

# Success PLANNER

for

Exam Pattern, Trend, Stratagy & Success Mantra



## **PREFACE**

Education can be a life-changing point in every child's life. The stream and career that is to be chosen in high school and later in life need a strong foundation base at a primary and secondary level. A foundation is an early staple for aspirants who are not only preparing for the NEET examinations but have far-reaching goals of other competitive examinations ahead of them. With several years in the field of education, Disha publication has been working at various levels to be the one-stop solution for quality education. In this book, we intend to form a strong base for any future competitive exam candidate and help them recapitulate the latest pattern and syllabus. This book also mentions the study techniques and preparation tips for students with illustrative examples added for better understanding and to ensure they build up their skills in a motivated manner.

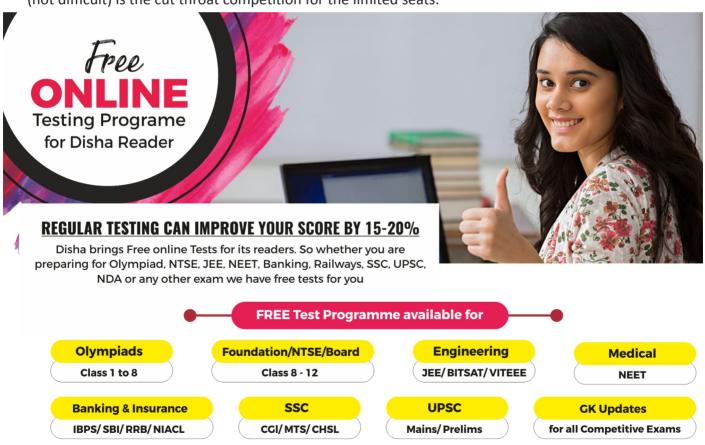
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## **Board Exams vs Competitive Exams**

- In boards the focus is on concepts whereas in competitive exams the focus is on application of concepts
  to real life situations. The board exams test that whether you know the fundamentals or not whereas
  competitive exams are designed to test whether you can apply these fundamentals to real life situations
  or not.
- In board exams good writing and presentation skills are very important whereas in competitive exams what they emphasise upon is not your writing skills but understanding of fundamentals and their applications.
- Board exams are designed to filter below average students (who can't score more than 33% marks) from good and average students whereas competitive exams are designed to filter excellent students (who can score more than 75% marks and are among top 3 to 4 percentage students) from the average ones.
- In board exams absolute marks are important (% marks scored) whereas in competitive exams relative marks/percentile rank is important (it is not important that whether you score 80 % or 90 % but what is important is how many students have scored more than you). Normally to succeed in a competitive examinations your percentile rank has to be 95% and above.
- Also in competitive examinations there are many students who miss by just one, two or three marks. This
  is the most important difference between the competitive exam and board exam. In board exam, you
  will say that two students getting 88% & 87% marks are equally intelligent and successful. But, in case of
  competitive exam success & failure is just one mark away. So what makes competitive exams different
  (not difficult) is the cut throat competition for the limited seats.



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## **The Different Strokes**

(a comparision between CBSE Boards and competitive examinations)

The same syllabus, same students, the same hard work, but different results !!!

It had been intriguing, all the time, for all the students. But as soon as we understand, "how it is that same syllabus is being asked differently in different exams", our efforts will be different for different exams and results

will be uniformly BRIGHT (Good). In other words, there is absolutely no difference in the concepts involved in the questions asked in the various board and competitive examinations. The difference comes in the way, it is asked in these exams. Wherein the boards, they check the conceptual clarity of a student, in the competitions, it is the application of the concepts which is stressed upon. Further this application skill may vary from exam to exam. For Example:



I: Projectile motion

#### What they ask in CBSE?

- Q1 (a) What is a Projectile.
  - (b) Find out the maximum range & maximum height for a given velocity (u) & ratios there of.
  - (c) Find the range of a Projectile falling from a horizontal table etc.

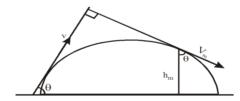
#### What they ask in JEE Mains/ NEET?

- Q1 (a) What is the minimum Kinetic Energy of the projectile with initial velocity (u) & angle of projection (j), mass of the object being (m)?
  - (b) How much time it would take to reach a height 'h'?
  - (c) What should be its velocity at height 'h'?

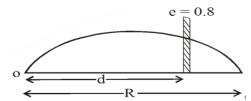
[HINT: Calculate from basic concepts. No direct formula used.]

#### What they ask in JEE Advance?

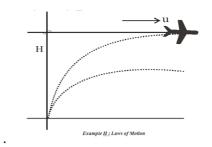
Q1 (a) What is the height (hm) & velocity (Vm) of a projectile when angle between the initial velocity and velocity at hm is perpendicular to each other.



(b) If a projectile has a range of 'R' & there is a high wall at a distance (d) from the point of projection, at what distance will the projectile strike on the ground after being reflected from the wall with inelastic collision (e being 0.8).

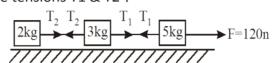


(c) What should be minimum velocity of projectile so that it hits a aeroplane at a height (H) which is moving horizontally with a velocity of u

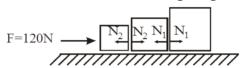


#### What they ask in CBSE?

Q2 (a) In the given figure find the tensions T1 & T2?

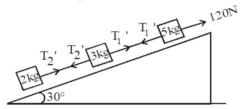


(b) What are the normal reactions N1 & N2, as shown in the figure given below?



#### What they ask in JEE Mains/ NEET?

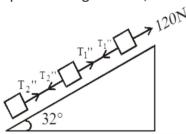
Q2 (a) Calculate the Tensions & , when the three blocks, joined with the help of a string, as shown in the figure, are moving upwards with the help of a force of 120N.



(b) Find the ratio of Tensions & when the force of 120N is applied downwards only.

#### What they ask in JEE Advance?

Q2 (a) Find the ratio of & at an inclined plane of angle of 32°, when pulled with a force of F=120 N, upward.

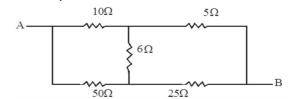


[Hint: Force drops in ratio of masses & independent of angle. Hence T1 = 60 N, & T2 = 24 N]

#### Example III: Current Electricity

#### What they ask in CBSE?

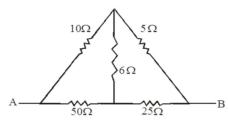
Q3 (a) Find out the resistance between point A & B.



[Hint: Resistance 6W is ineffective using Wheatstone bridge principle.]

#### What they ask in JEE Mains/ NEET?

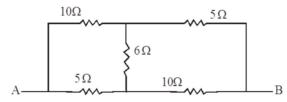
Q3 (a) Find the equivalent Resistance between A & B.



[Hint: Simplify using Wheatstone bridge principle.]

#### What they ask in JEE Advance?

Q3 (a) Find the Equivalent resistance between A & B.



[Hint: Use symmetry & apply Kirchoff's law & logic]

From the above examples, we find that – syllabus is same, topic is same, but there is level difference in asking & Calculations. Hence we can conclude that:

CBSE asks straight forward Questions to TEST the knowledge.

AIEEE asks the application level questions but simple calculations.

IIT-JEE asks analytical ability & depth in the Concepts & some times smart calculations.

For the better understanding of the above article we can use the anology of VEHICLE DRIVING CAPABILITY.



CBSE.ASKS: What is accelerator, clutch, Brake, Steering, self-ignition & steps to use it in driving.

AIEEE ASKS: OK drive forward, left, right, backward etc. & some times can ask the role of clutch & hydraulic

braking systems.

IIT-JEE ASKS: Let as take our vehicles, on the road & drive through a stretch of ten kms through traffic

conditions, bad patches, & various turns. Those who reach first with reasonable time know the

Driving well & the rest are rejected.

That is Selection on the basis of application Skill.

## Most Student - Friendly Books to Prepare for NEET 2020

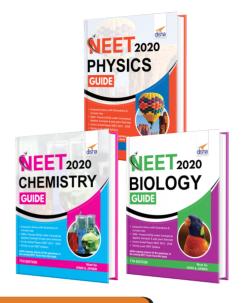
- Exhaustive theory with illustrations & concept map
- 5000+ Practice MCQs under Conceptual, Applied, Exemplar & past years Exercises
- Covers Solved Papers NEET 2013 2019
- Strictly as per NEET Syllabus

Author expects almost all the questions in the coming NEET Exam from this book

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### How to make a Plan that works?

So, planning is important but the most important part is to come up with a plan that works. Most people fail at this because they give up when the first attempt at planning does not work out perfectly. The best thing to do is to expect changes and be ready for the process. Needing to make changes in your plan does not mean failure - it means inexperience at planning. Quitting all planning when things go off the rails - THAT really is failure!

Very often students plan with great vigour in the beginning. Once they start implementing the plan, they find that the plan does not work. After a short period of time the plan is consigned to the dustbin. So the question arises what is the secret of good planning?

#### **Good planning means**

- Consult your seniors about how they started their preparation. Study the trend of previous year question
  papers & draw marks distribution of each subject to find out which topics are most important & which are
  least. Give priority to important topics & try to put them in early stages of your preparation to avoid any
  possibility of them being leftout.
- Divide your entire time into periods of one month each and plan to complete a block of lessons by the end
  of each period. Set up milestones after every period to find out whether the objectives have been met out
  or not. Chart out this plan on a calendar clearly and place it above your study table.
- Do not overestimate the time you have. If you actually have the extra time you can always do more studying, but if you plan more than what you actually have, you feel depressed and your entire plan might go haywire. You are also advised to leave a little gap (free time) in between two periods so that if any module gets delayed you don't have to change the whole plan.
- Set study goals for each day, each week & each month: Remember the characteristics of good study goals: specific, reasonable, verifiable, and rewardable. If you have a written set of easy-to-start and soon-to-befinished study goals, procrastination is much less likely. It's is the huge daunting tasks that are easy to put off. A small goal that will be finished in 30 minutes and will be a contribution to a larger goal is one of the

best procrastination beaters.

- The plan should not be too detailed and neither should it be too sketchy. For example a plan which goes down to the level of say 10 minutes is too detailed a plan and cannot be implemented. On the other hand a plan, which is very sketchy and deals only at the topic level is too high level. Ensure that the plan is balanced.
- Students sometimes plan in such a way that is no scope for errors. For example they may have scheduled for 12 hour of study a day. Now if they go out of schedule, there is a little scope for accelerating so as to catch up with the schedule. The secret is to have say 20-25% flexible unallocated time. Students can then use this to catch up.
- It is important to review the plan after working it out . It is also important that a student tries out the plan and sees how it works before adopting it. Students may have missed out some activities or estimated some activities incorrectly. If they perform a mock run, the estimates will be more accurate.
- Study soon after lecture type courses: Retention and understanding are aided by a review of your lecture notes immediately after class; e.g., one study showed that students who wrote a 5-minute review test following a lecture remembered one and a half times as much material when tested 6 weeks later as students who did not review, when tested the next day.
- List and do tasks according to priorities: remember Parkinson's law that "work expands to fill the time available for its completion." If you allot 2 hours to read 10 pages, it'll probably take you 2 hours to complete this 30 min. task. What do toppers say.
- Discover how long to study: as a rough starting guide, for every hour in class you should plan to study for two hours outside of class. Then, adjust up or down as necessary to achieve your goals.
- Your first short-term goal will be the first completion date. If you concentrate and complete the predetermined number of lessons by that point of time, you will be safely on your way to achieve your longterm goal.

#### While making a daily plan keep following things in mind:

- While doing time planning for a day keep following things in mind
- The longest study period should not exceed 3 hours. It is hard to concentrate for longer periods so after 3 hours a substantial break is a must.
- A break of 5 to 10 minutes is needed after every 45-60 minutes of study. After concentrating for that long, experiments show that our brain momentarily needs time to assimilate and consolidate the material it has received. During the rest period, a change in activity or posture is desirable. A walk around the room, stretching your arms, a light refreshment is enough to restore your energies and recharge your concentration.
- Remember shorter periods are fine for studying notes and memorizing materials. Longer periods are
  often needed for problem solving tasks and for writing papers. Breaks relieve stress and help sustain
  motivation and provide a transition period when switching subjects
- Determine the time of day that is best for you to study.
- When you are not fully alert in the afternoons, sleep for an hour and then study.
- At the end of each day reflect on what you did and what you need to do on the next day.
- Highlight what has been left undone.
- Cover difficult subjects when you are fresh. What do toppers say
- If you have really adhered to your schedule as planned, the free-days before the beginning of the second phase is your reward for hard work. As each deadline is met, it will instill confidence in you that you are on your way to the final goal. This will boost your morale and determination to succeed.
- So planning brings clarity of what you want to study and accomplish and helps is improving study efficiency in the following ways
- It helps overcome procastination by eliminating the time wasted in deciding what to work on and hence prevents worry.
- It helps keep you on task while you're working; having a specific objective makes it harder to rationalize quitting before you've achieved it.

- It generates a feeling of progress and success when you complete a concrete goal. This kind of success can
  easily begin to cascade
- It helps break large, daunting tasks into more easily managed chunks of small tasks.
- Or, in other words, it motivates you and at the same time keeps you focussed on each study session.

#### Whereas if you do not make a Plan:

- you do not succeed in studying as much as you had planned.
- you waste a lot of time moving from one activity to another.
- you fail to concentrate on even one task.
- you have difficulty focusing on your studies.
- So a plan does not restrict one's freedom, instead it keeps you informed about your progress and broadens
  your horizon by giving you time to do things you could not do without planing. What do toppers say
- Remember there is no one golden method that will work for all. This book can only outline guidelines for
  preparation. Every student will then have to evolve his or her own method. Once you have defined your
  method, try it out on a few topics and evolve the method.
- To end this chapter always remember it is very important to
- Evolve a method/Make a plan, which takes into account your strengths, weaknesses and skills.
- Stick to this method throughout your preparation and remember planning is a kind of mental muscle, it will improve the more often you use it.

## **How to Improve Concentration Power?**

#### How to remove the flow of distracting thoughts?

How sharp is your ability to concentrate? I have asked this question to thousands of students in last two years. More than 95 percent of them replied poor, absolutely zero! So, the next important question is

#### How to develop concentration?

When we watch a favourite film, we are able to concentrate for three hours. We hardly realize who's beside us, when he/she got up, etc. A cricket match absorbs us similarly; our eyes remain glued to the TV screen!

So, we can concentrate when we are watching a movie or a cricket match but when it comes to studying a subject especially a difficult subject we feel distracted by the slightest noise, the faintest whisper, even by the most distant sound of music. So, the basic problem is not of concentration but is of interest in the activity which we are doing. Concentration is nothing but the extent of interest and involvement in the subject.

#### **Learning Concentration Interest Confidence**

The amount of learning is dependent on the amount of concentration, which is further dependent on the intensity of interest. Some of the characteristics of students who have confidence in a subject are:

- 1. They enjoy doing the subject or topic.
- 2. All their efforts to study are self motivated. Nobody needs to tell them that they have to study the subject.
- 3. They develop the killer instinct, which is necessary to solve tricky problems.

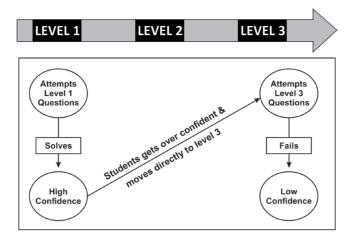
#### On the other hand, those who lack confidence in a subject or a topic display the following traits:

- 1. They dislike the topic
- 2. They have to force themselves to study the topic
- 3. They approach any problem with negative frame of mind.

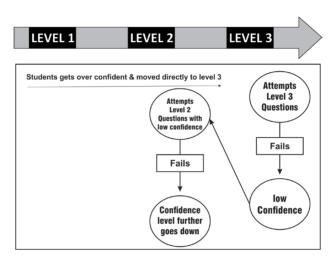
#### How to develop Interest / Confidence in a subject

An easiest way to develop confidence/interest is to approach the subject in a systematic and step by step manner. Usually, students skip some of the fundamental steps and approach problem solving with half-baked knowledge because of which they get stuck and slowly and slowly develop dis-interest in the subject. Let us find out different approaches adopted by the students.

#### Approach 1.



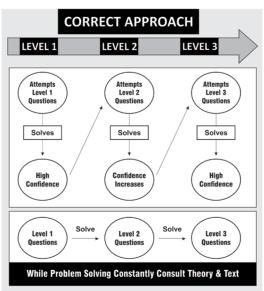
#### Approach 2



In both the approaches the student skips certain steps and the net result is inability to solve problems which lowers the confidence level / interest in the subject. This is the stage when suddenly the subject starts looking difficult and boring. The correct methodology is explained in Approach 3.

#### Approach 3.

In Approach 3 the student moves from Level 1 to 2 and then to 3 and constantly refers theory and text as and when the problem occurs.



#### So to summarize:

It is very important to develop confidence in subject. Confidence level also leads to higher interest in the

subject.

- The student develops confidence in a subject in 5 to 6 sittings
- Even if the scores are low during the initial sitting the student should not give up but rather spend more time on the topic

#### In addition to adopting correct approach to studying, following techniques will aid your concentration:

- Whenever you find you mind wandering become conscious of the fact that your mind has wandered and bring it back to what you are studying. Do not let frustration come in the way. You will find that with passage of time, you become better and better at catching the mind from jumping here and there.
- Everyday set aside 10-15 minutes during which time you are going to completely concentrate on a
  particular activity. The activities, which you can concentrate, can be praying, walking, eating, looking at
  a still picture/clock and so on. Whenever you find that your mind has wandered, gently bring back the
  mind, review the thought that distracted your mind and get back to the task of fully concentrating on your
  activity.
- Environment of study. Proper lighting is important. If your eyes are getting strained, you will not be able to concentrate. Ensure that you are sitting comfortably and the light is optimal. Again noise distractions should be minimal. It is difficult to concentrate when you are in a noisy room.
- Studies should be concentrated around your peak performance. Study hard during your peak hours of performance. Schedule your study such that the peak consumes those activities, which need concentration, high problem solving skills and alertness. During other hours, you may want to perform routine activities.
- Be active in what you do e.g. speak aloud, talk to someone, write notes.
- Set yourself realistic small targets. This will give you more chance to succeed in reaching your goal. Success will increase both your self- confidence and your study efficiency.
- Vary both the topics you study and the methods you use.
- Study for short periods of time, at least initially
- Check your sleep: Lack of concentration is often due to lack of complete sleep. So don't increase your study hours at the cost of your sleep.
- Apply above mentioned techniques in your studies and soon your concentration related problems will go away.

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## **How to Sharpen Problem**

#### **Solving Skills?**

In a competitive exam it is not important that whether you know the question or not or whether you can solve the question or not but what is important is whether you can solve the question in shortest possible time or not. The goal of this chapter is to teach problem solving approaches so that you can become an expert problem solver. Effective, expert problem solving involves answering six questions:

- What's the problem about?
- What am I asked to find?
- What information am I to use? What principles apply?
- What do I know about similar situations?
- How can I go about applying the information to solve the problem?
- Does my solution make sense?

As a student you will decide, "this is an energy problem," or, "this is a Newton second law problem." A novice is more likely to decide, "this is a pulley problem," or, "this is a baseball problem." The novice concentrates on the surface features of the problem while an expert concentrates on the underlying principle. You, an expert problem solver, will answer above questions, play around (briefly) with the problem, and make drawings and sketches (either in your mind, or even better, on paper) before writing down formulas and plugging in numbers. A novice problem solver, on the other hand, will try to write down equations and plug in numbers as soon as possible. So the key issue is

#### **Toppers approach to Problem Solving**

After interaction with lot of students I observed that most of us do not have correct approach towards problem solving. Some of the common made mistakes are

- Many students read the question & the solution and then satisfy themselves that they could have attempted the question in a similar manner.
- Many students lay too much emphasis on solving higher number of questions.

Remember that there is no dearth of books and problems available. One has to draw boundaries and concentrate on quality rather than quantity. Doing 100 quality & concept based questions is more important than doing 1000 questions which have not been selected carefully. Remember that the purpose is to sharpen problem-solving skills. It is possible to prepare a topic by doing 30-40 problems only, if you try to solve them completely by yourself. This may also involve devoting half an hour or one hour or may be even more



on an occasional problem. On the other hand, your preparation can be very weak and hollow even if you have attempted more than 200 problems on the same topic in the same time, thereby devoting much less time on difficult problems and leaving them as doubts to be cleared from your teachers. The key to success in sharpening problem solving skills is to practice quality questions without seeing the solution.

In fact, it should be noted that Problem solving is the end result of many other important activities like

STEP I: Proper understanding of concept and its application.

STEP II: Mastering skills such as visualization

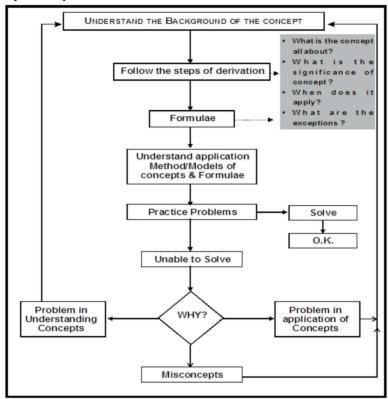
#### STEP III: Continuous interaction between theory & problems.

If you have done all these activities properly, only then you would be able to solve problems successfully. Another misconception is collecting problems from all sources and then trying to solve them. Plan beforehand and tell yourself that you will solve a particular number of problems in the topic. Once you have achieved proficiency you need not waste your time in collecting still more problems. Also important here is that we have to solve relevant problems, problems of the level that are asked in the exams. Solving problems from here and there can lead to frustration which can disturb the entire plan. Let us now discuss each of the above key steps involved in problem solving.

#### STEP I: Proper understanding of Concept and its Application

It has been seen that normally students move directly to the formulae and start solving problems. The result, after solving few problems they get stuck and ultimately get frustrated. This is basically because of wrong approach towards the subject. It is advised that student should follow following steps in order to have proper understanding of concepts and their applications.

#### Basic steps of learning any concept



- Understand the background of the concept
- What is the concept all about?
- What does the concept say?
- Focus on significance of the concept
- What are the exceptions to this concept?
- When, Where and How to apply this concept?
- Follow the steps of derivation of the concept
- TRY TO REPRODUCE CONCEPT IN YOUR WORDS
- In case of any doubt read and understand the concept again
- Understand the application method of the concept
- Practice questions on the concept (Start from easy and gradually move to difficult ones)
- Diagnose the problems and take corrective measures.

#### While Practicing, try solving questions completely

After mastering the concept and application methods, try to solve the question on your own. In the beginning till you have achieved mastery of the application method and concept), write every step of the application method and solve the question. Once you have achieved mastery you may ignore the steps. Remember that trying to miss steps or solving in a brief manner in the beginning itself will lead to serious problems and the student will not be able to gain mastery. If you cannot solve the question, look at the answer briefly and then solve it again.

#### STEP II: Visualization of the problem

Follow the following steps to convert the problem in the form of a diagram. Conversion of problem in the form of a diagram helps in better understanding of the concept. Visualisation of a problem involves following

steps

Step 1. Draw the diagram as per the problem.

Step 2. Once the diagram is drawn, check the problem again to see if what is asked in the question is clearly represented in the diagram.

Step 3. Check if the diagram makes sense. If the diagram looks absurd, there is some problem in your understanding of the question.

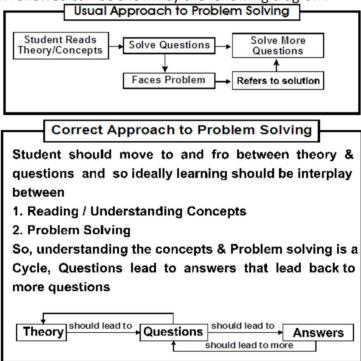
Step 4. Understand the question now by going through the diagram instead of the question. If you find that this is not possible, then your representation is wrong. You should be able to explain what is required by interpreting the diagram.

Step 5. Make modifications in the diagram till you are clear that the diagram is exact representation of the problem.

Step 6. Do not proceed to the next step till you are confident about the diagram.

#### STEP III: Interplay between theory & Problem Solving

Normally students read the theory, understand the concept and then they keep on solving more and more questions. So the approach followed can be shown by the following diagram.



This is a wrong approach. Ideally, the student should move to & fro between text & questions. Remember, reading the text and solving homework problems is a cycle: Questions lead to answers that lead back to more questions. It is recommended that students should solve questions in rounds and in multiple sittings.

We have already learned that learning always happens in jumps. So rather than trying to complete entire exercise at one go it is recommended that students should attempt exercises in multiple sittings. The aim of sittings should be

First Round Objective: You should be able to solve 60 to 70% questions Second Round Objective: You should be able to solve 70 to 80% questions Third Round Objective: You should be able to solve 90% and above.

Remember, you will learn more in six 1 hour periods spaced through the week than in one 6 hour period.

## What is a Misconcept?

#### How to identify and remove Misconcepts?

The normal sequence of steps followed by student in problem solving are:

1. The student solves a problem

- 2. The student checks up the answer
- 3. The student finds that the answer is wrong
- 4. The student reviews the solution
- 5. Sometimes they find that they have made a simple mistake which when corrected gives the correct answer. This is a very good state of affair and the student need not be worried if most of the time they face such situation. However if they make such silly mistakes too often it is a cause of worry. They should then figure out reasons why they make such mistakes and remove these causes.
- 6. A far more dangerous possibility is that after verification also the solution seems to be correct.

#### This is the Stage of Misconception

At this stage, the student is confused. They either

- try to find some way of getting the solution right by trying out alternate methods or by hit & trial approach.
- or else ignore their method and understand the solution.

Both of them are not the correct way to approach the problems. Ideally what a student should do is to critically analyse his approach to the solution and try to find out where did he go wrong and what is the corrective measure he should take so as to avoid these kind of mistakes in the future. It is very important to find out the misconcept and initiate steps to remove the misconcepts.

## **Frequently Asked Questions**

#### Is IQ important factor in success?

IQ or intelligence is a factor, though a minor one. In my opinion IQ acts as a threshold. You just need to have a basic minimum level of IQ to succeed. Interestingly, in a survey it was found out that the average level of IQ of IIT students was 110, compared to the average level of IQ of general population which was 100+. So, there was very little difference between the IQ level of brightest students (IIT Students) and the general public. This implies that the basic determinant of success therefore is not IQ, but other factors.

In the last 3 years after interacting with lot of students I realized that vast majority of students who set off on a course of study are quite capable of successfully completing it. It is practical life circumstances, false beliefs and negative attitudes which, coupled with poor study techniques, may cause the problems - not lack of ability or IQ.

#### How to some students do well even without studying hard?

I have seen lot of students who have worked very hard but inefficiently and who's performance in examination has been a surprise & disappointment both to themselves and their teachers, families and friends. At the same time I have also met students who are able to achieve some times satisfactorily and some times excellent results without hardwork. The basic differentiating factor is the study techniques. Hard work should bring achievement but only when coupled with efficient and appropriate study techniques. And that is what this book is all about.

#### How to Relax?

One of the most common problem during studies is severe anxiety or nervousness. The result of the exam can totally change your future and so the very process of preparing for them can be a stressful experience. Delay in preparation schedule; inability to solve problem or even few hours waste of time can lead to anxiety and create stress which can adversely affect your studies, so it is very important to learn how to manage stress or anxiety.

#### Even famous people do it

I still remember a video clipping of a famous singer that I saw on TV years ago. The camera had been following him around while he went to rehearsal, got made-up and talked with his manager.

The scene I remember most was the shot of him as he waited backstage for his name to be announced. Now, remember, this was a man who had been doing stageshows for decades. You could hear the audience: It was excited to be in his presence. It was friendly. And he looked nervous, horrified, petrified, regretful that he'd ever entered show business and extremely vulnerable. (Presuming he remembered he was being filmed, this was the controlled panic.)

But, when the announcer called his name and the roar of applause began, he was transformed. He walked

with a determined gait to the stage, the lights hit him, he smiled and took the microphone, the band began and he never looked back. His famous voice filled the auditorium, and the audience went wild. If he could face such regular panic attacks and still passed the test, why shouldn't you?

Remember that a certain level of anxiety is also good and must for you to have a faster learning. Remember a certain level of anxiety can enable you to be more alert, attentive and to concentrate more fully. It can sharpen your exam performance; make you feel more full of energy; cause you to work at the most effective speed and be more attentive to detail. So achieving optimum arousal (anxiety) is the key to success. But the moment the anxiety level becomes higher and it starts disabling it is the time to take an immediate corrective measures.

It is a natural human reaction to worry at times during your studies. It is also natural to express an emotional reaction to the ups and downs of tackling tasks: angry or frustrated at one time, exhilarated at another. The ideas in this book are intended to help you avoid becoming locked into a state of anxiety, where your interaction with exams, tests and course deadlines (the potential 'stressors') results in an unhelpful stress reaction in you. This is the type of anxiety state which feels disabling.

Before we learn how to handle stress & anxiety, let us understand what are the signs and symptoms of stress?

- Your heart beats at an accelerated rate.
- Your breathing rate increases.
- Your body sweats.
- Your mind becomes agitated and you feel restless.
- Your stomach feels queasy. In other words you feel butterflies in your stomach.

You can control these problems by training your mind and body to relax on command. In relaxation you are really training to control the functions of your mind.

Relaxation Techniques: You can relax while sitting on a chair, lying on a bed or stretched out on a comfortable spot. To relax focus on your breathing first, close your eyes and listen to the sound as air flows in and out. As you breath your belly should be moving in and out. Next start counting one to ten, on your inhalations and saying to yourself "relax" in your mind. Continue this process until you feel quiet and your mind is focussed and undisturbed by fleeting thoughts. The idea behind counting is to shut your mind from other thoughts and not to be disturbed.

Palming: Close your eyes and keep your open palm pressed against your eyes. Hold this position for 5-10 minutes every day. You will feel the heat being transferred to your eyes. Do this exercise regularly every day or pressing a folded cloth to your mouth, blow air into the cloth so that it becomes warm. Press the cloth against your eyes.

When ever you are tensed or anxious, close your eyes and take a deep breath. Slowly breath out Do this about ten times and watch the difference. This should calm your nerves and reduce your anxiety.

#### Other methods for Reducing Anxiety

- Self-Assertion Do a realistic review of the situation, and decide on a course of action and carry it out;
   assert yourself, take charge of your life.
- Sleep habits In order to get more time to study several students sacrifice their normal sleep. Occasional loss of sleep may not affect your thinking but loss of sleep over a longer period can create stress. Do not carry your problems and anxieties to bed. They will leave you mentally sluggish the next morning. Cultivate methods that enable you to get enough good sleep.
- Relaxation Practice physical and mental relaxation exercises
- Quiet time Cultivate and then use a "quiet time" to review your situation, to compose yourself, and to prepare for a project or situation for the day.
- Friends Talk to one or two friends a day, for support and encouragement, to renew your self-confidence and morale.
- Consultation Help yourself by seeking consultation with peers, instructors, or professional counsellors.
- Practice to relax every day: The more you practice, the better you will be able to relax. Practice to relax for five minutes at the beginning. Plan to have atleast 3 relaxation periods each day, of five minutes duration.

On very busy days, do not be tempted to do away with the practice totally. It is more important to relax on these busy days.

Remember, anxiety affects people of all abilities. Among the students I have met who are most anxious about their examinations are large numbers who have gained very good marks.

#### **Importance of Notes**

- Why should you make notes: Some of the advantage of making notes are:
- Making notes while attending the class help you concentrate better in the class.
- Notes making also aid in improving the retention. They help in transferring information from short term to long term memory.
- Notes helps in revising the contents of the lecture faster. Research says that with the help of personalised notes you can revise a chapter 10 times faster than revising directly from the book.

#### The Amount of Notes to Take

- There is no limit to the amount of notes to take down. The amount will depend on;
- The content of the lecture: If the lecture deals with solid facts, laws and principles. It may necessitate a great quantity of notes
- How familiar you are with the topic: The less familiar you are with the subject, more detailed notes you require. If you are familiar, just an outline of the lecture will suffice
- Whether the information is readily available in a text- book or else where: If no other source is readily available, complete notes will have to be taken down

#### **Cornell Notes**

Cornell Notes is a system of making and using notes that promotes active learning. Before the lecture (or reading) you set up your notebook pages with a vertical line dividing the page roughly 1/4 (left) and 3/4 right. The wider right side is used to make notes, draw graphs and record the

important information from the lecture or reading. It's a good idea to leave a line or two between each major note or piece of information. The left column is used to write questions and keywords that relate to the information recorded on the right. Each major point on the right ought to have a question or keyword on the left.

Depending on the speed of the professor and the amount of information that needs recording in the right column, you may or may not have time to write the questions and keywords in the left column. If you do, that's great. If you don't, then you should fill in the left column as soon as possible, and for sure before the end of the day. The questions and keywords serve an important function. You will be using these to remember the key points in the right column during several practice sessions.

Once you have the questions and keywords in the left column, you are ready to do a practice session. Use a blank sheet of paper to cover the right column. Now, without peeking, look at the questions and keywords on the left and try to remember the information on the right. Say the answers to yourself, or write them down on the blank sheet. Don't just say to yourself, "I know that..." You want to be able to repeat or paraphrase the information on the right with good accuracy. If it is information that needs to be perfect (e.g., a formula), then that is what you want. However, if it is information that is more general, then an accurate paraphrase is probably better. Your first practice session should be as soon as possible, ideally right after class if you have a spare period, or in your first break. If you wait too long, you will find that you can't remember much of the information in the right column. If that's the case, then you waited too long. As you practice, Keep Score. If you remembered the information accurately and without peeking, then give yourself a tick (check mark)



Solutions

Exercise 2 - NCERT Exemplar MCQs &

Past 5 years NEET/ JEE Main MCQs

100% Pattern

Syllabus

under the question or keyword on the left. If you had to peek or didn't remember the information very well, give yourself an "X."

#### **Spider Notes**

This is one of the most effective ways of note making. The final notes should always be in condensed form, at the same time they should include all the important information so as to help in subsequent and final revision before exams.

In spider notes, the primary idea is placed in the centre of the page so that the secondary and tertiary ideas can follow quickly and easily facilitate a harmonious thought process.

Advantages of Spider Notes over Linear Notes

- 1. About 60% time is saved by noting only the relevant words.
- 2. About 80% time is saved by reading only relevant words.
- 3. About 80% revision time is saved.
- 4. About 85% time is saved by not having to search for keywords amongst unnecessary verbiage.
- 5. Essential key words are more easily discernible.
- 6. Concentration on main issue is enhanced.
- 7. Quick and appropriate association is made between the keywords.
- 8. The brain finds it easier to accept and remember visually stimulating, multidimensional spiders, rather than monotonous, boring linear notes.

#### Key Concepts / Key Words: Nature of Memory Recall

Get ready for a small exercise.

Describe any book you have read, or any place you have visited, or any film or TV program you have watched. Close your eyes and do it for about 2 minutes.

People do not tell word-for-word for what happened. What they remember is main features, outlines, main incidents of film. These are key words of key concepts.

You remember things as key words and key concepts rather than word-for-word details and word-for-word descriptions. This is the very nature of your memory.

Use the following guidelines while drawing or writing a mind map.

- Use a key word or key phrase at the centre.
- Then draw lines from the centre
- On each line, write key words in CAPITAL letters. Use of capital letters helps in revision and memory.
- Use only one word per line. This makes it easy to make connections.
- Let ideas flow. Do not try to "think" hard. Just write down whatever comes to your mind. The aim is to write everything that your mind thinks about the central idea. Since your mind thinks faster than you can write, you should not pause or stop momentarily. Just keep writing or drawing.

Mind maps use only key words and key concepts while linear notes use complete sentences and paragraphs. The key words and key concepts use only 20% of the words. So, if you use linear notes, you waste time in writing those 80% additional words, and more importantly, you waste time in reading those 80% additional words every time you revise. In linear notes, you waste time searching for the key words because they are mixed up with non-key words.

The mind map has the following additional advantages:

- Mind map clearly shows the central idea of lesson.
- The relative importance of any idea is clearly shown: the ideas nearer to the centre are more important.
- The links or connections between key ideas are clearly shown.
- The nature of the structure makes it easy to add new information without scratching or writing in small letters.
- Each mind map looks different from others- it helps memory.

When you use mind map notes, you do not have to worry about the problems usually associated with linear notes such as: order, sequence, emphasis of ideas, beginning, ending, organization etc. These problems are simply eliminated in the mind map technique.

Exercise: Spend 15 minutes and prepare your own mind map notes for this book.

#### How to be a winner and a champion?

Everyone loves to be a champion. But not everyone knows how to be one. In every endeavor we all say we'll be THE NUMBER 1. But when asked how, we start looking here & there.

Most achievers will answer, "Luck has very little to do with it." Being Number 1 takes much more than luck. It takes inspiration, persistence, and faith. Luck is a "nice-to-have."

According to Tom Hopkins the 4 P's to be a champion are:

- 1. PRE-PLAN: Set goals. Devise strategies. Set your course of action, with specific tasks and corresponding deadlines. The only way you can reach what for you is the Number 1 position is to have a clear picture of that top slot and whatever path leads to it. Your plans must be realistic, though achievable. Put your goals in writing to add commitment. Some planning takes a little time. It's all right. A good plan is the first step up the ladder to Number 1.
- 2. PRACTICE: Now, with a good scheme in hand, your next step is to work on it. How? Practice, practice, practice. No one becomes a champion swimmer overnight. Not even ten overnights! It takes months of serious training, dedicated practice. And what did Tom Hopkins say? "Practice doesn't make perfect. Perfect practice makes perfect." In other words, there's no sense practicing something that doesn't work or that doesn't lead you to success.
- 3. PERFECT: This is something that goes beyond practice. This P is shooting for perfection. Some call it fine-tuning. After you've practiced long and hard to learn, understand, and rationalize the techniques and skills... after you've done it a hundred, a thousand times... after you've acquired "muscle memory" and you can actually do it with your eyes closed... it's then time to cross the line to perfection. Do not stop practicing until the motion becomes flawless. Until you can do it flawlessly, every time. Imagine the magicians who get away with card tricks using slight-of-hand. They start learning a trick in slow motion, and practice until they can perform it faster and smoother. And when they can do it flawlessly with their eyes closed, every time, they move on to perfecting the move until they become confident enough to...
- 4. PERFORM: This is the test. The moment that will tell you that you have succeeded. Everything you planned, practiced, and perfected, will find fulfillment during the performance. Show your mastery your skill. Let other people marvel at your speciality. Make them appreciate your effort and excellence in the task you have chosen.

#### When does one start preparation?

The earlier one starts the preparation the better are his chances. The ideal time to start is within one month of completing one's board examination. However, even one year of concentrated effort can help student achieve success – however, student's commitment needs to be high in this case.

If you are attending school as well as preparing for Competitive Exam, and if you have 2 years with you, then you must devote 2 to 3 hours every working day for studies and 10 to 12 hours on school holidays and weekends. Whereas if you start preparing in Class XII you should spend 3 to 5 hours everyday preparing for Competitive Exams.

#### Is coaching necessary?

For success in Competitive Exams, 80% of the contribution is from the student's effort, 10% is from the strategy of how to derive maximum out of the knowledge the student has and 10% is from guidance. Here the important thing to note is that however strategy & guidance contribute only 20% but are very important because it is this 20% which decides & defines how the balance 80% of time & energy is going to be spend. In case proper guidance is available to a student at home or at school, there will be no need for coaching; however, in absence of that coaching is advisable.

#### My future will be ruined if I fail/don't get good marks

Examinations are an important way in which professional colleges select students. Success in them does open

## Books for NEET 2020



doors to particular jobs and careers. Lack of success will mean certain jobs and careers are not immediately open to you, at least at the level of entry you originally intended. Some may be closed altogether. However, happiness, wealth, peace of mind, rich experience of life, meaningful status in the eyes of others, a worthwhile career, a useful job and an inner sense of purpose and self belief as a human being, do not depend upon examination results.

## **NEET Cut off for Top Medical Colleges**

Students appearing in NEET 2020 can check the NEET 2019 cut off of some well-known medical institutes in India from the table given below:

Name of the College	Number of Seats	Closing Rank
Maulana Azad Medical College	250	32
VMMC and Safdarjung Hospital	150	157
University College of Medical Science	150	171
Govt. Medical College	250	360
Seth G.S Medical College	180	638
Lady Hardinge Medical College	150	489
CSM Medical University	250	3692
S. M. S Medical College	250	356
Grant Medical College & Sir J. J. Hospital	200	382
Pt. B. D. Sharma PGIMS	200	600
King George Medical College	NA	506
Sardar Patel Medical College	250	1083
Madras Medical College	250	501
Dr S.N Medical College	250	1128
T. D. Medical College	150	747
M. G. M. Medical College	100	1375
Rural Institute of Med Science & Research	150	1953

#### **NEET 2019 Statistics**

Below tabulated are the stats for NEET 2019:

Number of candidates appeared	14,10,755
Number of candidates qualified	7,97,042
NEET cut off for UR (in marks)	134 marks   equal to 50 <sup>th</sup> percentile
NEET cut off for reserved candidate	107 marks   equal to 40 <sup>th</sup> percentile

#### **Minimum Qualifying Percentile**

NEET 2020 Minimum Qualifying Percentile

The percentile can be calculated by the following method:

Suppose, you have scored Rank 50 in NEET and the total number of students appeared are 6,00,000.

The percentile will be:  $[600000-50)/600000] \times 100 = 99.99$ 

You need to get 50 percentile for admission in Medical/Dental colleges.

### **NEET Admission Process 2020**

Admission in the top medical colleges will be done in two ways – through All India Quota Counselling and State Counselling.

#### APPLY NOW CHECK ELIGIBILITY GET UPDATES

- 1. 15% of the seats come under the All India Quota.
- 2. Colleges can fill the rest 85% of their seats through state counselling.
- 3. Seats will be allotted according to the candidate's NEET Score, Rank, colleges chosen during online

counselling and Cut Off.

4. If any seat remains vacant after the two rounds of AIQ Counselling, they will be transferred into State Quota.

#### **NEET Counselling & Seat Allotment**

#### **NEET Counselling & Seat Allotment 2020**

- 1. MCC will declare the number of available seats before each round of NEET Counselling.
- 2. NEET Counselling will begin in the last week of JUne.
- 3. Centralized counselling for 15% All India Quota will be conducted by MCC in 2 rounds.
- 4. The state quota admissions will be carried out by respective state counselling authorities in three rounds.
- 5. The result of NEET Counselling will be released in the form of Seat Allotment list and letter.

#### 15% All India Quota Merit List of NEET 2020

NTA will release 15% All India Quota NEET Merit List for admission to medical and dental colleges participating in NEET. Candidates who will obtain marks equal to or more than NEET cut off (except candidates from Jammu & Kashmir) will be eligible for All India Quota admissions. Andhra Pradesh and Telangana have also joined other states in allotment of 15% of MBBS and BDS seats in Government Medical & Dental Colleges through NEET All India Quota Counselling, held by MCC.

Tie-Breaker for Determining Merit List

In case 2 or more candidates obtain equal marks then their order of merit rank will be determined by considering the following factors in the order of priority:

- Marks obtained in Biology in NEET 2020
- Marks obtained in Chemistry in NEET 2020
- Total number of wrong answers
- Higher in age

#### **NEET 2018 Cut Off**

Below given is the previous year NEET 2018 Cut Off percentile, score and the total number of candidates:

Category	Cut Off Percentile	Cut Off Score	Number of Students
UR	50 <sup>th</sup> Percentile	691 – 119	634897
OBC	40 <sup>th</sup> Percentile	118 – 96	54653
SC	40 <sup>th</sup> Percentile	118 – 96	17209
ST	40 <sup>th</sup> Percentile	118 – 96	7446

#### **NEET 2017 Cut Off Percentile**

Minimum marks for NEET 2020 can be determined by taking a look at the previous year's Cut Off. The table given below enlists the NEET Cut Off percentile & scores and number of candidates qualified in different categories.

Category	Cut Off	Cut off	No. of Candidates
	Percentile	Score	
General	50 <sup>th</sup>	697-131	543473
OBC/SC/ST	40 <sup>th</sup>	130-107	47382-OBC 14599- SC 6018- ST
General-Physically Handicapped	45 <sup>th</sup>	130-118	67
OBC/SC/ST- Physically Handi- capped	40 <sup>th</sup>	130-107	152-OBC 38- SC 1- ST

#### **NEET Cut off 2017 for Government Colleges**

Category	Opening Rank (AIR	Closing Rank (AIR	Opening Rank	Closing Rank
	– MBBS)	– MBBS)	(AIR – BDS)	(AIR – BDS)

UR	1	5579	3792	10920
OBC	53	5922	5805	10891
SC	97	38660	14000	49936
ST	224	62604	61096	84770

#### **NEET 2017 Cut off for All India Quota**

The following table depicts the opening and closing ranks for MBBS and BDS as per last year's Cut Off. Round 1

Category	MBBS Opening Rank	MBBS Closing Rank	BDS Opening Rank	BDS Closing Rank- ing
UR	1	5799	3792	10920
ОВС	53	5922	5805	10891
SC	97	38660	14000	49936
ST	224	62604	61096	84770

#### Round 2

Category	MBBS Opening Rank	MBBS Closing Rank	BDS Opening Rank	BDS Closing Ranking
UR	45	5922	5314	10896
OBC	152	5234	7317	9254
SC	1762	38177	38558	47695
ST	5332	62604	61096	73861

#### Deemed University Round 1

Category	Opening Rank	Closing Rank	Opening Rank	Closing Ranking
UR	4	647124	5130	614065
OBC	465	2514	9607	12165
SC	2046	20687	35045	54965
ST	6309	42693	78677	100687

#### Deemed University Round 2

Category	Opening Rank	Closing Rank	Opening Rank	Closing Ranking
UR	90	639759	8020	499849
OBC	1148	5680	12235	13672
SC	16754	43253	59095	72836
ST	27581	64283	88136	92328

#### NEET 2019 - Toppers

NEET All India Rank List 2019 (AIR)	Name	Marks
1	Nalin Khandelwal	701
2	Bhavik Bansal	700
3	Akshat Kaushik	700
4	Swastik Bhatia	696
5	Anant Jain	695
6	Bhat Sarthak Raghvendra	695
7	Madhuri Reddy G	695

8	Dhruv Kushwaha	695
9	Mihir Rai	695
10	Raghav Dubey	691

#### NEET 2018 – Toppers

	Marks	Percentage	AIR
Kalpana Kumari	691	99.999921	1
Rohan Purohit	690	99.999764	2
Himanshu Sharma	690	99.999764	3
Aarosh Dhamija	686	99.999606	4
Prince Choudhary	686	99.999606	5
Varun Muppidi	685	99.999449	6
Agrawal Krishna Ashish	685	99.999449	7
Ankadala Anirudh Babu	680	99.999134	8
Madhvan Gupta	680	99.999134	9
Ramneek Kaur Mahal	680	99.999134	10
Aditya Gupta	680	99.999134	11
Keerthana K	676	99.998976	12
Ritwik Kumar Sahoo	676	99.998976	13
Onteru Venkata Sai Harsha Vardhan Reddy	675 99.998189		14
Sahil Sachinbhai Shah	675 99.998189		15
Menda Jaideep	675 99.998189		16
Abhishek Kumar	675	99.998189	17
Tanuj Jatin Presswala	675	99.998189	18
Koduru Sriharsha	675	99.998189	19
Amulya Gupta	675	99.998189	20
Gunjan Atul Gattani	675	99.998189	21
Sangeet	675	99.998189	22
AADITYA Vasudev Aggarwal	675	99.998189	23
Shilok Viral Patel	673	99.998110	24
Siddharth Ravi	672	99.998031	25
Mohammedanas Memon	671	99.997559	26
Aadhya Akshya Joshi	671	99.997559	27
Shikhar Bansal	671	99.997559	28
Shabita Khan	671	99.997559	29
Sameer Patro	671	99.997559	30

#### NEET 2017 Toppers:

Name of Topper	Rank in NEET 2017
Navdeep Singh	1 (score - 697)

Archit Gupta	2 (score - 695)			
Manish Mulchanadani	3 (score - 695)			
Sankeerth Sadananda	4 (score - 692)			
Dogra Abhishek Veerendra	5 (score - 691)			
Deric Joseph	6 (score - 691)			
Kanishh Tayal	7 (score - 691)			
Nikita Goyal	8 (score - 690)			
Aryan Raj Singh	9 (score - 690)			
Tanish Bansal	10 (score - 686)			

#### **NEET Merit List: State Quota & All India Quota**

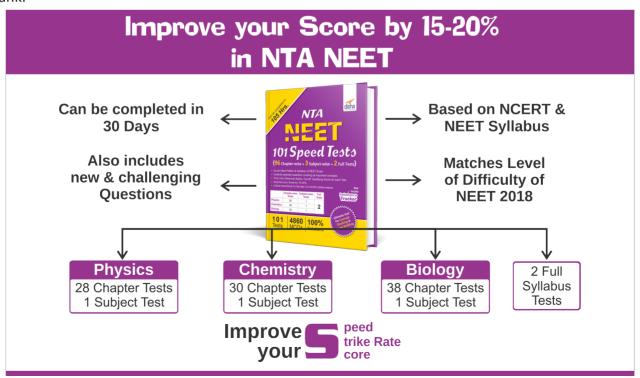
**NEET Merit List** 

The usage of NEET Rank List can be comprehended in the following ways:

- 1. NEET Rank List for All India Quota: The All India Quota List is drawn up by NTA to provide admission to the applicants into 15% seats of Government Medical and Dental Colleges of the nation.
- 2. NEET UG State Wise Rank List: The State Wise Rank List is set up by the authorities designated for various states. More than 85% seats in the NEET Participating Institutes are reserved for state quota.

#### **NEET State Wise Rank List - Marks Vs Ranks**

- As per previous year analysis of NEET result, in order to come in the top 100 ranks of NEET, one would roughly need a score of 701 or above.
- The last person to qualify NEET 2019 from general category got a score of 133 and NEET rank of 5,43,473.
- The highest mark scored in NEET 2019 was 701, and in NEET 2018 it was 691.
- The qualifying score in NEET 2019 was 133 (for general).
- As the marks scored decreased, the number of candidates scoring similar marks in NEET increased.
   Wherein multiple candidates scored same marks, the tie-breaking criteria is used to determine the NEET rank.



### TREND ANALYSIS OF AIPMT/NEET PAPERS (2009-2019)

#### **PHYSICS**

CL					Nı	umber	of Que	stion(s)	)in				
Ch. No.	Chapter Name	2009	2010	2011	2012	2013	2014	2015	2016 Ph-1	2016 Ph-2	2017	2018	2019
1	Units and Measurements	1	1	1	1	2	1	1	0	1	1	1	1
2	Motion in a Straight Line	2	3	2	2	2	0	1	1	1	1	1	1
3	Motion in a Plane	2	2	2	2	2	1	1	1	0	1	1	2
4	Laws of Motion	1	1	2	0	2	3	2	2	2	2	2	2
5	Work, Energy and Power	4	2	3	2	2	1	3	1	4	1	2	2
6	System of Particles and Rotational Motion	3	2	2	3	2	2	3	4	3	3	3	3
7	Gravitation	1	2	3	3	2	3	2	2	2	2	2	2
8	Mechanical Properties of Solids	0	0	0	0	1	1	1	0	0	1	1	1
9	Mechanical Properties of Fluids	0	0	0	0	1	1	1	1	2	1	1	2
10	Thermal Properties of Matter	2	2	0	2	2	2	2	3	2	2	1	2
11	Kinetic Theory	1	0	0	0	1	1	2	1	2	1	1	_
12	Thermodynamics	2	1	2	0	2	2	2	3	1	2	3	2
13	Oscillations	2	2	2	0	0	1	2	0	1	2	1	3
14	Waves	2	2	1	1	2	_	1	3	2	2	2	_
15	Electric Charges and Fields	1	2	1	2	1	3	1	1	1	1	2	3
16	Electrostatic Potential and Capacitance	1	1	2	1	1	3	1	1	1	2	_	1
17	Current Electricity	5	4	3	4	2	4	3	2	2	2	3	3
18	Moving Charges and Magnetism	1	0	2	2	2	2	2	3	3	2	2	2
19	Magnetism and Matter	2	2	1	1	1	1	0	1	1	1	1	1
20	Electromagnetic Induction	2	5	1	2	1	1	1	0	0	1	1	2
21	Alternating Current	1	1	2	1	2	1	1	2	2	1	1	_
22	Electromagnetic Waves	_	_	1	_	1	1	1	1	1	1	1	1
23	Ray Optics and Optical Instruments	0	2	2	5	2	1	2	3	4	2	2	3
24	Wave Optics	2	1	_	1	2	2	2	2	1	3	3	1
25	Dual Nature of Radiation and Matter	3	3	8	3	2	2	2	2	2	2	2	1
26	Atoms	2	2	1	3	1	2	2	1	1	1	1	1
27	Nuclei	3	2	2	4	2	1	1	1	_	1	1	1
28	Semiconductor Electronics : Materials, Devices and Simple Circuits	4	5	4	5	2	2	2	3	3	3	3	2
	Total Questions	50	50	50	50	45	45	45	45	45	45	45	45

## TREND ANALYSIS OF AIPMT/NEET PAPERS (2009-2019) CHEMISTRY

Ch. No.	Chapter Name	2009	2010	2011	2012	2013	2014	2015	2016 Ph-1	2016 Ph-2	2017	2018	2019
1	Same Basic Concepts of Chemistry	1	1	0	0	1	2	1	0	1	1	2	1
2	Structure of Atom	3	1	3	2	3	2	0	1	2	1	1	2
3	Classiication of Elements and Periodicity in Properties	1	2	0	1	0	1	1	1	0	1	0	1
4	Chemical Bonding and Molecular structure	4	4	2	3	4	3	5	2	3	4	2	4
5	States of Matter	1	0	4	1	2	1	0	1	0	0	2	1
6	Thermodynamics	2	2	2	3	0	2	0	1	1	2	1	2
7	Equilibrium	3	6	2	3	2	4	3	2	2	3	3	3
8	Redox Reactions	0	1	0	2	0	1	0	1	1	0	1	1
9	Hydrogen	0	0	0	0	0	1	0	1	0	0	0	1
10	The s-Block Elements	1	2	2	1	0	0	2	1	1	3	3	2
11	The p-Block Elements (gr - 13 & 14)	2	1	1	1	3	0	0	0	1	1	2	2
12	Organic Chemistry-Some Basic Principles and Techniques	4	7	4	2	4	2	4	0	2	3	2	2
13	Hydrocarbons	2	2	1	1	1	1	4	3	4	3	2	2
14	Environmental Chemistry	0	0	1	1	1	1	0	1	0	1	1	1
15	The Solid State	1	1	0	2	2	1	1	2	1	1	1	1
16	Solutions	1	3	3	1	1	0	3	2	2	1	0	2
17	Electrochemistry	3	0	3	1	3	2	1	1	5	1	1	2
18	Chemical Kinetics	4	3	2	2	2	0	2	2	1	2	2	2
19	Surface Chemistry	0	0	1	2	0	1	1	1	2	1	1	1
20	General Principles and Processes of Isolation of Elements	0	0	2	3	0	0	1	1	0	1	1	1
21	The p-Block Elements (gp - 15, 16, 17 & 18)	3	1	0	2	3	1	1	5	3	2	2	4
22	The d and f-Block Elements	2	2	2	1	3	5	5	2	2	2	2	0
23	Coordination Compounds	2	3	3	1	2	2	2	1	1	4	3	1
24	Haloalkanes and Haloarenes	1	0	0	0	0	1	1	2	2	0	0	0
25	Alcohols, Phenols and Ethers	3	0	0	1	1	3	1	2	0	3	4	1
26	Aldehydes, Ketones and Carboxylic Acids	1	3	1	3	2	1	3	1	1	2	1	0
27	Amines	1	2	2	0	2	2	1	3	3	2	2	2
28	Biomolecules	2	1	1	3	0	2	0	3	3	1	2	1
29	Polymers	1	1	1	2	2	2	1	1	1	1	1	1
30	Chemistry in Everyday Life	1	1	2	0	1	1	1	1	0	1	0	1
	Total Questions	50	50	50	50	45	45	45	45	45	45	45	45

GI		Number of Question(s)in											
Ch. No.	Chapter Name	2009	2010	2011	2012	2013	2014	2015	2016 Ph-1	2016 Ph-2	2017	2018	2019
1	The Living World	1	0	1	0	1	0	0	1	1	0	1	1
2	Biological Classification	3	3	8	4	1	6	2	4	4	4	4	1
3	Plant Kingdom	3	3	1	3	4	4	4	2	2	4	4	1
4	Animal Kingdom	2	4	3	1	4	4	3	3	2	5	3	2
5	Morphology of Flowering Plants	2	3	4	7	2	5	5	7	5	2	2	1
6	Anatomy of Flowering Plants	5	3	4	5	3	2	4	0	3	4	4	3
7	Structural Organisations in Animals	6	1	3	2	1	2	2	2	2	1	1	3
8	Cell: The Unit of Life	4	4	4	5	3	4	4	3	3	1	4	3
9	Biomolecules	0	1	2	3	4	2	1	5	3	2	1	2
10	Cell Cycle and Cell Division	2	2	1	2	2	3	2	4	3	2	1	2
11	Transport in Plants	1	0	0	0	1	0	1	1	0	2	2	0
12	Mineral Nutrition	2	3	4	3	1	1	2	1	2	0	1	0
13	Photosynthesis in Higher Plants	2	3	2	2	1	1	2	4	2	1	2	0
14	Respiration in Plants	1	1	0	0	2	1	0	1	1	2	2	1
15	Plant Growth and Development	2	2	0	0	2	4	2	1	1	1	0	1
16	Digestion and Absorption	4	2	2	1	1	2	2	2	1	4	1	3
17	Breathing and Exchange of Gases	0	2	0	1	2	1	2	2	2	1	1	2
18	Body Fluids and Circulation	5	3	5	0	1	2	3	2	2	1	2	2
19	Excretory Products and their Elimination	2	3	5	1	1	1	2	1	1	1	2	2

## **State-Wise Success in NEET 2019**

Among all states, Delhi is top-performing state in 2019, followed by Haryana and then Chandigarh.

State Name	Registered	Appeared	Qualified	% of Qualified candidates	Rank
Andhra Pradesh	57798	55200	39039	70.72	Rank 4
Arunachal Pradesh	4509	3716	1619	43.57	
Assam	27183	24228	10716	44.23	
Bihar	83814	76536	44092	57.61	
Chandigarh	1657	1562	1144	73.24	Rank 3
Chhattisgarh	28391	25984	12456	47.94	
Delhi	32048	30215	22638	74.92	Rank 1
Goa	3776	3465	1677	48.4	
Gujarat	78318	75889	35177	46.35	
Haryana	33047	30649	22499	73.41	Rank 2
Himachal Pradesh	13868	12646	8003	63.28	Rank 10
Jammu and Kashmir	26595	24744	13295	53.73	
Jharkhand	18285	16934	10297	60.81	
Karnataka	115931	102735	64982	63.25	Rank 11
Kerala	117255	110206	73385	66.59	Rank 8
Madhya Pradesh	58059	53391	26773	50.15	
Maharashtra	216176	206745	81171	39.26	
Manipur	6402	5794	3672	63.38	Rank 9
Meghalaya	3421	3016	1094	36.27	
Odisha	35093	32378	19244	59.44	
Punjab	14847	13783	9456	68.61	Rank 6
Rajasthan	98757	93149	64890	69.66	Rank 5
Tamil Nadu	138997	123078	59785	48.57	
Telangana	51114	48996	33044	67.44	Rank 7
Uttar Pradesh	155556	144993	84982	58.61	
Uttarakhand	13587	12531	7602	60.67	
West Bengal	66924	62050	36846	59.38	

Overall NEET 2019 Analysis						
Category of CANDIDATES	NUMBER	REMARKS/Particulars				
No. of candidates registered	1519375 [In 2018 total Registered 13,26,725 ]	14.52% increase from NEET 2018				
No of Candidates Present	1410755	92.85%				
No of Candidates Absent	108620	7.15%				
No. Of Indian citizens appeared	1516066	99.78%				
NRIs	1884	0.12%				
OCIs	675	0.04%				
PIO	63	0.01%				
Foreigners	687	0.05%				
Male	680414	44.78%				
Female	838955 [In 2018,total Registered 7,46,075 ]	55.22% (increased by 12.44% than 2018)				
Transgender	6 [In 2018, only 1 candidate Registered]	Increased by 5 times from NEET 2018				
Unreserved	534072	35.15%				
SC	211303	13.91%				
ST	96456	6.35%				
OBC	677544	44.59%				
Number of Cities	154	16.67% increase from NEET(UG)-2018				
Number of Languages	11	_				
Number of centres	2546	12.90% increase from NEET(UG)-2018				
*Importance of NEET has i	ncreased in 2019 in compa	arison to 2018.				

### **NEET Result Marks vs Rank**

Medical aspirants have the chance of predicting their expected NEET 2020 rank by calculating the marks they are likely to score. For convenience in the same NEET marks vs rank data has been provided in the tables that follow.

#### NEET Result - Marks vs Rank 2019, 2018 and 2017

Marks Range	Rank Range (2019)	Rank Range (2018)	Rank Range (2017)
701		-	-
691-700		1	1 - 9

681-690	20 - 88	2 - 7	10 - 25
671-680	99 - 214	8 - 31	26 - 83
661-670	223 - 476	32 - 63	84 - 163
651-660	568 - 930	64 - 122	164 - 301
641-650	946 - 1714	123 - 232	302 - 535
631-640	1809 - 2570	233 - 398	534 - 870
621-630	2788 - 3956	399 - 639	871 - 1308
611-620	4074 - 5630	640 - 994	1309 - 1962
601-610	5692 - 7580	995 - 1505	1963 - 2786
591-600	7784 - 10036	1506 - 2169	2787 - 3874
581-590	10248 - 12898	2170 - 3084	3875 - 5229
571-580	13064 - 16008	3085 - 4202	5230 - 6788
561-570	16173 - 19478	4203 - 5615	6789 - 8736
551-560	19967 - 23501	5616 - 7433	8737 - 10851
541-550	23695 - 27650	7434 - 9493	10851 - 13353
531-540	27994 - 32317	9494 - 11885	13354 - 16163
521-530	32796 - 37464	11886 - 14629	16163 - 18876
511-520	37780 - 38736	14630 - 17816	18876 - 22372
501-510	38822 - 44553	17817 - 21337	22372 - 25842
491-500	45023 - 51086	21338 - 25229	25843 - 29557
481-490	51498 - 58114	25230 - 29528	29558 - 33893
471-480	58214 - 65316	29529 - 34037	33894 - 38152
461-470	65801 - 73197	34038 - 38947	38153 - 43019
451-460	73337 - 81607	38948 - 44227	43020 - 47809
441-450	82216 - 89872	44228 - 49907	47810 - 53184
431-440	90825 - 99323	49908 - 55928	53185 - 59177
421-430	99914 - 109429	55929 - 62506	59178 - 65280
411-420	109937 - 120258	62507 - 69529	65281 - 71938
401-410		69530 - 76981	71939 - 78651
391-400		76982 - 84899	78652 - 86257
381-390		84890 - 93120	86258 - 93741
371-380		93121 - 102006	93742 - 101720
361-370		102007 - 111483	101721 - 110266
351-360		111484 - 121479	110267 - 119395
341-350		121480 - 132093	119396 - 128853
331-340		132094 - 143344	128853 - 138981
321-330		143345 - 155264	138982 - 149614

#### **NEET Marks and Rank of Previous Years' Toppers**

NEET All India Rank	Marks scored in 2019	Marks Scored in 2018	Marks Scored in 2017
1	701	691	697

2	700	690	695
3	700	690	695
4	696	686	692
5	695	686	691
6	695	685	691
7	695	685	691
8	695	680	690
9	695	680	690
10	691	680	686
11	691	680	685
12	690	676	685
13	690	676	685
14	690	675	685
15	690	675	685
16	690	675	685
17	690	675	685
18	690	675	684
19	690	675	683
20	690	675	682
21	690	675	682
22	690	675	682
23	690	675	681
24	690	673	681
25	690	672	681

#### **NEET Cutoff Percentile and Previous Year Trend**

Category	Percentile	NEET 2019 Cutoff Score (out of 720)	NEET 2018 Cutoff Score (out of 720)	NEET 2017 Cutoff Score (out of 720)
Unreserved	Unreserved 50th Percentile		119	131
Unreserved-PH	Unreserved-PH 45th Percentile 120		107	118
SC/ST/OBC	SC/ST/OBC 40th Percentile 107		96	107

#### **NEET marks mange - Number of candidates**

By referring to the table that follows medical aspirants can get an idea of the number of aspirants that fall under the following range of marks. Aspirants can also check category-wise cutoff and number of candidates qualifying in the respective categories here.

#### NEET marks range and number of candidates 2019 - Category-wise

Category	Marks Range (2019)	No. of Candidates Qualified (2019)		
Others	701-134	7,04,335		
Scheduled Caste (SC)	133-107	20,009		
Scheduled Tribe (ST)	133-107	8,455		

Other Backward Classes (OBC)	133-107	63,789
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1

## \*Denotes the number of candidates in the given marks range not in the particular category NEET marks range and number of candidates - Category-wise

Category	Marks Range (2018)	No. of Candi- dates Qualified (2018)	Marks Range (2017)	No. of Candi- dates Qualified (2017)
Unreserved (UR)	691-119	6,34,897*	697-131	5,43,473*
Scheduled Caste (SC)	118-96	17,209	130-107	14599
Scheduled Tribe (ST)	118-96	7,446	130-107	6018
Other Backward Classes (OBC)	118-96	54,653	130-107	47382

<sup>\*</sup>Denotes the number of candidates in the given marks range not in the particular category Know your chances for NEET 2020 AIQ admission

Although, all aspirants (except those from Jammu & Kashmir) are eligible for 15% AIQ admissions. However, not everybody is able to secure a seat for themselves in the aforementioned category. For clarity on this medical aspirants can refer to the table that follows.

#### AIQ Closing Ranks - 2019

Category	NEET 2019 AIR	NEET 2019 Marks
General	12618	582
OBC	12179	583
SC	293667	
ST	87649	445

#### AIQ Closing Ranks - 2018 and 2017

Category	NEET 2018 AIR	NEET 2018 Marks#	NEET 2017 AIR	NEET 2017 Marks#
General	10443	537	8317	563
OBC	10449	537	8347	562
SC	64642	417	52996	442
ST	77792	399	76167	405

#### How many MBBS/BDS seats are available?

The year 2019 has seen significant increase in the number of medical colleges and seats nationwide. A list of medical and dental colleges and seats available through NEET 2020 is given below, medical aspirants can refer to them to get an idea of the availability of options.

#### MBBS/BDS Seats and Colleges (available through NEET 2020)

MBBS						
Colleges and Seats	Government Colleges	Private Colleges*	Central Universities			
Total Colleges 273		260	7			
Total Seats 41,808		37,340	1,180			
BDS						
Colleges and Seats	Government Colleges	Private Colleges*	Central Universities			
Total Colleges	51	262	4			

Total Seats	3,549	23,400	174
	-,	,	

<sup>\*</sup>Inclusive of Deemed Universities

## **List of AIIMS Colleges in India**

The main aim of the AIIMS institutes is to make medical education affordable and reachable to people from all strata of society. In this article, we present to you the ranking of AIIMS colleges in India with their location, ranking and total intake below:

S.No	Name	Location (State)	Year of Establishment	Rank among AIIMS Colleges in India
1.	<u>AIIMS Delhi</u>	New Delhi	1956	1
2.	AIIMS Bhopal	Madhya Pradesh	2012	2
3.	AIIMS Bhu- baneswar	Odisha	2012	3
4.	AIIMS Jodhpur	Rajasthan	2012	4
5.	<u>AIIMS Patna</u>	Bihar	2012	5
6.	<u>AIIMS Raipur</u>	Chhatisgarh	2012	6
7.	AIIMS Rishikesh	Uttarakhand	2012	7
8.	AIIMS Raebareli	Uttar Pradesh	2012	Not Available
9.	AIIMS Nagpur	Maharashtra	2018	Not Available
10.	AIIMS Mangalgiri	Andhra Pradesh	2018	Not Available
11	AIIMS Gorakhpur	Uttar Pradesh	2019	Not Available
12	AIIMS Bibinagar	Telangana	2019	Not Available
13	AIIMS Bathinda	Bathinda	2019	Not Available
14	AIIMS Kalyani	West Bengal	2019	Not Available
15	AIIMS Deogarh	Jharkhand	2019	Not Available
16	AIIMS Telangana	Telangana	2019	Not Available

#### **Under Development AIIMS in India**

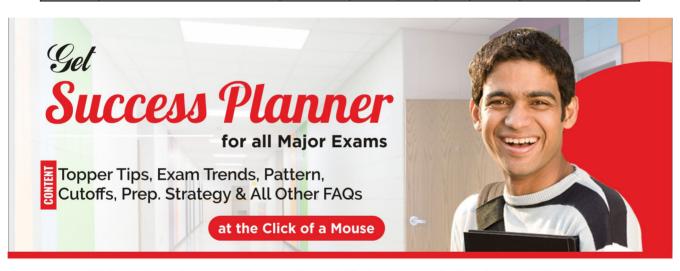
As of now, there are 9 AIIMS colleges under development in India. In a few of the under-development AIIMS in India, the construction work has already started and some of them will be functional soon. Check out the under-development AIIMS in India below:

S.No	Name	Location (State)
1	AIIMS Madurai	Tamil Nadu
2	AIIMS Rajkot	Gujarat
3	AIIMS Vijay Pur	J&K (Jammu Region)
4	AIIMS Awantipora	J&K (Kashmir Region)
5	AIIMS Bilaspur	AIIMS Himachal Pradesh
6	AIIMS Chandsari	Assam
7	AIIMS Rewari	Haryana
8	AIIMS Darbhanga	Bihar

Furthermore, the Union Cabinet has approved a proposal to set up 20 new AIIMS colleges soon.

#### **Total Seats and Reservation at AIIMS**

Sr.No.	AIIMS Institute	General	ОВС	SC	ST	PWD	Foreign	Total
1	AIIMS, New Delhi	51	27	15	8	5%	7	107
2	AIIMS, Bhopal	51	27	15	8	5%		100
3	AIIMS, Bhubaneswar	51	27	15	8	5%		100
4	AIIMS, Guntur	51	27	15	8	5%		100
5	AIIMS, Jodhpur	51	27	15	8	5%		100
6	AIIMS, Nagpur	51	27	15	8	5%		100
7	AIIMS, Patna	51	27	15	8	5%		100
8	AIIMS, Raipur	51	27	15	8	5%		100
9	AIIMS, Rishikesh	51	27	15	8	5%		100
10	AIIMS, Bathinda	24	14	8	4	3%		50
11	AIIMS, Gorakhpur	24	14	8	4	3%		50
12	AIIMS, Kalyani	24	14	8	4	3%		50
13	AIIMS, Rae Bareli	26	13	7	4	2%		50
14	AIIMS, Deogarh	26	13	7	4	2%		50
15	AIIMS, Telangana	26	13	7	4	2%		50
	Total	600	321	180	96		7	1207



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The roots of **Education** are bitter, but the fruit is **Sweet**.

-Aristotle

