

## NSEB - 2016

### A Detailed Analysis by Resonance

#### INTRODUCTION

On 22<sup>nd</sup> November 2016, NSEB (National Standard Examination in Biology) – 2016 exam was conducted by the Indian Association of Physics Teachers (IAPT) at many centers all over the country. NSEB is the stepping stage for selection of aspiring and talented students in the Biology Olympiad Program. The student can move forward to other stages only after clearing this stage.

**Eligibility:** Only Indian citizens with date of birth between 1 July 1997 and 30 June 2002, both days inclusive and studying in Class XII or lower as of November 30, 2017, can apply and appear for NSEP 2016. The student has to himself re-assure his eligibility. At any stage if the student is found to be not eligible for the exam, he/she may be disqualified from the program.

**Syllabus:** The syllabus for National Standard Examination in Astronomy (NSEB) is almost similar as the curriculum of senior secondary level (Class XI and Class XII) of CBSE. However, only basic guideline for the course is mentioned. No detailed syllabus is given for NSEB. There is greater emphasis on Botany and Zoology.

**Question Paper:** The medium of test was English only and it comprised of 80 objective type questions, each with only one of the four options correct with 3 marks each and -1 negative marking for incorrect answer.

**Qualifying for the Second Stage:** The basic objective of conducting this test is not focusing on merit but to involve as many students from the country to participate in the exam and try to show and expose their talent. Hence the selection to the stage II examinations i.e. Indian National Olympiad Examinations (INOs) is based on the following scheme.

- **Cutoff:** To be eligible to get to the next level, i.e. the second stage, it is necessary that a student scores at-least a Minimum Admissible Score (MAS) which is 40% of the maximum score.
- **Proportional Representation Clause:** The maximum number of students that can get to Stage II (INO) in each subject is around 300. These many students are not selected only on the merit basis but also on proportionate basis. This proportion is decided on the base of the number of candidates who appeared for NSE in the previous year from that center in each State or Union Territory (UT). In case there is a tie at the last position, then all the students competing for the last position will be eligible to move to stage II. However it's necessary that the selected students fulfill the eligibility clause laid out above. The total number to be selected from centers in each State for each subject will be displayed on the IAPT and HBCSE website.

- **Minimum Representation Clause:** Notwithstanding the proportional representation clause the number of students selected for INO from each State and UT must be at least one, provided that the eligibility clause is satisfied.
- **Merit Clause:** As stated above, approximately 300 students are to be selected for second stage. If this does not happen according to MAS, then after selection as per merit, the shortfall from 300 students will be selected based purely on merit without further consideration to proportional representation and minimum representation clauses. In the event of a tie at the last position in the list all students with the same marks at this position will qualify to appear for the Stage II examination.

There will be no other criterion or provision for selection to the Indian National Olympiad Examinations (INOs). All students who qualify to appear for the INBO get a certificate of merit from IAPT.

### OVERALL MARKS DISTRIBUTION

The paper pattern was same as last year. The paper had 80 questions each worth 3 marks. All questions were objective type with single correct option. The class wise breakup is given below.

SUBJECT	Class 11		Class 12		Total	
	No of Questions	Total Marks	No of Questions	Total Marks	No of Questions	Total Marks
Biology	39	117	41	123	80	240

### OVERALL DIFFICULTY LEVEL ANALYSIS

In this analysis we have rated every question on a scale of 1 to 3. The ratings are done by expert faculty of Resonance. The individual ratings are then averaged to calculate overall difficulty level.

- 1: Easy
- 2: Moderate
- 3: Difficult

Difficulty Level	Count of Question No.	Sum of Marks
Easy	9	27
Medium	37	111
Difficult	34	102
<b>Grand Total</b>	<b>80</b>	<b>240</b>
<b>Aggregate Difficulty</b>	<b>2.31</b>	

#### Question Wise Difficulty Breakup

Overall, it is felt by Resonance Faculty Team that paper was on tougher side compared to last year.

## TOPIC WISE ANALYSIS

Unit & Topic Name	No of Questions	Total Marks	% Weightage
<b>BIOLOGY</b>	<b>80</b>	<b>240</b>	<b>100.00%</b>
<b>Animal Kingdom-2</b>	<b>2</b>	<b>6</b>	<b>2.50%</b>
Chordata	2	6	2.50%
<b>Application Biology</b>	<b>6</b>	<b>18</b>	<b>7.50%</b>
Biotechnology- Principles, Processes and Applications	6	18	7.50%
<b>Biology in Human welfare</b>	<b>2</b>	<b>6</b>	<b>2.50%</b>
Human health and Disease	2	6	2.50%
<b>Biomolecules</b>	<b>6</b>	<b>18</b>	<b>7.50%</b>
(blank)	6	18	7.50%
<b>Cell Biology</b>	<b>4</b>	<b>12</b>	<b>5.00%</b>
Cell Division	2	6	2.50%
Cell: The basic unit of Life	2	6	2.50%
<b>Ecology</b>	<b>19</b>	<b>57</b>	<b>23.75%</b>
Organisms and population	19	57	23.75%
<b>Genetics</b>	<b>10</b>	<b>30</b>	<b>12.50%</b>
Molecular basis of inheritance	5	15	6.25%
Principals of inheritance and variations	5	15	6.25%
<b>Human Physiology</b>	<b>9</b>	<b>27</b>	<b>11.25%</b>
Body Fluids and Circulation	1	3	1.25%
Breathing and Exchange of Gases	1	3	1.25%
Chemical Coordination and Integration	1	3	1.25%
Digestion and Absorption	1	3	1.25%
Excretory Products and Their Elimination	2	6	2.50%
Locomotion and Movements	1	3	1.25%
Neural Control and Coordination	2	6	2.50%
<b>Origin and Evolution</b>	<b>2</b>	<b>6</b>	<b>2.50%</b>
(blank)	2	6	2.50%
<b>Plant Diversity</b>	<b>4</b>	<b>12</b>	<b>5.00%</b>
Biological Classification	1	3	1.25%
Kingdom Plantae	3	9	3.75%
<b>Plant Physiology I</b>	<b>3</b>	<b>9</b>	<b>3.75%</b>

Mineral Nutrition	1	3	1.25%
Transport in Plants	2	6	2.50%
<b>Plant Physiology II</b>	<b>9</b>	<b>27</b>	<b>11.25%</b>
Cellular Respiration	8	24	10.00%
Photosynthesis	1	3	1.25%
<b>Reproduction in Organism</b>	<b>2</b>	<b>6</b>	<b>2.50%</b>
(blank)	2	6	2.50%
<b>Structural Organisation in Animal</b>	<b>2</b>	<b>6</b>	<b>2.50%</b>
(blank)	2	6	2.50%
<b>Grand Total</b>	<b>80</b>	<b>240</b>	<b>100.00%</b>

### EXPECTED CUTOFF

To be eligible to get to the next level, i.e. the second stage, it is necessary that a student scores at-least a Minimum Admissible Score (MAS) which is 40% of the maximum score. However, all students scoring 80% of the average of top 10 students will be considered qualified (Merit Clause).

