

Date Planned ://	Daily Tutorial Sheet-3	Expected Duration : 90 Min		
Actual Date of Attempt : / /	Level-1	Exact Duration :		

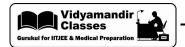
Act	ual Date	e of Attempt :	:_/_/		Leve	-1	Ex	cact Duration :_		
31.	For the first order reaction with rate constant k, which expression gives the half-life period? (Initial concentration = a)									
	(A)	ln 2/k	(B)	1/ka	(C)	0.693/ka	(D)	$3/2 \text{ ka}^2$		
32 .	The rate constant is given by the equation $k = p.Ze^{-E/RT}$. Which factor should register a decrease for the									
	react	ion to proceed	more rapi	dly?						
	(A)	T	(B)	Z	(C)	E	(D)	p		
33.	The temperature coefficient of most of the reactions lies between :									
	(A)	1 and 3	(B)	2 and 3	(C)	1 and 4	(D)	2 and 4		
34.	The reaction $2\text{FeCl}_3 + \text{SnCl}_2 \longrightarrow 2\text{FeCl}_2 + \text{SnCl}_4$ is an example of :									
	(A)	first order reaction			(B)	second order reaction				
	(C)	third order	reaction		(D)	None of thes	se			
35.	Activation energy of a reaction is determined by :									
	(A)	plotting substrate-time graph								
	(B)									
	(C)									
	(D)	None of the								
36.		constant deper			(T)					
	(A)	temperatur			(B)	time				
07	(C)	initial conc			(D)	none				
37.	If the half-life for a first order reaction is 4 min, then the time after which the reaction is 99.9% completed is:									
	(A)	16 min	(B)	8 min.	(C)	32 min	(D)	40 min.		
38.									()	
	I.	$CH_{3}COOC_{2}H_{5} + H_{2}O \xrightarrow{H^{+}} CH_{3}COOH + C_{2}H_{5}OH$								
	II. $C_{12}H_{22}O_{11} + H_2O \xrightarrow{H^+} C_6H_{12}O_6 + C_6H_{12}O_6$									
	(A)	only I			(B)	only II				
	(C)	both I & II			(D)	none of thes	e			
39 .	For the reaction $A+B \longrightarrow C+D$, doubling the concentration of both the reactants increases the									
	reaction rate by 8 times and doubling the concentration of only B simply doubles the reaction rate. The rate law is given as:									
	(A)	$r = k[A]^{1/2}$	$^{2}[B]^{1/2}$		(B)	r = k[A][B]	$]^2$			
	(C)	$r = k[A]^2$	[B]			$\mathbf{r} = \mathbf{k} [\mathbf{A}] [\mathbf{B}]$	=			
40 .	In Ar	rhenius plot, ii	ntercept is	equal to:						

(C)

 $\ln k$

(D)

 $log_{10}A$



(A)

(C)

1.1 times that of half-life

3.3 times that of half-life

41.	When a	a biochemical re	eaction	is carried out ir	n labora	tory from ou	tside of hu	ıman body in a	absence o
	enzyme	e then the rate of	f reactio	n obtained is 10) ⁻⁶ times,	, then activat	ion energy	of reaction in p	resence o
	enzyme	enzyme is :							
	(A)	6/RT							
	(B)	P is required							
	(C)	different from E_a obtained in the laboratory							
	(D)	cannot say anything							
42 .	A sample of radioactive substance loses half of its activity in 4 days. The time in which its activity is								
	reduce	d to 5% is :							lacksquare
	(A)	12 days	(B)	8.3 days	(C)	17.3 days	(D)	None of these	
43.	A chem	nical reaction wa	s carrie	d out at 300 K a	nd 280	K. The rate c	onstants w	ere found to be	K ₁ and K ₂
	respect	ively. Then:							lacksquare
	(A)	$\mathbf{k}_2 = 4\mathbf{k}_1$	(B)	$\mathbf{k}_2 = 2\mathbf{k}_1$	(C)	$k_2 = 0.25k_1$	(D)	$k_2 = 0.5k_1$	
44.	Collision Theory is applicable to:								
	(A)	First order reactions			(B)	Zero order reactions			
	(C)	Bimolecular rea	ctions		(D)	Intramolecu	ılar reactio	ns	
45 .	The tim	time taken for 90% of a first order reaction to complete is approximately:							

(B)

(D)

2.2 times that of half-life

4.4 times that of half-life