CHAPTER 5

DATA COLLECTION

5.1 Sources of data. For this research study the inputs are received from various sources as given below:

5.1.1 Primary Data

(a) Through the questionnaires (enclosed as appendix 'H') data as under was obtained from over 265 respondents:

Questionnaire I : To ascertain if the problem existed.
Questionnaire II : To ascertain causes of the problem.
Questionnaire III : To ascertain level of causes of the Problem.
Questionnaire IV A : To Explore solutions.
Questionnaire IV B : To prioritise solutions.
Through e-Mail to UGC it was requested to know as to what guidelines are issued by UGC to the Universities to conduct examinations and evaluation norms. Their response is enclosed as Appendix `J`. It is stated that the guidelines are issued by UGC but the universities themselves lay down the detailed procedures.

Personal interaction was done with eminent persons in the referred field to obtain their views. This was found extremely useful in channelising the research and work out the technique of normalization.

5.1.2 Secondary Data

The secondary data was collected from Books, periodicals, journals and Internet. The secondary data has been used to:

(a) Compile “Review of Literature”.

(b) Identifying correct and most apt statistical tool to develop the technique of normalization.

5.2 Verification If the Problem Exists

The respondents were approached with a request to answer the attached questionnaires with utmost sincerity to help derive right inferences. Questionnaire 1 was to ascertain if the problem exists. The enquiries made and responses received are presented hereunder.
5.2.1 Questionnaire I

It was enquired if the respondent agreed or otherwise with the proposition that evaluation/grading system varies from one university to the other. 100% respondents confirmed that there is variation in evaluation systems.

Since the variation in evaluation system was confirmed it was enquired if the respondents thought it appropriate to compare marks of students of different universities while deciding their inter-se merit. 100% respondents felt that it was in-appropriate to compare the marks of the students to determine their inter-se merit.

In view of respondents having felt it 'in-appropriate' on above enquiry, respondents were asked if conducting common written test and then comparing marks scored in such a test to ascertain inter-se merit was considered to be a better solution. 100% respondents opined that it was a better solution.

Respondents were asked if they could suggest or identify any other method besides conducting the common written test to work out inter-se merit of the students. 100% respondents affirmed positively.
Respondents were requested to specify such other method(s) in brief. 80% respondents gave solutions and 20% did not respond. The responses duly summarised are being discussed separately.

When respondents were asked if, besides conducting common entrance test, any other solution is not known to them, if they felt that some mechanism is required to accurately compare inter-se merit of students of different universities. 100% respondents felt that such a system is required.

There are several times when the common written test cannot be conducted due to time constraints, infrastructural constraints and so on. Under such circumstances the respondents' views on having some mechanism to process marks of students of different universities before short-listing them as per merit was sought. 100% respondents felt that there was indeed requirement of having some system in place that judiciously processed the marks.

5.3 Identifying Likely Causes

Besides the responses from the respondents as discussed above, close interactions with several of the students, friends, colleagues, and staff in educational institutions, proved beyond doubt that there is indeed
difference in evaluation systems in the universities and that there is a need of a system that can correct these differences.

As a result of this it appeared that in some universities evaluation is more liberal than some others. To know all (or most of) the probable causes that contribute towards such differences the Questionnaire 2 was circulated. The responses and questions are discussed hereunder:

5.3.1 Questionnaire II: Ascertain Causes of Problem

It was enquired as to what factors contributed towards causing differences in grading systems in different universities. 80 % respondents gave possible causes ranging from 1 to four causes. Balance 20 % respondents did not respond.

It was enquired if liberal marking were noticed in one faculty in certain university, would it exist in all the other faculties of that university. 80 % respondents said 'NEVER' and 20 % said 'Some Times'.

5.3.2 Likely Causes of Problem

The responses to Question Number 1 in Questionnaire 2 received from all the respondents were analysed and it was found that there existed three types of causes leading to the evident variation in grading. These are:
(a) Causes due to Environment
(b) Causes under the control of University
(c) Causes within the control of the students

5.3.3 Causes Due to Environment

Uncertainty of Examinations. In India there are certain problems of perennial nature, which cause uncertainty in the minds of the students on whether the examinations would be held as scheduled, or not. This uncertainty may be due to any one or more of the following:

(a) There are internal security problems due to internal disturbances.

(b) Certain places are prone to environmental hazards e.g. floods, landslides, high temperatures etc, which by the past records show that the examinations get rescheduled at short notice leaving the affected students guessing causing them mental stress.

(c) There are unforeseen disturbances, which may crop up just when the examinations are around; for example, strike by transport workers, strike by colleges, etc.

(d) There are disturbances due to political activities. In certain regions agitations due to political decisions cause disturbances in day-to-day life.
There are regions where insurgency is a common phenomenon. The closures and boycotts by insurgents cause rescheduling of examinations.

If such disturbances occur when the examinations are in progress or are likely to be held shortly then such circumstances are stressful to the student community at large. These disturbances adversely affect their studies and cause a lot of mental stress and anxiety. Such circumstances would cause students to underperform than their natural best.

In India there are several areas where such disturbances are perpetually there, some other areas are generally free from such disturbances and certain other areas are susceptible to disturbances at short notice. This brings in certain changes in performance of students and thus affecting their marks scored in examinations.

Said differently, students of same intelligence will score differently if they are disturbed. They will score less than those who do not face disturbances.

Climatic conditions. Dry weather (with 60% humidity or better) and temperature of 22 to 28 Degrees Celsius is the most comfortable weather for humans. At the time of examinations if such or close to such weather
conditions prevail then the students will be able to study well and also do well in the examinations than others. In India the climate in different regions is different at any one time. Certain places have healthy (conducive) climate at the time of examinations than most others. If the weather is in-salubrious, the performance of the students cannot be their best. Under adverse weather conditions the concentration of mind declines and fatigue increases causing performance below normal.

5.3.4 Causes under the control of University

Schedule of Examinations. In India the marks scored by the students in the examination is directly related to the extent of studies and preparations on the part of the students. If the examination schedule is such that after every question paper there is at least one clear day off then students would get more time to prepare for examinations for each of the subjects than if every day there are examinations in a row. The situation is still worse if on certain days there are examinations of two subjects on a single day. Universities where the scheduling of examinations is done in such way that the students get a gap of at least one day between examinations of any two successive examinations then students in that university would score more marks than where this is not done.

Selection of order of subjects. "Morale is the single largest factor that accounts for success", goes the saying. If a student does well in an
examination in one subject he is likely do as well (may be better) in the next day's examination and so on. This implies that if in the beginning of examinations more simple subjects are scheduled first followed by more difficult ones then the student is likely to attain better marks, for he would remain encouraged and motivated throughout. Universities where the scheduling of examinations is so done as to sequence the examinations in such a way that the simpler subjects are scheduled first followed by difficult ones, in that order of difficulty then students in that university would score more marks than where this is not done.

Coverage of Subjects. Each University sets the syllabus of all the courses it runs. The syllabi of any subject in different Universities would generally cover more or less the same (or similar) contents. Universities are autonomous institutions and enjoy academic freedom. There would therefore be local variations in the curricula in emphasising or de-emphasising certain areas in the total course content according to local expediency. This obviously either reduces or increases the load of study. In a common test, therefore, the students' scores are dependent on the degree of emphasis put on that particular subject area at their respective universities.

Timing of Examinations. In India most students undertake studies primarily to get a better job or pursue higher studies in premier institutions.
For most of the jobs (recruitment) or admissions for higher studies there are competitive examinations conducted in India. If university examinations are scheduled at a time when major competitive examinations are due during or soon after the university examinations then the students are not likely to concentrate well in their studies since their minds will also be attracted towards competitive examinations which are meant to get them a job. In such a case the students are likely to end up underperforming in university examinations.

**Composition of question papers.** UGC gives certain guidelines in conducting the examinations, however, Universities frame their own rules and the pattern of examination papers. The proportion of objective and subjective type questions and their weightage in any question paper differs from one university to another. Students in those universities where the objective type questions have more weightage than the subjective types may end up scoring more marks.

In some of the disciplines there are practical examinations and/or internal marks against assessing the students’ term work (submissions). Universities have different percentages of marks allotted to theory, practical and term work(s). Students at the universities allocating higher percentage marks to practical(s) and term work(s) are likely to end up with
scoring higher overall % marks in their examinations than students elsewhere.

**Liberal marking.** Almost all the people with whom this researcher interacted in person or through the questionnaire opined that certain universities follow liberal evaluation system. Such liberal system may be attributed to all or some of the reasons mentioned in this section and applied collectively or selectively in a favourable manner.

**Centralised Vs De-centralised evaluation system.** In certain universities evaluation of answer papers is done centrally that is evaluators gather at a central place and the same set of evaluators (Empanelled for specific subjects) value the answer papers. In certain other universities evaluation is decentralised in that answer papers are sent to evaluators for evaluation. Universities where centralised evaluation is done would generally be able to grade the students more rationally.

In Indian Army answer papers of officers' promotion examinations are evaluated centrally. In that the nominated evaluators (experts in those specific fields) gather at predetermined venue and time to evaluate the answer papers. Specific question(s) are allotted to each of the evaluators to grade the answers. Thus each evaluator ends up grading answers to
only one or two questions of all the answer papers. This brings in the best of rational evaluation.

Repeated questions. Certain universities set questions from a small question bank, and as a result, certain questions get repeated year after year. This helps the student community because they need to concentrate on a relatively small body of questions such as those in the previous examinations so as to be able to attempt those and thereby succeed in getting more marks in the examination they appear at.

Invigilation. In certain universities by tradition invigilation is very strict and thus there exists almost no scope for students to resort to unfair means. Whereas, where invigilation is likely to be poor, it tempts the students to use these means to score more marks without much effort.

Degree of difficulty associated with question papers. Since each University sets its own question papers, it is likely that some question papers are simpler than others. Students subjected to simple question papers are likely to score more marks than if they have to face more difficult question papers. The guidelines on composition in terms of the degree of difficulty of question papers issued by universities are at variance.
On interacting with university authorities it was experienced that question paper composition in one University was that questions worth 50% weightage should be such that even a mediocre student should be able to answer, next 30% worth questions would be such that only students in the bracket of scoring in general 70 to 85% marks could be able to answer. The balance 20% worth of questions were such that only genuinely meritorious students could solve these. The last category of questions often demand application oriented answers, answer of which in all probability would not be readily found in prescribed books.

Since all universities do not adopt a uniform composition as explained above there is bound to be difference in the degree of difficulty faced by students in different universities. This will introduce an element, which will make equating students of different universities inappropriate.

5.3.5 Causes specific to the students

Degree of preparedness of students. Depending upon the academic environment in the university the students prepare themselves hard for the examinations. In certain universities the timing of examinations, well in advance announcement of examination schedule, and letting a day off between two consecutive papers allows students to study well and ready themselves for the examinations. Such an opportunity gets extended in
certain universities year after year. In such cases the students are able to score more marks than others where such an opportunity is not there.

At places a coaching class facility for students exists; particularly in subjects, which are deemed difficult. If the students join such classes then automatically the students overcome the difficulty and enable themselves to get more marks than those who do not have such a facility.

SIFTING OF DATA

5.4 The data collected through the responses to the questionnaires reveals that:

(a) 100 % respondents stated that marks scored by students in different universities should not be compared to determine the inter-se merit of the students.

(b) 100 % respondents agreed with the preposition that grading system is different in different Universities.

(c) 100 % respondents felt that comparing marks of students coming from different Universities is inappropriate.

(d) 100 % respondents felt that conducting common entrance test is better solution than comparing just the marks of students.
(e) 100% respondents felt that in the absence of common written test it is required to have some technique of normalizing marks of the students.

(f) Respondents have given an alternative to the common entrance test and the normalization techniques of resting confidence in other common entrance tests in India to include net/ set, IIT Entrance, CAT/GAT, IAS Entrance Examinations etc.

(h) 100% respondents felt that developing a normalization technique considering all the students passed in the examination were a better preposition than working out a solution taking only a subset in the mind.

(i) Degree of importance of each of the above Causes are tabulated in Table 5.1 and bar chart in Figure No. 5.1

(j) The break up of responses based on University, faculties, disciplines, students, employers and University staff are enclosed separately as appendices 'K' to 'O'.

TABULATION AND ANALYSIS OF DATA

5.5 The questionnaire attempted to extract information to ascertain comparative importance of all the causes together. Responses of all 265 respondents against causes are indicated against each of the causes in tabulated form.
A study of grading systems in different universities for development of normalisation technique to streamline recruitment processes.

(Note: The causes were described in brief. If these factors are employed in any university in favourable manner then it would result in students scoring more marks.)

Above causes were mixed randomly and sequenced 'A' to 'M'. Respondents were requested to read carefully the causes 'A' to 'M' and place them in descending order of effect. (The factor that was felt to be most important was to be placed at number 1. For example if factor 'C' was most important then mark 'C' opposite 1 and if next important factor was 'J' then mark 'J' opposite 2 and so on...). After compilation, the number of respondents who graded against a degree of importance are summarised below. (For example against cause 'A': 2 respondents felt it was most important, 74 felt it was 4th most important cause and 77 felt that cause 'A' is 5th important cause and so on..)

A. Schedule of Examinations. If the examination programme is so set that after every question paper there is at least one day off.

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B. Selection of order of subjects. If in the beginning of examinations simple subjects are scheduled first followed by difficult ones.
Points | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13
---|---|---|---|---|---|---|---|---|---|---|---|---|---
Number of Respondents | 1 | 43 | 58 | 76 | 79 | 1 | 2 | 2 | 2 | 1 |   |   |   |

C. **Timing of Examinations.** If the examinations are scheduled at a time when no major competitive examinations are just over or scheduled soon after the university examinations. (In such a case the students are likely to concentrate well and not think of competitive examinations).

Points | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13
---|---|---|---|---|---|---|---|---|---|---|---|---|---
Number of Respondents | 1 | 1 | 3 | 0 | 56 | 57 | 30 | 49 | 31 | 37 |   |   |   |

D. **Composition of questions paper.** If the objective questions are more than the subjective types in question papers.

Points | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13
---|---|---|---|---|---|---|---|---|---|---|---|---|---
Number of Respondents | 1 | 1 | 2 | 1 | 71 | 37 | 54 | 36 | 51 | 11 |   |   |   |

E. **Uncertainty of Examinations.** In certain places uncertainty exists on whether examinations will be held as scheduled or not due to internal disturbances.

Points | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13
---|---|---|---|---|---|---|---|---|---|---|---|---|---
Number of Respondents | 1 | 1 | 1 | 1 | 24 | 56 | 63 | 53 | 30 | 35 |   |   |   |
A study of grading systems in different universities for development of normalisation technique to streamline recruitment processes

**F. Coverage of subjects.**
If the subject has been covered in details and/or entire syllabus is covered (If part of the syllabus is covered then questions would be asked out of only that part of syllabus).

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**G. Climatic conditions.** Certain places have healthy (conducive) climate at the time of examinations.

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**H. Deliberate liberal marking.** Certain universities follow liberal evaluation system.

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**I. Centralised Vs De-centralised evaluation system.** In certain universities evaluation of answer papers is done centrally that is evaluators gather at a central place whereas in certain others answer papers are sent to evaluators for evaluation.

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J. Repeated questions. Certain universities set questions out of limited question bank and as a result certain questions are repeated in examination after examination.

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K. Inadequate invigilation. In certain universities invigilation is poor and thus more scope for malpractices.

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L. Degree of preparedness of students. Depending upon the academic environments in the university the students prepare themselves hard for the examinations.

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<td>85</td>
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M. Degree of difficulty associated with question papers. University sets question papers that are relatively simpler than others.

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Respondents were also asked if they had any more causes which merited listing, and if so, then importance wise where would that be fitted (e.g. between 8 and 9 etc.) There was no response to this query.

The summary of responses from all the 265 respondents in sample against Questionnaire 3 is as in Table 5.1 and Figure 5.1.

**Gross Result : Universitywise**

<table>
<thead>
<tr>
<th>Causes</th>
<th>University</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<th>K</th>
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<td>509</td>
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<td>125</td>
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| GROSS TOTAL | 1362 | 1473 | 2522 | 2453 | 2591 | 571 | 2699 | 372 | 2524 | 645 | 1322 | 2809 | 1407 |

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<th>Sorted Results</th>
<th>H</th>
<th>F</th>
<th>J</th>
<th>K</th>
<th>A</th>
<th>M</th>
<th>B</th>
<th>D</th>
<th>C</th>
<th>I</th>
<th>E</th>
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<td>372</td>
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<td>2522</td>
<td>2524</td>
<td>2591</td>
<td>2699</td>
<td>2809</td>
<td></td>
</tr>
</tbody>
</table>

| Average Result | 272 | 295 | 504 | 491 | 518 | 114 | 540 | 74.4 | 505 | 129 | 264 | 562 | 281 |

<table>
<thead>
<tr>
<th>Sorted Results</th>
<th>H</th>
<th>F</th>
<th>J</th>
<th>K</th>
<th>A</th>
<th>M</th>
<th>B</th>
<th>D</th>
<th>C</th>
<th>I</th>
<th>E</th>
<th>G</th>
<th>L</th>
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<td>Average</td>
<td>74.4</td>
<td>114</td>
<td>129</td>
<td>264</td>
<td>272</td>
<td>281</td>
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<td>491</td>
<td>504</td>
<td>505</td>
<td>518</td>
<td>540</td>
<td>562</td>
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</table>

Chapter 5
"A study of grading systems in different universities for development of normalisation technique to streamline recruitment processes".

(Table 5.1 Continued)

<table>
<thead>
<tr>
<th>University Staff</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<td>103</td>
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<td>115</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Sorted Results</th>
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<th>52</th>
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<td>M</td>
<td>G</td>
<td>E</td>
<td>I</td>
<td>C</td>
<td>D</td>
<td>L</td>
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</table>

<table>
<thead>
<tr>
<th>Employers</th>
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<th>50</th>
<th>55</th>
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<th>11</th>
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<th>6</th>
<th>48</th>
<th>13</th>
<th>26</th>
<th>53</th>
<th>27</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H</td>
<td>F</td>
<td>J</td>
<td>K</td>
<td>A</td>
<td>M</td>
<td>B</td>
<td>I</td>
<td>C</td>
<td>E</td>
<td>L</td>
<td>D</td>
<td>G</td>
</tr>
</tbody>
</table>

| Total            | 6 | 11| 13| 26| 27| 27| 30| 48| 50| 52| 53| 55| 57|

**CONSOLIDATED RESULT** (Table 5.1 Continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
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</thead>
<tbody>
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<td>2522</td>
<td>2453</td>
<td>2591</td>
<td>571</td>
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<td>645</td>
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<td>2809</td>
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<td>Employers</td>
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<td>55</td>
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<td>48</td>
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<td>26</td>
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<tr>
<td>Grand Total</td>
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<td>1560</td>
<td>2679</td>
<td>2616</td>
<td>2745</td>
<td>602</td>
<td>2851</td>
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<td>2675</td>
<td>682</td>
<td>1400</td>
<td>2877</td>
<td>1491</td>
</tr>
</tbody>
</table>
"A study of grading systems in different universities for development of normalisation technique to streamline recruitment processes".

Figure 5.1

The responses from the members in sample against Questionnaire 3 duly compiled and summarised are enclosed as appendices as under:

(a) Summary University wise (All disciplines put together) appendix 'K'

(b) Summary Discipline wise (All Universities put together) appendix 'L'

(c) Summary of Responses : University staff together appendix 'M'

(d) Summary of Responses : Prospective Employers together appendix 'N'
5.6 Possible Solution

The questionnaire IVA attempted to extract information on what could constitute a possible solution to the problem under reference. The brief queries and the responses are discussed hereunder.

Given the problem under reference and the fact that differences existed in the grading systems from one university to the other respondents were asked as to what are the possible solutions to compare marks scored by students of different universities. An illustrative example was given. (Example: Take average of marks of all the students who have passed examinations of one faculty at a time in a university and equate this average with other universities' averages in the corresponding faculty.) Respondents did not give out any specific solution.

If respondents had more than one solution to recommend then they were requested to suggest the same in the order of preference. Respondents did not recommend any specific solution.
5.7 Better Solution

Questionnaire IVB was designed to prioritise solutions. This questionnaire attempted to select better of the possible solutions to the problem under reference.

Given the problem under reference and the fact that differences do exist in the grading systems from one university to the other. Following possible solutions to normalise the marks of students were listed and respondents were requested to list them in descending order of preference.

A. Take average of marks of all the students who have passed examinations of one faculty at a time in a university and equate this average with other universities' average in the corresponding faculty worked out in the same manner.

B. Similar to 'A' above but take average of only top ten (or such other suitable number) students of a faculty in a university and equate them with others.

C. There are certain all India based competitive examinations such as UPSC's civil services examinations, Bank recruitment examinations etc. Identify the scores of students of different universities and grade the faculties of universities accordingly.
(Respondents were to mark most important factor against serial 1 and second most against 2 and so on). The response from all the respondents was as under:

<table>
<thead>
<tr>
<th>Order</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A</td>
</tr>
<tr>
<td>2.</td>
<td>B</td>
</tr>
<tr>
<td>3.</td>
<td>C</td>
</tr>
</tbody>
</table>

It was enquired if they had any more solutions which merited listing. *No specific method was recommended to be listed.*

If respondents had any more solutions then they were requested to recommend as to where importance wise would they fit them in table above (e.g. between 2 and 3 etc.)

During discussions some of the respondents suggested few techniques, which could be used as substitute to both i.e. Common Written Test, and intended technique of normalisation. These are as under:

(a) Normalisation Model followed by Birla Institute of Technology and Science, Pilani, Rajasthan.
(b) Taking Reference of other competitive examinations conducted on all India basis. Grade Universities based on the performance of their students in such examinations.

(c) Follow certain uniform standards applied in other countries (However no specific reference was given).

(d) Follow certain normalization technique with proven credibility adopted in the world (However no specific reference was given).

While the decision on developing normalization technique was approved by 100 % respondents, all the respondents also supported to consider all the students of the university as reference while developing the normalisation technique instead of considering subset of the students. Some of the respondents also suggested using following statistical tools for processing data and development of tool.

(a) Linear programming.
(b) Data Envelopment Analysis.
(c) Factor analysis.
(d) Conjoint analysis
(e) Weighted averaging technique.

In the discussion that would follow in Chapter 6 all the above suggestions have been taken into consideration, their merits and de-merits have also been discussed and logical conclusions drawn.
Correlations

5.8 Questionnaire 3 was designed to ascertain the level of each of the causes compiled from the responses to questionnaire 2. The causes were deliberately mixed at random to attempt to get natural response from the respondents.

Going by popular choice demonstrated through the responses by the respondents it is found that the degree of importance of causes is in three clusters as under:

Cluster 1. H, F and J. (Graded 1st to 3rd in level of importance).
Cluster 2. K, A, M and B (Graded 4th to 7th in level of importance).
Cluster 3. D, C, E, I, G and L (Graded 8th to 13th in level of importance).

Thus the causes in order of importance (Most important cause at Serial Number 1 and the next important at serial 2 and so on.) are listed as under. (The causes would be favourable to the students).

1. Deliberate liberal evaluation by certain universities (H).
2. Limited coverage of subjects by universities (F).
3. Repeated questions asked in examination after examination (J).
4. Inadequate invigilation in certain universities (K).
5. Examination scheduled in most favourable manner (A).
6. Less degree of difficulty associated with the question paper (M).

7. Rational sequence of subjects of question papers (B).


9. Correctly timing the examinations (C).

10. Less uncertainty of examinations (E).

11. Centralised evaluation of answer papers (I).

12. Healthy climatic conditions (G).


Assumptions

5.9 After studying the contents as discussed in review of literature in Chapter 3 and the responses to Questionnaires 1 and 2 certain assumptions are made. These are quite realistic and do not seem to be having any ambiguity or distance from the truth:

Assumptions # 1: "The intelligent people are distributed evenly and randomly across India". This assumption has understanding and dimensions as under:

(a) All states, regions and universities have intelligent people in just about the same proportion as their population;

(b) All the people belonging to different castes, religions or languages in India posses intelligent people in same proportion;
The intelligent people are distributed at random independent of their age;

Intelligent people in all faculties and disciplines in all Universities across India are in same proportion;

The rural and urban divide does not alter the random distribution of intelligent people;

The students to pass out every year from the universities have similar mix of intelligent and not so intelligent students, and accordingly more intelligent students do not pass out in any one year;

If the parents are intelligent it does not necessarily mean that their children will also be always intelligent;

**Assumptions # 2** : “The intelligence of people is governed by their anatomy, attitude and aptitude as held since birth and built or groomed over the period of time”.

**Hypotheses**

5.10 After careful study of contents in Review of Literature in Chapter 3 and taking into consideration analysis of responses from the respondents through the medium of questionnaires following hypotheses emerge:
5.10.1 University and UGC Related:

The hypothesis related to the university are as under:

(a) It is the responsibility of all universities to help in modernizing and developing India.

(b) It is the responsibility of UGC who has to frame and implement suitable regulation to ensure that the standards of education and examination across India are not only maintained but also to make them uniform such that these do not favour any class of students based on any causes.

5.10.2 Current Subject Related:

The hypotheses related to the current subject evolved out of review of literature and responses of respondents through the questionnaires are as under:

(a) There is difference in the schedule of examinations conducted by different Universities.

(b) The environments (weather and such like factors) are different in different regions in India at any given time.

(c) There is a definite difference in pattern of evaluating question papers of the students from different universities.

(d) There is difference in average percentage of marks scored by students of different Universities.
There may be difference in average percentage of marks scored by students of same university in different years.

The coverage in syllabus of universities for awarding similar degrees varies from one university to another.

The standard of teaching and conduct of training differs from university to university.

The intelligent people in India are randomly distributed and thus one single University students cannot be doing better year after year with respect to others.

If a university is found to be liberal in evaluating the question papers in one faculty does not mean that it is equally liberal in all the faculties.

If any University is found doing liberal marking of its students in one year does not mean that every year it would do liberal marking.

In India some of the more preferred disciplines are medicine, engineering, law, management, architecture etc., than the disciplines such as arts, commerce, pure science etc. This implies that the students who have not done so well may land up studying in non-preferred disciplines. Thus marks scored by students in preferred disciplines versus that of non-preferred disciplines should not be equated while judging their relative intelligence.
5.11 **Information According to Objectives of the Research**

The objectives of the current research study have been explained in Chapter 4 and encompassed the following:

(a) Study of existing evaluation system in five selected universities.

(b) Point out the dissimilarities, if any, in the above system.

(c) Study pattern of marks scored in these universities for comparison amongst themselves.

The observations made by the researcher covering the above aspects are discussed in the succeeding paragraphs.

5.12 **Study of Existing evaluation system**

Existing system in five selected universities was studied keeping all the 13 causes in mind. The observations made critically are discussed hereunder:

5.12.1 **Amravati University**

1. **Schedule of Examinations.** List of holidays that may fall within the examination program is compiled well in advance. The examination schedule set in a predetermined sequence is then announced. No deliberate efforts are made to have a day or so off after every question
paper to accord time for the students to prepare better for the next question paper.

2. **Selection of order of subjects.** The sequence of the question papers is pre-set and generally does not undergo changes every year. The sequence is set keeping in mind the fact that some of the failed students may have to appear in a few papers which should not clash with their fresh examination papers. The staff also feels that by keeping the sequence same students can decide about their style of preparation and accord better priorities to certain subjects.

3. **Timing of Examinations.** University examinations are conducted with no consideration to other examinations such as competitive examinations in mind.

4. **Composition of question papers.** (If the objective questions are more than the subjective types in question papers.) The composition was not revealed but it was stated that it depends upon the subject.

5. **Degree of difficulty associated with question papers.** University issues instructions to the members setting question paper on how they should go about setting the question paper. There is a process in place
that finally approves the question paper. Variation in degree of difficulty of any question paper is incidental and not intended.

6. **Centralised Vs De-centralised evaluation system.** Evaluation of answer papers is done centrally.

7. **Coverage of subjects.** (If the subject has been covered in details and/or entire syllabus is covered). University ensures that all its affiliated colleges cover the entire syllabus. The question paper thus covers the entire syllabus in all the subjects.

8. **Deliberate liberal marking.** (Certain universities follow liberal evaluation system.) The exact information on what and how instructions are issued to the paper evaluation team was not disclosed.

9. **Repeated questions.** University does issue instructions to the members setting question paper on how they should go about. There is a process in place that finally sets the question paper. Repetition of any questions is thus incidental and not intended.

10. **Inadequate invigilation.** University follows strict invigilation and also has scheme of surprise visit to examination centres by squads specially tasked to do so.
11. **Degree of preparedness of students.** Academic environments in the university ensure that the students prepare themselves hard for the examinations.

12. **Climatic conditions.** (Certain places have healthy (conducive) climate at the time of examinations.) University plans and times the examination to ensure that as far as possible in all the examination centres there is no water shortage and the weather is least unfriendly.

13. **Uncertainty of Examinations.** (In certain places uncertainty exists on whether examinations will be held as scheduled or not due to internal disturbances.) As of now such a situation has not been faced. However, if any question paper is required to be rescheduled due to any unforeseen circumstances then the same is usually scheduled at the end of the examination of the course.

### 5.12.2 Nagpur University

1. **Schedule of Examinations.** The examination sequence is predetermined and finalised after the experience of several years. List of holidays that may fall within the examination program is compiled in
advance. Any day or so off after every question paper besides holidays is incidental.

2. **Selection of order of subjects.** The sequence of the question papers is pre set and undergoes minor changes every year. The sequence is set allowing students to appear in old papers which should not clash with their fresh examination papers.

3. **Timing of Examinations.** University examinations are conducted independent of any examinations such as competitive examinations.

4. **Composition of questions paper.** The composition was not revealed but it was stated that it varies from subject to subject.

5. **Degree of difficulty associated with question papers.** There is a process in place that sets the question paper. Variation in degree of difficulty of any question paper is incidental.

6. **Degree of preparedness of students.** Environments in the university ensure that the students prepare themselves well for the examinations. Since the examination schedule is announced in advance the students do get time to prepare well for the examinations.
7. Coverage of subjects. University ensures that all its affiliated colleges cover the entire syllabus. The question paper covers the entire syllabus in all the subjects.

8. Deliberate liberal marking. Evaluation instructions are issued to the evaluators but exact contents of such instructions were not disclosed.

9. Repeated questions. University issues instructions to the question paper setting body on how to go about it. There is a process in place that finally approves the question paper. Repetition of any questions is purely incidental.

10. Inadequate invigilation. University follows strict invigilation and also deploys squads specially tasked to make surprise checks.

11. Centralized Vs De-centralized evaluation system. Evaluation of answer papers is done in a de-centralized manner. Efforts are afoot to introduce centralized evaluation system at the earliest.

12. Climatic conditions. University times the examination to ensure that as far as possible there is no water shortage in any of the examination centres and the weather is friendly to the maximum extent.
13. Uncertainty of Examinations. If any question paper is required to be rescheduled due to any unforeseen circumstances then the same is usually scheduled at the end of the examination of the course. Notice of such reschedule is informed to the students through the newspapers besides the notice boards in examination centres.

5.12.3 Pune University

1. Schedule of Examinations. List of holidays that may fall within the examination program is compiled and then the examination sequence is finalised. Any day or so off after every question paper besides holidays is incidental. There had also been instances when examination was schedules on Sundays. As a practice the theory examination follows the practical examinations.

2. Selection of order of subjects. Like Nagpur University the sequence of the question papers is pre set and undergoes minor changes every year. The sequence is set allowing students to appear in old papers which should not clash with their fresh examination papers.

3. Timing of Examinations. University examinations are conducted independent of any examinations such as competitive examinations. The students are better informed on national and state level competitive
examinations applicable to them. The students thus evolve their own plans
of preparations for academic examinations.

4. **Composition of questions paper.** The instructions on composition of
question paper were not revealed but it was stated that it varies from
subject to subject.

5. **Degree of difficulty associated with question papers.** Like Nagpur
University there is a process in place that sets the question paper.
Variation in degree of difficulty of any question paper is incidental.

6. **Degree of preparedness of students.** Environments in the
university ensure that the students prepare themselves well for the
examinations. Practical examinations precede theory examinations. The
students thus get enough time for preparation.

7. **Coverage of subjects.** University ensures that all its affiliated
colleges cover the entire syllabus. The question paper covers the entire
syllabus in all the subjects.

8. **Deliberate liberal marking.** Evaluation instructions are issued to the
evaluators but exact contents of such instructions were not disclosed.
9. **Repeated questions.** University issues instructions to the question paper setting body on how to go about it. There is a process in place that finally approves the question paper. Repetition of any questions is purely incidental.

10. **Inadequate invigilation.** University follows strict invigilation and also deploys squads specially tasked to make surprise checks.

11. **Centralised Vs De-centralised evaluation system.** Evaluation of answer papers is done in a centralised manner. Certain colleges are earmarked where the evaluators gather to undertake this task in a time bound fashion so that results of any course can be published within 40 days of completing examinations.

12. **Climatic conditions.** University times the examination to ensure that examinations get over before summer becomes severe.

13. **Uncertainty of Examinations.** If at all rescheduling is required due to any unforeseen circumstances the same is usually scheduled at the end of the examination of the course. Information of such reschedule is communicated to the students through the newspapers besides the notice boards.
5.12.4 Osmania University

1. **Schedule of Examinations.** List of holidays that may fall within the examination program is compiled. Examination sequence is also finalised in advance. Attempt is made to give a day or so off after every question paper where it is feasible, besides incidental holidays.

2. **Selection of order of subjects.** Like Nagpur University the sequence of the question papers is pre-set and undergoes minor changes every year.

3. **Timing of Examinations.** University examinations are conducted independent of any competitive examinations. The students evolve their own plans of preparations for academic examinations since they are better informed on national and state level competitive examinations.

4. **Composition of questions paper.** The instructions on composition of question paper exist but were not revealed. It was stated that composition varies from one subject to the other.

5. **Degree of difficulty associated with question papers.** Like Nagpur University there is a process in place that sets the question paper. Variation in degree of difficulty of any question paper is incidental.
6. **Degree of preparedness of students.** Environment in the university ensures that the students prepare themselves well for the examinations.

7. **Coverage of subjects.** University instructs that all its affiliated colleges to cover the entire syllabus. The question paper is expected to cover the entire syllabus in all the subjects.

8. **Deliberate liberal marking.** Evaluation instructions are issued to the evaluators. Exact contents of such instructions were not disclosed.

9. **Repeated questions.** There is a process in place with which question paper is finally set. This avoids any repetition of question; however, repetition of any questions is incidental and is not rejected.

10. **Inadequate invigilation.** University follows strict invigilation and also deploys squads specially tasked to make surprise checks.

11. **Centralised Vs De-centralised evaluation system.** Evaluation of answer papers is done in a centralised manner.

12. **Climatic conditions.** University times the examination to ensure that examinations get over before summer becomes severe.
13. **Uncertainty of Examinations.** If at all rescheduling is required due to any unforeseen circumstances the same is usually scheduled at the end of the examination of the course.

### 5.12.5 Bangalore University

1. **Schedule of Examinations.** List of holidays that may fall within the examination program is compiled well in advance. The examination schedule set in a predetermined sequence is then announced. No deliberate efforts are made to have a day or so off after every question paper to accord time for students to prepare better for the next question paper.

2. **Selection of order of subjects.** The sequence of the question papers is pre set and generally does not undergo changes every year. The sequence is set keeping in mind the fact that some of the failed students may have to appear in few papers which should not clash with their fresh examination papers. The staff also feels that by keeping the sequence same students can decide about their style of preparation and accord better priorities to certain subjects.
3. **Timing of Examinations.** University examinations are conducted with no consideration to other examinations such as competitive examinations in mind.

4. **Composition of question papers.** The composition was not revealed but it was stated that it depends upon the subject.

5. **Degree of difficulty associated with question papers.** University issues instructions to the members setting question paper on how they should go about setting the question paper. There is a process in place that finally approves the question paper. Variation in degree of difficulty of any question paper is incidental and not intended.

6. **Centralised Vs De-centralised evaluation system.** Evaluation of answer papers is done centrally.

7. **Coverage of subjects.** University ensures that all its affiliated colleges cover the entire syllabus. The question paper thus covers the entire syllabus in all the subjects.

8. **Deliberate liberal marking.** The exact information on what and how instructions are issued to the paper evaluation team was not disclosed.
9. **Repeated questions.** University does issue instructions to the members setting question paper on how they should go about. There is a process in place that finally sets the question paper. Repetition of any questions is thus incidental and not intended.

10. **Inadequate invigilation.** University follows strict invigilation and also has scheme of surprise visit to examination centres by squads specially tasked to do so.

11. **Degree of preparedness of students.** Academic environments in the university ensure that the students prepare themselves hard for the examinations.

12. **Climatic conditions.** University plans and times the examination to ensure that as far as possible in all the examination centres there is no water shortage and the weather is least unfriendly.

13. **Uncertainty of Examinations.** As of now such a situation has not been faced. However, if any question paper is required to be rescheduled due to any unforeseen circumstances then the same is usually scheduled at the end of the examination of the course.
"A study of grading systems in different universities for development of normalisation technique to streamline recruitment processes".

5.13 Dissimilarities, in the Systems in Universities.

Going by the above discussion it appears that the instructions issued by Universities by far are similar with the following difference(s):

(i) The practical examinations definitely precede theory examinations in Pune University.

(ii) In Nagpur University there is de-centralised evaluation. They are also going to introduce the centralised evaluation system soon.

(iii) Pune University keeps its students informed on various competitive examinations applicable to them.

(iv) Scheduling examination even on Sundays is not ruled out in Pune University.

The above discussion indicates that the changes are minor and should not make any material difference in the pattern of evaluation/grading the students. It is felt that the implementation differs whereby the difference in grading gets in.