

## **SCHEME AND SYLLABUS FOR THE POST OF INSPECTOR OF FACTORIES IN A.P. FACTORIES SERVICE**

### **SCHEME OF THE EXAMINATION** **(Degree Standard)**

| <b>WRITTEN EXAMINATION<br/>(Objective Type)</b>  |   | No. Of<br>Question | Duration in<br>Minutes | Maximum<br>Marks |
|--|---|--------------------|------------------------|------------------|
| Paper - I  | GENERAL STUDIES AND MENTAL<br>ABILITY                         | 150                | 150                    | 150              |
| Paper - II   | Industrial and Occupational<br>Safety, Health and Environment | 150                | 150                    | 300              |
|  |   |                    | Total                  | 450              |
| <b>NEGATIVE MARKS: As per G.O.Ms. No.235, Finance (HR-I, Plg &amp; Policy) Dept., Dt. 06/12/2016, for each wrong answer will be penalized with 1/3rd of the marks prescribed for the question.</b> |   |                    |                        |                  |

### **SYLLABUS**

#### **PAPER-I: GENERAL STUDIES AND MENTAL ABILITY**

1. Events of national and international importance.
2. Current affairs- international, national and regional.
3. General Science and its applications to the day to day life Contemporary developments in Science & Technology and information Technology.
4. Social- economic and political history of modern India with emphasis on Andhra Pradesh.  
**(Starts from 1707 AD)**
5. Indian polity and governance: constitutional issues, public policy, reforms and e-governance initiatives with specific reference to Andhra Pradesh.
6. Economic development in India since independence with emphasis on Andhra Pradesh.
7. Physical geography of Indian sub-continent and Andhra Pradesh.
8. Disaster management: vulnerability profile, prevention and mitigation strategies, Application of Remote Sensing and GIS in the assessment of Disaster.
9. Sustainable Development and Environmental Protection
10. Logical reasoning, analytical ability and data interpretation.
11. Data Analysis:
  - a) Tabulation of data
  - b) Visual representation of data
  - c) Basic data analysis (Summary Statistics such as mean, median, mode, variance and coefficient of variation) and Interpretation
12. Bifurcation of Andhra Pradesh and its Administrative, Economic, Social, Cultural, Political, and Legal implications/problems.

## Paper – II

### Industrial and Occupational Safety, Health and Environment

1. **Industrial Safety, Occupational Health and Environment:** Evolution Concepts, Policies and Legal framework.
2. **Quantitative Risk Assessment:** Consequence analysis, Damage modeling, FTA, ETA, Uncertainty in risk assessment, Dispersion models, Source models, Software applications.
3. **Process Safety and System Safety Analysis:** PHA, HAZAN, HAZOP, System life cycle and safety consideration.
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.
5. **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.
6. **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 evaluation, Preventive Measures and Workplace Stress, Effect of Technology, Design and Job Stress and MSDs, Task/Job Analysis for Job Control.
7. **Safety Management and Work Environment:** Procedure for incident investigation, Accident analysis, Engineering and Administration control, Behavioral safety, Interactions amongst man-machine-work environment, Safety performance analysis and monitoring, Organization for safety, System Safety Integration software.
8. **Occupational Health:** Fitness to the job, Risks likely to impact the worker's occupational Health, Surveillance programs & their Effectiveness, Records.
9. **Labour Welfare:** Amenities and their maintenance.
10. **Waste & Effluent Management & Disposal:** Types of industrial effluents & wastes – The methods of treatment and their disposal.