APPENDIX-I
(See Rule-3)

SYLLABUS FOR THE MAIN EXAMINATION

Paper-I
General Hindi and General English
Total Marks: 100

The General Hindi and General English paper shall be composite paper, consisting of two segments, namely (i) Hindi and (ii) English. Both the segments shall be of equal weightage i.e. each of 50 marks. The purpose of the paper is to test the working knowledge of the candidates in the above two languages. As such the questions to be asked in both the segments of this paper shall be of matric standard only and shall be confined to the following areas:-

(A)	**General Hindi:**			**50 marks**
	(क)	निबंध (400 शब्दों का)	–	15 अंक
	(ख)	व्याकरण	–	15 अंक
	(ग)	वाक्य विन्यास	–	10 अंक
	(घ)	संक्षेपण	–	10 अंक

(B)	**General English :**			**50 marks**
	1.	Essay (400 words)	-	15 marks
	2.	Grammar	-	15 marks
	3.	Comprehension	-	10 marks
	4.	Precis	-	10 marks

It will be only a qualifying paper in which out of 100 (combined both Hindi & English) every candidate will have to secure only 30 marks.

The marks obtained in this paper will not be counted for the preparation of merit list.

Syllabus of Factory Inspector Examination:

Engineering
Paper-I
Total Marks: 200

Sl.No.	Subject	Marks
1	**Industrial safety, Occupational Health and Environment:** Evaluation Concepts, Policies and Legal Framework.	20
2	**Quantitative Risk Assessment:** Consequence Analysis, Damage modeling, FTA, ETA, Uncertainty in risk assessment, Dispersion models, Source models, Software applications**.**	40
3	**Process Safety and System safety analysis:** PHA, HAZAN, HAZOP, System life cycle and safety consideration.	30
4	**Engineering Design:** Design for Safety, Structural Design Safety, Plant Layout, Pressure system design, Control System Design including relief and relief design, Process design, Change Control, Fail Safe Condition, Electrical Safety, Fire Safety.	60
5	**Occupational Health:** Fitness to the job, Risks likely to impact the worker's occupational Health, Surveillance programs & their Effectiveness, Records.	30
6	**Labour Welfare:** Amenities and their Maintenance	20
	Total	200

Engineering
Paper-II
Total Marks: 200

Sl.No.	Subject	Marks
1	**System Reliability, Maintenance and Safety:** Reliability predication, System reliability, Reliability of Complex system, Fault diagnosis, Software applications. Maintainability, Maintenance activities and policies, RCM, RBM Life cycle costing.	40
2	**Ergonomic and System Safety:** Anthropometry, Working posture analysis, Work Station Design, Human error Quantification and preservation, Cognitive modeling, Safety critical system and human reliability, Musculoskeletal Disorders, Measurement and evalution, Preventive Measures and workplace Stress, Effect of Technology, Design and Job Stress and MSDs. Task/Job analysis for Job Control.	70
3	**Safety Management and Work Environment:** Procedure for incident investigation, Accident analysis, Engineering and	70

	Administration Control, Behavioral safety, Interactions amongst man-machine- work environment, Safety performance analysis and monitoring, Organization for safety, System Safety integration software.	
4	**Waste & Effluent Management & Disposal:** Types of industrial effluents & wastes- The methods of treatment and their disposal.	**20**
	Total	**200**

Syllabus of Boiler Inspector Examination:

Engineering
Paper-I
Total Marks: 200

Sl.No.	Subject	Marks
1	Calculation of Load, areas, volume, quantities and weight.	**20**
2	Description of different types of boiler and calculation of working pressure of boiler.	**20**
3	Calculation of stress	**40**
4	Working management of steam boiler, superheater and economizer	**30**
5	Use and purpose of various valves, cocks, mountings, fittings and safety devices	**10**
6	Description and function of BFP, feed injector, feed regulator, feed water filters and softeners, feed heaters, air heaters, clarifiers, accumulators, F.D. Fans, I.D. Fans. Drafts system and draft control devices	**30**
7	Combustion system, Overall efficiency of boiler	**30**
8	Foundation of boiler and chimney and height of chimney	**20**
	Total	**200**

Engineering
Paper-II
Total Marks: 200

Sl.No.	Subject	Marks
1	Condensation, reheating and steam expanstion	20
2	Description and principles of strokers, pulverizers, gas, oil and pulverized fuel system	10
3	Cleaning method of boiler, PH value of water	10
4	Detect defects in boiler and remedial measures	40
5	Start up of boiler	20
6	Economizer	10
7	Fuel economy and instrumentation of boiler	20
8	Materials used for construction of boiler and piping	30
9	Sketch and drawing of boiler, boiler component and mountings	40
	Total	200

झारखण्ड राजकीय मुद्रणालय, राँची द्वारा प्रकाशित एवं मुद्रित,
झारखण्ड गजट (असाधारण) 153 -- 50