

HOW TO SCORE MORE MARKS IN BIOLOGY

Class -XII

There are no shortcuts to success.

It is indeed not very surprising to find high school students confused and disturbed as they are passing through their adolescent phase. Frankly, it takes nothing more than systematic preparation, consistent hard work and the proper environment at home and school to achieve higher scores in class XII. Persistent efforts and determination can take one towards his or her goals.

Biology is a very important subject in class XII. Whether the student wants to enter medicine or machinery, Biology helps to boost class XII percentage, It is of prime importance for various medical exams like NEET, AIIMS and many more. Apart from Doctors, Geneticists and pharmacist also have larger use of Biology.

In CBSE Board Biology carries 100 marks. 70 theory and 30 practical.

Let us take a brief look at the unit wise mark distribution:

Syllabus

1. Reproduction: 14 marks
2. Genetics and Evolution: 18 marks
3. Biology and Human Welfare: 14 marks
4. Biotechnology and its Applications: 10 marks
5. Ecology and Environment: 14 marks

Looking at the marks distribution above, it is wiser to prepare for the unit Reproduction, Ecology and Human welfare first, as it comprises of 42 marks and needs subsequent revisions. Genetics and Biotechnology are interconnected so should be taken together. This needs concentration and understanding, which makes the learning far simpler and interesting as it is based on mathematical logics.

The style of learning Biology is different. As a subject is different from other subjects of Science stream, so it is important to approach Biology with a fresh mind. By studying and not mugging up Biology. This would make it easier at the exam level and in future endeavors.

If the student aims at 100% score, no topic is more important than other. All chapters and portions of the syllabus must be given equal importance, so that you can attempt all questions and for this practice helps the most.

THE STUDENT CANT DO ALL THIS ALONE, HE NEEDS TEACHERS AND PARENTS TO GUIDE AND SUPPORT HIM MENTALLY AND MORALLY .

For the complete development of a student, a triangle comprising teacher, parent and the student is needed. If even one is not dedicated the triangle is left open and targets are not achieved. My tips to score more in class XII CBSE BIOLOGY are as under, these are based on the outcome of my 32 years of teaching experience, If you follow these steps religiously, nothing on earth can stop you from securing high in your XII Board exams.

Let us first divide our academic year into four slots:

- 1) Learning
- 2) Revision
- 3) Pre-Examination Months (3-4)
- 4) Examination Day.

1) LEARNING:

There are three stages of learning Biology:

- a) Understanding the concept:
This includes terms, keywords and basics.
- b) Understanding the content:
Without knowing the content and just memorizing will not take you far.
- c) Practicing writing exercise questions:
This puts your knowledge into action and reinforces understanding of content further.

Now if we further simplify the Do's of learning:

- Pay attention in class and make sure to take running notes of what the teacher teaches on the board. As this shall help in your preparation later.
- By understanding the concept in the class itself, that is when teacher teaches, your half battle is won.
- Once you reach home, make point wise summary of the concept taught at school. It may take 10mins, 20, or 30mins...but this will save your HOURS during the time of examinations.
- It helps you to pull out the hidden knowledge from your subconscious mind!
- Create flowcharts to effectively remember lengthy processes; you can also use mnemonics for that matter.
- Focus on your prescribed NCERT book as the book would be your Bible and key to success.

- Reference books can be referred to clarify doubts but don't substitute it for your NCERT book otherwise your study portion is going to be too extensive and exhaustive.
- Go through the text by not trying to memorise it but trying to understand it. Sticking to the text-book gets you good scores as all questions in the board would be from the CBSE prescribed book.
- Make efforts during practical classes, not only will that help you secure high in the allocated 30 marks practical section but will also help clear certain theory topics.
- Read and practice in the free time of school.
- Read 8 hrs. a day and make it 9-10 hrs. on a holiday. To achieve higher percentage possible, this is important.
- Take a healthy 5-6hrs sleep instead of 8 hrs. and save good 2 hrs. for some more important work.
- Create a study plan, make sure you know the concept and basic of the topic before advancing into complex studies.
- While you sit to study, it should be really effective reading, no minute of this slot should be wasted.
- This can make the most of every single minute that you spend at your desk, so that there is less procrastination.
- You should keep your reading neat, clean and well managed, as messy reading space could be repulsive.
- Do some practice question daily as this reinforces understanding of content.
- Emphasis should be laid on structuring the answers according to CBSE Board style.
- Each evening, devote 15-30 minutes to Biology and learn the notes prepared by you till that day.

Now you have plenty of knowledge about the topics taught in Biology. So to fix it as it is in your mind, next stage is important.

2) REVISION:

- Biology happens to be more of Understanding and Application so the prescribed NCERT book should be thoroughly read at least three times.
- You do not ever have to remember a concept BY ROTE! Remember that.
- Revise the concept without any stress.
- Peer teaching plays a pivotal role in strengthening your concepts, so teach your friends as and when they require help.
- Outperform yourself by taking a look at the score achieved in the past, create a score that is achievable and focus on it.
- Keep defeating your previous score, your present has to be perfect than your past or so to say better than ever before.
- Make a table of your previously attained Biology percentage; this lets you know where you presently stand and how much you need to work more to achieve your desired score in future.
- The will to outperform yourself, drives you ahead and could also be a strong motivating factor.

- Group discussions on various topics in the class allow you to see different points of view on biological concepts and different techniques.
- Brain mapping should be done after every topic revised; this proves to be a time saver in further revisions.
- Solving papers of previous years is a key to score a mind blowing percentage in class XII CBSE.
- This also helps you to identify trends and your weak areas.
- With the periodic tests and term papers one should note the mistakes he has made, clarify with teachers understand the ways to improvise the answer and take a note of the same in their diary, so that you never repeat the mistake again.
- Work hard on mistakes and weak areas, analyse them and convert your weakness into strength.
- Last three months you should discontinue coaching classes, as self-study is very important for better performance.
- At this stage you remember the content without having to refer to your notes, but if you need to refer, please don't feel stressed out, go ahead and refer. This shall reaffirm your answers.
- Revise the whole course of Biology at least three times before the final exams.
- This will make the knowledge to deepen its roots in your subconscious mind.

3) PRE-EXAMINATION MONTHS (3-4):

- Keep confidence in yourself and study properly.
- Don't panic and do not let stress consume your time. Focus is important.
- If you feel exhausted and you don't want to waste time, you can practice diagrams or look through brain maps and flow charts prepared by you.
- One should take a break after every one hour.
- Consume good nutrition and have a healthy sleep of 5-6 hrs.
- Solve one paper completely as the exams get closer.
- Solving question papers within the stipulated time frame and appreciably in the time slot given by CBSE Board. As brain gets tuned to function its best in that time slot. This way thoughts, answers and keywords click to the mind quickly in the examination hall.
- Paper solving will give you a fair idea of time management.
- This will also facilitate the student in writing to the point answers and according to the weightage of the questions.
- You should choose a Biology reference book which provides you plenty of NCERT questions; this shall give you thorough exposures to questions.
- Go through and try to solve each and every question related to that topic. Observe how questions are asked and how to answer them...
- Next step should be to time limit your answers, so that you are comfortable in responding an answer according to the marks allocated for that particular question, in your final exams.

➤ Look into as many papers as possible but solve at least 10 papers completely, before your exams. Now, finally YOU ARE PREPARED! For the D-day, towards which you have been striving so dedicatedly.

4) EXAMINATION DAY:

a) HOURS PRIOR TO EXAM:

- Get up early after a sound sleep.
- Open up your study stuff and revise quickly all the topics in a brief way.
- Keep your confidence up, if you find something is still to study, ignore it, let it not disturb your confidence because if you indulge into it, this shall only bring in negative effect on marks and confidence.
- Leave your study material at home, carry energetic drink with you and go to the examination center with a relaxed mind.
- All you need at this time is free mind and confident self.
- Board examiner does not know you personally, the way you present your work will play a major role in determining the impact you make on the examiner.
- Good handwriting and neat work easily impresses people.
- Nothing can substitute your subjective content but first impression gained by a well presented answer sheet is very helpful.
- Be stress free while you take exams.

b) EXAMINATION BEGINS:

- Read the question paper carefully.
- Start with the answers you know best, rest can be attempted later as they would require time and you would have to innovate on them.
- Sometimes it could happen that you don't get the question in the first go, don't panic.
- Read the question again and think what could you write for the question and you shall reach to the right answer.
- In case you don't reach to the right answer, leave the question for a while, get back to it later and you shall realize that you know the answer. This happens sometimes due to the built-in pressure.
- Attempt 5 marks questions first, as these would need time.
- Do each and every question with same attention and sincerity as it is important to score high.
- Support your answers with neat and labeled diagram wherever possible with great precision, this would impress the examiner.
- Include diagrams, charts, tables, guidelines and flowcharts in the answer and minimize the corresponding theory.
- Don't be in a hurry to leave the examination hall after completing your exams.
- Wait and cross check your answers sheet.
- Find errors and rectify them.
- Revise the paper thoroughly.

➤ Underline the keywords and then submit your answer paper.

A student who has worked hard from the beginning will definitely have an edge over those who become serious only after Nov-Dec.

TEACHER'S ROLE:

❖ Teach Students How to Learn:

For students to be successful as learners, they have to learn how to develop an appetite for learning. Teachers and parents could turn into facilitators and guide them in:

- Self-regulating their learning
- Setting their own academic goals
- Developing strategies to meet their goals
- Reflections on their academic performance.

❖ Listing of discoveries

Important discoveries in Biology should be highlighted, not merely through a chronological listing, but through brief biographical discussions, in an effort to bring out the processes that led to the discovery of principles and ideas in Biology. These would stimulate critical and creative thinking.

❖ Use of technology:

Students being associated with technology in today's generation will find it more interesting when topics are taken up on them. Like the smart boards, they help in the student attaining more information, as well as them understanding the topics well due to the visuals shown. It becomes easier for the student to visualise the processes and theories.

This way, the students who lag behind in the class would benefit. They gain interest in the subject through the visuals and their way of understanding theories improve.

❖ Practicing diagrams:

Diagrams are the core of biology learning. CBSE insists the students to practice as well use them in their answers while giving their boards. This applies to mostly all the questions where the answers can be explained through diagrams. Teachers can help out students to answer them according to the diagrams to make attempting questions easier. This also includes flowcharts and tables. Teachers can make it easier if these are provided beforehand to the students, i.e. before starting a new topic. This can be referred by the students during that session and also while revising the topics to avoid difficulties.

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❖ Group discussions

Student's interaction will make them remember their concepts well. It allows them to have their own opinions and thoughts on that particular topic. Mistakes can be rectified by the teacher later which further elucidated the students about where to focus more on.

❖ Notes

1. Give key points and methods to the students to learn their concepts
2. Biological names and terminologies are to be listed out by the students after every chapter, helps in memorizing.
3. Teach students to make flowcharts and tables and to relate notes with diagrams.

❖ **Regular evaluation:**

By conducting doubt sessions and tests after every chapter/unit will help in regular revision and evaluation of the student's performance. This can give an idea to the teacher, which area is to be focused on for a child to improve his/her performance. These are just a few to list here, as I believe that teacher, despite of the technological revolution, plays a pivotal role in the students' performance.

In addition to the above stated technique to score more, which addresses to students at all platforms. There are some more strategies for teachers towards students of different intellectual levels.

LOW ACHIEVERS:

- **As** they are slow learners, teachers should pay more attention towards them and again teach them those topics that they find difficult to grasp in the class.
- Help them in understanding the concept and acquiring the required knowledge of the topic taught.
- Emphasis should be made on knowledge based questions--- their specific facts, terms, concepts, principles and theories, so that they can score more.
- This benefits them in understanding the topic and applying the information that they have in all concrete situations.
- After each session, some short objective questions should put to the students individually to test their understanding of the topic/ topics/chapter as the case may be.
- The process should continue till the student feels confident on the topic .
- The students should write a short test on a set of questions (5-7) framed on the topic taught. Whole emphasis should be laid on knowledge and understanding.
- On finding admirable amount of improvement they can move to next topic.

Technique of scoring higher remains the same as defined earlier.

HIGH ACHIEVERS:

- This set of students is exposed to analytic and application type of questions.
- Application of abstract information in concrete situations should to be taught to them.
- The students can be exposed to different skills. For example-to integrate unique pieces of information from variety of sources before attempting to answer the questions.
- The students should be exposed to questionnaires which would require them to justify the value of a decision or to predict outcomes based on rational thinking.
- On weekends, the students must write a short test on a set of questions (5-7) framed from the topic taught. Whole emphasis to be laid on high order thinking skills and their application.
- The batches can be steady and not static so that the students do not get into the mode of overconfidence.
- Guidelines for competitive exams can also be given to the students.

PARENT'S ROLE:

They comprise an important element in the whole process. They alone can focus on happiness of the child, boost his self-esteem and keep him motivated at all times –low or high. This gives the student tools to succeed and face the challenges with more joy and confidence.

To sum it all my one advice to all the students there-

A straight line is the shortest distance between two points. Apply this to your life and it really works, As you know where you want to be. Then you start focusing to be there and for sure you shall reach there.

Wishing you all the very best.....

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