Session:

Curriculum Outcome Assesment using Subject Matter on the FE Examination.

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Abstract:

In engineering education, assessment has become a major topic as a result of the adoption of EC 2000 by The Accreditation Board for Engineering and Technology (ABET). In particular, the utilization of a nationally-normed examination is one method recommended by the ABET criteria¹. In this regard, an effective and recognized tool for assessing engineering education is the Fundamentals of Engineering (FE) examination developed by the National Council of Examiners for Engineering and Surveying (NCEES). In this study, the findings of a detailed analysis of FE examination data of the students at Lamar University is conducted and presented in various forms. The investigation includes a discussion concerning the FE as an effective assessment tool and the development of a database of FE examination results. Fundamentals of Engineering examination data are presented in several forms to evaluate engineering student performance. First, a comparison of grades in individual subject areas (e.g chemistry, computers, dynamics, fluid mechanics, mathematics etc.) is conducted relative to the national average. This provides assessment information for a particular institution. Overall, the findings of the study indicate that the use of the subject matter on the FE exam to measure student performance yields considerable data for comparison purposes which may be utilized to asses and improve an engineering program.

I. Introduction:

Among the most significant obstacles facing universities, today, is related to developing quantitative measures for evaluating engineering student performance and tracking the effect of program changes in the curriculum. Gaining faculty acceptance for the evaluation methodology utilized is also important. Here, many of the difficulties result from a lack of available uniform performance measures, across institutions. Presently, the only available uniform performance measure taken by a large number of students from many institutions is the Fundamentals of Engineering (FE) examination. Unfortunately, many educators and university administrators are principally concerned with only the overall pass rate on the FE examination. Numerous institutions use this single number as a performance measure for engineering programs^{5,6,8}. For

example the Texas Legislature has recommended that Texas Universities should be funded by a formula based, in part, on the student pass rate on the FE examination¹².

II. FE exam as an assessment tool:

The Fundamentals of Engineering examination is used, in part, as the first step in the professional licensing of engineers and was developed to measure minimum technical competence^{2,4,10}. It is a pass/fail exam that is taken by approximately 50,000 people a year, most of whom are recent college graduates or seniors within one year of graduation. Although the exam results do provide specific data on performance in a given subject, this information is not used for licensing. The data can, however, be utilized to make comparisons and conclusions, some of which may or may not be valid. Most importantly, the FE exam results also provide information concerning the achievement of students taking the test relative to state and national averages.

In fact, the FE examination is the only nationally-normed exam that addresses specific engineering topics, which makes it an extremely attractive tool for use as part of an assessment process. Furthermore, the format of the FE exam was recently changed with the express purpose of making it more useful for outcomes assessment. Specifically, discipline specific sections for chemical, civil, electrical, industrial, and mechanical engineering were developed to include subjects from upper level courses --- topics that were not appropriate when students from all engineering disciplines took the same exam. This was done to better measure students knowledge of subjects taught in junior and senior level engineering courses. In addition to the above, the FE exam is currently under revision by the National Council of Examiners for Engineering and Surveying to increase its utility as a program evaluation tool.

FE exam results may be used to assess the following subject areas as specified in the ABET criterion.

- a) An ability to apply knowledge of mathematics, science and engineering.
- b) An ability to design and conduct experiments, as well as to analyze and interpret data
- c) An ability to design a system, component, or process to meet desired needs
- d) An ability to identify, formulate and solve engineering problems
- e) An understanding of professional and ethical responsibility
- f) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Some of the aforementioned subject areas may be covered in either or both the morning or afternoon sessions

III. FE Pass Rate:

Although the FE exam provides some means of assessment, there are both advantages and disadvantages of using the exam as an assessment tool; therefore, its widespread use as such should be viewed with caution. The FE exam should not be used to determine the curricular

content of a program—its original purpose is to test, in part, competency for licensure. In addition, the exam is not intended to force programs to be similar. For licensure purposes, the total score is used rather than the score in any specific subset of questions. Passing the exam does not show the competence in all subjects but instead shows an average minimum level of competency in several subject areas.

As mentioned, one of the major errors that could be made in using the FE exam as an assessment tool is focusing on the percentage who pass the exam⁹. This criterion is too broad to be effective in improving sub-discipline instruction. More specific measures are needed. Too often, the passing rates of individual programs are compared with those of other institutions, and these rates become more important than the subjects to be evaluated. In such a situation, the focus becomes "teaching to the exam" and not truly assessing the subject matter in the curriculum. In any case, institutions must remember that the original primary purpose of the FE is to assess minimal technical competencies of the various individuals sitting for the examination.

IV. FE Subject areas:

A database of FE examination scores for Civil Engineering students at Lamar University has recently been developed. The data for the six years between 1998 and 2003 was extracted from the NCEES documentation³. With this information, the average scores of students from Lamar University can be compared with the national averages. Tables 1-4 show the grades for each subject (e.g Chemistry, Computers, Dynamics, Electrical Circuits, Fluid Mechanics, Ethics, Statics etc.) for both the morning and the afternoon general examination sessions. Comparing the data between Tables 1 & 2, and that of Tables 3 & 4, it can be seen that Lamar University results tend to be above the national average for many subject areas. For example, in the 2003 morning exam, shown in Tables 1&2, Lamar students performed above the national average in these subjects: Chemistry (82.0% / 63.5%), Electrical Circuits (50.0% / 39.5%), Ethics (86.7% / 68.5%), Fluid Mechanics (54.7% / 53.0%), Mathematics (76.3% / 64.0%) and Thermodynamics (48.3% / 44.5%).

In order to reduce the volume of data and eliminate the importance of a single examination, three-year averages (2001 to 2003 and 1998 to 2000) were calculated. The results are illustrated in Tables 5-8. A comparison between Tables 5 & 6 indicates that the Lamar Civil Engineering scores tend to be generally higher than the national average for the morning examination. In fact, for the 2001-2003 time period, Lamar students earned lower scores in only three subject areas: Engineering Economy (62.2% / 64.7%), Material Science (48.8% / 53.5%) and Thermodynamics (43.1% / 47.0%). A comparison of the findings in Tables 7 & 8 for the afternoon general examination, however, show that the grades of Lamar students are generally lower than the national average for numerous subject areas. As an example, for the 2001-2003 time period Lamar students performed above the national average in only five of the twelve subjects under consideration.

The ratio of the scores for the various subject areas, earned by students of Lamar University compared to the national scores, for both the morning and afternoon sessions was also calculated. Here, a ratio of greater than unity indicates that the Lamar scores exceed the national averages. This approach is recommended by the NCEES as a method to illustrate and compare the performance of the students in a specific department¹¹. For example, Table 9 illustrates that the Civil Engineering scores for 2001-2003 in Engineering Economy (0.96), Material Science/Structure of Matter (0.91) and Thermodynamics (0.92) were below the national average. Nevertheless, Table 10, the afternoon exam, shows for the three subjects under consideration that except for Material Science/Structure of Matter (0.90), Engineering Economy (1.06) and Thermodynamics (1.09) are above average.

Table 11 illustrates the data for the six-year period between 1998 - 2003. The findings show that the ratio for all subjects is greater than unity for morning exam. This indicates that the Civil Engineering students have performed better than the national average for this test. However, in the afternoon, only four subjects are above the national values. These findings show that for many students the afternoon general exam is more difficult than the morning test.

V. Summary and Conclusions:

One of the methods of assessment listed in the ABET criteria is student performance on nationally-normed examinations. The NCEES has developed, over the years, the FE examination, which is designed, in part, to satisfy the professional licensing process. In addition, the FE examination, today, is the only nationally-normed exam that addresses specific engineering topics. This makes it an extremely attractive tool for use as part of the assessment process for an engineering institution. However, it must be noted that the FE test was originally designed to measure minimal technical competency.

Lamar University has been utilizing the FE exam for numerous years. In fact, 524 students have sat for the examination since 1980. Data indicates that the pass rate of this group is 94.59%. From 1986 the pass rate of various disciplines was recorded by the College of Engineering. Since that time, 115 Civil Engineering students have taken the examination with an overall pass rate of 94.8%. This data must be transmitted, yearly, to the Texas State Legislative Board⁷.

The NCEES recommends that the pass rate should not be utilized for assessment purposes. It is believed that a comparison of performance in individual subject areas yields more consistent results. Taking this concept under consideration, the department developed documentation that tabulates the Civil Engineering score in various subjects compared to the national scores in the identical subject areas. In addition, the ratios of the individual departmental scores to the national scores were calculated as shown in Tables 9-11. Utilizing this approach a ratio of equal to or greater than one indicates that the performance of Lamar students is equal to or exceeds the national average.

The faculty of the Civil Engineering department is considering establishing a goal that the ratio for each subject area should be equal to or greater than unity for either the morning or afternoon

examination. The findings in Table 11 indicate that this has been accomplished, on average, in the morning exam for the six years between 1998-2003. Nevertheless, the afternoon ratios indicate that these exams have been more difficult for the students. However, Tables 9 & 10 show the goal has not been met for the three-year period, 1998-2000. Specifically, chemistry (0.94 / 0.76), dynamics (0.94 / 0.89) and mathematics (0.98 / 0.75) do not meet the criteria. However, these problems were solved during the 2001-2003 time period. Nevertheless, Material Science/Structure of Matter (0.91 / 0.90) does not meet the goal for 2001-2003. A new faculty member has been hired in the materials area which should solve this problem. Overall, the findings of this investigation indicate that the use of the FE exam to measure student performance yields considerable data for comparison purposes which may be utilized to assess and improve an engineering program.

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	Table 1.	Lumber C	100												
SUBJECT	Oct-03	Apr-03	AVG	Oct-02	Apr-02	AVG	Apr-01	AVG	Oct-00	Apr-00	AVG	Oct-99	AVG	Apr-98	AVG
0000201	00100	7 ipi -00	2003	00102	7101-02	2002	riproi	2001	00000	7.01-00	2000	00100	1999	7101-00	1998
CHEMISTRY	82	82	82.0	55	59	57.7	73	73	45	64	49.8	59	59	45	45
COMPUTERS	71	36	47.7	71	50	57.0	100	100	43	29	39.5	79	79	57	57
DYNAMICS	78	56	63.3	56	67	63.3	78	78	70	33	60.8	61	61	33	33
ELECTRICAL CIR.	50	50	50.0	33	38	36.3	58	58	61	42	56.3	42	42	42	42
ENGINEERING ECO.	60	20	33.3	80	70	73.3	80	80	100	40	85.0	70	70	80	80
ETHICS	100	80	86.7	40	60	53.3	80	80	53	80	59.8	85	85	100	100
FLUID MECHANICS	38	63	54.7	50	56	54.0	75	75	38	75	47.3	66	66	75	75
MAT SCI/ STR MAT.	75	38	50.3	25	19	21.0	75	75	71	63	69.0	72	72	75	75
MATHEMATICS	79	75	76.3	79	71	73.7	58	58	58	54	57.0	67	67	50	50
MECH OF MATL.	63	56	58.3	50	75	66.7	75	75	67	38	59.8	50	50	75	75
STATICS	50	58	55.3	75	75	75.0	58	58	67	50	62.8	85	85	75	75
THERMODYNAMICS	45	50	48.3	45	45	45.0	36	36	61	55	59.5	50	50	45	45
TIERWOOD INAMICS	45	30	40.0	43	40	40.0	30	30	01	- 55	03.0	30	- 00	45	40
	Table 2.	Nationa	l Grades	: Mornin	g sessio	n									
SUBJECT	Oct-03	Apr-03	AVG	Oct-02	Apr-02	AVG	Apr-01	AVG	Oct-00	Apr-00	AVG	Oct-99	AVG	Apr-98	AVG
	1		2003			2002		2001			2000		1999		1998
CHEMISTRY	55	72	63.5	60	62	61	64	64	48	58	53.0	56	56	54	54
COMPUTERS	56	54	55.0	62	62	62	74	74	44	55	49.5	61	61	57	57
DYNAMICS	60	62	61.0	54	56	55	61	61	56	47	51.5	58	58	55	55
ELECTRICAL CIR.	37	42	39.5	38	42	40	56	56	37	41	39.0	41	41	45	45
ENGINEERING ECO.	63	59	61.0	69	67	68	65	65	56	58	57.0	57	57	61	61
ETHICS	63	74	68.5	66	62	64	80	80	74	73	73.5	80	80	80	80
LUID MECHANICS	55	51	53.0	55	55	55	67	67	43	58	50.5	57	57	62	62
MAT SCI/ STR MAT.	55	52	53.5	48	48	48	59	59	49	49	49.0	60	60	54	54
MATHEMATICS	64	64	64.0	57	63	60	57	57	52	55	53.5	60	60	64	64
			04.0	07							45.0	55	55	55	55
		57	505	57	57	57	1 64 1	64							
MECH OF MATL.	62	57	59.5	57	57	57	64	64	41	49					
MECH OF MATL. STATICS THERMODYNAMICS	62 55 44	56 45	55.5 44.5	64 43	64 46	64 44.5	64 49 52	49 52	54 38	49 44 45	49.0 41.5	71 45	71 45	59 50	59 50
MECH OF MATL. STATICS THERMODYNAMICS	62 55 44	56 45 Lamar C	55.5 44.5 ivil Engi	64 43	64 46 Grades:	64 44.5 Afternoo	49 52 on Genera	49 52 al Exam	54 38 nation	44 45	49.0 41.5	71 45	71 45	59 50	59 50
MECH OF MATL. STATICS	62 55 44	56 45	55.5 44.5	64 43	64 46	64 44.5	49 52	49 52	54 38	44	49.0	71	71	59	59
MECH OF MATL. STATICS THERMODYNAMICS SUBJECT	62 55 44	56 45 Lamar C	55.5 44.5 ivil Engi	64 43	64 46 Grades:	64 44.5 Afternoo	49 52 on Genera	49 52 al Exam	54 38 nation	44 45	49.0 41.5 AVG	71 45	71 45 AVG	59 50	59 50
MECH OF MATL. STATICS THERMODYNAMICS SUBJECT CHEMISTRY	62 55 44	56 45 Lamar C Apr-03	55.5 44.5 ivil Engi AVG 2003 50	64 43	64 46 Grades: Apr-02	64 44.5 Afternoo 2002 50	49 52 on General Apr-01	49 52 al Exam AVG 2001 20	54 38 nation Oct-00	44 45 Oct-00	49.0 41.5 AVG 2000 29.8	71 45 Oct-99	71 45 AVG 1999 35	59 50 Apr-98	59 50 AV0 1998 40
MECH OF MATL. STATICS THERMODYNAMICS SUBJECT CHEMISTRY COMPUTERS	62 55 44	56 45 Lamar C Apr-03 50 50	55.5 44.5 ivil Engl AVG 2003 50 50	64 43	64 46 Grades: Apr-02 50 50	Afternoo AVG 2002 50	49 52 on General Apr-01 20 67	49 52 al Exam AVG 2001 20 67	54 38 nation Oct-00 33 67	44 45 Oct-00 20 67	49.0 41.5 AVG 2000 29.8 67.0	71 45 Oct-99 35 58	71 45 AVG 1999 35 58	59 50 Apr-98 40 33	AV0 1998 40 33
SUBJECT CHEMISTRY COMPUTERS DYNAMICS	62 55 44	56 45 Lamar C Apr-03 50 50 30	55.5 44.5 ivil Engi AVG 2003 50 50 30	64 43	64 46 Grades: Apr-02 50 50	64 44.5 Afternoo 2002 50 50	49 52 on General Apr-01 20 67 60	49 52 al Exam AVG 2001 20 67 60	54 38 nation Oct-00 33 67 40	44 45 Oct-00 20 67 0	AVG 2000 29.8 67.0 30.0	71 45 Oct-99 35 58 45	71 45 AVG 1999 35 58 45	59 50 Apr-98 40 33 20	AV0 1998 40 33 20
SUBJECT CHEMISTRY COMPUTERS DYNAMICS SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR.	62 55 44	56 45 Lamar C Apr-03 50 50 30 8	55.5 44.5 ivil Engi AVG 2003 50 50 30 8	64 43	64 46 Grades: Apr-02 50 50 10 33	Afternoo 2002 50 10 33	49 52 on General Apr-01 20 67 60 17	49 52 al Exam AVG 2001 20 67 60 17	54 38 nation Oct-00 33 67 40 67	44 45 Oct-00 20 67 0 17	AVG 2000 29.8 67.0 30.0 54.5	71 45 Oct-99 35 58 45 21	71 45 AVG 1999 35 58 45 21	59 50 Apr-98 40 33	AV0 1996 40 33 20 50
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO.	62 55 44	56 45 Lamar C Apr-03 50 50 30	55.5 44.5 ivil Engi AVG 2003 50 50 30	64 43	64 46 Grades: Apr-02 50 50	64 44.5 Afternoo 2002 50 50	49 52 on General Apr-01 20 67 60	49 52 al Exam AVG 2001 20 67 60	54 38 nation Oct-00 33 67 40	44 45 Oct-00 20 67 0	AVG 2000 29.8 67.0 30.0	71 45 Oct-99 35 58 45	71 45 AVG 1999 35 58 45	59 50 Apr-98 40 33 20 50	AV0 1998 40 33 20 50
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS	62 55 44	56 45 Lamar C Apr-03 50 50 30 8 50 67	55.5 44.5 ivil Engi AVG 2003 50 50 30 8 50 67	64 43	64 46 Apr-02 50 50 10 33 67 67	Afternoo 2002 50 50 10 33 67 67	49 52 on General Apr-01 20 67 60 17 33 67	49 52 al Exam AVG 2001 20 67 60 17 33 67	54 38 Ination Oct-00 33 67 40 67 56 78	0ct-00 20 67 0 17 33	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5	71 45 Oct-99 35 58 45 21 58 75	71 45 45 1999 35 58 45 21 58 75	59 50 50 Apr-98 40 33 20 50 0	AV0 1998 40 33 20 50 0
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SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT SCI/STR MAT.	62 55 44	56 45 Lamar C Apr-03 50 50 30 8 50 67 50 67	55.5 44.5 44.5 AVG 2003 50 50 30 8 50 67 50	64 43	64 46 Apr-02 50 50 10 33 67 67 50 33	Afternoo 2002 50 50 10 33 67 67 50 33	49 52 Apr-01 20 67 60 17 33 67 25 33	49 52 al Exam AVG 2001 20 67 60 17 33 67 25 33	54 38 nation Oct-00 33 67 40 67 56 78 50 67	0ct-00 20 67 0 17 33 100 50	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5	71 45 Oct-99 35 58 45 21 58 75 63 75	71 45 45 1999 35 58 45 21 58 75 63 75	59 50 Apr-98 40 33 20 50 0 100 25 0	AV0 1998 40 33 20 50 0 100 25 0
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SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ELUID MECHANICS MAT SCI/STR MAT. MATHEMATICS MECH OF MATL. STATICS THERMODYNAMICS SUBJECT	62 55 44 Table3.	56 45 Lamar C Apr-03 50 50 8 50 67 50 67 46 63 42 33 Nationa	55.5 44.5 44.5 AVG 2003 50 50 8 50 67 50 67 46 63 42 33	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02	Afternood AVG 2002 50 50 10 33 67 67 50 33 67 63 58 42 AVG 2002	49 52 Apr-01 20 67 60 17 33 67 25 33 50 50 100 67 Apr-01	49 62 AVG 2001 20 67 60 17 33 67 25 33 50 50 100 67	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 74.8 37.3	71 45 Oct-99 35 58 75 63 75 40 44 79 46 Oct-99	71 45 1999 35 58 45 21 58 75 63 75 40 44 79 46	59 50 40 33 20 0 100 25 0 42 25 50 33	AV(0 19982 50 0 0 100 25 50 42 25 50 33 33 42 42 42 42 42 42 42 42 44 44 45 46 46 46 46 46 46 46 46 46 46 46 46 46
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ENGINEERING ECO. ETHICS ELUID MECHANICS ALT SCI/STR MAT. MATHEMATICS MECHOF MATL. STATICS HERMODYNAMICS CHEMISTRY CHEMISTRY CHEMISTRY CHEMISTRY	62 55 44 Table3.	56 45 Lamar C Apr-03 50 50 8 50 67 50 67 46 63 42 33 Nationa Apr-03	55.5 44.5 44.5 AVG 2003 50 50 8 50 67 50 67 46 63 42 33	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02	Afternood AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 39	49 52 52 50 67 60 67 50 100 67 67 67 67 67 50 100 67 67 67 67 67 67 67 67 67 67 67 67 67	49 52 al Exam AVG 2001 20 67 60 17 33 67 25 33 50 100 67 AVG	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.5 74.8 37.3	71 45 Oct-99 35 58 45 75 63 75 40 44 79 46 Oct-99	AVG 1999 35 58 45 75 63 75 40 44 79 46	59 50 40 33 20 50 0 100 25 0 42 25 50 33	AV0 1991 400 200 0 100 255 500 333 AV0 1991 54
SUBJECT CHEMISTRY COMPUTERS PLUID MECHANICS THICS THERMODYNAMICS SUBJECT CHEMISTRY COMPUTERS COMPUTERS CHEMISTRY COMPUTERS CHEMISTRY COMPUTERS CHEMISTRY COMPUTERS CHEMISTRY COMPUTERS CHEMISTRY COMPUTERS	62 55 44 Table3.	56 45 Lamar C Apr-03 50 50 8 50 67 50 67 46 63 42 33 Nationa Apr-03	55.5 44.5 44.5 AVG 2003 50 50 67 50 67 46 63 42 33 I Grades AVG 2003 50 76	neering	64 46 Apr-02 50 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 39 59	Afternood AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 202 39 59	49 52 52 50 67 60 67 60 67 67 60 67 67 67 67 67 67 67 67 67 67 67 67 68 67 68 67 68 68 68 68 68 68 68 68 68 68 68 68 68	49 52 al Exam AVG 2001 20 67 60 17 33 67 25 33 50 100 67 AVG 2001 57 63	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 79 46 Oct-99	71 45 1999 35 58 45 21 58 75 63 75 40 44 79 46	59 50 40 33 20 50 0 100 25 0 42 25 50 33 Apr-98	AV0 1991 40 33 20 0 100 25 0 42 25 50 33 33
SUBJECT CHEMISTRY COMPUTERS OYNAMICS CHECHOCK STRICS CHEMISTRY COMPUTERS OYNAMICS CHECHOCK CHEMISTRY COMPUTERS OYNAMICS CHECHOCK CHECHOCK CHEMISTRY COMPUTERS OF MATL. CHEMISTRY COMPUTERS OYNAMICS CHEMISTRY COMPUTERS OYNAMICS	62 55 44 Table3.	56 45 Apr-03 50 50 30 8 50 67 50 67 46 63 42 33 Nationa Apr-03	55.5 44.5 44.5 AVG 2003 50 50 67 50 67 46 63 42 33 I Grades AVG 2003 8 50 67 76 33	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 39 59	Afternoo AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 eral Exal AVG 2002 39 59 39	49 52 52 50 67 60 17 33 50 50 100 67 67 67 68 40 40	49 52 al Exam AVG 2001 20 67 60 17 33 67 25 33 50 100 67 AVG 2001 57 63 40	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00	AVG 2000 29.8 67.0 30.0 54.5 50.0 58.5 31.0 31.5 74.8 37.3 AVG 2000 43.5 46.0 37.0	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 79 46 Oct-99	71 45 1999 35 58 45 21 58 75 63 75 40 44 79 46	59 50 40 33 20 50 0 100 25 0 42 25 50 33 Apr-98	AVV 199 400 333 200 1000 25 500 333 AVV 199 54 65 65 25
SUBJECT CHEMISTRY COMPUTERS OYNAMICS LECTRICAL CIR. INGINEERING ECO. ITHICS AAT SCI/STR MAT. MATHEMATICS MECH OF MATL. STATICS CHEMISTRY COMPUTERS OYNAMICS ACTION COMPUTERS OYNAMICS CHEMISTRY COMPUTERS OYNAMICS CHEMISTRY COMPUTERS OYNAMICS CHEMISTRY COMPUTERS OYNAMICS CHECTRICAL CIR.	62 55 44 Table3.	56 45 Apr-03 50 50 67 50 67 46 63 42 33 Nationa Apr-03	55.5 44.5 44.5 AVG 2003 50 67 50 67 46 63 42 33 I Grades AVG 2003 50 76 37 37	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 Apr-02 39 59 39 45	Afternood AVG 2002 50 50 10 33 67 67 50 58 42 eral Exal	Apr-01 20 67 60 17 33 67 25 33 50 50 100 67 Apr-01 Apr-01 57 63 40 27	49 62 AVG 2001 20 67 60 17 33 67 25 30 50 100 67 AVG 2001 57 63 40 27	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00 43 56 34 37	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 31.5 74.8 37.3 AVG 2000 43.5 46.0 37.0 34.5	71 45 Oct-99 35 58 75 63 75 40 44 79 46 Oct-99 40 56 45 29	AVG 1999 35 58 75 63 75 40 44 79 46 AVG 1999 40 56 45 29	Apr-98 Apr-98 40 33 20 50 0 100 25 50 33 Apr-98 54 65 25 41	AVV 199 400 255 500 333 200 0 0 422 555 333 AVV 199 544 445 447 447 447 447 447 447 447 447
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ALLID MECHANICS COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO.	62 55 44 Table3.	56 45 Apr-03 50 50 67 50 67 46 63 42 33 Nationa Apr-03 50 76 37 37	55.5 44.5 44.5 AVG 2003 50 50 8 50 67 46 63 42 33 I Grades AVG 2003 50 76 30 30 30 47 48 49 40 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 39 59 39 45 50	Afternood AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 39 59 39 46 50	49 52 52 50 67 60 67 67 60 67 67 60 67 67 67 60 67 67 60 67 67 60 67 67 60 67	49 62 AVG 2001 20 67 60 17 33 67 25 33 50 50 100 67 AVG 2001 57 63 40 27 39	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32 40	Oct-00 20 67 0 17 33 100 50 33 50 Oct-00 43 56 34 37 38	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 74.8 37.3 AVG 2000 43.5 46.0 37.0 34.5 39.0	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 79 46 Oct-99 40 56 45 29 41	71 45 1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41	59 50 40 33 20 0 100 25 0 42 25 50 33 Apr-98 54 65 25 41 38	59 50 40 199 40 25 50 0 0 100 25 50 50 100 100 100 100 100 100 100 100
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ELUID MECHANICS AMAT SCI/ STR MAT. MATHEMATICS MECH OF MATL. STATICS CHEMISTRY COMPUTERS SUBJECT CHEMISTRY COMPUTERS SUBJECT CHEMISTRY COMPUTERS CHEMISTRY COMPUTERS COMPUTERS CHEMISTRY CHEM	62 55 44 Table3.	56 45 Apr-03 50 50 67 50 67 46 63 42 33 Nationa Apr-03 50 76 37 54 65	55.5 44.5 44.5 AVG 2003 50 50 8 50 67 50 67 46 63 42 33 50 FO 46 63 42 33 50 76 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 39 59 39 45 50 66	Afternood AVG 2002 50 50 10 33 67 67 50 33 76 63 58 42 AVG 2002 39 59 39 45 50 66	49 52 Apr-01 20 67 60 17 33 67 25 33 50 100 67 Apr-01 Apr-01 57 63 40 27 39 74	49 52 AVG 2001 20 67 60 17 33 67 25 33 50 100 67 AVG 2001 57 63 40 27 39 74	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32 40 82	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00 43 56 34 37 38 77	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 79 46 Oct-99 40 56 45 29 41 70	71 45 1999 35 58 45 75 63 75 40 44 79 46 AVG 1999 40 56 45 29 41 70	59 50 40 33 20 0 100 25 0 42 25 50 33 33 40 42 42 42 42 42 42 42 42 42 42 42 42 42	AV(199) 544 655 255 411 388 888
SUBJECT CHEMISTRY COMPUTERS DYNAMICS STATICS CHEMISTRY CHEMISTRY COMPUTERS DYNAMICS CHICS	62 55 44 Table3.	56 45 Apr-03 50 50 50 67 50 67 46 63 42 33 Nationa Apr-03 50 76 37 54 65 42	55.5 44.5 44.5 AVG 2003 50 50 67 50 67 46 63 42 33 SI Grades AVG 2003 50 76 37 37 50 44 42 42 42 42 42 44 45 46 46 46 46 46 47 47 48 48 48 48 48 48 48 48 48 48 48 48 48	neering	64 46 Apr-02 50 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 39 59 39 45 50 66 54	Afternood AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 39 59 39 45 50 66 54	49 52 Apr-01 20 67 60 17 33 67 25 33 50 100 67 Mination Apr-01 57 63 40 27 39 74 34	AVG 2001 57 63 40 27 39 74 34	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32 40 82 40	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00 43 56 34 37 38 77 31	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.5 74.8 37.3 AVG 2000 43.5 46.0 37.0 34.5 39.0 79.5	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 79 46 Oct-99 40 56 45 29 41 70 58	AVG 1999 35 58 45 21 58 75 63 75 40 44 79 46 AVG 1999 40 56 45 29 41 70 58	59 50 50 40 33 20 50 0 100 25 0 42 25 50 33 33 40 42 25 50 41 42 42 45 46 46 46 46 46 46 46 46 46 46 46 46 46	AV(1993) 400 333 200 00 1000 255 500 333 AV(1999) 544 655 255 411 388 88 88
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS THERMODYNAMICS SUBJECT CHEMISTRY COMPUTERS DYNAMICS THERMODYNAMICS STATICS THERMODYNAMICS THERMODYNAMICS CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ELUID MECHANICS MAT SCI/ STR MAT.	62 55 44 Table3.	56 45 Apr-03 50 50 30 8 50 67 50 67 46 63 42 33 Nationa Apr-03 50 76 37 37 50 65 42 65 42 65	55.5 44.5 44.5 AVG 2003 50 50 67 50 67 46 63 42 33 I Grades AVG 2003 50 76 37 37 54 65 42 65	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 Apr-02 39 59 39 45 50 66 54 49	Afternood AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 39 59 39 45 50 66 54 49	49 52 52 50 67 60 67 60 67 67 60 67 67 60 67 67 60 67 67 60 67 67 67 67 67 67 67 68 67 69 67 69 67 69 69 67 69 69 67 69 69 69 69 69 69 69 69 69 69 69 69 69	AVG 2001 67 60 67 60 40 27 39 74 34 36 65 62	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32 40 32 40 30	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00 43 56 34 37 38 77 31 61	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 AVG 2000 43.5 46.0 37.0 34.5 39.0 79.5 35.5	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 47 79 46 Oct-99 40 56 45 29 41 70 58 53	AVG 1999 35 58 45 21 58 75 63 75 40 44 79 46 AVG 1999 40 56 45 29 41 70 58 53	59 50 40 33 20 0 100 25 0 42 25 50 33 Apr-98 54 65 25 41 38 88 56 43	AV0 1998 40 33 20 0 100 25 0 42 25 50 33 33 42 25 42 25 42 25 42 25 42 42 42 42 42 43 44 44 45 45 45 45 45 45 45 45 45 45 45
SUBJECT CHEMISTRY COMPUTERS OYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT SCI'STR MAT. MATHEMATICS MECH OF MATL. STATICS THERMODYNAMICS SUBJECT CHEMISTRY COMPUTERS OYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT. CHEMISTRY COMPUTERS OYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT SCI'STR MAT. MATHEMATICS	62 55 44 Table3.	56 45 Lamar C Apr-03 50 50 30 8 50 67 46 63 42 33 Nationa Apr-03 50 76 37 37 54 65 42 62 47	55.5 44.5 44.5 AVG 2003 50 50 67 50 67 46 63 42 33 1 Grades AVG 2003 50 76 37 37 50 42 42 42 42 42 47	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 Apr-02 39 59 39 45 50 66 54 49 62	Afternoo AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 39 59 45 50 66 50 67 63 58 42 42 45 67 67 67 67 67 67 67 67 67 67	49 52 52 50 67 60 17 33 67 25 33 50 100 67 67 63 40 27 39 74 34 36 52	49 52 al Exam AVG 2001 20 67 60 17 33 67 25 33 50 100 67 AVG 2001 57 63 40 27 39 74 34 36 52	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32 40 82 40 82 40 30 42	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00 43 56 34 37 38 77 31 61 49	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 31.5 74.8 37.3 AVG 2000 43.5 37.0 34.5 39.0 79.5 35.5 45.5	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 6 Oct-99 40 56 45 29 41 70 58 53 54	71 45 1999 35 58 45 21 58 75 63 75 40 44 79 46 AVG 1999 40 56 45 29 41 70 58 58 58	59 50 50 50 50 50 50 50 50 50 50 50 50 50	AV0 1998 40 33 20 0 100 25 50 33 33 AV0 1998 42 25 50 1998 42 25 50 42 42 42 42 43 43 44 45 45 45 45 45 45 45 45 45 45 45 45
SUBJECT SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FULID MECHANICS MAT SCI'STR MAT. MATHEMATICS MECH OF MATL. STATICS THERMODYNAMICS	62 55 44 Table3.	56 45 Apr-03 50 50 30 8 50 67 50 67 46 63 42 33 Nationa Apr-03 50 76 37 37 50 65 42 65 42 65	55.5 44.5 44.5 AVG 2003 50 50 67 50 67 46 63 42 33 I Grades AVG 2003 50 76 37 37 54 65 42 65	neering	64 46 Apr-02 50 50 10 33 67 67 50 33 75 63 58 42 Apr-02 Apr-02 39 59 39 45 50 66 54 49	Afternood AVG 2002 50 50 10 33 67 67 50 33 75 63 58 42 AVG 2002 39 59 39 45 50 66 54 49	49 52 52 50 67 60 67 60 67 67 60 67 67 60 67 67 60 67 67 60 67 67 67 67 67 67 67 68 67 69 67 69 67 69 69 67 69 69 67 69 69 69 69 69 69 69 69 69 69 69 69 69	AVG 2001 67 60 67 60 40 27 39 74 34 36 65 62	54 38 nation Oct-00 33 67 40 67 56 78 50 67 33 17 72 33 Oct-00 44 36 40 32 40 32 40 30	Oct-00 20 67 0 17 33 100 50 33 25 75 83 50 Oct-00 43 56 34 37 38 77 31 61	AVG 2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 AVG 2000 43.5 46.0 37.0 34.5 39.0 79.5 35.5	71 45 Oct-99 35 58 45 21 58 75 63 75 40 44 47 79 46 Oct-99 40 56 45 29 41 70 58 53	AVG 1999 35 58 45 21 58 75 63 75 40 44 79 46 AVG 1999 40 56 45 29 41 70 58 53	59 50 40 33 20 0 100 25 0 42 25 50 33 Apr-98 54 65 25 41 38 88 56 43	AV0 1998 40 33 20 0 100 25 0 42 25 50 33 33 42 25 42 25 42 25 42 25 42 42 42 42 42 43 44 44 45 45 45 45 45 45 45 45 45 45 45

SUBJECT	2003	2002	2001	AVG	2000	1999	1998	AVG
				2001-2003			100000000000000000000000000000000000000	1998-2000
CHEMISTRY	82.0	57.7	73	70.9	49.8	59	45	51.3
COMPUTERS	47.7	57.0	100	68.2	39.5	79	57	58.5
DYNAMICS	63.3	63.3	78	68.2	60.8	61	33	51.6
LECTRICAL CIR.	50.0	36.3	58	48.1	56.3	42	42	46.8
ENGINEERING ECO.	33.3	73.3	80	62.2	85.0	70	80	78.3
THICS	86.7	53.3	80	73.3	59.8	85	100	81.6
LUID MECHANICS	54.7	54.0	75	61.2	47.3	66	75	62.8
IAT SCI/ STR MAT.	50.3	21.0	75	48.8	69.0	72	75	72.0
MATHEMATICS	76.3	73.7	58	69.3	57.0	67	50	58.0
MECH OF MATL.	58.3	66.7	75	66.7	59.8	50	75	61.6
STATICS	55.3	75.0	58	62.8	62.8	85	75	74.3
HERMODYNAMICS	48.3	45.0	36	43.1	59.5	50	45	51.5
	Table 6.	Nationa	Grades	(Three Year A	Average): Mo	orning S	ession	
SUBJECT	2003	2002	2001	AVG	2000	1999	1998	AVG
				2001-2003	- 1			1998-2000
CHEMISTRY	63.5	61	64	62.8	53.0	56	54	54.3
COMPUTERS	55.0	62	74	63.7	49.5	61	57	55.8
YNAMICS	61.0	55	61	59.0	51.5	58	55	54.8
LECTRICAL CIR.	39.5	40	56	45.2	39.0	41	45	41.7
NGINEERING ECO.	61.0	68	65	64.7	57.0	57	61	58.3
THICS	68.5	64	80	70.8	73.5	80	80	77.8
LUID MECHANICS	53.0	55	67	58.3	50.5	57	62	56.5
AT SCI/ STR MAT.	53.5	48	59	53.5	49.0	60	54	54.3
ATHEMATICS	64.0	60	57	60.3	53.5	60	64	59.2
ECH OF MATL.	59.5	57	64	60.2	45.0	55	55	51.7
STATICS	55.5	64	49	56.2	49.0	71	59	59.7
	00.0	04						45.5
	44.5	44.5	52	47.0	41.5	45	50	45.5
		44.5	52	47.0	41.5	45	50	45.5
	44.5			47.0				
HERMODYNAMICS	44.5 Table 7.	LamarC	ivil engi	neering Grade	es (Three yea	ar Averaç	ge): Afte	rnoon S
	44.5			neering Grade				rnoon S AVG
HERMODYNAMICS SUBJECT	44.5 Table 7 .	LamarC 2002	ivil engli 2001	AVG 2001-2003	es (Three year	ar Averaç 1999	ge): Afte 1998	rnoon S AVG 1998-2000
SUBJECT	44.5 Table 7 . 2003	LamarC 2002 50	ivil engii 2001 20	AVG 2001-2003 40.0	2000 29.8	1999 35	ge): Afte 1998 40	rnoon S AVG 1998-2000 34.9
SUBJECT CHEMISTRY COMPUTERS	Table 7. 2003 50 50	2002 50 50	2001 2001 20 67	AVG 2001-2003 40.0 55.7	2000 29.8 67.0	1999 35 58	ge): Afte	rnoon S AVG 1998-2000 34.9 52.7
SUBJECT CHEMISTRY COMPUTERS DYNAMICS	Table 7. 2003 50 50 30	2002 50 50 10	2001 2006 67 60	AVG 2001-2003 40.0 55.7 33.3	2000 29.8 67.0 30.0	1999 35 58 45	1998 40 33 20	rnoon S AVG 1998-2000 34.9 52.7 31.7
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR.	7able 7. 2003 50 50 30 8	2002 50 50 10 33	2001 20067 60 17	AVG 2001-2003 40.0 55.7 33.3 19.3	2000 29.8 67.0 30.0 54.5	1999 35 58 45 21	ge): Afte 1998 40 33 20 50	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8
SUBJECT CHEMISTRY COMPUTERS DYNAMICS LECTRICAL CIR. CINGINEERING ECO.	Table 7. 2003 50 50 30 8 50	2002 50 50 10 33 67	2001 20067 60 17 33	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0	2000 29.8 67.0 30.0 54.5 50.3	1999 35 58 45 21	1998 40 33 20 50	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8 36.1
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ENGINEETRICAL CIR. ENGINEERING ECO.	Table 7. 2003 50 50 30 8 50 67	2002 50 50 10 33 67 67	2001 2001 67 60 17 33 67	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0	2000 29.8 67.0 30.0 54.5 50.3 83.5	1999 35 58 45 21 58 75	1998 40 33 20 50 0	rnoon S 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2
SUBJECT HEMISTRY OMPUTERS IYNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS	Table 7. 2003 50 50 30 8 50 67	2002 50 50 10 33 67 67 50	2001 2001 20 67 60 17 33 67 25	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0	1999 35 58 45 21 58 75 63	1998 40 33 20 50 0 100 25	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0
SUBJECT CHEMISTRY COMPUTERS DYNAMICS LECTRICAL CIR. NIGINEERING ECO. CTHICS LUID MECHANICS MAT SCI/STR MAT.	7able 7. 2003 50 50 30 8 50 67 50 67	2002 50 50 10 33 67 67 67 50 33	2001 2006 67 60 17 33 67 25 33	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5	1999 35 58 45 21 58 75 63 75	1998 40 33 20 50 0 100 25 0	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. INGINEERING ECO. ETHICS LUID MECHANICS MAT SCI'STR MAT. MATHEMATICS	50 50 30 8 50 67 50 67	2002 50 50 10 33 67 67 50 33 75	2001 2006 67 60 17 33 67 25 33 50	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0	1999 35 58 45 21 58 75 63 75 40	1998 40 33 20 50 0 100 25 0	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. INGINEERING ECO. ETHICS ELUID MECHANICS MAT SCI'STR MAT. MATHEMATICS	7able 7. 2003 50 50 30 8 50 67 50 67	2002 50 50 10 33 67 67 67 50 33	2001 2006 67 60 17 33 67 25 33	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5	1999 35 58 45 21 58 75 63 75	1998 40 33 20 50 0 100 25 0	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5
SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS IAT SCI/ STR MAT. IATHEMATICS IECH OF MATL.	50 50 30 8 50 67 50 67	2002 50 50 10 33 67 67 50 33 75	2001 2006 67 60 17 33 67 25 33 50	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0	1999 35 58 45 21 58 75 63 75 40	1998 40 33 20 50 0 100 25 0	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7
SUBJECT CHEMISTRY COMPUTERS DYNAMICS LECTRICAL CIR. CINGINEERING ECO. CITHICS LUID MECHANICS HAT SCI/ STR MAT. MATHEMATICS MECH OF MATL. STATICS	Table 7. 2003 50 50 30 8 50 67 50 67 46 63	2002 50 50 10 33 67 67 50 33 67 67 50 33	2001 2001 20 67 60 17 33 67 25 33 50 50	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5	1999 35 58 45 21 58 75 63 75 40 44	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5
THERMODYNAMICS	50 50 30 8 50 67 50 67 46 63 42 33	2002 50 10 33 67 67 50 33 75 63 58 42	2001 2006 67 60 17 33 67 25 33 50 50 100 67	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 41.7 44.3 57.0 58.7 66.7 47.3	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	1999 35 58 45 21 58 75 63 75 40 44 79 46	1998 40 33 20 50 0 100 25 0 42 25 50 33	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8
SUBJECT CHEMISTRY COMPUTERS DYNAMICS EVENTS	Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8.	2002 50 50 10 33 67 67 50 33 75 63 58 42	2001 20067 600 17 33 67 25 33 500 100 67	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	1999 35 58 45 21 58 75 63 75 40 44 79 46	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33	rnoon S AVG 1998-200 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8
SUBJECT CHEMISTRY COMPUTERS DYNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS LAT SCI/STR MAT. MATHEMATICS HECH OF MATL. CTATICS	50 50 30 8 50 67 50 67 46 63 42 33	2002 50 10 33 67 67 50 33 75 63 58 42	2001 2006 67 60 17 33 67 25 33 50 50 100 67	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 441.7 44.3 57.0 66.7 47.3	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	1999 35 58 45 21 58 75 63 75 40 44 79 46	1998 40 33 20 50 0 100 25 0 42 25 50 33	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8
SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS LUID MECHANICS AT SCI/ STR MAT. ATHEMATICS HERMODYNAMICS SUBJECT	Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8.	2002 50 10 33 67 67 50 33 75 63 58 42 Nationa	2001 20 67 60 17 33 67 25 33 50 100 67	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	1999 35 58 45 21 58 75 63 75 40 44 79 46	1998 40 33 20 50 0 100 25 0 42 25 50 33 Session	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8
SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS AT SCI/ STR MAT. ATHEMATICS ECH OF MATL. TATICS HERMODYNAMICS SUBJECT HEMISTRY	44.5 Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8.	2002 50 50 10 33 67 67 50 33 75 63 58 42 National	2001 20 67 60 17 33 67 25 33 50 100 67	AVG 2001-2003 40.0 65.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3 (Three year AVG 2001-2003 48.7	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	1999 35 58 45 21 58 75 63 75 40 44 79 46	1998 40 33 20 50 0 100 25 0 42 25 50 33 Session	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8
SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS AT SCI/ STR MAT. ATHEMATICS ECH OF MATL. TATICS HERMODYNAMICS SUBJECT HEMISTRY OMPUTERS	44.5 Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003	2002 50 50 10 33 67 67 67 50 33 75 63 58 42 Nationa 2002	2001 2001 20 67 60 17 33 67 25 33 50 100 67 4 Grades 2001	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 Average): Aft	1999 35 58 45 21 58 75 63 75 40 44 79 46	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998	rnoon S AVG 1998-2007 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2007 45.8 55.7
SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS AT SCI/STR MAT. ATHEMATICS ECH OF MATL. TATICS HERMODYNAMICS SUBJECT HEMISTRY OMPUTERS YNAMICS	Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003	2002 50 10 33 67 50 33 75 63 33 75 842 Nationa 2002 39 59 39	2001 20 67 60 17 33 67 25 33 50 100 67 I Grades 2001 57 63 40	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3 (Three year AVG 2001-2003 48.7 66.0 38.7	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 Average): Aft	1999 35 58 45 21 58 75 63 75 40 44 79 46	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7
SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS IAT SCI/ STR MAT. IATHEMATICS HERMODYNAMICS SUBJECT HEMISTRY OMPUTERS YNAMICS LECTRICAL CIR.	44.5 Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003	2002 50 10 33 67 67 50 33 75 63 842 Nationa 2002 39 59 39 45	2001 20 67 60 17 33 67 25 33 50 100 67 I Grades 2001 57 63 40 27	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3 (Three year AVG 2001-2003 48.7 66.0 38.7 36.3	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 Average): Aft	1999 35 58 45 21 58 75 63 75 40 44 79 46	1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25 41	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 34.8
SUBJECT HEMISTRY OMPUTERS INAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS IAT SCI/ STR MAT. IATHEMATICS HERMODYNAMICS SUBJECT HEMISTRY OMPUTERS INAMICS LICTRICAL CIR.	Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003	2002 50 10 33 67 50 33 75 63 33 75 842 Nationa 2002 39 59 39	2001 20 67 60 17 33 67 25 33 50 100 67 I Grades 2001 57 63 40	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3 (Three year AVG 2001-2003 48.7 66.0 38.7	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 Average): Aft	1999 35 58 45 21 58 75 63 75 40 44 79 46	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7
SUBJECT CHEMISTRY COMPUTERS SYNAMICS LECTRICAL CIR. NGINEERING ECO. THICS LUID MECHANICS MAT SCI/ STR MAT. MATHEMATICS MECH OF MATL. STATICS HERMODYNAMICS CHEMISTRY COMPUTERS SYNAMICS LICTRICAL CIR. NGINEERING ECO.	44.5 Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 37 54	2002 50 10 33 67 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50	2001 20 67 60 17 33 67 25 33 50 100 67 Grades 2001 57 63 40 27 39	AVG 2001-2003 40.0 65.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 66.7 47.3 47.3 47.3 48.7 66.0 38.7 36.3 47.7	29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3	1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41	1998 40 33 20 50 0 100 25 50 33 3 Session 1998 54 65 25 41 38	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 34.8
SUBJECT CHEMISTRY COMPUTERS SYNAMICS CHICS	Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 37 54 65	2002 50 50 10 33 67 67 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50 66	2001 20067 600 177 33 67 25 33 500 1000 67 I Grades 2001 57 63 40 27 39 74	AVG 2001-2003 48.7 66.0 38.7 36.3 47.7 68.3 40.0	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 Average): Aft 2000 43.5 46.0 37.0 34.5 39.0 79.5	1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41 70	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25 41 38 88	rnoon S AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 36.7 34.8 39.3 79.2
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ELUID MECHANICS MAT SCI/STR MAT. MATHEMATICS MECH OF MATL. ETATICS HERMODYNAMICS CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ELUID MECHANICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS ELUID MECHANICS	Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 37 54 65 42	2002 50 10 33 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50 66 54	2001 20067 600 177 333 67 25 333 500 100 67 I Grades 2001 57 63 40 27 39 74	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 66.7 47.3 (Three year A A A C 2001-2003 48.7 66.0 38.7 36.3 47.7 68.3 43.3	29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 2000 43.5 46.0 37.0 34.5 46.0 37.0 34.5 39.0 79.5	1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41 70 58	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25 41 38 88 56	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 35.7 34.8 39.3 79.2 49.8
SUBJECT CHEMISTRY COMPUTERS DYNAMICS LECTRICAL CIR. NIGINEERING ECO. ETHICS LUID MECHANICS MAT SCI/STR MAT. MATHEMATICS MECH OF MATL. STATICS CHEMISTRY COMPUTERS DYNAMICS LECTRICAL CIR. ENGINEERING ECO. ETHICS CHEMISTRY COMPUTERS COMPUT	Table 7. 2003 50 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 37 54 65 42 62	2002 50 10 33 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50 66 54 49	2001 20 67 60 17 33 67 25 33 50 100 67 I Grades 2001 57 63 40 27 39 74 34 36	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 68.7 66.7 47.3 (Three year AVG 2001-2003 48.7 66.0 38.7 36.3 47.7 68.3 43.3 49.0	29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 2000 43.5 46.0 37.0 34.5 39.0 79.5 35.5 45.5	1999 35 58 45 21 58 75 63 75 40 44 47 79 46 1999 40 56 45 29 41 70 58 58 53	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25 41 38 88 88 86 64	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 34.8 39.3 79.2 49.8
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ENGINEERING ECO. ETHICS LUID MECHANICS MAT SCI/STR MAT. MATHEMATICS HERMODYNAMICS SUBJECT CHEMISTRY COMPUTERS DYNAMICS LUID MECHANICS CHEMISTRY COMPUTERS DYNAMICS LUID MECHANICS LUID MECHANICS LUID MECHANICS LUID MECHANICS MAT SCI/STR MAT. MATHEMATICS	44.5 Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 37 54 65 42 62 47	2002 50 10 33 67 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50 66 54 49 62	2001 20 67 60 17 33 67 25 33 50 100 67 I Grades 2001 57 63 40 27 39 74 34 36 52	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3 47.3 47.3 48.7 66.0 38.7 36.3 47.7 68.3 43.9 49.0 53.7	29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 2000 43.5 46.0 37.0 34.5 39.0 79.5 45.5 45.5	1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41 70 58 53 54	1998 40 33 20 50 0 1000 25 50 33 3 Session 1998 54 65 25 41 38 88 56 43 51	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 36.7 36.7 36.7 46.8 46.8 46.8 46.8 46.8 46.8 46.8 46.8
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS LUID MECHANICS MAT SCI/STR MAT. MATHEMATICS MECH OF MATL. ETATICS HERMODYNAMICS COMPUTERS DYNAMICS ELUID MECHANICS COMPUTERS DYNAMICS ELUID MECHANICS ENGINEERING ECO. ETHICS LUID MECHANICS MAT SCI/STR MAT. MATHEMATICS MAT SCI/STR MAT. MATHEMATICS MECH OF MATL.	Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 54 65 42 62 47 25	2002 50 50 10 33 67 67 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50 66 54 49 62 52	2001 20067 600 177 33 67 25 33 500 1000 67 I Grades 2001 57 63 40 27 39 74 34 36 52 49	AVG 2001-2003 44.7 66.0 38.7 36.3 47.7 68.3 43.3 49.0 55.7 42.0	2000 29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 Average): Aft 2000 43.5 46.0 37.0 34.5 39.0 79.5 35.5 45.5 41.0	1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41 70 58 53 54 42	ge): Afte 1998 40 33 20 50 0 100 25 0 42 25 50 33 Session 1998 54 65 25 41 38 88 56 43 38 88 56 43 34	AVG 1998-2000 34.9 52.7 31.7 41.8 36.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 36.7 34.9 49.8 47.2 50.2 39.0
SUBJECT CHEMISTRY COMPUTERS SYNAMICS COMPUTERS SYNAMICS CHICS CHIC	44.5 Table 7. 2003 50 50 30 8 50 67 50 67 46 63 42 33 Table 8. 2003 50 76 37 37 54 65 42 62 47	2002 50 10 33 67 67 50 33 75 63 58 42 Nationa 2002 39 59 39 45 50 66 54 49 62	2001 20 67 60 17 33 67 25 33 50 100 67 I Grades 2001 57 63 40 27 39 74 34 36 52	AVG 2001-2003 40.0 55.7 33.3 19.3 50.0 67.0 41.7 44.3 57.0 58.7 66.7 47.3 47.3 47.3 48.7 66.0 38.7 36.3 47.7 68.3 43.9 49.0 53.7	29.8 67.0 30.0 54.5 50.3 83.5 50.0 58.5 31.0 31.5 74.8 37.3 2000 43.5 46.0 37.0 34.5 39.0 79.5 45.5 45.5	1999 35 58 45 21 58 75 63 75 40 44 79 46 1999 40 56 45 29 41 70 58 53 54	1998 40 33 20 50 0 1000 25 50 33 3 Session 1998 54 65 25 41 38 88 56 43 51	AVG 1998-2000 34.9 52.7 31.7 41.8 36.1 86.2 46.0 44.5 37.7 33.5 67.9 38.8 AVG 1998-2000 45.8 55.7 36.7 36.7 36.7 46.8 46.8 46.8 46.8 46.8 46.8 46.8 46.8

	Table 9.	Three Ye	ear ratio	s: Morning Ex	amination			
SUBJECT	2003	2002	2001	AVG	2000	1999	1998	AVG
				2001-2003				1998-2000
CHEMISTRY	1.29	0.95	1.14	1.13	0.94	1.05	0.83	0.94
COMPUTERS	0.87	0.92	1.35	1.07	0.80	1.30	1.00	1.05
DYNAMICS	1.04	1.15	1.28	1.16	1.18	1.05	0.60	0.94
ELECTRICAL CIR.	1.27	0.91	1.04	1.07	1.44	1.02	0.93	1.12
ENGINEERING ECO.	0.55	1.08	1.23	0.96	1.49	1.23	1.31	1.34
ETHICS	1.27	0.83	1.00	1.04	0.81	1.06	1.25	1.05
FLUID MECHANICS	1.03	0.98	1.12	1.05	0.94	1.16	1.21	1.11
MAT SCI/ STR MAT.	0.94	0.44	1.27	0.91	1.41	1.20	1.39	1.33
MATHEMATICS	1.19	1.23	1.02	1.15	1.07	1.12	0.78	0.98
MECH OF MATL.	0.98	1.17	1.17	1.11	1.33	0.91	1.36	1.19
STATICS	1.00	1.17	1.18	1.12	1.28	1.20	1.27	1.24
THERMODYNAMICS	1.09	1.01	0.69	0.92	1.43	1.11	0.90	1.13
	Table 10).Three \	ear Rat	ios: Afternoor	n General Ex	am		1
SUBJECT	2003	2002	2001	AVG	2000	am 1999	1998	AVG
SUBJECT	2003						1998	AVG 1998-2000
CHEMISTRY		2002	2001	AVG 2001-2003 0.82			0.74	1998-2000 0.76
CHEMISTRY COMPUTERS	2003 1.00 0.66	2002 1.28 0.85	2001 0.35 1.06	AVG 2001-2003 0.82 0.84	2000	1999 0.88 1.04	0.74 0.51	1998-2000 0.76 0.95
CHEMISTRY COMPUTERS DYNAMICS	2003 1.00 0.66 0.81	2002 1.28 0.85 0.26	2001 0.35 1.06 1.50	AVG 2001-2003 0.82 0.84 0.86	2000 0.68 1.46 0.81	1999 0.88 1.04 1.00	0.74 0.51 0.80	1998-2000 0.76 0.95 0.89
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR.	2003 1.00 0.66 0.81 0.22	2002 1.28 0.85 0.26 0.73	2001 0.35 1.06 1.50 0.63	AVG 2001-2003 0.82 0.84 0.86 0.53	2000 0.68 1.46 0.81 1.58	1999 0.88 1.04 1.00 0.72	0.74 0.51 0.80 1.22	1998-2000 0.76 0.95 0.89 1.20
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR.	2003 1.00 0.66 0.81	2002 1.28 0.85 0.26 0.73 1.34	2001 0.35 1.06 1.50 0.63 0.85	AVG 2001-2003 0.82 0.84 0.86	2000 0.68 1.46 0.81	1999 0.88 1.04 1.00 0.72 1.41	0.74 0.51 0.80	1998-2000 0.76 0.95 0.89 1.20 0.92
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS	2003 1.00 0.66 0.81 0.22	2002 1.28 0.85 0.26 0.73	2001 0.35 1.06 1.50 0.63 0.85 0.91	AVG 2001-2003 0.82 0.84 0.86 0.53	2000 0.68 1.46 0.81 1.58	1999 0.88 1.04 1.00 0.72	0.74 0.51 0.80 1.22	1998-2000 0.76 0.95 0.89 1.20 0.92 1.09
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS	2003 1.00 0.66 0.81 0.22 0.93	2002 1.28 0.85 0.26 0.73 1.34 1.02 0.93	2001 0.35 1.06 1.50 0.63 0.85	AVG 2001-2003 0.82 0.84 0.86 0.53 1.05	2000 0.68 1.46 0.81 1.58 1.29	1999 0.88 1.04 1.00 0.72 1.41 1.07 1.09	0.74 0.51 0.80 1.22 0.00	1998-2000 0.76 0.95 0.89 1.20 0.92
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS	2003 1.00 0.66 0.81 0.22 0.93 1.03	2002 1.28 0.85 0.26 0.73 1.34 1.02	2001 0.35 1.06 1.50 0.63 0.85 0.91	AVG 2001-2003 0.82 0.84 0.86 0.53 1.05	2000 0.68 1.46 0.81 1.58 1.29 1.05	1999 0.88 1.04 1.00 0.72 1.41 1.07	0.74 0.51 0.80 1.22 0.00 1.14	1998-2000 0.76 0.95 0.89 1.20 0.92 1.09
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT SCI/STR MAT.	2003 1.00 0.66 0.81 0.22 0.93 1.03 1.19	2002 1.28 0.85 0.26 0.73 1.34 1.02 0.93	2001 0.35 1.06 1.50 0.63 0.85 0.91 0.74	AVG 2001-2003 0.82 0.84 0.86 0.53 1.05 0.98	2000 0.68 1.46 0.81 1.58 1.29 1.05 1.41	1999 0.88 1.04 1.00 0.72 1.41 1.07 1.09	0.74 0.51 0.80 1.22 0.00 1.14 0.45	1998-2000 0.76 0.95 0.89 1.20 0.92 1.09 0.92
CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT SCI/STR MAT. MATHEMATICS	2003 1.00 0.66 0.81 0.22 0.93 1.03 1.19 1.08	2002 1.28 0.85 0.26 0.73 1.34 1.02 0.93 0.67	2001 0.35 1.06 1.50 0.63 0.85 0.91 0.74	AVG 2001-2003 0.82 0.84 0.86 0.53 1.05 0.98 0.96	2000 0.68 1.46 0.81 1.58 1.29 1.05 1.41 1.29	1999 0.88 1.04 1.00 0.72 1.41 1.07 1.09	0.74 0.51 0.80 1.22 0.00 1.14 0.45	1998-2000 0.76 0.95 0.89 1.20 0.92 1.09 0.92 0.94
SUBJECT CHEMISTRY COMPUTERS DYNAMICS ELECTRICAL CIR. ENGINEERING ECO. ETHICS FLUID MECHANICS MAT SCI/STR MAT. MATHEMATICS MECH OF MATL. STATICS	2003 1.00 0.66 0.81 0.22 0.93 1.03 1.19 1.08 0.98	1.28 0.85 0.26 0.73 1.34 1.02 0.93 0.67 1.21	2001 0.35 1.06 1.50 0.63 0.85 0.91 0.74 0.92 0.96	AVG 2001-2003 0.82 0.84 0.86 0.53 1.05 0.98 0.96 0.90	2000 0.68 1.46 0.81 1.58 1.29 1.05 1.41 1.29 0.68	1999 0.88 1.04 1.00 0.72 1.41 1.07 1.09 1.42 0.74	0.74 0.51 0.80 1.22 0.00 1.14 0.45 0.00 0.82	1998-2000 0.76 0.95 0.89 1.20 0.92 1.09 0.92 0.94 0.75

Т	able 11. Six Year Ratios	
SUBJECT	MORNING	AFTERNOON
CHEMISTRY	1.04	0.79
COMPUTERS	1.06	0.89
DYNAMICS	1.05	0.87
ELECTRICAL CIR.	1.09	0.86
ENGINEERING ECO.	1.14	0.99
ETHICS	1.04	1.04
FLUID MECHANICS	1.08	0.94
MAT SCI/ STR MAT.	1.12	0.92
MATHEMATICS	1.07	0.91
MECH OF MATL.	1.15	1.14
STATICS	1.18	1.23
THERMODYNAMICS	1.02	1.11