UNIT 9 ASSESSMENT AND EVALUATION: BASICS

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9.1 INTRODUCTION

As a teacher, you carry out activities for assessment and evaluation of performance of your students. You have also learnt about the concept and the process of evaluation in teacher training programmes. The purpose of this unit is to help you to recall some of the basic concepts related to the process of assessment and evaluation so that you can make the process of evaluation more refined and effective. We shall also, discuss various techniques of evaluation in the present unit.

You know that assessment and evaluation are very important tasks in the educational process. Evaluation forms an integral part of the total system of education. It is intimately related to educational objectives. It is essential in the never ending cycle of formulating goals, measuring progress towards goals and determining the new goals. You also, know that evaluation in its broader concept includes examination of academic and non-academic components of education. In assessment you focus on performance of a student in academic subjects only but in evaluation you include all the changes that take place in a student’s total personality.

Evaluation helps you in a number of ways. It is a continuous process of appraisal of the achievement of aims of education as well as to bring about continuous improvement for making education more meaningful and effective. It guides both the student and the teacher in the selection of learning experience and placement of the student in special groups. The results of evaluation procedures are helpful in reporting student’s progress to parents.
Evaluation procedures help you in clarifying for the students what you desire them to learn and provide you with concrete information about their progress. These procedures also help in identifying areas of learning difficulties, which are useful in providing remedial support to the student.

9.2 OBJECTIVES

After going through this unit, you should be able to:

- differentiate between terms like assessment, measurement, evaluation, and examination.
- discuss the importance of assessment and evaluation in the educational process.
- describe the importance of continuous and comprehensive evaluation.
- explain the nature of diagnostic tests and remedial exercises.

9.3 IMPORTANCE OF ASSESSMENT AND EVALUATION

You know that the main purpose of teaching is to change student’s behaviour in desired directions. The term behaviour includes all dimensions of personality, that is, intellectual, emotional and physical. The desired directions are provided by instructional objectives formulated by the school and the teacher. To know progress of a student, it is essential to know about effectiveness of the total programme including teaching-learning situations, curriculum and making judgements, you are to assess and evaluate performance or achievement of the students. Therefore, assessment and evaluation are regarded integral part of the educational process and they can also play a very important role in its improvement. For clarification, your attention is drawn to Figure 9.1.

Instructional objectives

Learning experience

Evaluation procedures

Fig 9.1: Primary Aspects of Instructional Process

Figure 9.1 represents three primary aspects of the instructional process. Firstly, the instructional objectives, i.e., expected learning outcomes should be determined. What should students be like at the end of the learning experience? What knowledge and understanding should students possess? What skills should they be able to display? What interests and attitudes should they have developed? What changes in their habits of thinking, feeling and doing should have taken place? In short, you should determine what specific behavioural changes are you striving for, and what students are like when you have succeeded in bringing about those changes in them? Only by identifying and stating them clearly in terms of specific behaviour changes you can provide
direction to the teaching process and set the stage ready for evaluation of learning outcomes.

Secondly, you are to plan and direct learning experiences in harmony with stated instructional objectives. At this point, you are to integrate course content and methods of teaching and carryout learning experiences so that student’s behaviour will change in the desired direction.

Finally, you are to evaluate students’ progress and also your own performance as a teacher. You are to select situations to assess desired changes in the behaviour. Therefore, choose the most appropriate evaluation technique(s), construct or select specific evaluation technique, administer tools, interpret, apply and report the results.

One more important thing you may have noted is that the double-directed vectors of Figure 9.1 indicate interesting nature of the entire process. They signify that if our evaluation procedures are faulty and poor, then the quality of information on which we have to make judgements cannot be valid and reliable. Moreover, evaluation procedures are helpful not only in evaluation of learning outcomes of students, but also in identifying strengths and weaknesses of instructional objective(s) and learning experiences.

9.4 ASSESSMENT AND EVALUATION: TERMS USED

You might have come across various terminology related to assessment and evaluation. Let us understand these terms clearly because that will help to understand the concepts of assessment and evaluation.

9.4.1 Assessment

The term ‘assessment’ usually refers to the process of allotting a quantitative value to students’ achievements. As you already know, all types of achievements cannot be assessed by only a single method. You are to use several tools to assess different kinds of achievement which are technically called ‘tools of assessment’.

You can carryout assessment objectively only when you know what is to be assessed. For this purpose you should precisely formulate the objectives as an important step in the teaching-learning process. For the purpose of assessing achievements of students you can classify objectives in two categories: (i) content objectives, and (ii) instructional objectives. Content objectives should specify the course content to be covered in the class. The instructional objectives specify the level and type of objectives, viz., knowledge, understanding, application, analysis, synthesis, etc. It is expected that instructional objectives to be achieved would be fulfilled on successful learning and completion of course content. Abilities and skills should be specified in terms of improved performance of students. That is, it must clearly show the difference between performances of students who possess that ability and those who do not.

Once objectives are formulated, you have to decide about their weightage also. By doing so you will be able to select appropriate tool or tools for their assessment. In the schools mostly paper-pencil tests are being used. Paper-
pencil tests are those tests in which students are required to write answers in their own language or mark any of the given answers in the test-booklet.

9.4.2 Measurement

You may recall that measurement is defined as the description of data in terms of numbers. More precisely measurement is defined as the assignment of numerals to objects or events according to rules. In order to measure some object or event, we must follow certain procedures (operations) according to certain rules which compare the object or event to some defined standard or scale.

You might have experienced that measurement of physical dimensions is relatively straightforward. For example, you would like to measure the rate at which your students read. You could find out reading speed in terms of a scale measuring 'words-read-per minute'. In other words, the dimension is reading speed and the scale is the units words-read-per minute. The next task is that you are to specify a procedure (operation) for determining reading rate. Here you may allow each student to read a specified passage for the same amount of time, record how far a student had read when the time limit expired and count the number of words read. Then, by dividing the number of words read by the number of minutes spent in reading, you can obtain the rate of reading in words-read-per minute.

You must agree that measurement of psychological characteristics is not so simple or straightforward like measurement of physical characteristics. However, some steps are same in both the cases. In the case of psychological characteristics you may define a dimension or trait to be measured, determine the measurement operations, specify the rules, and have a certain scale of units to express the measurement.

You need measurement data in order to improve the decision making processes about each individual student. For example, for decisions regarding grouping in physical education you need to measure height, weight and attainment in certain physical skills. In case of measuring height and weight the process of measuring is simple and there might be an error only due to inaccuracy in the measuring instrument and carelessness in reading the results. But when you are to measure achievement in the skills, you may face some problems. For example, if you want to measure speed of running by your students, you will find that speed of running varies somewhat from time to time. When you measure it during morning hours it may differ from that during evening time. It may also vary from occasion to occasion. Therefore, you can obtain only a sample of running abilities in which sampling error is also involved. The only way in which you could determine the amount of variation in running time from one sample to another would be to check the variations in performance. The variation might be less if students are old, it might also be less with traditional runners.

If you try to judge how well a student knows his spellings, Arithmetic or History you will get variation in his scores from one test to another because each test includes a different sample of questions. From these samples you may find that (i) it is desirable to compare the performance of individuals under standard conditions, and (ii) you need to know the sources of error and the
amount of error involved when you make judgement about an individual on the basis of a sample of his/her behaviour.

You would like to know whether some students have achieved as well or made as much progress during a specific period of time, as other students of their age and grade have achieved. To obtain answer of such questions, you need data concerning representative samples of students. You need to obtain age or grade norms or other types of data that help in making meaningful comparisons of individuals and the group and meaningful intraindividual comparisons, such as inferring that a student performs more adequately in Arithmetic than in History. Actually, when you make statements about a student behaving immaturely or acting like a younger child, you are interpreting a sample of his/her present behaviour in terms of his/her own 'norms', that is, his/her accumulated observational data about students in various age groups. The sample of students you have observed, however, may or may not have been representative.

9.4.3 Evaluation

For assessing the performance of students, tests comprising various types of questions are constructed and administered, the scripts are checked and marks or scores are awarded. Interpreting the scores or marks – saying whether they are good or bad for a specific purpose – is evaluation. Assigning scores or marks to a student on the basis of his/her performance in a test is 'measurement' and the interpretation of these marks or scores in terms of 'good' or 'bad' is 'evaluation'. This is how we differentiate 'measurement' from 'evaluation'. To illustrate this distinction let us consider the following case. For example, you have given a spelling test of 20 different words. After assessment of the scripts you find that the number of words spelled correctly range from 6 to 15 and the average number of correct spellings is 10. You cannot stop there. Parent of one of the students may ask you how well his/her son is doing in spellings. You may show his/her answer script and explain that out of 20 words his/her son could spell 12 words correctly. By doing this you have shown the 'measure' you have carried out. The parent may demand an evaluation of the measurement by saying that his/her son has spelt eight words wrong and 60 percent 'right, whether that can be taken as good or bad. If now you say that more than half the students missed a greater number than his/her son had done, you are indicating the distribution of scores on the test, that is, staying within the area of measurement. However, if the parent agrees that 12 is indeed a 'poor' score or he/she comments that in view of the verbal ability of his/her son he is doing well as can be expected, then he/she is evaluating the score. The above illustration shows that whether a student's score is good or bad for a given purpose cannot be determined solely from the score itself. An interpretation is essential. The score is often interpreted in terms of fixed standards, such as percentage, student's rank on the test in the class, etc. Interpreting the student's test score is evaluation.

From an educational viewpoint, evaluation may be defined as a systematic process of determining the extent to which educational objectives are achieved by students. There are two important aspects of this definition. First, note that evaluation implies a systematic process, which omits casual, uncontrolled observation of students. Second, evaluation always assumes that educational objectives have been previously identified. Without previously determined objectives (goals), it is not possible to judge the extent of progress.
This definition indicates that evaluation is a more comprehensive and inclusive term than measurement. Evaluation includes both qualitative and quantitative descriptions of student behaviour taking together value judgements concerning the desirability of that behaviour. Measurement is limited to quantitative descriptions. It does not imply judgements concerning worth or value of the behaviour measured. Thus, it is clear that evaluation may or may not be based on measurement, and when it is, it goes beyond the simple quantitative description by using qualitative description (non-measurement) of student’s characteristics also. The main emphasis in evaluation is on the extent to which educational goals are achieved. For example, how much more accurately and quickly can a student do multiplication problems? How much greater is his/her understanding of the number system? Has he/she made any improvement in working with other students in small groups without constant supervision? If so, how much? Has he/she made improvement in using his/her time effectively? If so, how much? Is his/her handwriting more legible? If so, how much more? These questions are typical of those which you must be prepared to ask yourselves and to answer about each of your students. A variety of methods are, therefore, necessary and a sound evaluation programme will include both measurement and non-measurement techniques, each to be used as appropriate one.

9.4.4 Examination

As a teacher, you are very much accustomed with the process of examination. However, let us have a fresh look into the matter.

You know that in the field of education, the term ‘examination’ denotes a test of capacity and achievements. Generally speaking, examinations serve the purpose of providing information about students, information that may be used by teachers and others to decide the suitability of a student for subsequent course either in the same institution or at a college or an establishment of higher education; information that may determine whether a student is an acceptable entrant to certain professions, information that may be used by employers for recruitment and in allocating a role to an individual in industry, trade or commerce.

Examination may be ‘internal’ or ‘external’. Internal examination is conducted from time to time by the school for selecting and promoting students to a higher class whereas external examination is conducted by an external agency, namely, Board of School Education, University or any other organisation. Many schools also, hold weekly and monthly tests. These are taken into consideration at the time of annual examination for promotion. There is also, another way of classifying examination. Examination may be either oral or written. Oral examination is the oldest type. Oral examination has certain advantages over written examination. In this type of examination, the examiners may get the answers clarified from the examinee whenever there is any doubt. This does not give any scope for unfair means which are very common now-a-days. Handwriting, composition, neatness and other things do not influence marking. A large number of questions may be asked within a short period and the question may be adjusted to the ability of the students.
Oral examination, however, suffers from certain shortcomings. As in this type of examination each examinee is to be examined individually, it is very much time consuming and, therefore, cannot be applied in a large group situation. Presence of the teacher all the time may also, cause emotional disturbances in the examinee student. Though written examination has replaced the oral examination, it is still being used in some situations.

Written examinations may be essay type, short-answer type and objective type. Each of these types has certain advantages and disadvantages, we would discuss them later on.

Nevertheless, examinations especially external examinations have a significant place in any scheme of education because of certain advantages. These are given below.

(i) stimulate learning and teaching by providing a goal before the students and the teachers,

(ii) have prognostic values,

(iii) measure teaching efficiency of the teachers,

(iv) enable a teacher to know capabilities of students and accordingly he/she can provide proper guidance to them,

(v) help in the selection of candidates for different jobs and for admission to different institutions,

(vi) help a school to compare its performance with other schools,

(vii) provide a common standard which is universal and uniform in character,

(viii) especially the essay type once, train the students in critical thinking and in the systematic expression of thought.

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<th>Check Your Progress 1</th>
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<tr>
<td>Notes: a) Write your answers in the space given below.</td>
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<tr>
<td>b) Compare your answers with those given at the end of the unit.</td>
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1. Write definitions of the following terms:

2. Distinguish between measurement and evaluation.

3. List different types of examinations you would like to introduce in your class.

9.5 EVALUATION TECHNIQUES

Evaluation techniques are classified in many ways. Broadly, we may classify them as 'quantitative techniques' and 'qualitative techniques'. In the quantitative techniques, the results can be reduced to 'numerical scores' whereas in 'qualitative techniques' the results can be expressed only in verbal descriptions or narrations.
In the quantitative techniques we may include psychological tests which can be categorised in terms of their purposes, that is, the types of psychological traits they describe and claim to measure. Accordingly, there are four major classes of tests, each with many subclasses. First, are the tests of general mental ability or intelligence; second, the tests of special abilities or aptitudes; third, the tests of creativity and fourth, the tests of attainment or achievement.

Test of general mental ability or intelligence measures general ability which enters into performance of all activities and which differs in magnitude from individual to individual. Intelligence tests are classified as individual and group tests; verbal, non-verbal and performance tests; and speed and power tests. In spite of their limitations, intelligence tests serve as indispensable tools in evaluation. They are used for classifying and categorising subjects (students) in various groups. They will help you, as a teacher, to make decisions about the placement of students for different tasks, and therefore, help in making certain predictions.

Though intelligence tests seek to measure those mental abilities which are valuable in almost any type of thinking and learning, efficient vocational guidance or placement calls for tests specially directed at more specialised abilities which are of value only in a limited range of tasks. Such tests are called tests of special abilities or aptitudes. These tests will be helpful to you in making decisions about the students in their choice of subjects academic or vocational. You will, also, find such type of tests useful for predicting rate of learning in different subjects by the students and thus, avoiding wastage and stagnation.

You are already aware of the existence of two distinct types of thinking abilities, namely, convergent thinking and divergent thinking. Convergent thinking involves the generation of ideas and facts from the known information whereas divergent thinking involves generating novel responses to situations; responses that are original, unusual and varied. This thinking generally goes by the name of creativity. The tests of creativity are also used as tools in quantitative evaluation.

Tests of attainment or achievement measure the present performance of a student in relation to a skill or knowledge which he/she has acquired as a result of training or instruction in the school. These tests are designed to measure a student’s quality of learning in a particular subject or course of study at the end of training or instruction. Achievement tests may be oral or written. Written tests may be either teacher-made or standardized (specialist-made). The tests constructed by classroom teachers are generally called “informal tests”, while those prepared by the specialists following standardized psychometric procedures are called “standard tests”. Another classification of achievement tests are made on the basis of the function they are to serve. If the test is to assess whether a student possesses required skills at a particular time and whether those skills can be identified, then an achievement test in terms of a given ‘criterion’ is designed. If, on the other hand, the test is to assess the student’s relative position to some identified group, then an achievement test in terms of some ‘norm’ should be developed. The former type of the achievement test is designated as ‘mastery or criterion referenced test’ and the latter as ‘discriminatory or norm referenced test’. If your purpose is to
distinguish between students who have and students who have not mastered the minimum essentials, you may use a 'mastery or criterion referenced test'. But if the objective is to differentiate, as much as possible, the students who have reached different levels of achievement, you must use a 'norm referenced test. The instruction in criterion referenced evaluation is based on the concept that students are different primarily in the speed with which they can learn rather than in the amount they can learn. Using this model, you need to fix the amount that is to be learned for all learners; but the rate of learning is allowed to vary. On the other hand, the norm-referenced measurement compares a student's performance to the class or school average rather than to some predetermined criterion. It refers to relative achievement of other students to interpret performance. In the norm referenced measurement, you may allow the amount of material learned to vary greatly from student to student, but all students are expected to proceed through the subject matter at about the same pace. You need not fix in advance any criterion or mastery level for a minimum performance. It may be noted that a criterion test also serves the purpose of a diagnostic test for identification of specific difficulties or disabilities.

In **individual intelligence tests** one person only can be tested at a time. In **group intelligence tests** many individuals can be tested together at a time. If an individual taking the test is expected to manipulate objects or apparatus, it is called a **performance test**. If written or spoken language is used in responding, it is called a **verbal test**. If the response is sought in terms of reaction to or manipulation of object (picture, geometric figures etc.), it is called a **non-verbal test**.

A **speed test** is composed of items of approximately the same level of difficulty, scored according to the total number of items completed in a given time. The time limit is such that the average individual cannot complete all of the items. A **power test** includes items of increasing difficulty and time limits which permit most individuals to complete the test. The purpose of speed test is to determine how rapidly an individual can do a series of relatively simple tasks whereas the purpose of a power test is to determine his/her ability level of aptitude or achievement.

### 9.5.2 Qualitative Techniques

Most of the information pertaining to some characteristics of an individual is sought in the form of verbal and other symbolic behaviours. The information such as how an individual feels about certain situations, which activities interest him/her most, or what personal problems are of greatest concern to him/her, etc can be gathered or sought through interview, questionnaires or observation. These data are mostly qualitative in the form of descriptions about certain experience and interactions narrated by the individuals in their own words which provide depth and detail about the situations, attributes and behaviours.

The **interview** involves a face-to-face interaction between the interviewer (may be a teacher) and interviewee (may be a student). The interviewer is mainly interested in securing information concerning the individual's attitudes, opinions, interests and the like.
The questionnaire is most commonly used in systematic attempts to evaluate interests, attitudes, and other aspects of personal and social adjustments. This method can be used in group situations. A personality inventory is also constructed in the form of a questionnaire, using a standardized procedure.

Observation provides reliable information about an individual's typical or usual behaviour. It can be best obtained from persons who have observed him/her in a variety of situations. In the school both teachers and the student's peers have numerous opportunities to observe a student's typical behaviour. Anecdotal records, checklists, rating scales, and sociometric techniques are generally used in recording observation data.

9.5.3 Diagnostic Testing and Remedial Exercises

A test is used for the identification of specific difficulties or disabilities. Diagnostic tests are constructed not to assess levels but reveal difficulties in school subjects. These tests are constructed so that scores and individual item responses reveal specific disabilities and deficiencies in achievement. It is not expected that diagnostic tests will be routinely and regularly administered like other testing programmes. Diagnostic tests are used only for specific purposes. For example, if a general achievement test indicates that there are weaknesses among the students on learning of basic skills, the teacher may use a diagnostic test with those students having learning difficulty.

Most achievement tests also have some diagnostic value in that sub-scores of individual test items can be analyzed to diagnose students' strengths and weaknesses. Tests designed more specifically for diagnostic purposes, however, differ from norm-referenced achievement tests. The two areas where diagnostic tests are most common are reading and arithmetic.

Though the diagnostic tests are very useful for identification of specific disabilities, there are several reservations to be kept in mind while selecting and using diagnostic tests. These are:

(i) In selecting a test, the diagnostic procedures must be evaluated in light of the type of information desired.

(ii) Diagnostic tests indicate typical errors made by a student but they do not indicate causes of the errors.

(iii) Diagnostic tests provide only partial information for diagnosing a student's difficulty. In the reading area, for example, intelligence, vision, physical condition, and emotional factors must also be considered.

(iv) Results from diagnostic tests tend to have low reliability because of the relatively few items measuring each type of error. Thus, the findings regarding specific strengths and weaknesses for any particular student should be regarded as clues to be verified by other objective evidence and by regular classroom observation.

However, a diagnostic test is a good starting point, but supplementary information is needed before an effective remedial programme can be initiated. Remedial teaching which follows the diagnosis of individual difficulties should be geared to weaknesses that have been found in the student's processes and
habs of work. It should also, take into account the needs and aspirations of the student. It should be more than mere drill upon process and combinations that have not been mastered. Drill or practice is necessary, but this should be highly stimulating and related to life and career motives of the student wherever possible.

9.5.4 Continuous and Comprehensive Evaluation

In order to evaluate each individual student as objectively as possible, it is necessary to break down the student’s total performance or total behaviour pattern in relation to a particular course of study. This task is performed through a precise statement of objectives which sets down the abilities, skills and behaviour expected of students at the end of courses as a result of having followed them. The flaw in this approach is that it implies that the whole person is made of isolated reactions. However, no single aspect of a student’s behaviour can be understood without reference to the total behaviour pattern, i.e., without reference to the whole person. A way of redressing the balance is through continuous assessment carried out by the student’s own teacher who is in a unique position to see the student as a whole person as well as to help with assessment of his/her progress analytically. For the sake of validity, it may be argued that the process of assessing a student’s progress should be continuous using, written tests, oral tests and discussions, project reports, class work, homework etc as the assessment measures. Continuous assessment in one sense simply means gaining more and better information about the student in continuity.

It may be mentioned that through our traditional system of examination we measure one aspect of behaviour associated with cognitive abilities only. We must remember that the aim of our education system is to build up balanced personality in the students. Therefore, development of the activities of head (cognitive) only will not suffice. Development in activities relating to heart (affective) and hand (psychomotor) must also take place side by side. This needs some kind of monitoring in wholesome learning during the course of instruction. Our evaluation system must be a continuous and comprehensive one by which we can evaluate all aspects (cognitive, affective and psychomotor) relating to the balanced growth of the students.

Check Your Progress 2

Notes: a) Write your answers in the space given below.

b) Compare your answers with those given at the end of the unit.

1. Distinguish between ‘mastery or criterion-referenced tests’ and ‘norm-referenced test’.

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............................................................
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2. What are ‘Speed tests’? How are ‘Speed tests’ different from ‘Power tests’?

3. Write characteristics of diagnostic tests.

4. Would you like to follow continuous and comprehensive evaluation in your school? If so, why?

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### 9.6 LET US SUM UP

Assessment and evaluation are regarded as integral part of educational process and they play a very important role in improvement of the system. As a teacher, you must have proper understanding of the meaning of the terms related to assessment and evaluation and their scope of application. The term ‘assessment’ refers to the process of allotting a quantitative value to students’ achievement. Several methods are necessary to assess different kinds of achievement. Measurement is defined as the assignment of numerals to objects or events according to rules. Measurement of physical dimensions is relatively
simple but measurement of psychological characteristics is not so simple. Measurement data are necessary to improve decision making processes.

Interpreting scores or marks, saying whether they are good or bad for a specific purpose, is evaluation. Evaluation is a more comprehensive and inclusive term than measurement. Evaluation includes both qualitative and quantitative descriptions of student behaviour taking together value judgements concerning the desirability of that behaviour. The main emphasis in evaluation is on the extent to which educational goals are achieved. Total scheme of evaluation includes evaluation of physical development, evaluation of character and personality, evaluation of scholastic achievement and evaluation of social development. A sound evaluation programme includes both measurement (quantitative) and non-measurement (qualitative) techniques, each to be used in an appropriate way.

Examination denotes a test of capacity and achievements. Examinations serve the purpose of providing information about students. Examinations may be ‘internal’ or ‘external’. Examinations may either be ‘oral’ or ‘written’. Examinations have a definite place in any scheme of education because of their advantages.

The evaluation techniques can be classified as ‘quantitative’ techniques and ‘qualitative techniques’. There are two major ways of classifying evaluation procedures – (i) in terms of aspects of behaviour to be evaluated and (ii) in terms of evaluative method.

The most common tests used in schools are the achievement tests. Achievement tests may be oral or written and teacher-made or specialist-made. Achievement tests may also be classified as mastery or criterion-referenced tests, norm-referenced tests or diagnostic tests.

Intelligence tests may also be used in the schools. Intelligence tests may be individual tests or group tests. Depending on the response expected, intelligence tests may be classified as performance tests, verbal tests or non-verbal tests.

Various types of tests are classified as either speed tests or power tests. Individual information can be obtained by qualitative techniques, such as, interview or questionnaire or observation. Reliable information about an individual’s typical or usual behaviour can be collected through anecdotal records, checklists, rating scales and sociometric techniques.

Diagnostic tests are used for identifications of specific disabilities. These tests are not to assess levels but to reveal difficulties in school subjects. Diagnostic tests are more commonly used in reading and arithmetic. A diagnostic test is a good starting point, but supplementary information is needed before an effective remedial programme can be initiated. Remedial teaching should follow the diagnosis of individual difficulties of the students.

To see the student as a whole person as well as to help with the assessment of his/her progress analytically, continuous assessment is necessary to be carried out by the student’s own teacher. To evaluate the performance and around
development of the students, the process of evaluation must be continuous and comprehensive.

9.7 UNIT-END EXERCISES

1. Assessment and evaluation are an integral part of the educational process. Justify the statement.
2. Distinguish between the terms examination and evaluation.
3. Establish interrelationship among the terms assessment, measurement, examination and evaluation.
4. What are diagnostic tests? What is their importance in the educational process?
5. Discuss the importance of continuous and comprehensive evaluation.

9.8 ANSWERS TO CHECK YOUR PROGRESS

Answers to Check Your Progress 1

1. (i) **Assessment:** It is defined as the process of allotting a quantitative value to students’ achievements.
   (ii) **Measurement:** Measurement is defined as the assignment of numerals to objects or events according to rules.
   (iii) **Evaluation:** The process of interpreting scores or marks saying whether they are good or bad for specific purpose is called evaluation.
   (iv) **Examination:** Examination denotes a test of capacity and achievements.

2. Measurement is assigning numerals to objects or events according to rules. Evaluation is interpreting the measurement and saying whether it is good or bad for a specific purpose. Evaluation is a more comprehensive and inclusive term than measurement. Measurement is quantitative description but evaluation is both quantitative and qualitative description of a characteristic or attribute.

3. Consult sub-section 9.4.4.

Answers to Check Your Progress 2

1. A mastery or criterion referenced test measures knowledge, skills and other learning outcomes that all students must acquire and it sets a minimum standard which all students are expected to achieve.

   A norm referenced test measures the extent of difference in various students’ achievement and it emphasises general achievement.

2. The purpose of a speed test is to determine how rapidly an individual can do a series of relatively simple tasks, whereas the purpose of a power test is to determine his/her level of achievement or aptitude.
3. Diagnostic tests are constructed not to assess levels but to reveal difficulties in school subjects. These tests are used only for specific purposes.

4. As education is a continuous process assessment and evaluation also, must be continuous. For developing a balanced personality of an individual in all aspects physical, mental and emotional evaluation must be made in all aspects making it comprehensive and continuous.

9.9 SUGGESTED READINGS


