

GOVERNEMENT OF KERALA

Abstract

Education- Technical-Post Diploma course in Industrial Safety Engineering- conduct of examination- regulations- approved

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HIGHER EDUCATION ( J ) DEPARTMENT

G O M S 199/86/H Edn

Dated Trivandrum 17<sup>th</sup> July 1986

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Read:1. G O (RT) 193/84/H Edn dated 25/7/84.

2. Letter No. T3/ 84/26167/84 dated 7/2/86 fro the Director of Technical Education

ORDER

As per orders in the GO read as above, sanction was accorded to the Director of Technical Education to organize 6 months evening course in Industrial Safety for the benefit of Engineers in Industry and Supervisory Development Centre Kalamassery. In order to have the course recognized as an essential qualification for the Safety Engineers/ Inspectors/ Managers/ Officers , the Director of Technical Education has requested that it is essential that the duration of the course is extended to two semesters and that the final examination be conducted by the State Board of Technical Education.

Government accepted the suggestion and are pleased to approve the regulation as appended to the GO for the conduct of the course and examination. \*

(By Order of the Governor)

K L George  
Under Secretary

To

The Director of Technical Education, Trivandrum  
The Accountant general (A&E/Audit), Trivnadrum

Forwarded/By order  
Sd/-

Section Officer

**REGULATIONS FOR THE CONDUCT OF EXAMINATION FOR  
THE DIPLOMA COURSE IN INDUSTRIAL SAFETY ENGINEERING**  
(as per G O (MS) 199/86/H.Edn. dated 17/07/'86)

**1. Instruction and organisation on of the course:**

The course shall be of one year duration. It shall be organized in 2 Semesters each having a duration of 6 months.

**2. Eligibility for admission:**

A basic Degree in any Branch of Engineering or a Diploma in any Branch of Engineering with 2 years experience in an Industrial/Commercial establishment.

**3. Scheme of study:**

There will be 4 subjects in each Semester. A project report has to be submitted at the end of the II Semester. The two semesters will have the following subjects.

**I SEMESTER**

Sl. No	Subject	Lecture hours	Assignment	MARKS			
				Written Exam	Sessional Marks		Total
1	Accident Prevention -I	30 hrs	2	100	50		150
2	Accident Prevention -II	30 hrs	2	100	50		150
3	Fire Prevention	30 hrs	2	100	50		150
4	Occupation Health and Hygiene	30 hrs	2	100	50		150
Total		<b>120</b>		<b>400</b>	<b>200</b>		<b>600</b>

## II SEMESTER

Sl. No	Subject	Lecture hours	Assignment	MARKS			
				Written Exam	Sessional Marks	Viva Voce	Total
1	Communication	30 hrs		100	50		150
2	Advanced Safety Management	30 hrs		100	50		150
3	Safety & Law Part A&B	30 hrs		100	50		150
4	Safety in Engg. Industry	30 hrs		100	50		150
5	Project & Viva - Voce				150	50	200
Total				<b>400</b>	<b>350</b>	<b>50</b>	<b>800</b>

**Total Aggregate marks for I and II Semester together: 1400**

#### **4. Examinations:**

- (i) The first Semester examination shall be conducted internally.
- (ii) The Second Semester examination shall be conducted by the State Board of Technical Education.

#### **5. Eligibility for appearing the examination**

- (i) Minimum of 80% attendance in each Semester.
- (ii) Satisfactory conduct during the course.
- (iii) For appearing for the Second Semester examination, candidate shall have completely passed the First Semester examination.

#### **6. Eligibility for promotion to Second Semester**

A candidate who has Registered for the First Semester examination shall be promoted to the Second semester class.

#### **7. Conditions for pass**

- 1) A candidate shall be deemed to have passed a subject if he secures a minimum of 40% marks in the written examination and 50% marks for written examination and Sessional marks taken together.
- 2) The candidate shall be deemed to have passed a Semester examination if he/she passed all the subjects in that Semester and secures at least 50% of the aggregate marks for that Semester and the minimum of 60% of the total sessional marks.
- 3) The candidate shall secure 50% marks for the Project work.

- 4) A candidate shall be deemed to have passed the course of study and eligible for the award of the Post Diploma if he/she passes all the Semester examinations.
- 5) If a candidate fails in the sessional marks alone in a Semester, he has to completely undergo the course of study of that Semester, and if a candidate fails in a subject, he/ she need appear for the examination for that subject only.

### **7. Classification of Results**

- i) A candidate shall be placed in the First class if he/ she secures 60% or above of the aggregate marks for I and II Semesters taken together and has passed these examinations in the first chance itself.
- ii) All other successful candidates shall be placed in the Second class.

### **8. Examination fee**

A candidate appearing for the Second Semester examination shall pay an examination fee of Rs. 150/-

### **9. Remuneration for conducting examination**

Question Paper setters, Examiners, Invigilators and Viva voce Examiners shall be paid remuneration as per the norms already existing for similar Post Diploma examinations conducted by the State Board of Technical Education.

Sd/-

Section Officer

(\* These rules have been revised. Please see the revised rules and regulations given separately.)

## **Revised Rules & Regulations for Diploma Examinations in Industrial safety Engineering/Fire & Safety Engineering**

1. The Examinations will be conducted by the Controller of Technical Examinations of Kerala at the end of each semester.
2. The examination will be in accordance with the revised curricula and syllabi implemented.
3. Candidate will be given 4 chances including the Regular Examinations. If, even after the 4 chances he or she fails to get pass mark in the subject, he or she has to appear for the exam in the subject or in the subject declared as equivalent, as per the revised syllabi either by attending classes conducted by the centre or by self study
4. Immediately after the admission is over, the heads of Institutions will forward the Branch wise list of students in the prescribed form (given in the Web site) along with the affiliation fee. The Name and Initials, Date of birth, Caste etc of the students must be exactly the same as in their SSLC /THSLC/ SSC or equivalent Certificate. Each student will be allotted a permanent Register Number from this office. Corrections in name, initials etc, if any, should be done early before the First Semester Examinations at the initiative of the head of institution concerned. Fine will be charged for corrections in the Mark lists and Certificates later. The permanent Register Number will be used for both semesters for Regular and Supplementary appearances.  
There will be no change in the Register Number in case of re-admissions as far as the candidate does not change from one scheme to another scheme of study. If a student is changing over to another scheme consequent to re-admission, he has to apply to this office for new Register Number through Principal. In such cases he has to attend the examinations of further semesters as well as additional subjects, if any, in the new Reg. No. At the same time Supplementary Exams of the previous scheme should be attended in the previous Register Number itself. Such candidates will be issued Diploma Certificate only after passing the whole examinations including additional subjects, if any, in the respective Register Numbers.
5. Attendance  
A candidate must secure a minimum of 80% attendance in Semester, in order to secure the eligibility to appear for Each Semester Examinations.  
In the case of those students with 65% or more attendance but could not attain 80% attendance due to Medical reasons, the head of Institution, at his/ her discretion, may grant the eligibility to appear for the examination, subject to the remittance of “Condonation fee”, fixed by the Government from time to time.  
Students who have secured less than 65% attendance are not eligible to apply for “Condonation”, and will not be allowed to appear for the examination under any circumstances.  
Students who have shortage of attendance, but not condoned, in any semesters are not eligible to be promoted to the higher semesters. They may seek re-admission in the same semester.

6. The scheme of evaluation shall consist of (1) Internal assessment (Sessional) and (2) End Semester examinations in Theory and Practical Subjects. The marks for End Semester Examinations, and Internal Assessment, both for the Theory and Practical papers will be 100 and 50 respectively. Details of break up of marks are given in the Scheme of Study

7 Award of Internal assessment marks.

a) In respect of theory subjects the award of Internal assessment mark will be on a Continuous Evaluation method, based on tests, assignments and attendance in the proportion of 40% for tests, 40% for test assignments and 20% for attendance. There will be a minimum of two tests and Two Assignments, and all the 2 Test papers and 2 Assignments are taken in to account for the calculation of Final Internal Assessment Marks.

b) Split up of Internal Assessment Marks.

A. Attendance:

Sl.No	Percentage of Attendance	Marks to be awarded (Computed for 10 Marks)
1	Below 65	Zero
2	65 to 79	4
3	80 to 84	5
4	85 to 89	6
5	90 to 94	8
6	95 and above	10

B. Practical:

Sl No	Criteria Component	Marks to be awarded
1	Observation/ Rough Record	20%
2	Fair Record (Timely Submission, Accuracy and Neatness)	20%
3	Lab Attendance	20%
4	Computer lab tests	40%

Percentage of Attendance for that particular subject only is counted here.

C. Seminar

Sl.No	Criteria Component	Marks to be awarded
1	Relevance of Topic	10%
2	Collection of materials	20%
3	Presentation (Presentation using Audio visual Projectors and Delivery)	40%
4	Question-Answer/ Discussion	20%
5	Seminar Report	10%

D. Project Work

Sl.No	Criteria Component	Marks to be awarded
1	Relevance of Project Work & Selection of languages and programming tools	10%
2	Knowledge in the language and the project topic	10%
3	Preparation of SRS,UML Diagrams/ data flow diagrams etc	20%
4	Proficiency in Design, coding and testing the project work	30%
5	Role of the candidate in the project Team	20%
6	Project Report	10%

c).The faculty concerned will maintain a record of all details regarding Attendance and Internal Assessment marks awarded in the prescribed log book. The students can represent their grievances, if any, in respect of marks awarded, to the concerned Head of institution for clarification.

d) The students are required to keep a record of all their laboratory exercise performed by them in the form of a laboratory record. This record has to be authenticated by the teacher in charge of the laboratory before he is allowed to take the practical examinations. No students will be permitted to take any practical examinations without bona fide Record

## 8. END SEMESTER EXAMINATIONS

In each theory subject, there will be an end examination in each Semester conducted by the Board of Technical examination, Kerala State as per the pre-announced notification of examinations. The time table for the examination will also be informed to the students ahead of their conduct.

No candidate will be eligible to register for any semester examination unless he/she secure a minimum 60% of total sessional marks in the semester. Candidates should repeat the entire semester if he/she fails to fulfill the above conditions.

- 9 The Examination fees will be fixed by the Government. The course fee should be remitted within the date announced by the Controlling Officer. Otherwise a superfine of Rs.200/- will be imposed for every fortnight to institution authorities. The present fee structure as follows.

Affiliation fee Rs.500 per student  
 Whole Exam fee (Regular) Rs.1000  
 Supplementary Rs.500 per subjects

- 10 Candidate will not be allowed to appear for examination in piecemeal. If in case this is happened, the candidate's registration shall be automatically cancelled at any stage of the examination process:

- 11 There will be provision for the cancellation of the candidature for an examination provided an application in the prescribed form along with cancellation fee is to be given to the Controller of Technical Examinations within 7 days after the conduct of last paper in the theory examination. Cancellation is allowed only once per semester. Candidates reported for malpractice will not be eligible for cancellation.
- 12 There will be provision for revaluation of answer books of theory examinations provided an application is given to the Controller of Technical Examinations within 15 days after the publication of examinations results, along with the prescribed revaluation fee. (Fee for revaluation and scrutiny of answer script is the same as the Diploma Examination)
- 13 There will not be any revaluation for practical subjects
- 14 **Minimum marks for a pass**  
A candidate must secure a minimum of 40% marks in the End Semester examination in Theory, Practical and 50% for total (Internal+ Theory/ Practical) for a pass in each subject.  
Candidate must secure 50% marks for the project work.  
Candidate must secure a minimum 50% of the aggregate (Internal & External) mark for the semester and a minimum of 60% to the total internal marks for the semester.
- 15 **Rules for promotion to the Higher Semesters**  
Candidates shall be allowed to go to the next higher Semester, if he/she completed the previous Semester and has fulfilled the conditions of attendance required and registered for the concerned semester examination.
- 16 **Classification of successful candidates**  
Candidates shall be declared to have passed course only if he/ she has secured a Pass in all the theory and practical subjects in all the Semesters of Study.  
There will be 3 classifications of passed candidates namely, First class with Distinction, First Class and Second Class  
The total marks of both semesters shall be considered to classify the successful candidates. The marks obtained in all the semesters will be added the percentage of marks is worked out.  
**FIRST CLASS WITH DISTINCTION:**  
A passed candidate will be declared to have passed the Course in First Class with Distinction if he/ she secures not less than 75% of the aggregate marks (I Semester + II Semester) and passes both semesters in the first appearance itself, within the stipulated period of normal study, ie, Two consecutive semesters without any break.  
**FIRST CLASS**  
A passed candidate will be declared to have passed the Course in First Class with Distinction if he/ she secures not less than 75% of the aggregate marks (I Semester + II Semester) and passes both semesters in the first appearance itself, within the stipulated period of normal study, ie, Two consecutive semesters without any break.  
**SECOND CLASS**  
All other successful candidates will be declared to have passed in the Second class



17 If a candidate discontinues the course, after completing one semester and then leaves the course, he or she shall be considered for the award diploma only if he or she shall complete the course by proper readmission as per rules within a span of 4 Years, from the date of registration.

18 Scheme of Study

### Industrial Safety Engineering – First Semester

Code .No	Subject	Theory/ Pract	Marks		Total
			Internal	Written	
101	Accident Prevention, Investigation & Analysis	T	50	100/40	150/75
102	Safety in Electrical Systems	T	50	100/40	150/75
103	Safe working condition & their development	T	50	100/40	150/75
104	Training & Communication	T	50	100/40	150/75
105	Legal Aspects of Safety	T	50	100/40	150/75
<b>Total</b>			<b>250/150</b>		<b>750/375</b>

### Industrial Safety Engineering – Second Semester

Code .No	Subject	Theory/ Pract	Marks		Total
			Internal	Written	
201	Fire Engineering	T	50	100/40	150/75
202	First Aid Emergency Procedures	T	50	100/40	150/75
203	Safety in Chemical Industry	T	50	100/40	150/75
204	Industrial Hygiene	T	50	100/40	150/75
205	Seminar	T	50		50/25
206	Project Work			50/25	
207	Lab Work		50		50/25
<b>Total</b>			<b>300/180</b>		<b>750/375</b>

### Fire Safety Engineering – First Semester

Code .No	Subject	Theory/ Pract	Marks		Total
			Internal	Written	
101	Fire Prevention	T	50	100/40	150/75
102	Fire Extinction	T	50	100/40	150/75
103	Fire Engineering Service	T	50	100/40	150/75
104	General Subjects	T	50	100/40	150/75
105	Stand I	P	50	100/40	150/75
106	Stand II	P	50	100/40	150/75
107	Stand III	P	50	100/40	150/75
<b>Total</b>			<b>350/210</b>		<b>1050/525</b>

### Fire Safety Engineering – Second Semester

Code .No	Subject	Theory/ Pract	Marks		Total
			Internal	Written	
201	Fire Service Organization Management	T	50	100/40	150/75
202	Fire & Law	T	50	100/40	150/75
203	Fire Safety	T	50	100/40	150/75
204	Fire Engineering	T	50	100/40	150/75
205	Stand IV	P	50	100/40	150/75
206	Stand V	P	50	100/40	150/75
207	Stand VI	P	50	100/40	150/75
208	Seminar	T	50		50/25
209	Project Work			50/25	50/25
<b>Total</b>			<b>400/240</b>		<b>1150/575</b>

### One Year Diploma in Fire & Safety – First Semester

Code .No	Subject	Theory/ Pract	Marks		Total
			Internal	Written	
101	Fire Engineering Science - Part I	T	50	100/40	150/75
102	Fire Technology -Part I	T	50	100/40	150/75
103	Fire Prevention Protection & Safety - Part I	T	50	100/40	150/75
104	Fire Service Organization Management - Part I	T	50	100/40	150/75
105	Physical Training	P	50	100/40	150/75
106	Fire Ground Drill	P	50	100/40	150/75
<b>Total</b>			<b>300/180</b>		<b>900/450</b>

### One Year Diploma in Fire & Safety – Second Semester

Code .No	Subject	Theory/ Pract	Marks		Total
			Internal	Written	
201	Fire Engineering Science - Part II	T	50	100/40	150/75
202	Fire Technology -Part II	T	50	100/40	150/75
203	Fire Prevention Protection & Safety - Part II	T	50	100/40	150/75
204	Fire Service Organization Management - Part II	T	50	100/40	150/75
205	Rescue Drill	P	50	100/40	150/75
206	Seminar	P	50		150/75
207	Project	P	100	100/40	200/100
<b>Total</b>			<b>400/240</b>		<b>1000/500</b>