

**STUDENT INDUCTION PROGRAMME ANALYSIS  
2024-2025  
DEPARTMENT OF STATISTICS  
GOVERNMENT COLLEGE (AUTONOMOUS)  
RAJAHMUNDRY**



**GOVT COLLEGE (A) : : RAJAHMUNDRY**  
**NAAC Re-accredited with 'A<sup>+</sup>' Grade at 3.38 CGPA**  
**DEPARTMENT OF STATISTICS**

## **STUDENT INDUCTION PROGRAMME**

### **DEPARTMENT OF STATISTICS**

#### **I B.Sc. STATISTICS**

**2024-2025**

### **Introduction:**

#### **Course Overview**

This bridge course is designed to provide students with the necessary mathematical background and introductory statistical concepts to successfully transition into more advanced statistical coursework. The course will cover fundamental topics in mathematics, data analysis, and basic statistical methods.

#### **Course Objectives**

- Develop proficiency in basic mathematical concepts relevant to statistics.
- Understand and apply fundamental statistical concepts and techniques.
- Prepare students for more advanced study in statistics or related fields.

#### **Course Structure**

- **Duration:** 1-2 weeks
- **Format:** Lectures, tutorials, and practical exercises
- **Assessment:** Quizzes, assignments, and final exam

## **Week 1: Introduction to Statistics and Mathematical Review**

- **Overview of Statistics:** Definitions, importance, and applications
- **Basic Mathematics Review:** Algebra, functions
- **Data Collection Methods and Data Types :** Surveys, experiments, and observational studies

## **Week 2: Descriptive Statistics and Probability**

- **Measures of Central Tendency:** Mean, median, mode
- **Measures of Dispersion:** Range, variance, standard deviation
- **Data Visualization:** Histograms, bar charts, pie charts
- **Introduction to Probability:** Definitions, rules, and Probability distribution

## **Assessment**

- **Quizzes:** Short quizzes at the end of each week to test understanding of key concepts
- **Assignments:** Weekly assignments involving problem-solving and data analysis
- **Final Exam:** Comprehensive exam covering all course material

## **Recommended Resources**

- **Textbooks:**
  - *Fundamental of Mathematical Statistics* Gupta and VK Kapoor by S Chand Publications
  - *Elementary Statistics by Gupta*

## STUDENT INDUCTION PROGRAMME - SCHEDULE

S.No	Date	1st Hour	2nd Hour	3rd Hour	No of Students
1	12-08-2024	Certificate Verification	Certificate Verification	Basic Data collection	22
2	13-08-2024	Data Collection	Department tour	College virtual tour	20
3	14-08-2024	Department webpage	Resources available on dept. page	Online Resources familiarization	25
4	15-08-2024	Independence day celebrations	Independence day celebrations	Independence day celebrations	28
5	17-08-2024	Library Tour	Introduction to bridge course	Pre CAT Core Assessment Test	30
6	19-08-2024	Orientation Session About Department			32
7	20-08-2024	Human values and Professional Ethics	Introduction to Bridge course	Bridge Course-1	35
8	21-08-2024	Course Structure	CIE structure	Bridge Course-2	35
9	22-08-2024	Support Services NCC, NSS, YRC, RRC	Support Services NCC, NSS, YRC, RRC visit	Bridge Course -3	40
10	23-08-2024	Opportunities for Statistics in Corporate Sector	Opportunities for Statistics in Government Sector	Bridge Course-4	40
11	24-08-2024	Community Service Project	Internship	Bridge Course-5	42
12	27-08-2024	New Education Policy-2020	Guest Lecture By Computer Science Department Faculty	Bridge Course -6	42
13	28-07-2024	Sports and games facilities	Sports tour	Bridge Course -7	43
14	29-08-2024	Familiarisation of ICT Tools	Familiarisation of ICT Tools	Bridge Course -8	43
15	30-08-2024	Google E-Class Room	Online Platform Courses Swayam, Edx etc	Gamification of Evaluation	44
16	31-08-2024	Closure remarks		Post CAT Core Assessment Test	44

### About SIP 2024-2025:

- Total number of students were admitted (as per first phase counseling)-53
- Total number of students were admitted (as per Second phase counseling)-66
- Total number of students attended all the classes -35(approximately)
- Total number of faculty assigned to classes:4
- Total number of Days classes are taken:16

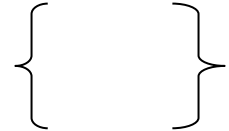


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**DEPARTMENT OF STATISTICS**

**Pre CAT (Core Assessment Test) 2024-2025**

**Questionnaire**

**SECTION-A**



**Name:**

**Contact No:**

**DOB:**

**Email id:**

**Location:**

**SSC Marks:**

**INTERMEDIATE GROUP WITH MARKS:**

**Medium of Education:(EM/TM)**

**PARENT NAME:**

**PARENT Contact No:**

**Parent Occupation:**

**GOAL OF STUDENT:**

**SECTION-I**

**ANSWER ALL OF THE FOLLOWING QUESTIONS:**

1. Have you ever heard about Statistics?  
a) YES      B) NO
2. Which of the following describe the middle part of a group of numbers?  
A) Measure of Variability B) central Tendency C) Measures of Shape D) Measures of Association
3. The middle value of an ordered array of numbers is  
A) Mode B)Mean C) Median D)Midpoint
- 4.Which of the following measures comes under Dispersion?  
A) Range B) Quartile Deviation C) Mean Deviation D) Standard Deviation
- 5.A constant variable can take values  
A) Zero B) Fixed C) Not fixed D) nothing

**SECTION-II**

**ANSWER ALL OF THE QUESTIONS:**

6. What is the mean , median and mode for the given data 5,6,6,2,3,5,7,4,7

7. Find Range for the given data 1, 2,7,8,15,8,24,5,35

8. What is the probability when we toss a single coin for getting head?

9. Write any four applications of Statistics in daily life?

10. Name any Distributions you have studied in probability?

**THANK YOU**

\*\*\*\*\*

## **CAT 2024-2025 ANALYSIS:**

(Analysis Based on CAT exam )

The objective of Pre cat analysis is to identify learning levels of students and we ask the different information about students who are opted Statistics Course and prepared above question based on questions such as previous knowledge and their goals etc.

This bridge course is designed to provide students with the necessary mathematical background and introductory statistical concepts to successfully transition into more advanced statistical coursework. The course will cover fundamental topics in mathematics, data analysis, and basic statistical methods.

The Final CAT Exam analysis is designed to test student knowledge after taught designed syllabus and also test their ability and performance on subject.

The Assessment completed by three phases

### **Phase I: Pre CAT analysis**

- Based on exam, decided the student IQ levels on Statistics.
- Most of the analysis done based on Pre Cat Exam
- Main topics highlighted such Gender, Goal, Parent Occupation etc based on Pre Cat Exam only
- 40 students attended exam considered as respondents
- Total Students admitted from Phase 1 & 2 are 62

### **Phase II: Bridge Class course**

- Number of days Classes conducted :16
- In this phase department took students virtual tour entire college to address various departments and various labs and also to tell them about college supporting services etc.
- Bridge class were conducted on” Basic Statistics & Mathematics
- Number of Lecturers taken classes : 3
- Total number of Students attended on average:35

### **Phase III: Final Review**

- Final CAT Exam on :31/08/2024
- Number of Students attended exam : 44
- Average marks by students in the Exam :14

## **PRE CAT 2024-2025 ANALYSIS:**

(Analysis Based on Pre CAT exam)

The objective of Pre cat analysis is to identify learning levels of students and we ask the different information about students who are opted Statistics Course and prepared above question based on questions such as previous knowledge and their goals etc.

Based on the test, the following analysis prepared

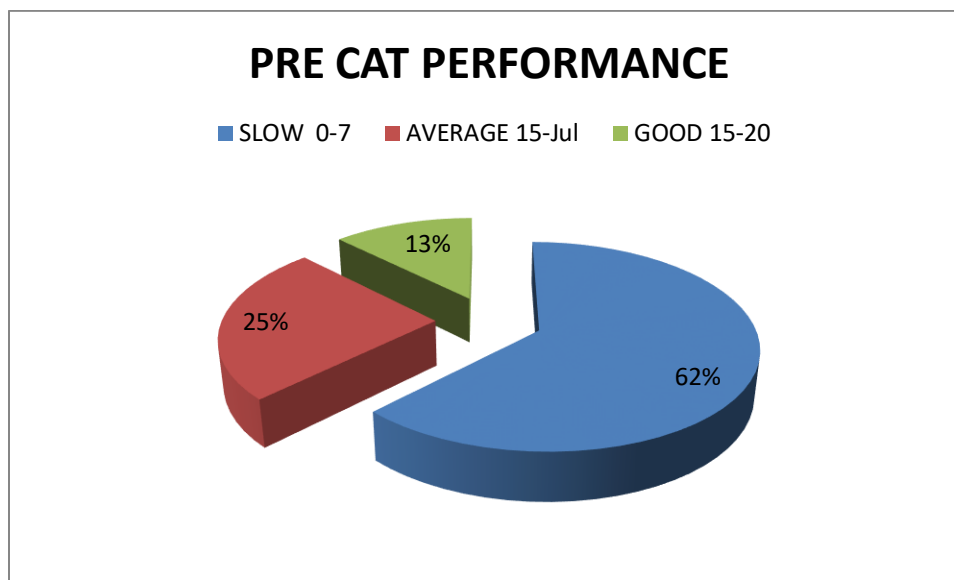
- **Total Students admitted (For BSC Stat (Hons): 62**
- **No. of Students attended exam : 40**

### **QUESTIONNAIRE MARKS ANALYSIS:-**

**Table: Pre CAT Performance**

<b>CATEGORY</b>	<b>MARKS</b>	<b>No. Of students</b>
<b>SLOW</b>	<b>0-7</b>	<b>25</b>
<b>AVERAGE</b>	<b>7-15</b>	<b>10</b>
<b>GOOD</b>	<b>15-20</b>	<b>5</b>

**Diagram: Pre CAT Performance**



The majority of the students (62.5%) fall under the SLOW category, 25% comes under Average category and 13% students are in good category based on the pre cat exam.

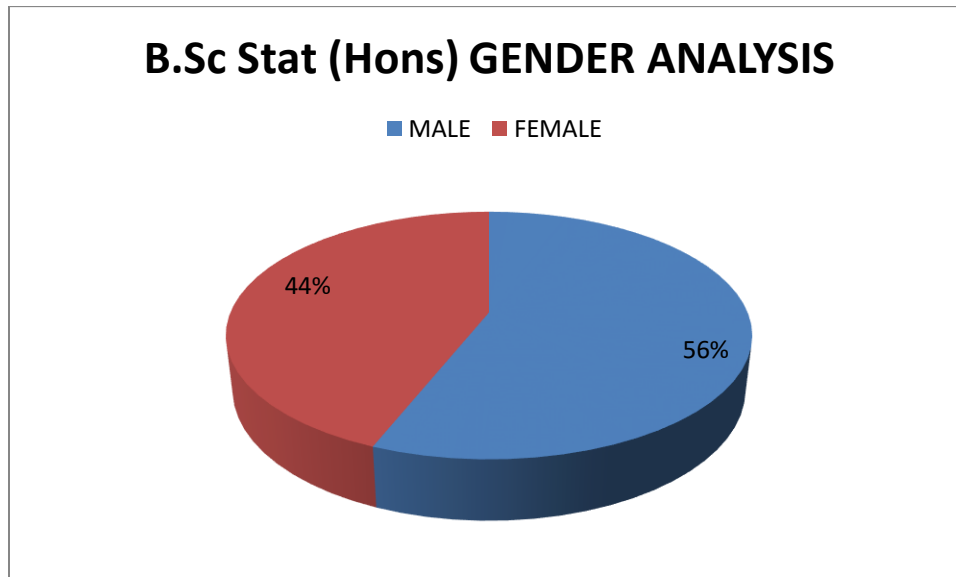
## GENDER ANALYSIS:

✓ **TOTAL STUDENTS ADMITTED:**      **66** (after phase 2)

**Table: Gender Analysis**

<b>GROUP</b>	<b>MALE</b>	<b>FEMALE</b>	<b>TOTAL</b>
<b>B.Sc Stat (Hons)</b>	<b>37</b>	<b>29</b>	<b>66</b>

**Diagram: Gender Analysis**



The total number of students is 66. There are more males (37) than females (29) in B.Sc Stat (Hons). The percentage of males is 56.06% and the percentage of females is 43.94%.

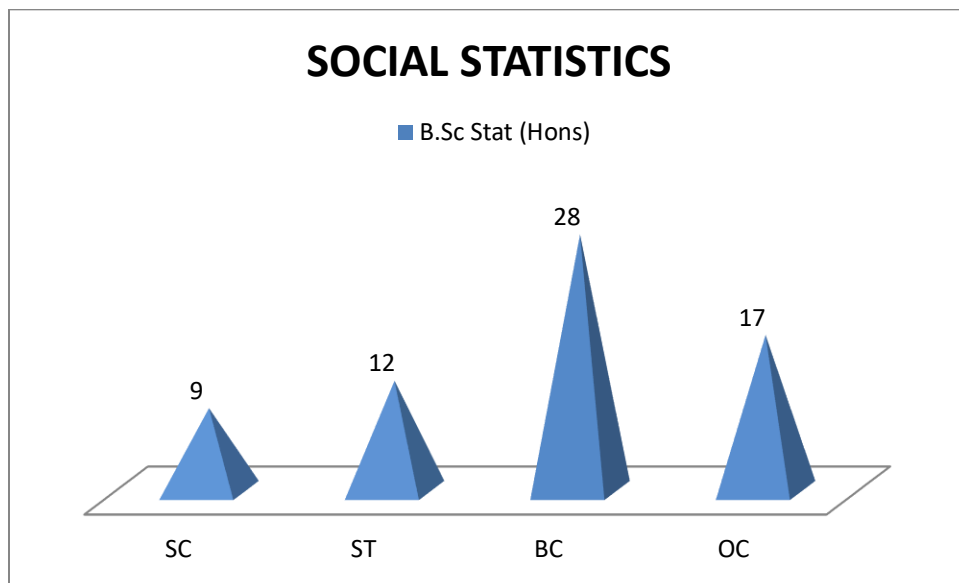
## SOCIAL ANALYSIS:

✓ **TOTAL STUDENTS ADMITTED:** 66(after phase 2)

**Table: Social Statistics**

GROUP	SC	ST	BC	OC
<b>B.Sc Stat (Hons)</b>	<b>9</b>	<b>12</b>	<b>28</b>	<b>17</b>
<b>Percentatges</b>	<b>13.84</b>	<b>18.18</b>	<b>42.42</b>	<b>25.72</b>

**Diagram: Social Statistics**



The total number of students is 66. There are more students from BC (28) than any other groups. The percentage of students from BC is 42.42%.

## PARENT OCCUPATION ANALYSIS:

Asking students about their parents' occupations can provide valuable insights into various aspects of their lives and experiences. Here are some reasons why this information might be relevant:

1. **Socioeconomic Background:** Understanding parents' occupations can give a sense of the family's socioeconomic status. This information can be useful for identifying potential barriers to learning or providing targeted support.
2. **Cultural Influences:** Parental occupations can be linked to cultural backgrounds and values, which can influence students' perspectives, interests, and learning styles.
3. **Career Aspirations:** Knowing parents' professions can expose students to different career paths and inspire them to consider their own future goals.
4. **Community Connections:** Parental occupations might connect students to resources or networks within the community that can benefit their education or personal development.

**Total Students admitted : 66 (after phase 2)**

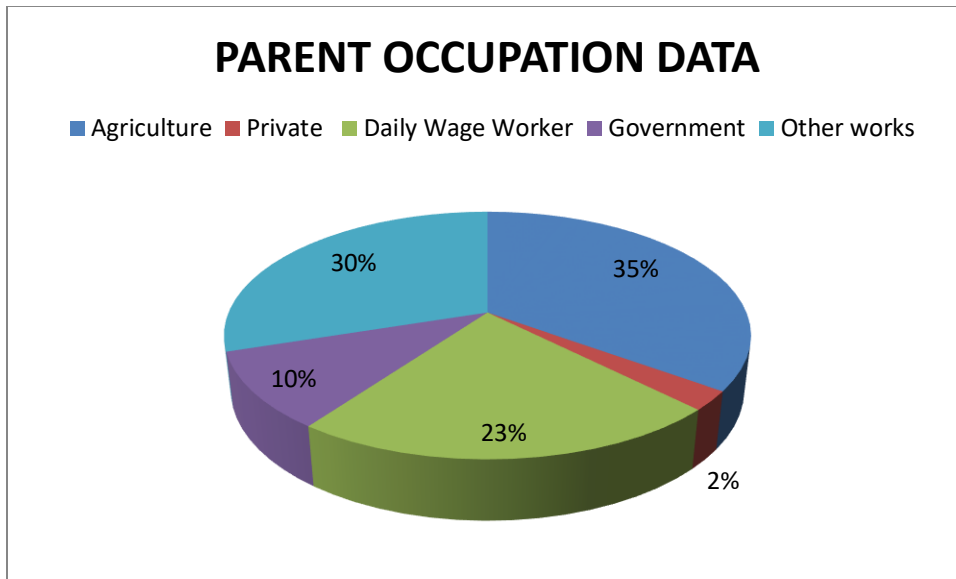
**Number of Students: 40 ( Responded)**

All the students Parent Occupation answers are divided into four categories such as Government, Private or Software, Self employment and others .

**Table: Parent Occupation**

<b>Name of the Category</b>	<b>Number of Parents</b>	<b>Percentage</b>
<b>Agriculture</b>	<b>14</b>	<b>35%</b>
<b>Private</b>	<b>1</b>	<b>2.5%</b>
<b>Daily Wage Worker</b>	<b>9</b>	<b>22.5%</b>
<b>Government</b>	<b>4</b>	<b>10%</b>
<b>Other works</b>	<b>12</b>	<b>30%</b>
<b>Total</b>	<b>40</b>	<b>100%</b>

**Diagram: Parent Occupation**



- 1. Agriculture (14 parents, 35%)**
  - **Analysis:** This is the largest category, indicating that a significant portion of the parents (over a third) is engaged in agriculture. This may reflect regional economic factors or cultural practices where agriculture is a primary source of livelihood.
- 2. Daily Wage Worker (9 parents, 22.5%)**
  - **Analysis:** A substantial number of parents are involved in daily wage work, which suggests a reliance on informal employment. This can indicate economic vulnerability, as daily wage work often lacks job security and benefits.
- 3. Other Works (12 parents, 30%)**
  - **Analysis:** This category encompasses a diverse range of jobs not specified in the other categories. With 30%, it shows that many parents are engaged in various forms of employment, highlighting the diversity of the local job market.
- 4. Government (4 parents, 10%)**
  - **Analysis:** A smaller percentage of parents work in government positions. This may suggest limited access to government jobs or a competitive job market for such positions.
- 5. Private (1 parent, 2.5%)**
  - **Analysis:** The lowest representation, indicating that very few parents are employed in the private sector. This could reflect economic conditions, availability of private jobs, or personal preferences.

**Overall Employment Trends:** The majority of parents are engaged in agriculture and informal work (daily wage and other jobs), indicating a reliance on sectors that may be less stable.

## STUDENT GOAL ANALYSIS:

**Total Students admitted : 66(after phase 2)**

Asking students about their goals in education at the beginning of the academic year can be a valuable tool for fostering engagement, motivation, and personalized learning. Here are some key reasons:

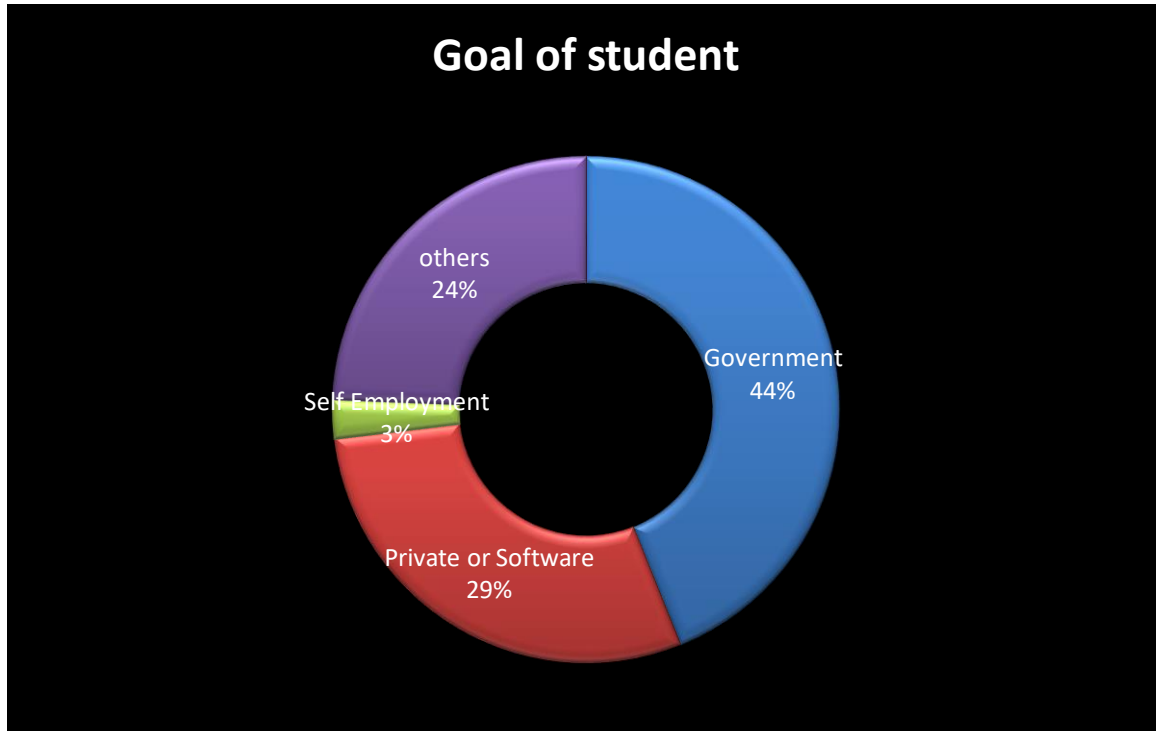
1. **Setting a Direction:** Knowing students' goals provides a clear direction for their learning journey. It helps them understand why they are in school and what they hope to achieve.
2. **Motivation and Engagement:** When students have personal goals, they are more likely to be motivated and engaged in their studies. They can see the relevance of the material and connect it to their aspirations.
3. **Personalized Learning:** Understanding students' goals allows teachers to tailor their instruction and assignments to meet their individual needs and interests. This can make learning more meaningful and effective.
4. **Goal Setting and Tracking:** By discussing goals at the beginning of the year, students can learn about goal setting and tracking. This is a valuable life skill that can benefit them in various areas.

All the students answers are divided into four categories such as Government, Private or Software, Self employment and others .

**Table: Student Goals**

<b>Name of the Category</b>	<b>Number of students</b>	<b>Percentage</b>
<b>Government</b>	<b>18</b>	<b>45%</b>
<b>Private or Software</b>	<b>12</b>	<b>26.67%</b>
<b>Self Employment</b>	<b>1</b>	<b>2.5%</b>
<b>others</b>	<b>10</b>	<b>25%</b>
<b>Total</b>	<b>40</b>	<b>100%</b>

**Diagram: Student Goals**



**Key Findings:**

- **Government:** The most popular choice, with 45% of students opting for government roles.
- **Private or Software:** The second most popular choice, with 26.67% of students pursuing careers in the private sector or software industry.
- **Self-Employment:** The least popular choice, with only 2.5% of students choosing self-employment.
- **Others:** A significant portion (25%) of students have chosen career paths that don't fall into the above categories.

**PHASE-II**  
**STUDENT INDUCTION PROGRAMME**

**SIP GALLERY 2024:-**











**Department of Statistics faculty interacted with second phase students**





**Students Visited Media center and interacted with Sri.Venkatrao sir**

**PHASE-III**  
**FINAL CAT ANALYSIS 2024-2025**

The Final Cat analysis is based on syllabus “ Bridge Course syllabus On Statistics “a 16 days programme taught to students and classes conducted from 12/08/2024 to 31/08/2024 .

The Final Cat core assessment test conducted on 31/08/2024 to 44 students who attended the exam out of 66 students by the time having from both phases and the assessment done following exam based on the syllabus we taught in the programme.

**FINAL CAT Core Assessment Test 2024-2025**

**Name:**

**Questionnaire**



**ANSWER ALL OF THE FOLLOWING QUESTIONS:**

1. Do you know about Statistics?  
a) YES      B) NO
2. Which of the following describe the middle part of a group of numbers?  
B) Measure of Variability B) central Tendency C) Measures of Shape D) Measures of Association
3. The middle value of an ordered array of numbers is the  
B) Mode B)Mean C) Median D)Midpoint
4. Which of the following is not a measure of central tendency?  
A) Percentile B) Quartile C) Standard deviation D) Mode
5. Which of the following divides a group of data into four subgroups?  
B) Percentiles B) Deciles C) Median D) Quartiles
6. A constant variable can take values  
B) Zero B) Fixed C) Not fixed D) nothing
7. The weights of students in a college/school is a  
A) Discrete Variable  
B) Continuous Variable  
C) Qualitative Variable  
D) None of these
8. Which of these represent qualitative data  
A) Height of a student  
B) Liking or disliking of (500) persons of a product  
C) Income of a government servant in a city  
D) Yield from a wheat plot
9. The data which have already been collected by someone are called  
A) Raw data  
B) Array data  
C) Secondary data  
D) Fictitious data
10. Population census is conducted through  
A) Sample survey  
B) Accounting  
C) Investigatio

## SECTION-II

### ANSWER ALL OF THE QUESTIONS:

11. What is the mean for the given data 5,6,6,2,3,5,7,4,7
  
12. If the standard deviation of a population is 9, the population variance is:
  
13. Find median for the given data 4,1,2,7,2,5,8,9,5,7,5
  
14. Find Mode for the given data 2,2,5,1,4,1,5,1,8,8,7,5,5,7,1,8
  
15. Find Range for the given data 1,2,7,8,15,8,24,5,35
  
16. What is the probability when we toss a single coin for getting head?
  
17. Write any four applications of Statistics in daily life?
  
18. The mean of number of a set of 5 numbers is 12.7 .What extra must be added to bring up the mean up to 13.1?
  
19. How many types of Distributions we have in probability?
  
20. Find mean,median,mode and Range for the set of data 5,6,2,4,7,8,3,5,6,6

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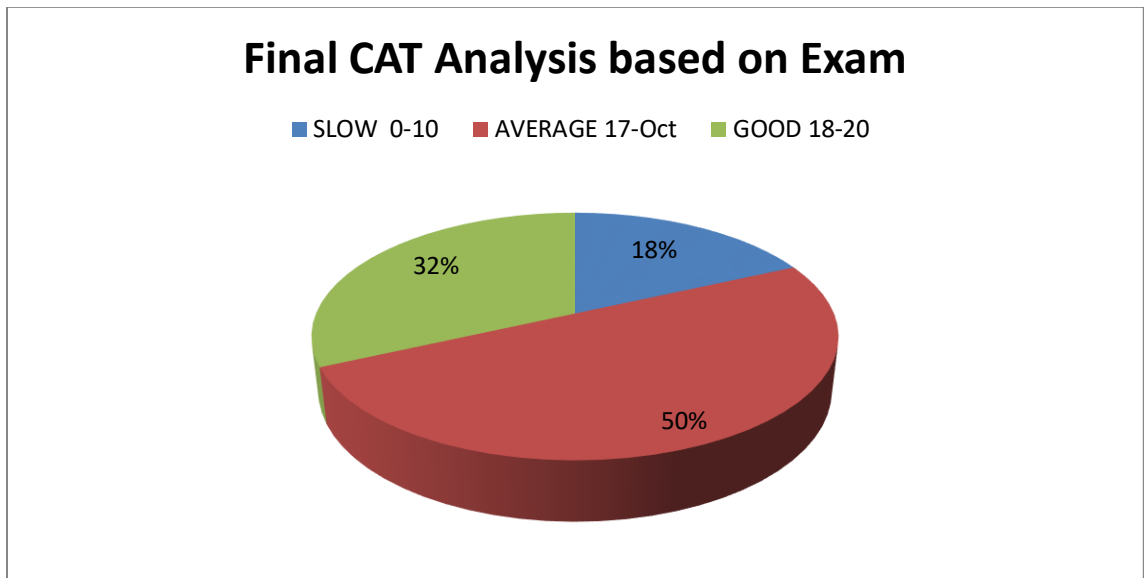
## Final Review

Based on the test, the following analysis prepared

- Total students admitted (For BSC Stat (Hons): 66
- No.of Students attended exam :44

**Table: Final CAT Grade Analysis**

CATEGORY	MARKS	No. Of students	Percentage
SLOW	0-10	8	18.18 %
AVERAGE	10-17	22	50.00%
GOOD	18-20	14	31.82%
Total		44	100.00%



Most of the students (50%) scored in the AVERAGE range (10-17 marks). A smaller percentage of students scored in the SLOW (18.18%) and GOOD (31.82%) ranges.

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