7.0 AIMS AND OBJECTIVES

In this lesson we shall discuss about employee testing and selection. After studying this lesson you will be able to:

(i) Understand selection process and simulation.
(ii) Analyse small business application.
7.1 INTRODUCTION

To select means to choose. Selection is the process of picking individuals who have relevant qualifications to fill jobs in an organisation. The basic purpose is to choose the individual who can most successfully perform the job, from the pool of qualified candidates.

7.2 SELECTION PROCESS

The selection process is a series of steps through which applicants pass.

1. **Preliminary Reception:** Selection starts with a visit to the HRM office or with a written request for an application. If an applicant appears in person, an impromptu preliminary interview may be granted as a courtesy, simply as a matter of good public relations.

2. **Employment Tests:** Employment tests are devices that assess the probable match between applicants and job requirements. When tests are used for these positions, however, they often are a simulation of real-life situations.
   
   i. **Test Validation:** For a test to be relied upon, it should be valid. Validity means that the test scores have a significant correlation to job performance or to some other relevant criterion.

   ii. **Testing Tools:** There is a wide variety of employment tests. But each type of test has only limited usefulness. The exact purpose of a test, its design, its direction for administration and its applications are recorded in the test manual, which should be reviewed before a test is used.

7.2.1 Basic Testing Concepts

Another important decision in the selection process involves applicant testing and the kinds of tests to use. A test is a standardised, objective measure of a person’s behaviour, performance or attitude. It is standardised because the way the test is carried out, the environment in which the test is administered and the way the individual scores are calculated – are uniformly applied. It is objective in that it tries to measure individual differences in a scientific way, giving very little room for individual bias and interpretation.

Over the years, employment tests have not only gained importance but also a certain amount of inevitability in employment decisions. Since they try to objectively determine how well an applicant meets job requirements, most companies do not hesitate to invest their time and money in selection testing in a big way. Some of the commonly used employment tests may be stated thus:

7.2.2 Types of Test

1. **Intelligence tests:** These are mental ability tests. They measure the incumbent’s learning ability and also the ability to understand instructions and make judgements. The basic objective of intelligence tests is to pick up employees who are alert and quick at learning things so that they can be offered adequate training to improve their skills for the benefit of the organisation. Intelligence tests do not measure any single trait, but rather several abilities such as memory, vocabulary, verbal fluency, numerical ability, perception, spatial visualisation, etc., Stanford-Binet test, Binet-Simon test, The Wechsler Adult Intelligence Scale are examples of standard intelligence tests. Some of these tests are increasingly used in competitive examinations while recruiting graduates and post-graduates at entry level management positions in Banking, Insurance and other Financial Services sectors.

2. **Aptitude tests:** Aptitude tests measure an individual’s potential to learn certain skills – clerical, mechanical, mathematical, etc. These tests indicate whether or not
an individual has the ability to learn a given job quickly and efficiently. In order to recruit efficient office staff, aptitude tests are necessary. Clerical tests, for example, may measure the incumbent’s ability to take notes, perceive things correctly and quickly locate things, ensure proper movement of files, etc. Aptitude tests, unfortunately, do not measure on-the-job motivation. That is why the aptitude test is administered in combination with other tests, like intelligence and personality tests.

3. **Personality tests:** Of all the tests required for selection, personality tests have generated lot of heat and controversy. The definition of personality, methods of measuring personality factors and the relationship between personality factors and actual job criteria have been the subject of much discussion. Researchers have also questioned whether applicants answer all the items truthfully or whether they try to respond in a socially desirable manner. Regardless of these objections, many people still consider personality as an important component of job success.

Personality tests are used to measure basic aspects of an applicant’s personality such as motivation, emotional balance, self-confidence, interpersonal behaviour, introversion, etc. The most frequently used tests are the Minnesota Multiphasic Personality Inventory (MMPI), the California Psychological Inventory, the Manifest Anxiety Scale, Edwards Personal Performance Schedule, etc. Some of the items in personality inventory run thus:

<table>
<thead>
<tr>
<th></th>
<th>True/False</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evil spirits possess me at times</td>
<td></td>
</tr>
<tr>
<td>I believe I am being followed</td>
<td></td>
</tr>
<tr>
<td>I am fascinated by fire</td>
<td></td>
</tr>
<tr>
<td>I have never indulged in any unusual sex practices</td>
<td></td>
</tr>
<tr>
<td>I am a special agent of God</td>
<td></td>
</tr>
<tr>
<td>I day-dream very little</td>
<td></td>
</tr>
</tbody>
</table>

There are three types of PIP tests: projective (personality), interests and preferences. Let’s examine these in detail:

i. **Projective tests:** These tests expect the candidates to interpret problems or situations based on their own motives, attitudes, values, etc. Many personality tests are projective in nature. A picture is presented to the person taking the test who is then asked to interpret or react to it. Since the pictures are clouded, the person’s interpretation must come from inside – and thus get projected. The person supposedly projects into the picture his or her own emotional attitudes, motives, frustrations, aspirations and ideas about life. Standard tests are also frequently used to assess the personality of the testee. For example, in the Thematic Appreciation Test, the testee is shown a picture and is asked to make up a story based on the picture. The responses are analysed and a profile of personality is developed. However, projective tests have been under attack since they are unscientific and often reveal the bias of the test evaluator, particularly if he is not properly trained.

ii. **Interest tests:** These are meant to find how a person in tests compare with the interests of successful people in a specific job. These tests show the areas of work in which a person is most interested. The basic idea behind the use of interests tests is that people are most likely to be successful in jobs they like. These tests could be used as effective selections tools. Obviously if
you can select people whose interests are roughly the same as those of successful investments by using, say the Strong-Campbell inventory, in the jobs for which you are recruiting, it is more likely that the applicants will be more successful in their new jobs. The chief problem with using the interest tests for selection purposes is that responses to the questions are not always sincere.

iii. **Preference tests**: These tests try to compare employee preferences with the job and organisational requirements. The job diagnostic survey developed by Hackman and Oldham, is an example of a preference test. This test shows how people differ in their preferences for achievement, meaningfulness, discretion etc., in their jobs.

4. **Achievement tests**: These are designed to measure what the applicant can do on the job currently, i.e., whether the testee actually knows what he or she claims to know. A typing test shows typing proficiency, a shorthand test measures the testee’s ability to take dictation and transcribe, etc. Such proficiency tests are also known as work sampling tests. Work sampling is a selection test wherein the job applicant’s ability to do a small portion of the job is tested. These tests are of two types; Motor, involving physical manipulation of things (e.g., trade tests for carpenters, plumbers, electricians) or Verbal, involving problem situations that are primarily language-oriented or people-oriented (e.g., situational tests for supervisory jobs).

Since work samples are miniature replicas of actual job requirements, they are difficult to fake. They offer concrete evidence of the proficiency of an applicant as against his ability to do the job. However, work-sample tests are not cost effective, as each candidate has to be tested individually. It is not easy to develop work samples for each job. Moreover, it is not applicable to all levels of the organisation. For managerial jobs it is often not possible to develop a work sample test that can take one of all the full range of managerial abilities.

5. **Simulation tests**: Simulation exercise is a test which duplicates many of the activities and problems an employee faces while at work. Such exercises are commonly used for hiring managers at various levels in an organisation. To assess the potential of a candidate for managerial positions, assessment centres are commonly used.

6. **Assessment centre**: An assessment centre is an extended work sample. It uses procedures that incorporate group and individual exercises. These exercises are designed to simulate the type of work which the candidate will be expected to do. Initially a small batch of applicants come to the assessment centre (a separate room). Their performance in the situational exercises is observed and evaluated by a team of 6 to 8 trained assessors. The assessors’ judgements on each exercise are compiled and combined to have a summary rating for each candidate being assessed. The assessment centre approach, thus, evaluates a candidate’s potential for management on the basis of multiple assessment techniques, standardised methods of making inferences from such techniques, and pooled judgements from multiple assessors.

**Box 7.2**

<table>
<thead>
<tr>
<th>Work Sample</th>
<th>Assessment Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Suitable for routine, repetitive jobs with visible outcomes</td>
<td>• Suitable for managerial jobs, the outcomes are not behaviourally observable</td>
</tr>
<tr>
<td>• Takes a few minutes to test the applicant</td>
<td>• Takes days to conduct various exercises</td>
</tr>
<tr>
<td>• Evaluated by one supervisor</td>
<td>• Evaluated by a team of trained observers</td>
</tr>
<tr>
<td>• Can be done on location where the applicant</td>
<td>• Requires a separate facility. The centres are conducted</td>
</tr>
<tr>
<td>• Performs a small segment of the job</td>
<td>• For a variety of task segments (that may not be the real job) that may be included in the real job</td>
</tr>
<tr>
<td>• Usually completed on one applicant at a time</td>
<td>• Usually performed on groups of applicants at the same time</td>
</tr>
</tbody>
</table>
Initially a small batch of applicants come to the assessment centre (a separate room). Examples of the simulated exercises based on real-life, included in a typical assessment centre are as follows:

i. *The in-basket:* Here the candidate is faced with an accumulation of reports, memos, letters and other materials collected in the in-basket of the simulated job he is supposed to take over. The candidate is asked to take necessary action within a limited amount of time on each of these materials, say, by writing letters, notes, agendas for meetings, etc. The results of the applicant’s actions are then reviewed by the evaluators. In-baskets are typically designed to measure oral, and written communication skills, planning, decisiveness, initiative and organisation skills.

ii. *The leaderless group discussion (LGD):* This exercise involves groups of managerial candidates working together on a job-related problem. The problem is generally designed to be as realistic as possible and is tackled usually in groups of five or six candidates. A leader is not designated for the group, but one usually emerges in the course of the group interaction. Two or more assessors typically observe the interaction as the group tries to reach consensus on a given problem. The LGD is used to assess dimensions such as oral communication, tolerance for stress, adaptability, self confidence, persuasive ability etc.

iii. *Business games:* Here participants try to solve a problem, usually as members of two or more simulated companies that are competing in the market place. Decisions might include how to advertise and produce, how to penetrate the market, how much to keep in stock, etc. Participants thereby exhibit planning and organisational abilities, interpersonal skills and leadership abilities. Business games may be simple (focussing on very specific activities) or complex models of complete organisational systems. They may be computer-based or manually operated, rapidly programmed or flexible. In computer based games, participants typically draw up plans for an organisation to determine such factors as the amount of resources to allocate for advertising, product design, selling and sales effort. The participants arrive at a number of decisions, and then the computer tells them how well they did in comparison to competing individuals or teams. Business games have several merits: they reduce time, events that might not take place for months or years are made to occur in a matter of hours. They are realistic and competitive in nature. They also offer immediate feedback.

iv. *Individual presentations:* Participants are given a limited amount of time to plan, organise and prepare a presentation on an assigned topic. This exercise is meant to assess the participant’s oral communication skill, self-confidence, persuasive abilities, etc.

v. *Structured interview:* Evaluators ask a series of questions aimed at the participant’s level of achievement, motivation, potential for being a ‘self-starter’ and commitment to the company.

### 7.2.3 Evaluation of Assessment Centre Technique

The assessment centre technique has a number of advantages. The flexibility of form and content, the use of a variety of techniques, standardised ways of interpreting behaviour and pooled assessor judgements account for its acceptance as a valuable selection tool for managerial jobs. It is praised for content validity and wide acceptance in corporate
circles. By providing a realistic job preview, the technique helps a candidate make an appropriate career choice. The performance ratings are more objective in nature and could be readily used for promotion and career development decisions. However, the method is expensive to design and administer. Blind acceptance of assessment data without considering other information on candidates (past and current performance) is always in advisable.

i. **Graphology tests:** Graphology involves using a trained evaluator to examine the lines, loops, hooks, strokes, curves and flourishes in a person’s handwriting to assess the person’s personality and emotional make-up. The recruiting company may, for example, ask applicants to complete application forms and write about why they want a job. These samples may be finally sent to a graphologist for analysis and the results may be put to use while selecting a person. The use of graphology, however, is dependent on the training and expertise of the person doing the analysis. In actual practice, questions of validity and just plain scepticism have limited its use.

ii. **Polygraph (lie-detector) tests:** The polygraph (The lie detector consists of a rubber tube around the chest, a cuff round the arm, and sensors attached to the fingers that record the physiological changes in the examinee as the examiner puts questions that call for an answer of yes or no) records physical changes in the body as the test subject answers a series of questions. It records fluctuations in respiration, blood pressure and perspiration on a moving roll of graph paper. The polygraph operator forms a judgement as to whether the subject’s response was truthful or deceptive by examining the biological movements recorded on the paper. Polygraphs, despite strong resistance by many applicants, are increasingly being used by companies which have problems with inventory and security of funds. Government agencies have begun to use the polygraph, though in a limited way, after the passage of the Employee Polygraph Protection Act in USA in 1988, especially for filling security, police, fire and health positions. Critics, however, question the appropriateness of polygraphs in establishing the truth about an applicant’s behaviour. The fact is that polygraph records biological reaction in response to stress and does not record lying or even the conditions necessarily accompanying lying. Is it possible to prove that the responses recorded by the polygraph occur only because a lie has been told? What about those situations in which a person lies without guilt (a pathological liar) or lies believing the response to be true? The fact of the matter is that polygraphs are neither reliable nor valid. Since they invade the privacy of those tested, many applicants vehemently oppose the use of polygraph as a selection tool.

iii. **Integrity tests:** These are designed to measure employee’s honesty to predict those who are more likely to steal from an employer or otherwise act in a manner unacceptable to the organisation. The applicants who take these tests are expected to answer several ‘yes’ or ‘no’ type questions, such as:

<table>
<thead>
<tr>
<th>Typical Integrity Questions</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Have you ever told a lie?</td>
<td></td>
</tr>
<tr>
<td>● Do you report to your boss if you know of another employee stealing from the store?</td>
<td></td>
</tr>
<tr>
<td>● Do you carry office stationery back to your home for occasional use?</td>
<td></td>
</tr>
<tr>
<td>● Do you mark attendance for your colleagues also?</td>
<td></td>
</tr>
</tbody>
</table>

Often these tests contain questions that repeat themselves in some way and the evaluator then examines the consistency in responses. Companies that have used integrity tests have reported success in tracking employees who indulge in ‘theft’. However, these tests ultimately suffer from the same weaknesses as polygraph and graphology tests.
7.2.4 Work Sampling Tests

A work sampling test requires the applicant actually do a sample of the work that the job involves in a controlled situation. Examples of work sampling tests include:

i. Programming test for computer programmers.
ii. Standard driving course for deliver persons.
iii. Standardized typing, work processing, or spreadsheet applications problems for secretarial and clerical help.
iv. Auditions used by a symphony orchestra or ballad company.
v. Stimulated "in basket" tests for managers. A standardized set of memos, requests, and so on, is given to the applicant, who must dispense with them as she or he would if the work were real.

Variations of these work sampling tests are used in many organizations. Applicants are frequently asked to run the machines they would run if they got the job. Then the quantity and quality of their work are systematically graded and compared with the work of other applicants.

Over a large number of selection situations, work sampling tests have demonstrated some of the highest validities of all selection tests. The presumed superiority of these tests over other types of selection tools lies in their direct and obvious relationship with performance of the job. However, for this relationship to actually exist, the content of the job must be well documented through job analyses. Care must be taken not to confuse face validity with actual validity. Face validity is how good a test looks for a given situation. Many test that are valid also look valid, but that is not always the case. Sometimes a test that appears to have no logical relationships to a particular job may prove to be a valid predictor of performance on that job. Nonetheless, job sample tests are a proven method of selection in many organizations.

7.3 SIMULATION

To simulate is to initiate. In general terms, simulation involves developing a model of some real phenomenon and then performing experiments on the model evolved. It is a descriptive, and not an optimizing, technique. In simulation, a given system is copied and the variables and constants associated with it are manipulated in an artificial environment to examine the behaviour of the system. Using simulation, an analyst can introduce the constants and variables related to the problem, set up the possible courses of action and establish criteria, which act as measures of effectiveness. The benefit of simulation from the view point of the analyst stems from the fact that the results of taking a particular course of action can be estimated prior to its implementation in the real world. Instead of using hunches and intuition to determine what may happen, the analyst using simulation can test and evaluate various alternatives and select the one that gives the best results.

Broadly, there are four phases of the simulation process. They are:

a. Definition of the problem and statement of objectives.
b. Construction of an appropriate model.
c. Experimentation with the model constructed, and
d. Evaluation of the results of simulation.

7.3.1 Monte Carlo Simulation

It is also known as probabilistic simulation method. It can be described as a numerical technique that involves modeling with the objectives of predicting the system's behaviour. The chance element is a very significant feature of Monte Carlo simulation and this approach can be used when the given process has a random, or chance component.
Illustration

A hotel keeps a record of the number of staff requirement of various categories. Information relating to 200 days' requirement are as under:

<table>
<thead>
<tr>
<th>Demand</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of staff</td>
<td>5</td>
</tr>
<tr>
<td>No. of days</td>
<td>4</td>
</tr>
</tbody>
</table>

Develop a simulation model to predict the demand of staff for a 10-day period.

Solution

Firstly, derive the probability distribution of demand for the staff, expressing each of the frequencies in terms of proportions. This is done by dividing each of the values by 200, i.e. the total frequency. The resultant distribution would, therefore, be as follows:

<table>
<thead>
<tr>
<th>No. of staff</th>
<th>Demand</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>.04</td>
<td></td>
</tr>
</tbody>
</table>

Secondly, determine random numbers using any mechanism of random number generator. There are various ways in which random numbers can be generated. These could be result of some device like coin or die, published table of random numbers, etc. However, the most convenient method is to make use of the published table of random numbers, published by the Rand Corporation of USA.

An assignment has to be worked out so that the interval of random numbers correspond to the probability distribution. Since the probabilities have been calculated to two decimal places, which add up to 1.00, we need 100 numbers of two digits to represent each point of probability. Thus we take random numbers 00 through 99 to represent them. Now, as the probability of 5 staff is equal to .02, we assign two random numbers 00-01 to this demand level; the probability of 6 staff being equal to .05, the next five numbers, 02-06 would be assigned to this level. In a similar manner each of the demand levels would be assigned appropriate intervals as under:

<table>
<thead>
<tr>
<th>Demand (No. of staff)</th>
<th>Probability</th>
<th>Cumulative probability</th>
<th>Random number interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>.02</td>
<td>.02</td>
<td>00-01</td>
</tr>
<tr>
<td>6</td>
<td>.05</td>
<td>.07</td>
<td>02-06</td>
</tr>
<tr>
<td>7</td>
<td>.08</td>
<td>.15</td>
<td>07-14</td>
</tr>
<tr>
<td>8</td>
<td>.25</td>
<td>.40</td>
<td>15-39</td>
</tr>
<tr>
<td>9</td>
<td>.31</td>
<td>.71</td>
<td>40-70</td>
</tr>
<tr>
<td>10</td>
<td>.19</td>
<td>.90</td>
<td>71-89</td>
</tr>
<tr>
<td>11</td>
<td>.06</td>
<td>.96</td>
<td>90-95</td>
</tr>
<tr>
<td>12</td>
<td>.04</td>
<td>1.00</td>
<td>96-99</td>
</tr>
</tbody>
</table>

The Cumulative probabilities column analyses the assigned numbers to correspond to the same probability range for each event.

Thirdly, once the random number intervals are determined, we select a tracking pattern for drawing random numbers from the random number table. We may start with any column and row of the table and read the values in any set manner – horizontally, vertically or diagonally. Using the pattern, we draw the random numbers and match them with the assigned events.

Let us assume for the purpose of this problem, we have decided to take every third value horizontally, starting with the fifth column and fourth row of the table of random numbers. The random numbers, according to this pattern are 61, 74, 24, 03, 59, 16, 84, 92, 52, 07, 94, etc. (for 10-day demand period). We draw as many random numbers as the number of days' demand required to be simulated.
The first number, i.e. 61, lies in the interval 40-70. Corresponding to the demand level of 9 staff. Thus, the simulated demand for the first day is 9 staff members. In a similar manner, we can obtain the demand for each of the day. For the 10-day period, we have the following demand:

<table>
<thead>
<tr>
<th>Day</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>61</td>
<td>74</td>
<td>24</td>
<td>03</td>
<td>59</td>
<td>16</td>
<td>84</td>
<td>92</td>
<td>52</td>
<td>07</td>
</tr>
<tr>
<td>Demand of staff</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>

**Exercise**

A caterer keeps on reserve cooks during marriage season. Previous experience indicates the daily demand of cooks is as under:

<table>
<thead>
<tr>
<th>Daily demand</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability</td>
<td>.01</td>
<td>.20</td>
<td>.15</td>
<td>.50</td>
<td>.12</td>
<td>.02</td>
</tr>
</tbody>
</table>

Consider the following sequence of random numbers:

48, 78, 19, 51, 56, 77, 15, 14, 68, 09

Using this sequence, simulate the demand for the next 10 days. Find out the reserve situation if the owner of the caterer decides to maintain on payroll 30 cooks everyday. Also estimate the daily average demand for the cooks on the basis of simulated data.

**Solution**

<table>
<thead>
<tr>
<th>Demand (No. of staff)</th>
<th>Probability</th>
<th>Cumulative probability</th>
<th>Random number interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.01</td>
<td>0.01</td>
<td>00</td>
</tr>
<tr>
<td>10</td>
<td>0.20</td>
<td>0.21</td>
<td>01-20</td>
</tr>
<tr>
<td>20</td>
<td>0.15</td>
<td>0.36</td>
<td>21-35</td>
</tr>
<tr>
<td>30</td>
<td>0.50</td>
<td>0.86</td>
<td>36-85</td>
</tr>
<tr>
<td>40</td>
<td>0.12</td>
<td>0.98</td>
<td>86-97</td>
</tr>
<tr>
<td>50</td>
<td>0.02</td>
<td>1.00</td>
<td>98-99</td>
</tr>
</tbody>
</table>

The simulated demand for the cooks for the next 10 days and the stock position for various days when the decision is to make available 30 cooks a day, would be as under:

**Determination of Demand and Stock levels**

<table>
<thead>
<tr>
<th>Day</th>
<th>Random number</th>
<th>Demand</th>
<th>Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>48</td>
<td>30</td>
<td>–</td>
</tr>
<tr>
<td>2</td>
<td>78</td>
<td>30</td>
<td>–</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>51</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>56</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>77</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>8</td>
<td>14</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>9</td>
<td>68</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>09</td>
<td>10</td>
<td>80</td>
</tr>
</tbody>
</table>

Expected demand = 220/10 = 22 cooks per day.
7.3.2 Advantages and Disadvantages of Simulation

Advantage: The chief merit of the simulation technique is its capacity to lend itself to problems that are cumbersome, or impossible to handle mathematically using analytical methods. Not only this, the technique allows the analyst to experiment with the system behaviour without subjecting it to the risks that would be inherent in experimenting with the real system. It also compresses time to enable the manager to visualize the long-term effects in a quick manner. Besides, simulation is often used to test proposed analytic solutions as well.

Disadvantage: It does not represent a methodology for derivation of optimal solutions to the given problems. This approach is designed merely to provide characterisation of the behaviour of the system in question for a given set of inputs. Further, the simulation approach is not precise in the sense that it yields only estimates which are subject to sampling error. Of course, the sampling error can be reduced by increasing the sample size.

Another drawback is that it may not prove economical, as it requires lot of efforts to develop a suitable model.

It is a tool of solution evaluation and does not generate problem solution. Thus the analyst has to develop the proposed solution; then simulation can be used to test the relative desirability of those solutions.

7.3.3 Selection Techniques

Immediately after the interview ends, the interviewer should record specific answers and general impressions about the candidate. Use of a checklist like one in Box 5.1 can improve the reliability of the interview as a selection technique.

7.3.4 Interview

Interview is the oral examination of candidates for employment. This is the most essential step in the selection process. In this step, the interviewer tries to obtain and synthesise information about the abilities of the interviewee and the requirements of the job. Interview gives the recruiter an opportunity to:

i. size up the interviewee’s agreeableness;
ii. ask questions that are not covered in tests;
iii. obtain as much pertinent information as possible;
iv. assess subjective aspects of the candidate – facial expressions, appearance, nervousness and so forth;
v. make judgements on interviewee’s enthusiasm and intelligence;
vi. give facts to the candidate regarding the company, its policies, programmes, etc., and promote goodwill towards the company.

Box 7.4: A Post-interview Checklist

<table>
<thead>
<tr>
<th>POST:</th>
<th>NAME OF THE CANDIDATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weightage</td>
<td>Description</td>
</tr>
<tr>
<td>Outstanding</td>
<td></td>
</tr>
<tr>
<td>2. a. Appearance &amp; attitude, courtesy &amp; dress</td>
<td></td>
</tr>
<tr>
<td>4. b. Experience (for post)</td>
<td></td>
</tr>
<tr>
<td>2. c. Communication (ability to express himself)</td>
<td></td>
</tr>
<tr>
<td>3. d. Technical competence</td>
<td></td>
</tr>
</tbody>
</table>

Contd....
### 25

General Evaluation

<table>
<thead>
<tr>
<th>Suitability &amp; Recommendation</th>
<th>YES / NO</th>
<th>Time Taken:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks, if any</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
<td>Signature of the Member</td>
</tr>
</tbody>
</table>

**Source:** Visakha Cooperative Dairy

#### 7.3.5 Types of Interviews

Several types of interviews are commonly used depending on the nature and importance of the position to be filled within an organisation.

i. **The non-directive interview:** In a *non-directive interview* the recruiter asks questions as they come to mind. There is no specific format to be followed. The questions can take any direction. The interviewer asks broad, open-ended questions such as ‘tell me more about what you did on your last job’ – and allows the applicant to talk freely with a minimum of interruption. Difficulties with a non-directive interview include keeping it job related and obtaining comparable data on various applicants.

ii. **The directive or structured interview:** In the directive interview, the recruiter uses a predetermined set of questions that are clearly job related. Since every applicant is asked the same basic questions, comparison among applicants can be made more easily. Structured questions improve the reliability of the interview process, eliminate biases and errors and may even enhance the ability of a company to withstand legal challenge. On the negative side, the whole process is somewhat mechanical, restricts the freedom of interviewers and may even convey disinterest to applicants who are used to more flexible interviews. Also, designing a structured interview may take a good amount of time and energy.

iii. **The situational interview:** One variation of the structured interview is known as the situational interview. In this approach, the applicant is confronted with a
hypothetical incident and asked how he or she would respond to it. The applicant's response is then evaluated relative to pre-established benchmark standards.

iv. **The behavioural interview:** The behavioural interview focuses on actual work incidents (as against hypothetical situations in the situational interview) in the applicant's past. The applicant is supposed to reveal what he or she did in a given situation, for example, how he disciplined an employee who was smoking inside the factory premises.

v. **Stress interview:** In stress interview, the interviewer attempts to find how applicants would respond to aggressive, embarrassing, rude and insulting questions. The whole exercise is meant to see whether the applicant can cope with highly stress-producing, anxious and demanding situations while at work, in a calm and composed manner. Such an approach may backfire also, because the typical applicant is already somewhat anxious in any interview. So, the applicant that the firm wants to hire might even turn down the job offer under such trying conditions.

vi. **Panel interview:** In a typical panel interview, the applicant meets with three to five interviewers who take turns asking questions. After the interview, the interviewers pool their observations to arrive at a consensus about the suitability of the applicant. The panel members can ask new and incisive questions based on their expertise and experience and elicit deeper and more meaningful responses from candidates. Such an interview could also limit the impact of the personal biases of any individual interviewer. On the negative side, as an applicant, a panel interview may make you feel more stressed than usual.

### 7.3.6 Common Interviewing Mistakes

The interview is a good selection tool in the hands of the person who knows how to use it. If it is not used properly or the interviewer himself is not in a positive frame of mind, mistakes may occur. The interviewer, for example, may:

i. favour applicants who share his own attitudes;

ii. find it difficult to establish rapport with interviewees, because he himself does not possess good interpersonal skills;

iii. not be asking right questions and hence not getting relevant responses;

iv. resort to *snap judgements*, making a decision as to the applicant's suitability in the first few minutes of the interview. Too often interviewers form an early impression and spend the balance of the interview looking for evidence to support it;

v. may have forgotten much of the interview's content within minutes after its conclusion;

vi. may have awarded high scores by showing leniency (leniency);

vii. may have been influenced by 'cultural noise'. To get the job, the applicants try to get past the interviewer. If they reveal wrong things about themselves, they realise that they may not get the job, so they try to give the interviewer responses that are socially acceptable, but not very revealing. These types of responses are known as cultural noise – responses the applicant believes are socially acceptable rather than facts;

viii. may have allowed himself to be unduly influenced by associating a particular personality trait with a person's origin or cultural background and that kind of stereotyping/generalising ultimately determining the scores of a candidate (*stereotyping*). For example, he may feel that candidates from Bihar may find it difficult to read, write and speak English language and hence not select them at all!

ix. may allow the ratings to be influenced by his own likes and dislikes (*bias*)
may conclude that a poorly dressed candidate is not intelligent, attractive females are good for public dealings, etc. This is known as ‘halo effect’, where a single important trait of a candidate affects the judgement of the rater. The halo effect is present if an interviewer allows a candidate’s accomplishments in athletics to overshadow other aspects and leads the interviewer to like the applicant because ‘athletes make good sales people’;

xi. have rated an applicant poorly, following the interview of very favourable or unfavourable candidates (an anomaly known as candidate-order error; the order in which you interview applicants can also affect how you rate them);

xii. have been influenced more by unfavourable than favourable information about, or from, the candidate. Unfavourable information is given roughly twice the weight of favourable information. According to Dobmeyer and Dunette, a single negative characteristic may bar an individual from being accepted, whereafter no amount of positive features will guarantee a candidate’s acceptance.

xiii. have been under pressure to hire candidates at short notice;

xiv. have been influenced by the behaviour of the candidates (how he has answered, his body language), his or her dress (especially in the case of female candidates) and other physical factors that are not job related.

7.3.7 Designing & Conducting the Effective Interview

Interviewing is an art. It demands a positive frame of mind on the part of the interviewers. Interviewees must be treated properly so as to leave a good impression (about the company) in their minds. HR experts have identified certain steps to be followed while conducting interviews:

![Diagram]

**Figure: 7.1**

1. **Preparation**: Effective interviews do not just happen. They are planned. This involves:
   i. Establishing the objectives of the interview and determining the areas and specific questions to be covered.
   ii. Reviewing the candidate’s application and resume, noting areas that are vague or that may show candidate’s strengths and weaknesses on which questions could be asked.
   iii. Keeping the test scores ready, along with interview assessment forms.
   iv. Selecting the interview method to be followed.
   v. Choosing the panel of experts who would interview the candidates (list the number of experts to be called plus the chairman).
   vi. Identifying a comfortable, private room preferably away from noise and interruptions (neat and clean; well furnished, lighted and ventilated) where the interview could be held.
2. **Reception:** The candidate should be properly received and led into the interview room. Greet the candidate with a warm, friendly, greeting smile. Names are important. So tell the applicant what to call you and then ask the applicant for his preferred form of address. Tell briefly about yourself and put the applicant at ease so that he may reciprocate with personal information. Ask the applicant about hobbies, activities or some other topic so as to break the ice. As a rule, treat all candidates – even unsolicited drop-ins at your office – courteously, not on humanitarian grounds but because your company’s reputation is at stake. Start the interview on time.

3. **Information Exchange:** To gain the confidence of the candidate, start the interview with a cheerful conversation. The information exchange between the interviewer and the interviewee may proceed thus:

   i. State the purpose of the interview, how the qualifications are going to be matched with skills needed to handle the job. Give information about the job for which the interviewee is applying. Known as a realistic job preview, such an exercise would be most fruitful when the applicant gets a realistic picture of what he is supposed to do on the job. A realistic job preview helps minimise surprises for the new recruit, enhancing the comfort level and decreasing ambiguity and uncertainty in the early stages of work. Also, the first impression a firm makes on a new hire is one of being an honest organisation, that stays with the employee, increasing the employee’s level of commitment.

   ii. Begin with open-ended questions where the candidate gets enough freedom to express himself freely instead of ‘yes’ or ‘no’ type of responses.

   iii. Do not put words in the applicant’s mouth by asking: You have worked in a private management institute before. Haven’t you?

   iv. Do not telegraph the desired answer by nodding or smiling when the right answer is given.

   v. Do not interrogate the applicant as if the person is a prisoner and do not be patronising, sarcastic or ultra-critical.

   vi. Do not monopolies the conversation, giving very little chance to the applicant to reveal himself.

   vii. Do not let the applicant dominate the interview by rambling from point to point so you cannot ask all your questions. Establish an interview plan and stick to it.

   viii. Do not use difficult words to confuse the applicant. Provide information as freely and honestly as possible.

   **Box 7.5: Common Interview Questions (R-Lathrop)**

   **Openers**
   - May I see your resume?
   - What can I do for you?
   - Why are you interested in joining our company?
   - Why do you feel that you are qualified for this job?
   - What do you think you can do for us?

   Contd....
- What attracts you to us?
- Tell me about your experience.
- What pay do you have in mind? (Try tactfully to avoid answering this one early in the interview).

**Regarding motivation and interests**
- Is your present employer aware of your interest in a job change?
- Why do you want to change jobs?
- What caused you to enter your job field?
- Why do you want to change your field of work?
- Why are you leaving military service at this point?
- What would you like to be doing five years from now? When you retire?
- What is the ideal job for you?
- If you had complete freedom of choice to be a great success in any job field, which would you choose? Why?

**Regarding education and intellectual capacity**
- Describe your education for me.
- Why did you pick your major (area of specialisation)?
- What was your class standing?
- What were your activities?
- What honours/awards did you earn?
- What were your average grades?
- Did your grades adequately reflect your full capability? Why not?
- What courses did you like best/least and why?
- Have you had any special training for this job?

**Regarding pay**
- What do you require?
- What is the minimum pay you will accept?
- What is your pay record for the last five years?
- Why do you believe you are qualified for so much more?
- We can’t pay the salary you should have. Would you be willing to start lower and work up to that figure?
- What do you expect to be earning five years from now?

**Regarding experience**
- Why should I hire you?
- How do you fit the requirements for this job?
- What did you do in military service?
- What would you do to improve our operations?
- Who has exercised the greatest influence on you? How?
- What duties performed in the past have you liked best/least and why?
- What are your greatest strengths/limitations for this job?
- What are the strongest limitations you have found in past supervisors?
- Which supervisor did you like the best and why?
- What kinds of people appeal most/least to you as work associates?
- How many people have you supervised? What types?
- What are your greatest accomplishments to date?
- What equipment can you work with?
- Why have you changed jobs so frequently?
- Have you ever been fired or asked to resign?
- Describe the biggest crisis in your career.
- What were you doing during the period not covered in your resume?
- Why were you out of work so long?
- What was the specific nature of your illness during your extended hospitalisation?
- What made you leave your previous jobs?
- Could I see samples of your work?
Focus on the applicant’s education, training, work experience, etc. Find unexplained gaps in applicant’s past work or college record and elicit facts that are not mentioned in the resume. Avoid questions that are not job-related.

Listen to the applicant’s answers attentively and patiently. And pay attention to non-verbal cues (applicant’s facial expressions, gestures, body language, etc.). To increase reliability and avoid discrimination, ask the same questions of all applicants for a particular job. Keep careful notes and record facts.

4. **Termination:** End the interview as happily as it began without creating any awkward situation for the interviewee. Here, avoid communicating through unpleasant gestures such as sitting erect, turning towards the door, glancing at watch or clock, etc. Some interviewers terminate the show by asking: do you have any final questions? At this point inform the applicant about the next step in the interview process, which may be to wait for a call or letter. Regardless of the interview performance of the candidate and interviewer’s personal opinion, the applicant should not be given any indication of his prospects at this stage.

5. **Evaluation:** After the interview is over, summarise and record your observations carefully, constructing the report based on responses given by applicant, his behaviour, your own observations and the opinions of other experts present during the interview. Better to use a standardised evaluation form for this purpose.

---

### 7.4 SMALL BUSINESS APPLICATION

<table>
<thead>
<tr>
<th>Box 7.6: Some Applications of Employment-Related Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PSYCHOLOGICAL TESTS</strong></td>
</tr>
<tr>
<td>Measures personality or temperament (executives, nuclear power, security)</td>
</tr>
<tr>
<td>Measures personality or temperament (executives, managers, supervisors)</td>
</tr>
<tr>
<td>Measures personality or temperament (sales personnel)</td>
</tr>
<tr>
<td>Measures logic and reasoning ability (executives, managers, supervisors)</td>
</tr>
<tr>
<td>Measures creativity and judgement ability (engineers)</td>
</tr>
<tr>
<td>Measures personality components (managers)</td>
</tr>
</tbody>
</table>

| **KNOWLEDGE TESTS** |
| Measures knowledge of leadership practices (managers and supervisors) |
| Measures verbal, spatial, numeric and other aptitudes and manual dexterity (job seekers at unemployment offices) |

| **PERFORMANCE TESTS** |
| Measures physical coordination (shop workers) |
| Measures spatial visualization (draughtsmen and draughtswomen) |
| Measures ability to work with numbers and names (clerks) |
| Measures a sample of “on-the-job” demands (managers, professionals) |

| **GRAPHIC RESPONSE TEST** |
| Measures physiological responses to questions (police, retail store workers) |

| **ATTITUDE TESTS** |
| Measures attitudes about theft and related subjects (retail workers, security personnel, bank staff) |
| Measures attitudes about work and values (entry level, low income workers) |

| **MEDICAL TESTS** |
| Measures the presence of illegal or performance-affecting drugs (government employees, equipment operators). Identifies genetic predispositions to specific medical problems. Measures and monitors exposure to hazardous chemicals (miners, factory workers, researchers) |
7.4.1 Computer Aided Interview

Advances in technology, coupled with increased access to the World Wide Web, are changing the face of recruitment and selection as we know it. Apply for a graduate post with KPMG, for example, and the first stage is an on-line self assessment test designed to help candidates decide if they match the company specifics. Shell International and Marks & Spencer are among other big names using this D.I.Y. approach to help weed out unsuitable applicants at an early stage. A growing number of organisations — Boeing and the BBC for example — actively encourage on-line application, providing a form that can be filled in on-screen.

‘Electronic’ applications of this kind are typically sifted with the help of computer software which searches for key words or phrases and singles out candidates worth investigating further. Job-seekers who successfully negotiate this hurdle might subsequently find themselves facing a more detailed, on-line assessment — perhaps in the form of a live, interactive, simulated exercise.

The use of IT in selection encourages candidates to respond more honestly and openly to questions. Job-seekers can use material freely available on the Internet to prepare for assessment by employers. There are sites that offer a free practice run of the type of aptitude tests and personality profiles commonly used in industry.

Psychometric tests appear to be undergoing a transformation too. An increased emphasis on softer skills, such as leadership and teamwork, has led to a glut of new tests designed to find out not just where candidates are likely to excel — but also what might make them go off the rails. In the same way creativity can lead to eccentricity, conscientiousness can turn into obsessive perfectionism and charm can cross the barrier into manipulation. Knowing how somebody behaves when they’re under pressure is important because it has a direct impact on the team. Another test dreamed up by psychologists aims to assess a candidate’s integrity. Called Giotto, it is designed to reveal those traits — such as carelessness, tardiness and intolerance — that an employer might want to avoid.

Recruitment agencies have been conducting basic aptitude and skills tests as standard procedure for some time. But Addeco Alfred Marks has taken the concept further with its Expert testing and matching system. The system allows recruitment consultants to evaluate applicants in three core areas — skills, motivation and attitude and preferred working environment. Under the first stage, ‘Can do’, applicants are tested for basic numeracy, literacy and job-related skills. The next step, ‘will do’, assesses areas such as reliability, stress tolerance, motivation and energy. The final part of the evaluation, ‘will fit’, compares information about the employer’s working environment with details of the candidate’s preferences. The results are then compared to ensure an optimum ‘fit’ for job-seekers and employers alike.

There is now a wide menu of alternative assessment techniques that organisations can experiment with if they feel so inclined. The interview, references and that important first impression still have their place. Tests don’t do the whole job. They’re just a way of enabling you to make your decision in the best possible light with the best available information.

Check Your Progress

1. List out the keys to success of employee involvement.
2. What is WABs stands for? What are its usefulness?
3. What is simulation test?
4. Draft a restaurant advertisement for any university. Assume that university wants to recruit manpower for position of progress or of commerce, librarian and also for administrative staff.
7.5 LET US SUM UP

Selection is the process of picking individuals who have relevant qualifications to fill jobs in an organisation. The basic purpose is to choose the individual who can most successfully perform the job, from the pool of qualified candidates.

The selection process is a series of steps through which applicants pass, i.e.

Preliminary Reception

Employment Tests

Another important decision in the selection process involves applicant testing and the kinds of tests to use. A test is a standardised, objective measure of a person’s behaviour, performance or attitude. To simulate is to initiate. In general terms, simulation involves developing a model of some real phenomenon and then performing experiments on the model evolved. It is a descriptive, and not an optimizing, technique. In simulation, a given system is copied and the variables and constants associated with it are manipulated in an artificial environment to examine the behaviour of the system. The interview is a good selection tool in the hands of the person who knows how to use it. If it is not used properly or the interviewer himself is not in a positive frame of mind, mistakes may occur.

7.6 LESSON-END ACTIVITY

You work for a medium-sized software solutions company that faces intense competition from local as well as global competitors. Change seems to be the only permanent feature in your workspot and each employee’s responsibilities shift from project to project. Suppose you have been asked to fill up the job openings at your company. How would you identify the best people to work in such an environment?

7.7 KEYWORDS

Preliminary Reception

Aptitude Test

Achievement Test

Simulation Test

Monte Carlo Simulation

7.8 QUESTIONS FOR DISCUSSION

1. What is testing in selection? Explain its validity and reliability in the selection process.

2. What are the different types of Interviews? Explain each.

3. If you were responsible for hiring someone for your job state “which recruitment sources would you consider, and also which you will avoid.” Explain with reason?

4. Write notes on:
   (a) Personality Tests
   (b) Achievement Tests
   (c) Polygraph
   (d) Europhology
7.9 SUGGESTED READINGS


