

## Detailed Analysis of KVPY – 2015 STREAM – SX SB

KVPY – 2015 was conducted on 1<sup>st</sup> November 2015 Sunday, for all of the streams.

### SB SX Stream

- Paper was conducted from 02:00 pm to 05:00 pm and a total number of 120 objective type questions were asked in two parts.
- Both part involved 4 sections (Physics, Chemistry, Biology and Mathematics).
- Part I:
  - 20 questions of 1 mark each with 0.25 negative for wrong answer.
  - Note: **Candidate was required to attempt any 3 sections out of 4 in Part-I.**
- Part-II,
  - 10 questions of 2 mark each with 0.5 negative marks for wrong answer.
  - Note: **Candidate was required to attempt any 2 sections in Part-II.**

### Overall Marks Distribution

- The paper pattern was same as last year.
- The paper had 120 objective type questions.
- Candidates have to attempt 80 questions from total 100 marks.

SUBJECTS	SX	
	No of Question	Total Marks
PHYSICS	30	40
CHEMISTRY	30	40
MATHEMATICS	30	40
BIOLOGY	30	40

**GRAND TOTAL** **120** **160**

*KVPY SB SX ANALYSIS*

## Difficulty Level Analysis: Number of Questions

### STREAM: SB SX

SUBJECT	EASY LEVEL		MEDIUM LEVEL		DIFFICULT LEVEL	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Physics	18	21	10	15	2	4
Chemistry	15	18	11	16	4	6
Mathematics	2	2	17	19	11	19
Biology	6	7	23	32	1	1
<b>GRAND TOTAL</b>	<b>39/35</b>	<b>46/41</b>	<b>44/38</b>	<b>63/50</b>	<b>7/17</b>	<b>11/19</b>

*KVPY SB SX ANALYSIS DIFFICULTY*

## Subject Wise Analysis

### Physics Analysis

Topic/Subtopic	No of Questions	Total Marks	% Weightage
<b>Overall Breakup</b>	<b>30</b>	<b>40</b>	<b>100.00%</b>
<b>Electrodynamics</b>	<b>7</b>	<b>10</b>	<b>25.00%</b>
Current Electricity	1	1	2.50%
Electro Magnetic Field	3	4	10.00%

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Electro Magnetic Induction	2	3	7.50%
Electrostatics	1	2	5.00%
<b>Heat &amp; Thermodynamics</b>	<b>3</b>	<b>4</b>	<b>10.00%</b>
KTG & Thermodynamics	3	4	10.00%
<b>Mechanics</b>	<b>2</b>	<b>2</b>	<b>5.00%</b>
Rectilinear	1	1	2.50%
Simple Harmonic Motion	1	1	2.50%
<b>Mechanics</b>	<b>10</b>	<b>14</b>	<b>35.00%</b>
Centre of Mass	3	4	10.00%
Elasticity & Viscosity	2	3	7.50%
Friction	1	1	2.50%
Gravitation	1	2	5.00%
Rigid Body Dynamics	2	3	7.50%
Unit & Dimension	1	1	2.50%
<b>Morden Physics</b>	<b>2</b>	<b>2</b>	<b>5.00%</b>
Morden Physics	2	2	5.00%
<b>Optics</b>	<b>3</b>	<b>5</b>	<b>12.50%</b>
Geometrical Optics & Physical Optics	2	4	10.00%
Wave Optics	1	1	2.50%

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<b>Semiconductor</b>	<b>2</b>	<b>2</b>	<b>5.00%</b>
Semiconductor	2	2	5.00%
<b>SHM &amp; Waves</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Sound Waves	1	1	2.50%

*KVPY SB SX ANALYSIS PHYSICS*

## Chemistry Analysis

<b>Topic/Subtopic</b>	<b>No of Questions</b>	<b>Total Marks</b>	<b>% Weightage</b>
<b>Overall Breakup</b>	<b>30</b>	<b>40</b>	<b>100.00%</b>
<b>Inorganic Chemistry I</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Periodic Table	1	1	2.50%
<b>Inorganic Chemistry-I</b>	<b>3</b>	<b>3</b>	<b>7.50%</b>
Chemical Bonding	3	3	7.50%
<b>Inorganic Chemistry-II</b>	<b>7</b>	<b>10</b>	<b>25.00%</b>
Coordination Compounds	2	3	7.50%
d-block & f-block Elements	3	4	10.00%
Qualitative Analysis	2	3	7.50%
<b>Organic Chemistry -II</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Polymers	1	1	2.50%
<b>Organic Chemistry-1</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>

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Hydrocarbon	1	1	2.50%
<b>Organic Chemistry-II</b>	<b>7</b>	<b>10</b>	<b>25.00%</b>
Alkyl Halide, Alcohol & Ether (Reaction Mechanism)	1	1	2.50%
Aromatic Compounds	2	3	7.50%
Biomolecules	1	1	2.50%
Carboxylic Acid and their Derivatives	1	2	5.00%
Stereoisomerism	2	3	7.50%
<b>Physical Chemistry-I</b>	<b>5</b>	<b>8</b>	<b>20.00%</b>
Atomic Structure & Nuclear Chemistry	1	1	2.50%
Chemical Equilibrium	1	2	5.00%
Gaseous State	1	2	5.00%
Ionic Equilibrium	1	1	2.50%
Thermodynamics and Thermochemistry	1	2	5.00%
<b>Physical Chemistry-II</b>	<b>5</b>	<b>6</b>	<b>15.00%</b>
Chemical Kinetics	1	1	2.50%
Electrochemistry	3	4	10.00%
Solid State	1	1	2.50%

KVPY SB SX ANALYSIS CHEMISTRY

## Mathematics Analysis

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<b>Topic/Subtopic</b>	<b>No of Questions</b>	<b>Total Marks</b>	<b>% Weightage</b>
<b>Overall Breakup</b>	<b>30</b>	<b>40</b>	<b>100.00%</b>
<b>Algebra</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Vector	1	1	2.50%
<b>Binomial Theorem</b>	<b>3</b>	<b>5</b>	<b>12.50%</b>
Binomial Theorem	3	5	12.50%
<b>Complex Numbers</b>	<b>2</b>	<b>3</b>	<b>7.50%</b>
Complex Numbers	2	3	7.50%
<b>Coordinate Geometry</b>	<b>2</b>	<b>2</b>	<b>5.00%</b>
Circle	1	1	2.50%
Parabola	1	1	2.50%
<b>Co-ordinate Geometry (3-D)</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Co-ordinate Geometry (3-D)	1	1	2.50%
<b>Differential Calculus</b>	<b>6</b>	<b>8</b>	<b>20.00%</b>
Application of Derivatives	3	4	10.00%
Functions	1	1	2.50%
Limit, Continuity & Differentiability	2	3	7.50%
<b>Integral Calculus</b>	<b>5</b>	<b>7</b>	<b>17.50%</b>
Definite integration	5	7	17.50%

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<b>Matrix &amp; Determinants</b>	<b>1</b>	<b>2</b>	<b>5.00%</b>
Matrices & Determinants	1	2	5.00%
<b>Probability</b>	<b>4</b>	<b>6</b>	<b>15.00%</b>
Hyperbola	1	2	5.00%
Probability	3	4	10.00%
<b>Quadratic Equation</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Quadratic Equation	1	1	2.50%
<b>Sequence &amp; Series</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Sequence & Series	1	1	2.50%
<b>Trigonometry</b>	<b>3</b>	<b>3</b>	<b>7.50%</b>
Solution of Triangle	2	2	5.00%
Trigonometric equation	1	1	2.50%

*KVPY SB SX ANALYSIS MATHEMATICS*

## Biology Analysis

<b>Topic/Subtopic</b>	<b>No of Questions</b>	<b>Total Marks</b>	<b>% Weightage</b>
<b>Overall Breakup</b>	<b>30</b>	<b>40</b>	<b>100.00%</b>
<b>Biomolecule</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Protein	1	1	2.50%
<b>Biomolecules</b>	<b>6</b>	<b>7</b>	<b>17.50%</b>
DNA	2	3	7.50%

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Enzymes	1	1	2.50%
Lipids	1	1	2.50%
Protein	2	2	5.00%
<b>Biotechnological Tools</b>	<b>1</b>	<b>2</b>	<b>5.00%</b>
Gel Electrophoresis	1	2	5.00%
<b>Biotechnology</b>	<b>2</b>	<b>3</b>	<b>7.50%</b>
Plasmid	1	1	2.50%
Restriction Enzymes	1	2	5.00%
<b>Cell Biology</b>	<b>2</b>	<b>3</b>	<b>7.50%</b>
Cell Division	1	1	2.50%
Mitochondria	1	2	5.00%
<b>Genetics</b>	<b>1</b>	<b>2</b>	<b>5.00%</b>
Mutation	1	2	5.00%
<b>Human Disease</b>	<b>2</b>	<b>3</b>	<b>7.50%</b>
Cancer	2	3	7.50%
<b>Human Immune System</b>	<b>2</b>	<b>2</b>	<b>5.00%</b>
Antibodies & Immune System	1	1	2.50%
Immune System	1	1	2.50%
<b>Human Nervous System</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>



Nervous System	1	1	2.50%
<b>Human Padigree</b>	<b>1</b>	<b>2</b>	<b>5.00%</b>
Pedigree	1	2	5.00%
<b>Human Reproduction</b>	<b>1</b>	<b>1</b>	<b>2.50%</b>
Male Reproductive System	1	1	2.50%
<b>Human Respiration</b>	<b>1</b>	<b>2</b>	<b>5.00%</b>
Respiratory System	1	2	5.00%
<b>Mendelian Genetics</b>	<b>2</b>	<b>2</b>	<b>5.00%</b>
Genes	1	1	2.50%
Mutation	1	1	2.50%
Molecular Genetics	6	7	17.50%
DNA	1	1	2.50%
DNA (Nucleic Acid)	1	2	5.00%
gene Expression	1	1	2.50%
Genetic Codons	1	1	2.50%
Nucleic Acid	1	1	2.50%
Transcription & Translation	1	1	2.50%
Monera	1	2	5.00%
Bacteria	1	2	5.00%

## Expected Cutoffs

Please note that the cutoffs are expected and the actual result can vary significantly

Stream	Cut Off	Total Marks
<b>Stream SA (general)</b>	43	100
<b>SA- SC/ST</b>	32	100
<b>SA- PWD</b>	32	100
<b>Stream SB (general)</b>	50	100
<b>SB- SC/ST</b>	34	100
<b>SB- PWD</b>	34	100
<b>Stream SX (general)</b>	54	100
<b>SX- SC/ST</b>	40	100
<b>SX- PWD</b>	40	100

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## Discussions & Questions

complete database of KVPY ( - sh...@ on 04-Nov-2017)

[1 Answer](#)

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- Examrace on 10-Jan-2019

I am a 12th grader studying abroad. Planning to attend coming KVPY. With just a month remaining for the exam, what can I do as preparation? ( - mu...@ on 03-Oct-2016)

1 Answer

Complete the NCERT books and practice questions available at - <https://www.doorsteptutor.com/Exams/KVPY/>

- Examrace on 13-Oct-2016

If we attempt 3 sections in part 2 suppose we got more marks in maths than in physics. In these two which marks taken into consideration ( - su...@ on 24-Sep-2016)

1 Answer

For part 2 you are required to attempt any 2 sections. If more than 2 sections are attempted, the one which is first will be counted.

- Examrace on 06-Oct-2016

View Remaining Ques