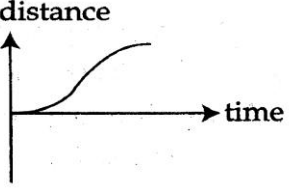


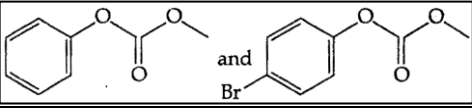
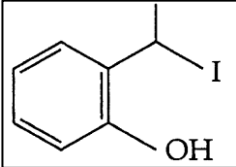
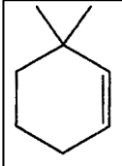
MOMENTUM

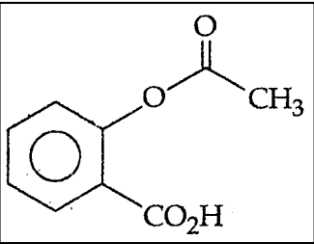
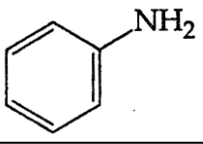
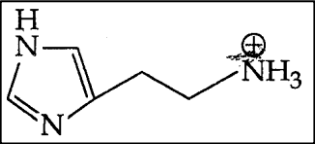
JEE Main ANSWER KEY (8 APRIL 2018)

Question	Answer	Set- A		Set- B		Set- C	
		Q. No.	Option	Q. No.	Option	Q. No.	Option
It is found that if a neutron	(.89, .28)	26	1	1	3	71	4
The mass of a hydrogen	$2.35 \times 10^3 \text{ N/m}^2$	11	1	2	3	89	4
A solid sphere of radius r	$\frac{mg}{3Ka}$	9	3	3	1	87	2
Two batteris with e.m.f.	11.5 V and 11.6 V	17	2	4	4	82	1
A particle is moving in a	Zero	4	3	5	1	68	2
Two masses $m_1 = 5 \text{ kg}$	27.3 kg	3	2	6	4	67	1
If the series limit frequency	$v_L / 25$	25	4	7	2	84	3
Unpolarized light	45	22	3	8	1	75	2
An electron from various	$A_n \approx A + \frac{B}{\lambda_n^2}$	24	1	9	3	62	4
The reading of the ammeter	11.5 mA	27	2	10	1	63	2
An electron, a proton and an	$r_e < r_p = r_\alpha$	18	3	11	4	65	1
A parallel plate capacitor of	1.2 n C	15	1	12	3	69	4
For an RLC	$\frac{\omega_o L}{R}$	20	1	13	3	80	4
A telephonic communication	2×10^6	28	3	14	1	74	2
A granite rod of 60 cm length	5 kHz	13	1	15	3	88	4
Seven identical circular planar	$\frac{181}{2} MR^2$	6	4	16	2	90	3
Three concentric metal shells	$\frac{\sigma}{\epsilon_0} \left[\frac{a^2 - b^2}{b} + c \right]$	14	2	17	4	66	1

In a potentiometer experiment,	1.5	29	2	18	4	73	1
An EM	$\frac{\epsilon r_1}{\epsilon r_2} = \frac{1}{4}$	21	3	19	1	79	2
The angular width	25	23	1	20	3	61	4
A silver atom in a solid	7.1 N/m	12	2	21	4	70	1
From a uniform circular disc of	$4MR^2$	7	1	22	3	77	4
In a collinear collision,	$\sqrt{2} v_0$	5	2	23	4	78	1
The dipole moment of	$\sqrt{2}$	19	3	24	1	72	2
The density of a material	4.50%	1	3	25	1	64	2
On interchanging	550	30	3	26	1	76	2
In an a.c. circuit, the	$\frac{1000}{\sqrt{2}}, 10$	16	2	27	4	85	1
All the graphs below		2	2	28	4	81	1
Two moles of an ideal monoatomic	(a) 189 K (b) -2.7kJ	10	2	29	1	86	2
A particle is moving with a uniform	$T \propto R^{(n+1)/2}$	8	3	30	1	83	2
If the tangent at	95	80	4	31	2	58	3
If L_1 is the line of	$\frac{1}{3\sqrt{2}}$	83	2	32	4	60	1
If $\alpha, \beta \in \mathbb{C}$ are	1	63	3	33	1	35	2
Tangents are drawn	$45\sqrt{5}$	82	1	34	3	32	4
If the curves $y^2 = 6x$	$\frac{9}{2}$	72	4	35	2	51	3
If the system of linear	10	65	2	36	4	56	1
Let $S = \{x \in \mathbb{R} : x \geq 0\}$	contains exactly two elements.	62	3	37	1	57	2

If sum of all the solutions	$\frac{13}{9}$	88	2	38	4	48	1
A bag contains 4 red and	$\frac{2}{5}$	86	2	39	4	46	1
Let $f(x) = x^2 + \frac{1}{x^2}$ and	$2\sqrt{2}$	73	4	40	2	43	3
Two sets A and B are	$A \subset B$	61	2	41	4	41	1
The Boolean expression	$\sim p$	90	1	42	3	55	4
Tangent and normal are drawn	2	81	2	43	4	33	1
If $\begin{vmatrix} x-4 & 2x & 2x \\ 2x & x-4 & 2x \\ 2x & 2x & x-4 \end{vmatrix} =$	$(-4, 5)$	64	3	44	1	54	2
The sum of the co-efficients	2	67	4	45	2	37	3
Let $a_1, a_2, a_3, \dots, a_{49}$ be	34	68	3	46	1	38	4
A straight line through a fixed	$3x + 2y = xy$	78	3	47	1	49	2
The value of	$\frac{\pi}{4}$	75	4	48	2	45	3
Let $g(x) = \cos x^2,$	$\frac{1}{2}(\sqrt{3}-1)$	76	1	49	3	36	4
For each $t \in \mathbb{R}$, let $[t]$ be	is equal to 120	70	3	50	1	44	2
If $\sum_{i=1}^9 (x_i - 5) = 9$	2	87	3	51	1	39	2
The integral	$\frac{-1}{3(1 + \tan^3 x)} + C$	74	2	52	4	31	1
Let $S = \{t \in \mathbb{R} : f(x) = x - \pi \}$.	ϕ (an empty set)	71	1	53	3	53	4
Let $y = y(x)$ be the solution	$-\frac{8}{9}\pi^2$	77	3	54	1	59	2
Let \vec{u} be a vector coplanar	336	85	1	55	3	34	4

The length of the projection	$\sqrt{\frac{2}{3}}$	84	4	56	2	47	3
PQR is a triangular park	100	89	1	57	3	40	4
From 6 different movels and 3	at least 1000	66	1	58	3	42	4
Let A be the sum of the first 20	248	69	2	59	4	50	1
Let the orthocentre and centroid	$3\sqrt{\frac{5}{2}}$	79	3	60	1	52	2
Total number of lone pair	9	44	3	61	1	10	2
Which of the following salts	CH ₃ COOK	45	2	62	4	1	1
Phenol reacts with methyl		57	3	63	1	24	2
The increasing order of basicity	(b) < (a) < (d) < (c)	58	3	64	1	13	2
An alkali is titrated against an acid	Base-Weak, Acid-Strong, End point- Yellow to pinkish red	55	3	65	1	5	2
The trans-alkenes are formed	Na / liq. NH ₃	52	3	66	1	22	2
The ratio of mass percent of C	C ₂ H ₄ O ₃	31	4	67	2	23	3
Hydrogen peroxide oxidises	H ₂ O and (H ₂ O + O ₂)	46	3	68	1	17	2
The major product formed in		59	4	69	2	27	3
How long (approximate) should	3.2 hours	40	3	70	1	9	2
Which of the following lines	A and B	34	1	71	3	26	4
At 518°C, the rate of	2	39	1	72	3	29	4
Glucose on prolonged heating	n-Hexane	51	1	73	3	18	4
Consider the following reaction	(I) and (III)	50	2	74	4	21	1
The major product of the following		60	2	75	4	25	1

Phenol on treatment with CO ₂		54	2	76	3	4	4
An aqueous solution contains an	1.1×10^{-9} M	38	3	77	1	28	2
Which of the following compounds		53	2	78	4	2	1
When metal 'M' is treated with	Al	49	3	79	1	11	2
An aqueous solution contains 0.10 M	6×10^{-21}	37	3	80	1	6	2
The recommended concentration	$[3\text{Ca}_3(\text{PO}_4)_2 \cdot \text{CaF}_2]$	41	3	81	1	20	2
The compound that does not	$(\text{NH}_4)_2 \text{SO}_4$	48	4	82	2	8	3
The predominant form of histamine		56	4	83	2	19	3
The oxidation states of Cr in	+3, 0, and +6	47	3	84	1	16	2
Which type of 'defect' has the	Frenkel defect	32	3	85	1	14	2
The combustion of benzene (1) gives	-3267.6	35	4	86	2	7	3
Which of the following are Lewis	BCl ₃ and AlCl ₃	43	4	87	2	3	3
Which of the following compounds	KCl	42	3	88	1	15	2
For 1 molal aqueous solution of the	$[\text{Co}(\text{H}_2\text{O})_3\text{Cl}_3] \cdot 3\text{H}_2\text{O}$	36	4	89	2	30	3
According to molecular orbital theory	H_2^{2-}	33	4	90	2	12	3