	**90**
Question	The rate constant of a chemical reaction decreases by decreasing the
A	pressure
B	concentration of reactants
C	temperature
D	duration of reaction
Answer	
Marks	2
Unit	2

Id	**91**
Question	When a catalyst increases the rate of chemical reaction, the rate constant
A	decreases
B	increases
C	remains constant
D	becomes infinite
Answer	
Marks	2
Unit	2

Id	**92**
Question	The rate constant of a reaction depends on the
A	Initial concentration of reactants.
B	time of reaction.
C	temperature of the system.
D	extent of reaction.
Answer	
Marks	2
Unit	2

Id	**93**
Question	The rate at which a chemical substance reacts is proportional to its
A	active mass
B	molecular weight
C	equivalent weight
D	atomic weight
Answer	
Marks	2
Unit	2

Id	**94**
Question	The reaction in which one of the products of reaction acts as a catalyst is called a/an..... reaction.
A	biochemical
B	photochemical
C	catalytic
D	autocatalytic
Answer	
Marks	2
Unit	1

Id	**95**
Question	$2HI \rightarrow H_2+I_2$ is example of …….. order
A	first
B	second
C	zero
D	third
Answer	
Marks	2
Unit	3

Id	**96**
Question	The catalyst in a second order reversible reaction increases the rate of the forward reaction
A	and decreases that of backward reaction.
B	and backward reaction equally.
C	only.
D	to a greater extent than that of the backward reaction.
Answer	
Marks	2
Unit	3

Id	**97**
Question	A catalyst
A	Initiates a reaction.
B	lowers the activation energy of reacting molecules.
C	is capable of reacting with any one of the reactants.
D	can not be recovered chemically unchanged at the end of a chemical reaction.
Answer	
Marks	2
Unit	1

Id	**98**
Question	The reaction between oxygen and organic material is a/an.....reaction.
A	exothermic
B	endothermic
C	biochemical
D	photochemical
Answer	
Marks	2
Unit	1

Id	**99**
Question	A rise in temperature
A	normally tends to increase the reaction rate.
B	does not affect a catalysed reaction
C	does not affect photo-chemical reaction rates.
D	all (a), (b) and (c).
Answer	
Marks	2
Unit	1

Id	**100**
Question	The half-life period of a first order reaction is given by
A	1.5 K
B	2.5 K
C	0.693/K
D	6.93
Answer	
Marks	2
Unit	3

Id	**101**
Question	For a……..…..…order chemical reaction, A → products, the half life period is independent of the initial concentration of the reactant A.
A	zero
B	first
C	second
D	third
Answer	
Marks	2
Unit	3

Id	**102**
Question	For a.....order chemical reaction, $A + B \rightarrow C$, the fractional conversion of reactant 'A' is proportional to time,
A	zero
B	first
C	second
D	third
Answer	
Marks	2
Unit	3

Id	**103**
Question	The fractional volume change of the system for the isothermal gas phase reaction, $A \rightarrow 3B$, between no conversion and complete conversion is
A	0.5
B	1
C	2
D	3
Answer	
Marks	2
Unit	3

Id	**104**
Question	A chemical reaction is of zero order, when the reaction rate is
A	$\propto CA$
B	$\propto l/CA$
C	independent of temperature
D	none of these.
Answer	
Marks	2
Unit	3

Id	**105**
Question	The half-life period of a zero order reaction, A → products, is equal to
A	$C_{AO}/2K$
B	C_{AO}/K
C	0.693/K
D	1/K
Answer	
Marks	2
Unit	3

Id	**106**
Question	Time taken for a first order reaction, A $\rightarrow$ products, to be 90% complete is
A	2.303/K
B	0.9/K
C	1.1 K
D	1.1/K
Answer	
Marks	2
Unit	3

Id	**107**
Question	From Arrhenius law, a plot of loge K versus 1/T gives a straight line with a slope of (–E/ R). The unit of E /R is
A	k cal
B	k cal/°K
C	°K
D	k cal. °K
Answer	
Marks	2
Unit	2

Id	**108**
Question	A photochemical reaction is.....light.
A	initiated by
B	accompanied with emission of
C	catalysed by
D	used to convert heat energy into
Answer	
Marks	2
Unit	3

Id	**109**
Question	Photochemical reaction rate does not depend significantly on temperature, because
A	it is a reversible reaction.
B	it is an exothermic reaction.
C	the energy of reacting molecules exceeds the activation energy by absorption of light
D	none of these.
Answer	
Marks	2
Unit	3

Id	**110**
Question	In an exothermic reaction, the energy of the reacting substances as compared to that of products is
A	More
B	less
C	same
D	either (a) or (b), depends on order of reaction.
Answer	
Marks	2
Unit	1

Id	**111**
Question	If the time required to change the concentration of reactant to half its original value is independent of the initial concentration, the order of reaction is
A	zero
B	one
C	two
D	three
Answer	
Marks	2
Unit	3

Id	**112**
Question	For a homogeneous reaction of nth order, the dimension of the rate constant is given by
A	$1/(\text{time})^n$
B	$(\text{concentration})^{1-n}/(\text{time})$
C	$(\text{concentration})^{n-1}/(\text{time})$
D	none of these
Answer	
Marks	2
Unit	2

Id	**113**
Question	Collision theory gives the rate constant for bimolecular reaction as
A	$K\ \alpha Te^{-E/RT}$
B	$Ke^{E/RT}$
C	$Kea^{-E/RT}$
D	none of these
Answer	
Marks	2
Unit	2

Id	**114**
Question	The rate constant of a reaction is a function of the
A	time of reaction.
B	temperature of the system.
C	extent of reaction.
D	initial concentration of the reactants.
Answer	
Marks	2
Unit	2

Id	**115**
Question	Rate of a chemical reaction is not affected by the
A	catalyst.
B	temperature.
C	reactant’s concentration.
D	number of molecules of reactants taking part in the reaction.
Answer	
Marks	2
Unit	2

Id	**116**
Question	A catalyst in a chemical reaction
A	decreases the activation energy.
B	alters the reaction mechanism.
C	increases the frequency of collisions of reacting species.
D	all (A), (B) and (C).
Answer	
Marks	2
Unit	1

Id	**117**
Question	The rate constant of a chemical reaction increases by increasing the
A	temperature
B	pressure
C	reactant’s concentration
D	none of these
Answer	
Marks	2
Unit	2

Id	**118**
Question	As the chemical reaction proceeds, the rate of reaction
A	increases.
B	decreases.
C	remains same.
D	may increase or decrease depending on the type of reaction.
Answer	
Marks	2
Unit	1

Id	**119**
Question	Catalytic action in a catalytic chemical reaction follows from the ability of catalyst to change the
A	activation energy
B	equilibrium constant
C	heat of reaction
D	none of these
Answer	
Marks	2
Unit	1

Id	**120**
Question	A balanced chemical reaction equation conforms to the law of
A	conservation of mass
B	Avagadro’s hypothesis
C	gaseous volumes
D	none of these
Answer	
Marks	2
Unit	1

Id	**121**
Question	For a first order chemical reaction, the rate constant
A	changes on changing the concentration units.
B	is not a function of the unit of time.
C	has unit of time^{-1}
D	none of these.
Answer	
Marks	2
Unit	2

Id	**122**
Question	Pick out the correct statement.
A	In catalytic reactions, the catalyst reacts with the reactants.
B	A catalyst initiates a chemical reaction.
C	A catalyst lowers the activation energy of the reacting molecules.
D	A catalyst can not be recovered chemically unchanged at the end of the chemical reaction.
Answer	
Marks	2
Unit	1

Id	**123**
Question	In…..system, the energy enters and leaves in the system.
A	open
B	closed
C	open-closed
D	insolated
Answer	
Marks	2
Unit	1

Id	**124**
Question	Thermodynamic equilibrium constant system is affected by
A	inerts
B	pressure
C	temperature
D	all (A), (B) and (C)
Answer	
Marks	2
Unit	1

Id	**125**
Question	The equilibrium constant of a catalytic chemical reaction.....due to the presence of a catalyst.
A	increases
B	decreases
C	remains unaffected
D	unpredictable from the data
Answer	
Marks	2
Unit	2

Id	**126**
Question	The unit of frequency factor in Arrhenius equation is
A	same as that of rate constant.
B	same as that of activation energy.
C	dimensionless.
D	none of these
Answer	
Marks	2
Unit	2

Id	**127**
Question	With an increase in pressure in gaseous phase chemical reactions, the Fractional conversion.....when the number of moles decreases.
A	increases
B	decreases
C	remains unaffected
D	unpredictable from the data
Answer	
Marks	2
Unit	3

Id	**128**
Question	With increase in initial concentration, the fractional conversion of a first order reaction in a given time
A	increases
B	decreases
C	remains constant
D	unpredictable
Answer	
Marks	2
Unit	3

Id	**129**
Question	Maximum equilibrium conversion for endothermic reaction is obtained at the.....temperature.
A	highest possible
B	lowest possible
C	intermediate
D	room
Answer	
Marks	2
Unit	3

Id	**130**
Question	Fractional conversion.....for an exothermic reversible chemical reaction, when the temperature is maximum.
A	increases
B	remains unchanged
C	decreases
D	unpredictable from the data
Answer	
Marks	2
Unit	3

Id	**131**
Question	What is the order of a chemical reaction whose rate is determined by the variation of one concentration term only ?
A	zero
B	first
C	second
D	third
Answer	
Marks	2
Unit	3

Id	**132**
Question	The role of a catalyst in a chemical reaction is to change the
A	equilibrium constant
B	activation energy
C	final products
D	heat of reaction
Answer	
Marks	2
Unit	1

Id	**133**
Question	Which of the following will favour the reverse reaction in a chemical equilibrium reaction ?
A	Increasing the concentration of one of the reactants.
B	Increasing the concentration of one or more of the products.
C	Removal of at least one of the products at regular interval.
D	None of these.
Answer	
Marks	2
Unit	1

Id	**134**
Question	Time required for 50% decomposition of a liquid in an isothermal batch reactor following first order kinetics is 2 minutes. The time required for 75% decomposition will be about .....minutes.
A	3
B	4
C	6
D	8
Answer	
Marks	2
Unit	3

Id	**135**
Question	The reactions with low activation energy are
A	always spontaneous
B	slow
C	fast
D	non-spontaneous
Answer	
Marks	2
Unit	2

Id	**136**
Question	The half-life period of a first order reaction is
A	always the same irrespective of the reaction.
B	dependent on initial concentration of the reactants.
C	proportional to the initial concentration of reactants.
D	half the specific rate constant.
Answer	
Marks	2
Unit	3

Id	**137**
Question	For a zero order chemical reaction, the
A	half life period is directly proportion to the initial concentration of the reactants.
B	plot of products concentration with time is k straight line through the origin.
C	products concentration increases linearly with time.
D	all (a), (b) and (c).
Answer	
Marks	2
Unit	3

Id	**138**
Question	Limiting reactant in a chemical reaction decides the
A	rate constant
B	conversion
C	reaction speed
D	equilibrium constant.
Answer	
Marks	2
Unit	3

Id	**139**
Question	In variable volume batch reactor system ……. Vary
A	Melting point
B	volume
C	boiling point
D	none of these
Answer	
Marks	2
Unit	3

Id	**140**
Question	The order of a chemical reaction is
A	an experimentally determined quantity.
B	always equal to the total stoichiometric
C	number of reactants. Never fractional.
D	none of this
Answer	
Marks	2
Unit	2

Id	**141**
Question	According to the ‘law of mass action’, the rate of reaction is directly proportional to the
A	equilibrium constant.
B	volume of the reaction vessel.
C	nature of the reactants.
D	molar concentration of the reactants.
Answer	
Marks	2
Unit	1

Id	**142**
Question	For a……..…..order reaction, the units of rate constant and rate of reaction are the same.
A	zero
B	first
C	second
D	fractional
Answer	
Marks	2
Unit	3

Id	**143**
Question	What is the order of a chemical reaction in which doubling the initial concentration of the reactants doubles the half life time of the reaction ?
A	0
B	1
C	2
D	3
Answer	
Marks	2
Unit	3

Id	**144**
Question	If the total enthalpy of products is less than the total enthalpy the reactants, the reaction is
A	endothermic
B	exothermic
C	either (A) or (B); more information required for correct prediction
D	neither (A) or (B)
Answer	
Marks	2
Unit	1

Id	**145**
Question	enzyme catalyzed reaction is ……reaction
A	elementary
B	chain
C	non chain
D	Can’t say
Answer	
Marks	2
Unit	2

Id	**146**
Question	Consider a reversible gas-phase reaction, The reaction is exothermic. If the system pressure is increased, equilibrium conversion of the reactant
A	decreases
B	increases
C	remains unaffected by pressure changes
D	may increase or decrease, depending on the magnitude of heat of reaction
Answer	
Marks	2
Unit	3

Id	**147**
Question	Constant volume batch reactor system ……. remain constant
A	volume
B	boiling point
C	viscosity
D	None of these
Answer	
Marks	2
Unit	1

Id	**148**
Question	For a reversible endothermic reaction, with increase in temperature.
A	rate of reaction increases
B	equilibrium conversion increases
C	both rate and equilibrium conversion increases
D	neither rate nor equilibrium conversion increases
Answer	
Marks	2
Unit	1

Id	**149**
Question	For a reversible exothermic reaction, with increase in temperature
A	rate of reaction increases
B	equilibrium conversion increases
C	rate of reaction decreases
D	equilibrium conversion decreases
Answer	
Marks	2
Unit	1

Id	**150**
Question	Order is equal to the stoichiometric coefficient for…..
A	Elementary reaction
B	non elementary reaction
C	Homogeneous reaction
D	heterogeneous reaction
Answer	
Marks	2
Unit	2