

**THE KERALA STATE HIGHER EDUCATION COUNCIL**  
**A MANUAL FOR GRADING IN UNDERGRADUATE COURSES**  
**(Supplementary to the Report on Restructuring Undergraduate Education)**  
**GUIDELINES**

**1 . Introduction**

**1. 1.** The performance of a student in a course/ programme can be assessed and represented in terms of marks or grades. Marks/grades indicate the level of a student's performance relative to the notion of an ideal performance. It also indicates the level of a student's performance relative to that of other students in the same class/ college/university. Performance assessment involves judgment in which subjective element cannot be totally ruled out. A teacher's notion of quality/ temperament/ quantum of work assigned /personal integrity would influence the marks/grades he/she awards to each student. When hundreds of teachers are involved in assessing thousands of students, the ideal of uniform application of objective standards for evaluation would be distorted at several levels. The marking and representation of such a raw assessment on a fine scale (varying from 0 to 100) would further compound the problems.

**1.2.** Grading is a raw assessment on a raw scale. It recognizes the distortions a teacher is likely to make while assessing student performance on a fine scale. It also recognizes that different standards of judgment applied by different teachers could distort the assessment of a student's performance in comparison with other students in the same class/college/university.

**1. 3.** Grading has to be done at two levels to overcome the distortions at the two levels. **(1) Direct Grading:** The individual teacher awards grades in place of marks while evaluating each answer. **(2) Relative Grading:** The scores given by a teacher to a particular student is re-assessed and represented on a relative scale against grade points given by other teachers to other students within the same class/ college/ university.

**1. 4.** In Direct Grading, assessment of quality and range are separated. First, the teacher evaluates the quality of an answer and awards grades. Afterwards, weightage is assigned, depending on the range of the question. In Indirect Grading, the scores awarded are normalized for ensuring proper distribution. But the implementation of indirect grading

may pose difficulties as it does not have universal academic and social acceptability. Therefore it is recommended that the method of direct grading may be mandated, while the principles of relative grading could be introduced as part of the general guidelines for internal evaluation. (See Appendix I & II for U.G.C. Guidelines on Grading and Internal Evaluation).

## **2. The Mechanics of Direct Grading**

### **2.1. Types of Answers**

There are different types of answers in an examination, with subject-wise variations, which teachers are generally required to evaluate. For instance, there are :

1. Essays/Long Answers
2. Short Essays / Problems
3. Short Answers
4. Multiple Choice /Objective Type Answers

Fieldwork/Assignments/Seminars fall into different categories. The evaluation of the performance in each category cannot be undertaken by using a uniform method. Depending on the nature of the task, appropriate method has to be adopted.

### **2.2. Grades and Grade Points**

The quality of an answer may be assessed and expressed in letter grades, prescribed as part of a scale. There are several scales in vogue in the country, ranging from a three point to nine point scale. Each system may have some advantage. What is adopted for our purposes is a five point scale which provides sufficient space for differentiation and categorization. The five point scale is as follows:

Grade	Grade Points	Grade Range
A	4	3.5 to 4
B	3	2.5 to 3.49
C	2	1.5 to 2.49
D	1	.5 to 1.49
F	0	Less than.5

## 2.3. Weightage

**2.3.1. Individual Questions:** An essay type question can test multiple skills like information recall, comprehension, analysis, application, synthesis, judgment etc. But an objective type question usually confines itself to testing fewer skills. Therefore, different types of questions are given different weightage to quantify their range and to distribute their weighted grade points accordingly, as illustrated below:

Essays/Long answer questions	: 4
Short essays / problems	: 2
Short answer questions	: 1
A bunch of 4 objective type questions	: 1

The weighted grade points of an answer would be the product of the grade points multiplied by its weightage, as illustrated below :

If an essay question is awarded A grade, its weighted grade points will be,	$4 \times 4 = 16$
If a short essay is awarded A grade, its weighted grade points will be	$4 \times 2 = 8$
If a short answer is awarded A grade, its weighted grade points will be,	$4 \times 1 = 4$
If a bunch of four objective type answers is awarded A grade, its weighted grade points will be,	$4 \times 1 = 4$

(In a five point scale, it is advisable to set objective type questions in bunches of four for the convenience of tabulation. Grade A could be awarded for 4 correct answers, B for 3 correct answers, C for 2 correct answers, D for 1 correct answer and F for no correct answer. It is possible that a question paper may have question types other than essays/short answers /objective type. Depending on their range, different weightage could be assigned to different types of questions by respective Boards of Studies. The weightage for each type of question should be indicated in the question paper.)

**2.3.2 Components / Subjects:** Weightage can also vary from component to component within a subject (example: theory /practical; internal /external) or from subject to subject (example: (main/subsidiary) depending on their comparative importance within the programme

## 2.4. The Arithmetic of Grading:

In calculating grades to be awarded at different levels, the following situations may have to be addressed:

### 2.4.1. Calculating overall grade of an answer paper

Suppose grades awarded and weightage are as follows:

Type of Questions	Question No	Grades awarded/ Grade Points	Weightage	Weighted Grade Points
Objective (in bunches of four )	1-4	B (3)	1	3
	5-8	A (4)	1	4
	9-12	A (4)	1	4
	13-16	C (2)	1	2
	17-20	D (1)	1	1
Short Answer	21	C (2)	1	2
	22	B (3)	1	3
	23	A (4)	1	4
	24	D (1)	1	1
	25	A (4)	1	4
	26	B (3)	1	3
Short Essay	27	B (3)	2	6
	28	F (0)	2	0
	29	B (3)	2	6
	30	A (4)	2	8
Long Essay	31	B (3)	4	12
	32	D (1)	4	4
Total			<b>27</b>	<b>67</b>

Overall Grade of an answer paper =  $\text{Sum of weighted grade points} \div \text{sum of the weightage} = 67 \div 27 = 2.48 = \text{Grade C}$

### 2.4.2 Calculating overall grade for a subject

Suppose Physics has separate weightage for different parts and a student has got grades as follows:

Paper		Grade / Grade Points	Weightage	Weighted Grade points
I Physics	Theory (Internal)	A (4)	1	4
	Theory ( External)	B (3)	3	9
II Physics	Practical (Internal)	A (4)	1	4
	Practical (External)	B (3)	3	9
Total			8	26

Overall Grade of a Subject = Sum of the Weighted Grade Points  $\div$  Sum of Weightage =  $26 \div 8$   
 $= 3.25 = \text{Grade B}$

### 2.4.3. Calculating Overall Grade of Part III of a Degree Programme.

2.4.3.1. Overall Grade of a programme may be represented on a seven point scale as shown below.

3.8 to 4	A+
3.5 to 3.79	A
3 to 3.49	B+
2.5 to 2.99	B
2 to 2.49	C+
1.5 to 1.99	C
.5 to 1.49	D

2.4.3.2. This would help differentiate the overall performance of students on a finer scale as shown below.

Theory		Grade / Grade Points	Weightage	Weighted Grade Points
Main	Theory	A (4)	8	32
	Practical	A (4)	4	16
Sub I	Theory	A (4)	3	12
	Practical	B (3)	1	3
Sub II	Theory	A (4)	3	12
	Practical	B (3)	1	3
Total			<b>20</b>	<b>78</b>

Overall Grade of Part III = Sum of the Weighted Grade Points  $\div$  Sum of the weightage =  $78 \div 20 = 3.90 = \text{Grade A+}$

### **3. Relative Grading and Internal Evaluation**

**3.1.** One of the general complaints against internal evaluation as it is practiced in the State is that teachers tend to give the same grade/marks for most of the students in the same class. This goes against the principle of normal distribution. A mandatory regulation for normalization (by assigning A,B,C,D, F to 7,24,38,24 and 7 percentage of the students respectively) as suggested by the U.G.C. may not be advisable. However, a general guideline that variations from the normal pattern should not exceed 100% within each grade may be useful. Accordingly, the percentage of students getting **A** for internal evaluation may vary from 0 to 14 %, **B** from 0 to 48, **C** from 0 to 76, **D** from 0 to 48 and **F** from 0 to 14, according to the assessment of the teacher. This would help to bring about greater comparability between external and internal scores and enhance the credibility of the overall score awarded to the student.

**3.2.** The Grades awarded for internal and external components should be shown separately in the final score sheet, along with the final grade arrived at by taking the average of the scores of internal and external evaluations. The name of the institution which has conducted the internal evaluation should be mentioned in the score sheet and degree certificate. The class average for internal and the university average for external examinations should also be shown in the score sheet.

### **4. Minimum Requirements**

**4.1.** A minimum of D grade is required in all courses for the award of degree certificate.

**4.2.** There will be option for improvement irrespective of grades awarded

**4.3.** Aggregate minimum of C grade is required separately for internal and external examination for the award of degree certificate.

**4.4.** Only those scoring C+ or above will be eligible for higher studies.

**5. Score Sheet for Part - III**

**Name of the University:**

**Name of the College :**

**Reg. No.**

**Year**

Subject		INTERNAL				EXTERNAL			
		Institutional average	Grade Awarded / Grade Points	Weightage	Weighted Grade Points	University average	Grade Awarded / Grade Points	Weightage	Weighted Grade Points
Main	Theory	B	A (4)	1	4	C	B (3)	3	9
	Practical	C	B (3)	1	3	B	A (4)	3	12
Sub I		B	A (4)	1	4	C	A (4)	3	12
Sub II		C	A (4)	1	4	B	B (3)	3	9
<b>Total</b>				<b>4</b>	<b>15</b>			<b>12</b>	<b>42</b>

Grade Point Average = 3.56

**Grade A.**

**U.G.C. GUIDELINES**  
**ON**  
**MARKS AND GRADES**

1. The present practice in most of our public examinations is to measure the candidate's performance by assigning a mark to an answer script. Suppose, there is a paper of three hours carrying 100 marks. The examiners are asked to award numerical scores while assessing the answer scripts. The marks can range from 0 to 100. This is called the 101 point scale because, including 0, there are in all 101 units of measurement. The implicit meaning of having such 101 steps in marking is that a candidate who scores 46 marks is superior to one who scores 45 marks, and so on. Such an inference could be correct when the mark is a "true" mark. Unfortunately, the mark given by an examiner is a "raw" mark. Such a mark is subject to several uncertainties.

2. The first type of uncertainty is about the thing to be measured which is called the candidate's performance. This is invariably ill-defined. The mark may be a measure of the candidate's ability or knowledge or memory or intelligence or power of expression or a combination of one or more of these characteristics. No one really knows what the examiner has really measured. Therefore, the mark assigned may vary from one examiner to another.

3. The second type of uncertainty arises from the fact that it is assumed that there is a "true" mark for each script. Such a "true" mark can only be assigned by an ideal examiner who does not exist. The actual examiner, at best, makes only an estimate of the "true" mark. This estimate is therefore, a "raw" mark and is subject to considerable error. For some typical papers set at universities, experts have carried out a statistical analysis. Such a statistical analysis has shown that when an examiner assigns a mark to a script, there is 50 per cent chance that his error is greater than 5 per cent. This means that when a candidate is awarded a "raw" mark of 41, the "true" mark may be either above 46 or below 36 in 50 per cent of the cases. Under these circumstances, the 101 point scale where candidates are distinguished in steps of one mark loses all its significance.

4. Quite often, certain marks are laid down as the minimum required for passing, for getting a second class, or for getting a first class. Thus, securing a minimum of 40 per cent marks may be necessary for a pass in a subject. From what has been said in the previous paragraph, it will be seen that this arbitrary minimum is meaningless. It may result in candidates who do not deserve a pass passing and vice-versa.

5. Unfortunately, the public in our country has not been kept informed of the inaccuracies in our current marking scheme. Many of them take the “raw” mark assigned by an examiner as the “true” mark and use the same for a variety of purposes. Thus, a candidate getting 60 per cent marks is regarded as superior to a candidate getting 59.9 per cent marks and gets admission to either higher courses of study or gets a chance for being interviewed for a post. This causes a considerable measure of frustration.

6. It will be seen from the above that the 101 point scale of marking together with the arbitrary minimum for a first, second or pass class is scientifically unsound. It was once adopted when our scientific knowledge about examinations was inadequate. Even with improved information becoming available about the reliability of such marks, we still continue giving marks in the 101 point scale and furnishing these marks to the student. The unscientific nature of this work and the harm it does to the student population is obvious from the previous paragraphs. One way of preventing authorities making admission to higher courses of study by going entirely on the marks secured by a candidate is to eliminate the 101 point scale from our scheme of working. This will also solve the problem of candidate being called for interviews for posts on the basis of marks. What the authorities need while considering candidates for higher courses or for employment is a prediction of how successful the candidate would be in the expected career. For this purpose, the authorities will have to carry out separate tests specially designed to evaluate the suitability of candidates and not use the marks in examination.

5. If a sample of 100 candidates is taken, assuming a normal distribution, the grading that can be done by a teacher or an examiner is shown in the table below:

**Grouping of Pupils by a Teacher**

<b>Classification</b>	<b>Grade</b>	<b>Percentage of Population</b>
Outstanding	1	7
Very Good	2	24
Good	3	38
Fair	4	24
Poor	5	7

Grade 3 represents the mean accomplishment of all the candidates appearing in a subject at an examination. In this system of grading, there is no question of failure which is an archaical concept. The last grade, viz., grade 5 where the candidate's performance is poor could be regarded as a failure if one wants to believe in it. Ordinarily, all candidates appearing for an examination are assigned one of the grades as mentioned above in a grade system and this is stated in the certificates issued. It is open to a candidate to sit for an examination again and improve his grade if he so desires.

8. Many countries of the world have given considerable thought to this question of declaring the results of examinations either at a school or at a college or of a public examination. Most countries firmly believe that the only scientific way of sorting out candidates taking an examination is through a system of gradings indicated above.

9. One could think of the grade system indicated above as a five point scale. Looked at this way, we assign to a candidate taking an examination marks in terms of 1,2,3,4,5. Such a scheme is much coarser than the 101 point scale. It is this coarser scale that is practically realizable having regard to the variety of ambiguities which creep in. Under the circumstances, it is most appropriate that the grade system is uniformly adopted in all our examinations in the country.

10. If an overall grade is to be awarded, the grades in individual courses may be weighted according to the credit hours of the courses concerned. For example, if the grades are  $g_1, g_2, g_3, \dots$ , and credits for courses are  $c_1, c_2, c_3 \dots$ , the average grade would be:

$$\frac{g_1c_1+g_2c_2+g_3c_3+\dots}{c_1+c_2+c_3\dots}$$

**U.G.C. GUIDELINES**

**ON**

**INTERNAL ASSESSMENT**

1. The necessity of sessional or continuous assessment is hardly ever questioned in academic circles, but it is commonly thought that this is a corrective for the chance factor involved in public examinations held according to a ready made astronomical time schedule. It is also thought that the public examinations give an impersonal or “objective” evaluation of a student’s performance while sessional assessment has the drawback of being “subjective”.

2. It is very necessary to look into the matter deeply and to realize that the above statements are only partly true; that in fact, sessional assessment deals with a sphere of activity which a public examination can never evaluate and hence the two are complementary to each other, that there are certain qualities of mind and of personality which can be reliably evaluated only by experienced teachers and hence “subjectivity” cannot simply be equated to a lack of criterion or to arbitrariness.

3. In fact teaching, learning and evaluation are inseparably linked together. When we teach, an evaluation allows us to find out if the objectives have been achieved, and if not what modifications in method or programme ought to be made. Thus evaluation is an essential link to feedback information which is of immense value to further teaching.

4. The objectives of teaching whose fulfillment is to be evaluated are quite complicated. They may involve content, as well as a set of desirable intellectual and social patterns. For the sake of an example, the objectives of teaching a particular courses may be all or several of the following:

- i. To transmit a body of facts, figures and theories etc.(like recording on magnetic tape);
- ii. To create a grasp and an understanding of the theories and principles so that one may apply them to new situations;
- iii. To produce a capacity of critically evaluating hypotheses when they are presented;
- iv. To cultivate an open and flexible mind, so that one may retain the capacity to learn new things in future;

- v. To cultivate an urge for perfection, an appreciation of beauty and inclination to search for newer and better solutions to problems, to discover and invent;
- vi. To train the mind for imagination, intuition and speculation into the realm of the unknown;
- vii. To produce motivation and drive in the individual to result in capacity for sustained intellectual effort, to possibly cultivate qualities of leadership as well as team work;
- viii. To cultivate specific manual skills;
- ix. To train in the ability to communicate at a high intellectual level through specific media and so on.

5. How does one evaluate the performance of a student in such a complicated situation? It is obvious that a versatile *set* of measuring instruments would be necessary. Fulfilment of some of the objectives can be tested by terminal examinations of the essay type provided a great deal of care is taken-this applies to (i), (ii) and perhaps (iii) and (ix) above. Objective tests can be used for (i) very effectively, but for (ii) and (iii) only with considerable expertize and experience; they cannot be used for (ix) and for many other objectives. Oral or face to face examinations are most suited to a large number of these objectives, and particularly for (iv), (vi), and (viii) and possibly (ix). Special tests have been devised to measure the performance on objectives (iv), (v) and (vi) but they are not yet suitable for frequent use in the class room; (vii) is even more difficult to assess. But an experienced teacher by continuously watching the attitude and reactions of a student to various situations, and by assigning specially designed tasks, can with remarkable consistency, assess the performance of a student on several of the most difficult objectives. The conclusion is that a harmonious set of tests, quizzes, tutorials, home assignments and orals have to be designed if an all-round assessment of the fulfilment of the objectives of a course has to be made. There is no escape from this and no substitute for the teacher in evaluating his students.

6. It is perhaps with this background that the Report of the Education Commission states on p. 290: "A system of internal assessment should be introduced as a supplement to the external examination, based on such periodical evaluations. The results of these assessments should not be mechanically added to the external marks but kept separate and both should be shown side by side in the final certificate. Passes should be required in both and the division gained in them should be shown separately."

7. The only question is that once in a while there may be a tendency to mark high or low deliberately, and there may be pressure to influence internal assessment. Some workable remedies which many institutions have employed in this connection may be :

- i. All internal assessment is open; that is, it is not secret. Marks or grades obtained are known to the students for each assessment as soon as it is made;
- ii. The work or test papers or the assignment on which assessment is made, is returned to the students promptly so that they can compare the grading if they wish, and so that they may approach the teacher if necessary to explain to them how a particular grade is awarded. This is the way in which students may know which mistakes they could avoid in future, and this is the only way to create confidence in the grading.
- iii. In case a student is not satisfied with his grade in spite of (i) and (ii) above, the head of the department or of the college could look into the complaint. A small committee could also be formed to dispose of such complaint expeditiously. The mode of redress has to be decided by institutions in the light of their experience. Some universities which have practiced (i) and (ii) above have the experience that hardly ever does a case have to be referred to the head.
- iv. The general level of grading could be reviewed every year, so that in particular cases teachers may receive data to convince them that a marked departure from expected distributions has taken place. In fact the review committee could also look into any possible complaints as stated in (iii) above.