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# Aspiring Minds' Campus Analysis Report

## BVBs Sardar Patel College of Engineering, 2019

### ( B.Tech/B.E, 2019)



Aspiring Minds Assessment Pvt. Ltd.

## Study of Students' Employability and their Performance in AMCAT

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## Purpose of this Report

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The Aspiring Minds Campus Analysis Report provides a detailed analysis of the student quality and their employability in the industry. Our aim is to produce a report which is useful to the campus and includes a comprehensive comparison across different degrees, streams and batches. All such analysis will serve as an employability checkup for students and accordingly, the administration can prioritize its efforts to increase the overall student employability.

The various sections of this report give a broad view on numerous aspects related to the performance of students. These sections contain tables and charts which have been constructed after an in-depth analysis of AMCAT assessment data collected from your campus. We evaluate your students' performance in comparison to the nation-wide norms, which are calculated from a sample of entry-level job-aspirants over 22 states across India. This comparison reveals those areas in which your students fare better (or otherwise) than the average student assessed by us, and determines the employability of the students in diverse industries. This report will give a clear picture of the employability status of students eligible for the listed companies and also help the institute to improve on the weak areas figured by Aspiring Minds' analysis.

We also provide an intra-campus analysis to give an overview of the characteristics of top performing students in comparison to the rest, such that appropriate measures can be taken to help the low performers fare better.

On the basis of our analysis, we suggest certain recommendations for your campus. We are certain that these recommendations will help BVBs Sardar Patel College of Engineering, 2019 march towards its goal of providing excellent education to the students, which will result in better employability. Our recommendations, if properly implemented, will also help increase the standing of the campus amongst prospective students.

### Data Snapshot

Campus	BVBs Sardar Patel College of Engineering,2019
Date of testing	2,3,5,6-Dec-18
Degree tested	B.Tech/B.E (183 students)
<b>Number of students compared in each stream</b>	
Civil Engineering	55 students
EE	59 students
Mechanical Engineering	64 students
Other	5 students

*Note: some students either did not enter their stream or entered it incorrectly. These students have not been included in any stream. Thus total students tested could be more than students in all reported streams.*

## Introduction

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This report is based on the results of AMCAT assessment conducted at your campus on 2,3,5,6-Dec-18 where a total of 183 students were tested. AMCAT is a two and half-hour adaptive test with multiple modules including aptitude, domain skills and personality assessment. It is India's largest employability test and is taken by more than 30,000 students every month. Being India's only adaptive employability test, it is used as a benchmark for hiring by several companies across India. The details of AMCAT assessment are as follows:

AMCAT Modules
I. English Comprehension
II. Quantitative Ability
III. Logical Ability
IV. Computer Programming
V. Electronics and Semiconductor Engineering
VI. Mechanical Engineering
VII. Electrical Engineering
VIII. Civil Engineering
IX. Aspiring Minds Personality Inventory (AMPI)

### I. English Comprehension

Familiarity with the English Language in its various nuances is an essential skill, especially in the current climate of global networking. Ideally, any recruitment should involve a test of skills in handling the language in ways that promote the objectives of the company. Needless to state, an appropriate test is necessary.

Our English test uses a variety of internationally standardized resources for framing questions aimed at determining the candidate's ability to a) understand the written text (b) comprehend the spoken word and (c) communicate effectively through written documents. The test broadly covers the following areas:

- a. A wide-ranging vocabulary to cope with general and specific terminology.
- b. Syntax and sentence structure, the incorrect use of which distorts meaning and becomes a communication hurdle.
- c. Comprehension exercises designed to test a candidate's ability to read fluently and understand correctly.
- d. The ability to understand and use suitable phrases, which enrich the meaning of what is conveyed.

Time management and accuracy in conformity with the examiner's criteria.

## II. Quantitative Ability

The Quantitative Ability assesses the ability of the candidate in following two aspects:

- a. Basic understanding of numbers and applications  
This section tests whether the candidate has understanding of basic number system, i.e., fractions, decimals, negative, positive, odd, even numbers, rational numbers, etc. The candidate should know how to do basic operations on these numbers, understand concepts of factors/divisibility and have good practice of algebra. Apart from operations on numbers, the candidate should know how to convert a real-world problem into equations, which is to be solved to find an unknown quantity. The candidate is tested on Word Problems representing various scenarios to assess the same.
- b. Analytical/Engineering Maths  
These are aspects of mathematics needed for Engineering disciplines and data analysis. This includes permutation-combination, probability and understanding of logarithms.

## III. Logical Ability

The Logical Ability section assesses the capacity of an individual to interpret things objectively, to be able to perceive and interpret trends to make generalizations and be able to analyze assumptions behind an argument/statement. These abilities are primary for success of a candidate in the industry. Specifically, these are divided into following sections:

- a. Deductive Reasoning: Assesses the ability to synthesize information and derive conclusions.
- b. Inductive Reasoning: Assesses the ability to learn by example, imitation or hit-and-trial. This also provides an indication of how creative the individual is.
- c. Subjective Reasoning: Assesses the critical thinking ability of an individual to see through loopholes in an argument or group of statements.

All these abilities are tested both using numerical and verbal stimuli. Coachable questions have been identified and removed.

## IV. Computer Programming

The Computer Programming Principles module evaluates the suitability of the candidate for the software industry. It not only tests the knowledge and application of basic constructs of programming, but also concepts of data structures, algorithm analysis and object-oriented-programming.

The test is language-independent and all programming questions use a pseudo-code. Significant effort has been made to exclude memory-based and rote-learning questions. The test contains questions on debugging programs, finding the output of programs,

completing incomplete programs, finding complexity of algorithms, questions on implementation and operations on different data structures, etc.

The test contains the following sections:

- a. Structure and constructs of Computer Programs
- b. Data-structures and Basics Algorithms
- c. Object Oriented Programming Concepts

#### V. Electronics and Semiconductor Engineering

The Electronics and Semiconductor test assesses the suitability of the candidate for the SOC, Embedded Systems, VLSI design, etc. companies. This test together with that of Computer Programming assesses the suitability of candidates for EDA companies. The test has the following sections:

- a. Analog Electronics
  - 1. Basic Components, their operations and Circuit Analysis
  - 2. Active Components, Large, Small Signal and Circuit Analysis
  - 3. Frequency domain and time domain analysis of systems, Feedback and Stability
  - 4. Opamp based circuits and analysis
- b. Digital Electronics
  - 1. Boolean Algebra, Minimization of Boolean Functions
  - 2. Implementation and Analysis of logic gates
  - 3. Sequential blocks - flip-flops and latches
  - 4. Digital Circuits and Blocks
  - 5. State Machines and design of Complex sequential circuits

#### VI. Mechanical Engineering

In this module, a student is tested for his understanding of mechanical engineering - theoretical and practical knowledge. Questions from different areas in this subject are asked so as to assess a student on his complete knowledge of the subject. The test has the following sections:

- a. Manufacturing Science
- b. Thermodynamics & IC Engines
- c. Fluid and Machine Mechanics

## VII. Electrical Engineering

The Electrical Engineering module has been designed to assess a candidate's knowledge working in power sector. The module is meant for B Tech. students who may be freshers or the students who may be exposed to industry for one to two years. The module checks for the concepts which would be used by the engineers in everyday working. The module consists of both conceptual and practical aspects of the subject.

## VIII. Civil Engineering

Civil Engineering module assesses a student's skills, knowledge and understanding of the core ideas involved in the branch of civil engineering. The module focuses on testing a student on theoretical knowledge and practical concepts which will help him perform a good job as an engineer in the industry.

## IX. AMPI: Aspiring Minds Personality Inventory

It is the first personality inventory designed for personality analysis of Indian college graduates for the purpose of inputs to corporate personnel selection. AMPI is based on the five factor model, which is by far the only scientifically validated and reliable personality model. Several scientific studies across the world have shown that different combinations of the five factor personality traits strongly correlate to different job profiles and predict long term job performance reliably. AMPI analysis will be a worthwhile objective input to the corporate selection process and help find better matches to job profiles. The AMPI questionnaire asks for candidate's reaction under various scenarios, his/her beliefs, likes-dislikes to ascertain his/her personality factors. Factors map to traits such as candidate motivation, self-discipline, sociability, persistence, confidence, emotional stability, etc. which both intuitively and scientifically map to job requirements. AMPI builds in a strong proprietary methodology to control distortions due to social desirability and answer-faking.

AMPI has been designed specifically keeping the fresh Indian graduates in mind. Context is very important in design of items. AMPI items take into consideration the cultural sensibilities of Indians, the scenarios students face at college/home, also depending on the socio-economic status of the target population. This brings AMPI into a unique position as compared to generic/Western inventories, which do not suit our target population and fail miserably.

AMPI's scoring is based on statistical techniques of factor analysis, polytomous item analysis and structural modeling. Norms have been set on large candidate assessment done on final year graduates. Testforms are auto-generated such that each factor can be reliably predicted in feasible amount of time. Test-retest reliability and test validity are statistically guaranteed.



AMPI traits are:

- a. Extraversion
- b. Conscientiousness
- c. Emotional Stability
- d. Openness to Experience
- e. Agreeableness

## Score Interpretation

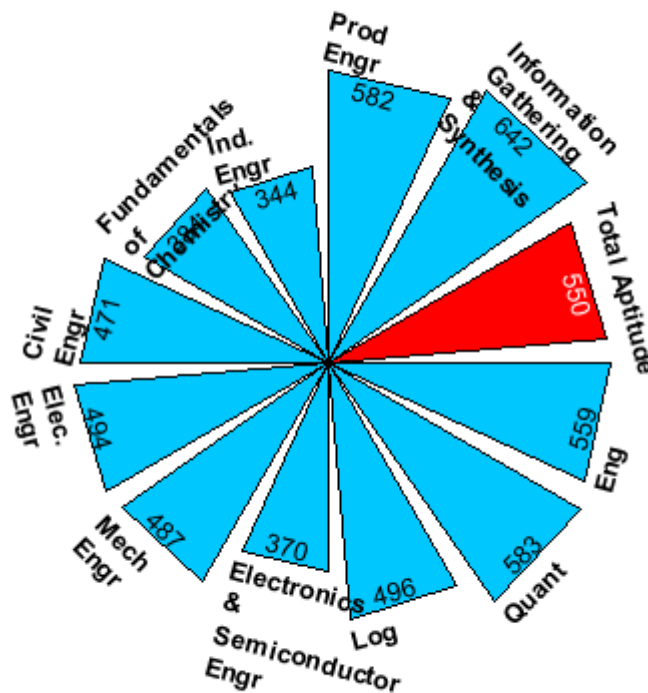
All scores lie between 100 and 900. The scores are normalized on a Gaussian curve using statistical techniques. The scores follow global standards of validity and reliability. They are valid for three years and remain consistent on repeat testing unless the candidate's ability improves because of sustained long term efforts.

## Percentile Interpretation

The percentile of the candidate is calculated over a National average group based on the percentile of all students tested by Aspiring Minds. Several statistical studies conducted demonstrate clearly that the percentiles are stable for a year and will not vary more than two percentile points. The percentile is a very important metric and gives an idea of the candidate's rank in comparison with all graduates nationwide.

## Section 1 - Students' Capability and Training Need Analysis

This section shows the overall performance of the campus students, along with their average and standard deviation in each module. In Campus Aptitude and Skill Chart below, BLUE triangles represent average score of your campus in each module. The RED triangle represents Total Aptitude score, which comprises of English, Quantitative Ability and Logical Ability scores.



Campus Aptitude And Skill Chart

The Campus Ability Table below shows the campus average scores (percentiles) and their standard deviations in comparison with the National norms. It also indicates if the difference between the Campus Average score and the National Average score is significant and if so, at what confidence level. Norm is the National Average of all the candidates tested on AMCAT. Confidence level refers to the likelihood (ranging from 0 to 100%) that the results observed in the study are real, and not due to chance. In this analysis, if confidence level is less than 90%, it indicates that the difference between the Campus Average and the National Average is not significant and that both the scores are equivalent. For confidence level greater than or equal to 90%, the difference between the Campus Average and the National Average is considered significant. If the difference is positive, on an average, the campus students are performing better than the National Average and vice versa.

## Campus Ability Table

Modules Attempted	Campus Average Percentile	Campus Average (Std. Dev.)	National Average (Std. Dev.)	Difference (Campus - National)	Confidence	Is Significant? <sup>1</sup>
English Comprehension	80%	559 (115)	475 (100)	84	100%	Yes
Quantitative Ability	78%	583 (151)	495 (115)	88	100%	Yes
Logical Ability	62%	496 (80)	465 (101)	31	100%	Yes
Electronics and Semiconductor Engineering	77%	370 (93)	310 (80)	60	100%	Yes
Mechanical Engineering	69%	487 (163)	450 (75)	37	97%	Yes
Electrical Engineering	87%	494 (121)	380 (103)	114	100%	Yes
Civil Engineering	99%	471 (92)	300 (72)	171	100%	Yes
Fundamentals of Chemistry	73%	384 (143)	335 (80)	49	82%	No
Industrial Engineering	3%	344 (113)	449 (54)	-105	100%	Yes
Production Engineering	98%	582 (140)	463 (57)	119	100%	Yes
Information Gathering and Synthesis	99%	642 (90)	450 (75)	192	100%	Yes
Automotive Engineering	93%	560 (154)	465 (66)	95	100%	Yes
Basic Computer Literacy	98%	642 (126)	425 (100)	217	100%	Yes
<b>Total Aptitude</b>	<b>75%</b>	<b>550 (91)</b>	<b>478 (105)</b>	<b>72</b>	<b>100%</b>	<b>Yes</b>

<sup>1</sup> if confidence level is less than 90%, it indicates that the difference between Campus Average and National Average is not significant and that both the scores are equivalent.

Note: Food Science, Computer Programming, Computer Science, Instrumentation Engineering, Metallurgical Engineering and Human Resources modules are not considered as they were attempted by less than 5 students in your campus.

## I. Inferences

### 1. English Comprehension

Communication is the key to building relationships and trust that leads to success in business. English is a corporate language and hence, the ability to read and comprehend this language effectively is essential to qualify for all types of job profiles, whether it is technical or non-technical. It is pleasing to say that the students of your institute have done **outstandingly well in English, on an average, scoring higher than the National Average with a significant difference.** The credit must go to the teaching at your campus. This level of excellence should be maintained throughout by consistent endeavors by both the campus and the students towards enhancing English language skills, for which consistent reading and regular grammar practice being a few methods.

### 2. Quantitative Ability

Quantitative Ability measures a person's ability to deal with numbers and real-world problems quantitatively and mathematically. It is the ability to convert a real world problem into equations which can then be solved to find the result. This module is designed to measure a candidate's basic maths and algebraic skills, his/her understanding of basic quantitative concepts and his/her ability to reason quantitatively, solve quantitative problems and interpret graphical data. Your campus has shown **excellent performance in Quantitative Ability module, on an average, scoring significantly higher than the National Average.** Our analysis shows that the students are well focused on the fundamentals and they have a deep understanding of the underlying concepts to be used. In order to keep performing well in this module, students must continue to put in their efforts, by practicing questions regularly.

### 3. Logical Ability

The purpose of Logical Ability module is to test students' logical reasoning skills and to check their intuitive ability, decision making capability, problem solving approach and other areas which are important from a company's perspective. People with strong Logical Reasoning are quicker to perceive and interpret things objectively. Therefore, proficiency in this module is desired for all job profiles. Scores of your students in **Logical Ability section are commendable. Although, on an average, the scores are greater than the National Average, the difference is not large.** Our advice to students is to be motivated and keep practicing various questions to master the section, which will help them score higher and be way ahead of the National Average.

### 4. Electronics and Semiconductor Engineering

The Electronics and Semiconductor module tests the students' understanding of analog and digital electronics. Students need expertise in this area to pursue a career in fields such as VLSI Design, Embedded Systems, Computer-Aided-Circuit Design - in general, the Semiconductor and SOC industry. The topics included in this module are taught to students pursuing Electronics/Electrical engineering. In some colleges, it is also taught to students pursuing engineering in Computer Science, Instrumentation, etc. On an average, the scores obtained by students of your campus are **significantly higher in comparison to the National Average** of students pursuing Electronics related disciplines. This is commendable. The faculty at the institute must be congratulated. To maintain the consistency in performance, the students need to regularly practice new questions. This will help them understand the concepts better.

## 5. Mechanical Engineering

Mechanical engineering module assesses a candidate's understanding on core concepts including mechanics, kinematics, thermodynamics, material science, structural analysis, etc. It requires a candidate to apply the principles of physics and material science for analysis, design, manufacturing and maintenance of mechanical systems. For any job profile in core mechanical sector, a student is required to do well in this module. The performance of your students has been reasonably good with students, on an average, **scoring slightly higher than national average**. While this is good, but in order to scale higher, further improvement is required. Our analysis shows that the students seem to have a basic understanding of the subject but need to practice more on the industrial application part - understanding the mechanism behind every process and relating the study to real-time scenarios will help.

## 6. Electrical Engineering

Electrical engineering module assesses a candidate's knowledge on a range of subfields like analog and digital electronics, power engineering, control systems and signal processing. The module deals with the study and application of electricity, electronics and electromagnetism. In order to build a career in fields such as Power sector, Control and electronics, a student is expected to do well in this module. The students of your institute have done extremely well in Electrical engineering module, on an average, **scoring higher than the National Average with a significant difference**. Our analysis suggests that they seem to have a solid understanding of all the relevant areas in Electrical engineering. Students should extensively read industry-specific electrical systems like Q-meters, oscilloscopes etc and practice enough to remain in touch with the field.

## 7. Civil Engineering

Civil engineering module requires a student to have a basic understanding of core topics such as structural, geo technical, material, transportation engineering etc, so that a student is able to apply this knowledge in planning, design, construction and maintenance of structures (like roads, building, etc). The module tests the student to have a basic knowledge of general principles of mechanics and construction and requires the candidate to apply these principles in practical based problems. The students of your institute have performed very well in Civil engineering module, on an average, **scoring significantly higher than the National Average**. While you display a solid understanding of the concepts in civil engineering module, you should challenge yourself to more advanced and niche topics like traffic engineering and mapping concepts in surveying.

## 8. Industrial Engineering

Industrial engineering module checks for student's understanding of basic concepts in operation research and management, management science, systems engineering, ergonomics and safety engineering. The module draws upon knowledge of various principles and methods of engineering analysis, design and management. To build a career in fields such as Production, Operations, Quality control, Logistics, Process and plant management etc, a candidate is expected to do well in this module. It is a matter of deep concern that the students of your campus, on an average, have **scored significantly lower than the National Average** in this module. The basic concepts of students in Industrial engineering are not clear. We suggest that students start from the simpler topics which are more theoretical based such as Facility design, Quality management, etc, then move on to more conceptual and numerical based topics like engineering costing and reliability and finally take up advanced topics like operation research and management.

## 9. Production Engineering

Production engineering module requires a candidate to have an understanding of various manufacturing processes, metal cutting & tool design, metrology, machine tools, Computer Integrated Manufacturing, etc. Students need to be well versed in this area in order to pursue a career in public and private sector manufacturing organizations engaged in design, development and implementation of new production processes, information and control systems, computer controlled inspection, assembly and handling. The students of your institute have performed well in Production engineering module, on an average, **scoring significantly higher than the National Average**. This shows that the students are well focused on the fundamentals and they have a deep understanding of the underlying concepts to be used. Conducting periodic tests and assignments on core topics like tool design, machining processes etc will help the students to sustain their potential.

## II. Performance Summary

From the above analysis, it is clearly visible that the **performance of the students at your campus is good in English Comprehension, Quantitative Ability, Logical Ability, Electronics and Semiconductor Engineering, Mechanical Engineering, Electrical Engineering, Civil Engineering and Production Engineering**, which is commendable. However, the students' performance is **not satisfactory in Industrial Engineering**, therefore additional training sessions and corrective measures are required by the campus authorities. Methodologies such as mock tests, assignments and extra classes can become a valuable strategy for the benefit of students. The campus can also include proactive mentoring sessions for weak students and review their skills in the given area(s). Another approach can be to hold training sessions focusing on comprehensive guidance for the students to excel in their weak areas. The gain resulting from these training sessions and your continuous support will allow overall development of the student and further enhancement in their abilities.

### III. Training Suggestions

This section lists areas where your students need to improve on the basis of their performance in the AMCAT. For each module, according to the degree of improvement needed, appropriate suggestions have been provided.

**Campus Training Requirement Table**

Area to Improve Upon	Degree of Improvement	Suggestion
English Comprehension	Slight	Conduct tests and quizzes under time constraints which would help students judge their performance and further improve upon it.
Quantitative Ability	Slight	Train the students to follow the clues and directions given in the questions well. Once the question is understood in a clear manner, half the job is done.
Logical Ability	Very Less	Encourage students to solve different types of puzzles and questions which need logical thinking. Help them understand the problem clearly in their minds before they start solving it.
Electronics and Semiconductor Engineering	Slight	Good understanding of combinational logic, circuit analysis and design is required to excel in this module. We suggest that the students should keep practicing questions in these areas to keep their knowledge updated. Make sure they go through various examples, understand and practice them. Then, make them solve multiple-choice-questions under time constraint.
Mechanical Engineering	Very Less	Mechanical engineering is a practical oriented branch with many real time applications. So, it is important that the teaching relates to such scenarios like understanding how an object is moving, what is the principle behind the working of a machine, etc.
Electrical Engineering	Slight	Hands on experience is critical in electrical engineering. Therefore internships and Industrial visits should be encouraged so that students get a chance to apply their concepts in 'real world' scenarios.
Civil Engineering	Slight	It is important for a civil engineer to be updated with the latest technology and innovation taking place in the infrastructural industries. Therefore, it is important to regularly conduct seminars and presentations so that students stay ahead of the curve on cutting edge information.
Industrial Engineering	Very Strong	Industrial engineering involves optimization of resources. Therefore, students should be encouraged to develop



Area to Improve Upon	Degree of Improvement	Suggestion
		<p>projects that are more simulation based and that involve management of resources. Industrial Engineering is a numerical and application based subject, so it is important that teaching does not involve students to memorize the formulae used in operation research, reliability, engineering costing, etc. It would be lot simpler if they could understand the logic of the derivation used to arrive at the formulae. This will help them to solve the numerical more easily. Since Industrial engineering involves a lot of numerical problems and requires good mathematical and problem solving skills, students should be provided with weekly or bi-weekly assignments to practice.</p>
Production Engineering	Slight	<p>Students should avoid memorizing the various manufacturing and machining processes. It would be a lot easier to understand the mechanism involved and relating the processes to real world scenarios.</p>

## Section 2 - Students' Employability

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This section gives you an approximate idea about the kind of companies your students are competent for. This section also provides an insight into the criteria used by different companies for their hiring process. Additionally, an estimate of the employability of your campus students in different sectors is mentioned. In order to improve employability prospects, domains in which your students need to focus their efforts are also listed.

### I. Perspective on Corporate Shortlisting Criteria

In this section, we discuss the different kind of job profiles available for fresh graduates. For each domain, we discuss the nature of the job and the kinds of skills required to succeed in the particular job profile.

- **IT Services**

These types of service companies have large training setups of their own. They provide system integration solutions, software application development, testing solutions and many other services. For large services companies, Computer Programming score is not an important criterion. They look for candidates with acceptable English and Logical Reasoning along with strong Quantitative Ability skills. A good score in computer programming module is an advantage. HCL, TCS, Wipro, Satyam, Polaris etc are some of the major large scale service based companies.

- **IT Products**

These types of product based companies analyze the future requirements of market and come up with exact solutions and product enhancements. That is, they develop their own products/applications based on the market requirements. These companies primarily look for good programming skills and quantitative ability. Since the job does not include interaction with clients, they do not focus on good scores in English. Yahoo, Microsoft, Texas Instruments, etc. are some of the product based technology companies.

- **Electronics & Semiconductor**

The companies in this sector provide job opportunities which fall under one of these two categories: electrical power generation/transmission and its application. One can further specialize in research, testing, design & development or production & manufacturing. Most electrical engineering strongly prefer candidates with a degree in electrical engineering or related field and hence candidates are expected to have sound domain knowledge apart from being strong in analytical & problem solving skills.

- **ITeS and BPO**

Business process outsourcing companies can be aptly defined as those that act to utilize the services of a third party in order to perform its back office operations. The BPO market is forecast to hit \$450 billion by 2012. These companies look at moderate to outstanding/exceptionally good English, depending on whether they have national or international clients. The other parameters they use for short listing are acceptable Logical Reasoning and Computer skills. GE Capital, Convergys, Wipro Spectramind and Dell are some of the prominent BPO entities.

- **Hardware and Networking**

These companies specialize in Hardware and Network Support and basically provide integrated solutions for business enterprise applications, networking equipment and network management. That is they help manage organization's computing resources up and running. These companies primarily look for average quantitative and logical ability. Since the job does not include a lot of interaction with clients, they do not necessarily require good scores in English Comprehension. Cisco, Hewlett Packard, Nortel, NEC, Citrix and Netgear are some of the Hardware/Networking companies.

- **KPO/Analyst**

Knowledge Processing Outsourcing (popularly known as KPO) calls for the application of specialized domain pertinent knowledge. KPO business entities provide typical domain-based processes, advanced analytical skills and business expertise, rather than just process expertise. These companies look for an impressive command in English and sound knowledge in both Quantitative and Logical Reasoning. Evalueserve, Ugam Solutions, 24/7 Customer, ICICI OneSource, etc. are some of the leading KPOs in India.

- **Automobile/Manufacturing Industry**

Automotive engineers work in all aspects of a vehicle's design and performance. The work could be broadly in one of the three categories- product engineering, development engineering and manufacturing engineering. This job requires the person to have strong analytical skills and logical ability as it involves lot of data analysis before a new design is developed. They should be good with English language and since this is a specialized job profile, technical knowledge in this field is mandatory which is assessed by the Mechanical Engineering module.

- **Software Quality**

Software testers are responsible for testing of software programs to ensure quality. They are required to review software requirements, prepare test cases, execute them and report defects.

- **Civil Design & Construction**

The job profile of a civil engineer includes planning and supervising the construction of society's infrastructure like roads, dams, buildings and highways. Civil engineering is a broad field and one would generally specialize in any one specific area like structural, construction, environmental or transportation engineering. Civil engineers need to have a strong aptitude for mathematics and should be able to think logically and creatively to be successful. They must be able to communicate well, both verbally and in writing. Domain knowledge is very important and hence the candidates need to have a bachelor's degree in Civil Engineering.

- **Electrical/Energy & Power**

The jobs in this sector involves design, deployment and maintenance of a broad range of electrical systems and equipment with a focus on economy, safety, quality and reliability. The skills required for the role of electrical engineer include analytical skills, effective communication and organizational skills and mastery in engineering skills.

## II. Employability Prospects

The following table suggests the methods to be implemented in order to improve employability of your students with reference to particular job profiles. We have investigated what precise skills are deficient in students which make them unemployable. These skills need to be improved through efforts of the student and campus. Campus administration is requested to go through these suggestions and implement them to make students more employable.

**Campus Job Match Table**

Type of Company	Percentage of Students Eligible	Percentage of Students Need Training
IT Services	64.1%	35.9%
IT Products	33.3%	66.7%
Electronics & Semiconductor	35.7%	64.3%
ITeS and BPO	87.6%	12.4%
Hardware and Networking	87.6%	12.4%
KPO/Analyst	47.1%	52.9%
Automobile/Manufacturing Industry	51.6%	48.4%
Software Quality	100%	0%
Civil Design & Construction	62%	38%
Electrical/Energy & Power	40.8%	59.2%

### III. Bird's-eye-view of Employability

The following table suggests the methods to be implemented in order to improve employability of your students for each type of company. These recommendations are provided on the basis of weak modules for each company, which the faculty should work on to help their students. Campus is requested to go through these suggestions and implement them to elevate the chances of getting placed in that particular company.

**Campus Employability Enhancement Table**

Type of Company	Campus Employability Prospect	Areas in Need of Training for Improving Employability Chances
IT Services	Medium	These companies are basically looking for good English and Logical skills with average Quantitative ability. To increase the employability prospects for this industry, extra efforts are required by the campus authority on .
IT Products	Medium	These companies are basically looking for good English, Programming and Logical skills with average Quantitative ability. If employability prospects is to be increased for this industry, campus faculty will need to focus on Computer Programming.
Electronics & Semiconductor	Medium	These companies look for candidates having good knowledge of Electronics and Semiconductors with good Logical and Quantitative abilities. For better employability prospects in this industry, your students need to focus on Electronics and Semiconductor Engineering, English Comprehension and Logical Ability.
ITeS and BPO	High	These companies look for candidates proficient in English with average Logical and Quantitative abilities.
Hardware and Networking	High	These companies are basically looking for candidates with good English and average Logical abilities.
KPO/Analyst	Medium	These companies look for candidates having proficiency in English with good Quantitative and Reasoning abilities. For better employability prospects in this industry, your students need to focus on English Comprehension.
Automobile/ Manufacturing Industry	Medium	These companies are basically looking for candidates with good English, Logical and Quantitative ability along with proficiency in Mechanical skills. To increase the employability prospects for this industry, extra efforts

Type of Company	Campus Employability Prospect	Areas in Need of Training for Improving Employability Chances
		are required by the campus authority on Mechanical Engineering.
Software Quality	High	This profile requires candidates with good aptitude skills along with knowledge of Computer Programming.
Civil Design & Construction	Medium	These companies look for candidates with good knowledge of English, Logical and Quantitative abilities with proficiency in Civil Engineering. For better employability prospects in this industry, your students need to focus on .
Electrical/Energy & Power	Medium	These companies look for candidates with good knowledge of English, Logical and Quantitative abilities with proficiency in Electrical Engineering. To increase the employability prospects for this industry, extra efforts are required by the campus authority on English Comprehension.

## Section 3 - Intra Campus Comparison

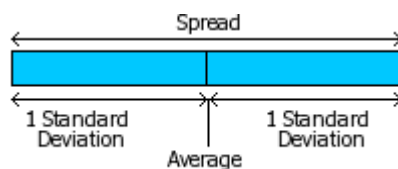
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In this section, we will compare assessment scores to create a comprehensive comparative analysis between different branches of a degree of your college. This section shall explain the competitiveness of students of each degree, branch and batch with others in the respective group.

### I. Stream Comparison

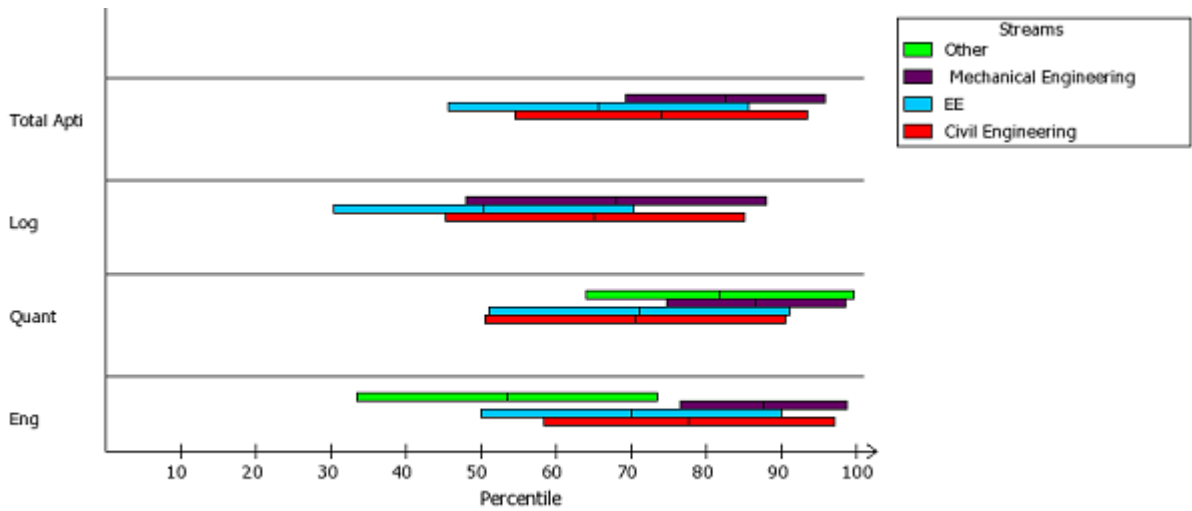
In this section, we compare the AMCAT scores of students categorized by their branch of study. Students from the following branches participated in AMCAT at your college.

1. Civil Engineering
2. EE
3. Mechanical Engineering
4. Other



The chart below shows the comparison of module-wise average scores for each stream. To interpret the chart, refer to the above illustration. Each horizontal bar represents the average score along with the standard deviation of a particular branch in that module. The vertical line at the center of each bar represents the average score. The length of bar represents the range of scores obtained by students of that stream.





Note: color bands are in order.

For each module, the following table lists the top scoring streams. Only the modules which are common for all the streams have been considered in the table.

## Top Scoring Streams For Each Module

Rank	English Comprehension	Quantitative Ability	Logical Ability
1	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering
2	Civil Engineering	Other	Civil Engineering

*Note: streams with less than 5 students have not been considered for the analysis.*

On the basis of AMCAT scores obtained by different streams in your campus, we make following inferences -

1. English Comprehension

**Mechanical Engineering students have shown that they are the best** when it comes to English Comprehension. **Civil Engineering students follow them** with a difference of 9.87 percentile points while **Other students are the last in the order** with a difference of 34.09 percentile points. If nationwide comparison is made, then, on an average, all the streams have done fairly well with respect to the National Average.

2. Quantitative Ability

When it comes to Quantitative Ability, **Mechanical Engineering students have grabbed the top position** among all streams. **Civil Engineering are the last rankers** with a difference of 15.96 percentile points. Also, note that all the streams have performed well with respect to the National Average.

3. Logical Ability

In Logical Ability **Mechanical Engineering students are the top scorers, their average score exceeding that of Civil Engineering** by 2.75 percentile points while **EE students are the lowest scorers**. If nationwide comparison is made, then, on an average, all the streams have done fairly well with respect to the National Average.

In your campus, **Mechanical Engineering stream performed outstandingly well in maximum number of modules**. Also, Other, Civil Engineering and EE streams are the low scorers of at least one module. These streams need special attention.

## Aspiring Minds' Concluding Words

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To summarize the overall analysis of your campus done by Aspiring Minds, key-points from all sections are highlighted below:

- The performance of the B.Tech/B.E students in your campus is **good in English Comprehension, Quantitative Ability, Logical Ability, Electronics and Semiconductor Engineering, Mechanical Engineering, Electrical Engineering, Civil Engineering and Production Engineering**, which is commendable. However, the students' performance is **not satisfactory in Industrial Engineering**, therefore additional training sessions and corrective measures are required by the campus authorities.
- It is clearly evident that **64.1%, 33.3%, 35.7%, 87.6%, 87.6%, 47.1%, 51.6%, 100%, 62% and 40.8%** of your students are eligible to work in **IT Services, IT Products, Electronics & Semiconductor , ITes and BPO, Hardware and Networking, KPO/Analyst, Automobile/ Manufacturing Industry, Software Quality, Civil Design & Construction and Electrical/ Energy & Power** which is good.
- In your campus, **Mechanical Engineering stream performed outstandingly well in maximum number of modules**. Also, Other, Civil Engineering and EE streams are the low scorers of atleast one module. These streams need special attention.

The strongest recommendation Aspiring Minds will like to give is initiation of classes to improve the weak areas of candidates. Apart from classes, regular quizzes and special training sessions should also be initiated, where students answer questions under time constraints. The classes should be student-friendly so that the students are open to questions and are free to ask their doubts. Peer teaching can be another way to increase the learning of students in the class

Along with increasing the employability of the institute, this will help your students compete with other candidates in a more effective and efficient way. With regard to areas where your students scored well, a sustained effort is needed. Regular assignments of problems should be given so that the students can accelerate their performance.

We strongly request the campus authorities to direct all students to follow the performance feedback given by Aspiring Minds based on their AMCAT scores. The campus authorities can go a long way in reminding students about their strengths and weaknesses, thus encouraging them to uphold their strengths and improve on their weaknesses. Consider special classes, better teaching processes and focused courses so that students get a good platform to improve and perform. We also strongly suggest conducting AMCAT again at campus after 4 months of dedicated hard work by students and campus authorities. This shall give students a benchmark to improve themselves, and help us understand if the initiated training program was useful. Of course, it would help students as well, with better scores leading to better job opportunities.

We thank BVBS Sardar Patel College of Engineering,2019 for giving us an opportunity to conduct AMCAT in their campus. For any clarification or further analysis, we can be contacted at campus@aspiringminds.in ..... 0 or (91) 124 4148777.



AMCAT ID	Name	AMCAT Score, Percentile																		
		English Comprehension	Quantitative Ability	Logical Ability	Computer Programming	Electronics and Semiconductor Engineering	Mechanical Engineering	Electrical Engineering	Civil Engineering	Metallurgical Engineering	Fundamentals of Chemistry	Industrial Engineering	Production Engineering	Instrumentation Engineering	Food Science	Computer Science	Information Gathering and Synthesis	Automotive Engineering	Basic Computer Literacy	Human Resources
158470428725361	Lalit Puri	465	46%	535	64%	520	72%	-	-	-	540	82%	-	-	-	-	-	-	-	-
158470428725362	Mahesh Rajekar	360	13%	550	68%	385	49%	-	-	335	90%	-	-	-	-	335	98%	-	-	-
158470428725363	Mahesh Kute	580	85%	445	55%	455	46%	-	-	-	-	380	24%	-	-	-	-	-	-	-
158470428725364	Murali Rathod	570	83%	620	86%	590	89%	-	-	-	-	380	24%	-	-	-	-	-	-	-
158470428725365	Maryam Ghadi	605	90%	370	44%	480	56%	-	-	405	22%	-	-	589	95%	-	-	-	-	-
158470428725366	Meeth Maru	430	33%	560	71%	565	84%	-	-	-	-	460	54%	-	-	411	83%	-	-	-
158470428725367	Meghara Vaidhampayan	795	100%	680	95%	495	62%	-	-	-	-	580	90%	-	-	-	-	-	-	-
158470428725368	Mehar Rajput	500	60%	555	67%	570	72%	-	-	-	-	456	66%	-	-	-	388	95%	-	-
158470428725369	Mikul Chokhani	465	42%	485	58%	340	47%	-	-	355	99%	-	-	278	30%	-	-	-	-	-
158470428725370	Naveena Akhara	650	96%	725	98%	545	79%	-	-	435	29%	-	-	411	50%	-	-	-	-	-
158470428725371	Nikhil Tata	570	87%	535	67%	-	-	-	-	340	7%	-	-	-	-	-	-	767	100%	700
158470428725372	Nikhil Datar	675	88%	590	80%	445	58%	-	-	395	17%	-	-	411	50%	-	-	-	-	-
158470428725373	Nitesh Chankar	650	96%	710	97%	545	79%	-	-	-	-	435	38%	-	-	340	5%	-	-	-
158470428725374	Nisad Kulkarni	630	94%	595	83%	520	71%	-	-	-	-	385	98%	-	-	380	12%	-	-	-
158470428725375	Nisant More	510	64%	310	3%	360	45%	-	-	-	-	-	-	420	38%	-	-	-	-	-
158470428725376	Nishad Sable	720	99%	505	61%	380	48%	-	-	235	0%	-	-	411	50%	-	-	-	-	-
158470428725377	Nishant Dhapade	600	96%	230	1%	250	2%	-	-	-	-	-	-	189	2%	-	-	340	3%	-
158470428725378	Nishant Ingle	525	69%	620	86%	495	62%	-	-	230	0%	-	-	500	80%	-	-	-	-	-
158470428725379	Nishit Na	745	100%	665	93%	485	58%	-	-	-	-	335	90%	-	-	-	-	625	99%	-
158470428725380	Oni Laxi	640	95%	680	95%	580	87%	-	-	-	-	-	-	580	90%	-	-	-	-	-
158470428725381	Pankaj Sapra	560	80%	665	93%	545	79%	-	-	-	-	544	90%	-	-	-	-	-	-	-
158470428725382	Pankaj Singh	560	80%	665	93%	470	52%	-	-	405	22%	-	-	411	50%	-	-	-	-	-
158470428725383	Pankaj Patil	615	92%	650	91%	495	62%	-	-	-	-	620	96%	-	-	-	-	-	-	-
158470428725384	Pankaj Munawar	475	52%	445	53%	420	53%	-	-	-	-	-	-	420	38%	-	-	-	-	-
158470428725385	Pankaj Thorat	560	80%	490	68%	435	58%	-	-	100	0%	-	-	549	95%	-	-	-	-	-
158470428725386	Parth Saraya	630	94%	635	89%	520	71%	-	-	-	-	315	89%	-	-	-	-	275	0%	-
158470428725387	Pawan Patel	580	85%	-	-	505	65%	-	-	-	-	745	100%	-	-	-	-	445	38%	-
158470428725388	Piyush Karyate	405	24%	505	63%	425	55%	-	-	-	-	305	8%	-	-	230	10%	-	-	-
158470428725389	Prajay Mevram	465	42%	440	29%	520	74%	-	-	-	-	-	-	-	-	-	-	-	-	-
158470428725390	Prajay Patilkar	595	88%	740	98%	605	82%	-	-	465	57%	-	-	-	-	605	99%	-	-	-
158470428725391	Prajay Shelke	595	88%	430	29%	430	29%	-	-	-	-	340	14%	-	-	-	-	-	-	-
158470428725392	Prajay Jadhav	605	90%	575	76%	540	77%	-	-	-	-	385	98%	-	-	-	-	555	95%	-
158470428725393	Prajay Arate	535	73%	445	53%	530	74%	-	-	-	-	544	90%	-	-	-	-	285	0%	-
158470428725394	Prashant Ehat	400	33%	575	76%	425	56%	-	-	400	22%	-	-	456	66%	-	-	-	-	-
158470428725395	Prath Jadhav	500	60%	630	91%	605	80%	-	-	295	1%	-	-	-	-	-	-	625	98%	-
158470428725396	Pratiksha Chitambar	475	51%	320	11%	-	-	-	-	-	-	589	95%	-	-	-	-	567	94%	567
158470428725397	Pravin Jadhav	420	29%	430	29%	395	50%	-	-	-	-	-	-	200	3%	-	-	-	-	-
158470428725398	Prerna Wavare	615	92%	385	17%	470	52%	-	-	-	-	540	82%	-	-	-	-	-	-	-
158470428725399	Priyanka Gorale	430	17%	520	69%	-	-	-	-	-	-	387	34%	-	-	-	-	700	100%	767
158470428725400	Purvesh Sakarkar	570	83%	710	97%	545	79%	-	-	-	-	740	100%	-	-	-	-	-	-	-
158470428725401	Rahul Singh	675	88%	650	91%	495	62%	-	-	325	87%	-	-	-	-	375	9%	-	-	-
158470428725402	Raj Sawla	595	88%	650	91%	630	95%	-	-	-	-	795	100%	-	-	-	-	345	3%	-
158470428725403	Rakesh Leel	500	60%	590	80%	520	71%	-	-	-	-	315	1%	-	-	-	-	305	0%	-
158470428725404	Rajou Chandiani	795	100%	830	100%	520	71%	-	-	-	-	795	100%	-	-	-	-	-	-	-
158470428725405	Rhea Santhoshayyer	780	100%	710	97%	375	29%	-	-	-	-	325	87%	-	-	-	-	605	99%	-
158470428725406	Riddhi Adhikari	685	98%	740	98%	555	81%	-	-	-	-	375	11%	-	-	-	-	515	76%	-
158470428725407	Rishabh Tembhare	595	88%	475	43%	315	3%	-	-	340	3%	-	-	589	95%	-	-	-	-	-
158470428725408	Rohit Karamde	510	64%	780	99%	495	62%	-	-	395	17%	-	-	500	80%	-	-	-	-	-
158470428725409	Rohit Gadhavi	535	73%	800	100%	565	84%	-	-	-	-	745	100%	-	-	-	-	675	100%	-
158470428725410	Rohit Deshmukh	560	80%	370	14%	540	77%	-	-	-	-	370	12%	-	-	-	-	290	0%	-
158470428725411	Rohit Datta	490	56%	740	98%	565	84%	-	-	-	-	350	0%	-	-	-	-	-	-	-
158470428725412	Rohit Pawar	465	42%	485	58%	380	47%	-	-	-	-	-	-	-	-	500	98%	-	-	-
158470428725413	Rohit Kumar Gupta	545	76%	650	91%	625	94%	-	-	-	-	335	90%	-	-	-	-	-	-	-
158470428725414	Rukhsar Soto	475	50%	-	-	-	-	-	-	-	-	340	14%	-	-	189	3%	-	-	-
158470428725415	Rushabh Dhanu	465	46%	460	38%	460	48%	-	-	-	-	387	34%	-	-	189	1%	-	-	-
158470428725416	Rutuja Phattar	630	94%	400	20%	445	42%	-	-	-	-	322	20%	-	-	233	10%	-	-	-
158470428725417	Sachin Bhatiya	420	29%	500	63%	485	58%	-	-	440	32%	-	-	278	30%	-	-	-	-	-
158470428725418	Saddamshahid Kadi	545	76%	695	96%	590	89%	-	-	-	-	549	95%	-	-	307	28%	-	-	-
158470428725419	Sagar	630	94%	870	100%	360	15%	-	-	555	91%	-	-	-	-	-	-	377	49%	-
158470428725420	Sagar Jadhav	360	11%	225	1%	335	40%	-	-	-	-	-	-	-	-	-	-	-	-	-
158470428725421	Sai Priva Charan Mivvala	395	21%	630	91%	545	79%	-	-	500	89%	-	-	549	95%	-	-	-	-	-
158470428725422	Saurabh Pawar	595	88%	680	95%	485	58%	-	-	-	-	480	54%	-	-	-	-	-	-	-
158470428725423	Sejal	465	42%	240	1%	495	46%	-	-	-	-	460	54%	-	-	-	-	-	-	-
158470428725424	Sejal Chaudhari	745	100%	620	86%	530	74%	-	-	-	-	585	98%	-	-	735	100%	-	-	-
158470428725425	Shamika Dabas	465	42%	550	68%	425	56%	-	-	-	-	-	-	555	95%	-	-	545	78%	-
158470428725426	Shayam Syed	605	90%	620	86%	495	62%	-	-	645	100%	-	-	-	-	465	15%	-	-	-
158470428725427	Shivani Kumar Dholey	570	83%	550	68%	605	82%	-	-	-	-	-	-	-	-	-	-	565	94%	-
158470428725428	Shivdha Sable	325	2%	255	4%	-	-	-	-	-	-	460	99%	-	-	-	-	700	100%	433
158470428725429	Shreyash Gaigali	615	92%	725	98%	460	58%	-	-	405	22%	-	-	589	100%	-	-	-	-	-
158470428725430	Shubham Bhor	615	92%	430	29%	455	46%	-	-	-	-	380	24%	-	-	-	-	-	-	-
158470428725431	Shubham Patil	630	94%	770	99%	595	89%	-	-	350	4%	-	-	367	34%	-	-	-	-	-
158470428725432	Siddhesh Rao	630	94%	820	98%	485	58%	-	-	-	-	-	-	420	38%	-	-	-	-	-
158470428725433	Siddharth Sane	335	8%	710	97%	485	58%	-	-	415	27%	-	-	-	-	-	-	715	100%	-
158470428725434	Sinha Deepak	395	21%	630	91%	490	66%	-	-	-	-	548	82%	-	-	-	-	-	-	-
158470428725435	Sinhal Sharmar	675	88%	710	97%	570	85%	-	-	-	-	680	98%	-	-	-	-	-	-	-
158470428725436	Sinhal Pabhu	360	13%	605	83%	595	81%	-	-	-	-	300	7%	-	-	-	-	-	-	-
158470428725437	Sinhal Shaikh	570	83%	520	69%	545	79%	-	-	-	-	500	69%	-	-	-	-	-	-	-
158470428725438	Sonal Purohit	315	5%	560	71%	460	48%	-	-	-	-	456	66%	-	-	278	24%	-	-	-
158470428725439	Sourabh Bahadur	560	80%	575	76%	530	77%	-	-	-	-	540	82%	-	-	-	-	-	-	-
158470428725440	Sourav Bhosale	535	73%	590	80%	380	21%	-	-	400										



## **II. Statistical Significance (Confidence)**

All score distributions generally follow a pattern called the Gaussian curve. The Gaussian curve is by far the most common assumption with regard to score distribution. For the purpose of comparison, we express AMCAT scores as Gaussian distribution. The most characteristic feature of this distribution is that the scores for maximum number of students fall in a very narrow range around the average value.

The percentage of scores lying in the range falls exponentially as we move away from the average value. The confidence percentage, which ranges from 0% to 100%, is indicative of the possibility that the difference in scores is by chance. A high confidence percentage indicates that it is very likely that the difference observed is real and not by chance. In this analysis, we classify differences, with confidence 90% or higher, as significantly different (that is, not by chance).

## **III. National Average (Norm)**

To construct the norms (National average & standard deviation), balanced sampling was used to select more than 25000 students tested by Aspiring Minds nationwide. Balanced sampling technique ensures that the selected candidates are representative of entry-level job-aspirants over 22 states in India. It is ensured that the sample contains different degrees, specializations, genders, regions, etc. in the same composition as the National distribution.

To summarize score distribution of the norms and BVBs Sardar Patel College of Engineering, 2019 students, two values (statistics) are used: average of the scores and standard deviation of the scores. While the former value indicates what, on average, candidates score in the test, the latter value tells how much do scores deviate from the average. High value of standard deviation means that the scores are dissimilar and spread across the scale. In contrast, a low value of standard deviation means that candidates scores are similar to each other and lie near the average.

## **IV. Variance (Standard Deviation)**

The variance (or standard deviation) is a measure of how spread out a distribution is. In other words, it is the measure of variability. A low standard deviation indicates that the data points tend to be very close to the average value, while high standard deviation indicates that the data is spread out over a large range of values.

## V. About Aspiring Minds

Aspiring Minds was founded in 2007 by alumni of IIT and MIT (USA) with a vision to introduce scientific assessment methodology to bring together job-seekers and campuses across India on a common standardized platform that is recognized by multiple companies on a national level. The aim of Aspiring Minds is to highlight the pool of talented students and progressive campuses to corporates nationally, provide an insight on how they can improve their employability and help them acquire jobs on the basis of their potential. In a short span of time, Aspiring Minds has earned credibility and is working with multiple corporations such as Microsoft Research, HCL Technologies, MPhasiS EDS, Erricson, Tata Motors, Aricent, Genpact, iGATE, L&T Finance, Sapiient, Godrej Agrovet and Tavant Technologies.

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