

# MUMBAI PORT AUTHORITY

## SYLLABUS FOR THE TECHNICAL QUESTIONS FOR THE POST OF ASSTT. DIRECTOR (EDP)

- (i) Programming & Platforms: C, C++, .Net, ASP, PHP, Java.
- (ii) Database Management: RDBMS concepts, database design and Security.
- (iii) Networking & Security: LAN/WAN, Network, OSI Layer.
- (iv) Administration, Firewall, Cryptography, Cryptanalysis, Information Security Management, Wireless Security.
- (v) Software & Systems: Data Structures & Algorithms, Software Engineering & Testing, Computer Organization & Architecture.
- (vi) VAPT Measures and MeitY standards and guide lot.
- (vii) Modern Tech & Hardware: Cloud Computing & Technologies, AI/ML/AR/VR concepts, ERP Technologies (SAP/Oracle), Troubleshooting, and Peripherals.
- (viii) Port related IT/ OT Technologies.
- (ix) Integration Technologies- APIs & Web Services.
- (x) AI/ML Emerging Technologies.

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## SYLLABUS FOR THE TECHNICAL QUESTIONS FOR THE POST OF ASSTT. DIRECTOR (RESEARCH)

<b>Subject/ Topic</b>	<b>Content</b>
International Trade - with focus on Ports & Shipping	Prominent shipping routes, basic function of Ports, Major Ports of World and in India.
Basic Statistics	Probability Theory, Measures of Central Tendency (Mean, Median, Mode etc.) & Forecasting techniques
MS EXCEL - Basic and Advanced Excel	Creating Excel files, Formulas, Functions, Sort, Filter, Conditional formatting, Charts, Pivot Tables, Power Query & Macros.
Windows Explorer , MS Word and Power Point	Creating folders, copying files, Creating Word documents and Power point presentations.

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**SYLLABUS FOR THE TECHNICAL QUESTIONS FOR THE POSTS OF  
CATERING OFFICER**

- (i) Food Production and Culinary Skills : Basics of cooking and methods of cooking, basic principles of heat transfer, stocks, soups, sauces and recipes for Indian, Chinese and Continental dishes. Quantity and Quality of food production, Kitchen Organisation and workflow, Basics of Bakery and Confectionary.
- (ii) Food Science and Applied Nutrition: Fundamental Concepts like BMR, Carbohydrates, proteins, lipid, and their function, balanced diets for adults, food chemistry, macro and micronutrients, food additives and food preservation. Nutritional requirements for different age groups.
- (iii) Application of scientific principles in food handling, selection and storage of food and preparation, wastage control
- (iv) Hygiene and Sanitation: Personal hygiene standards, food safety, kitchen sanitation, pest control (anti fly measures) and safety measures for equipments like LPG appliances, mixers, grinders etc. Prevention of food contamination.
- (v) Catering Management: Menu planning, in institutional catering, food costing, kitchen equipment maintenance, managing expenses, human resource management.
- (vi) Food & Beverage Service: Types of service (buffet, a la carte, institutional). Table laying/setting and professional etiquette. Knowledge of beverage service. Handling of guest complaints. Total service management.
- (vii) Institutional Catering in Major Ports, Cost control and budgeting, purchase and storage of food items, Inventory control, waste management.
- (viii) Staff management, Basics of Labour Laws, Record Keeping, Transparency in public dealings, techniques of grievance handling.
- (ix) The Food Safety and Standards Act, 2006, Food Safety Rules and Regulations and International food laws, HACCP principles, FSSAI guidelines.
- (x) The relevant sections of the Occupational Safety, Health and Working Conditions Code, 2020 w.r.t. Canteen facilities
- (xi) The relevant sections of Code on Social Security, 2020 pertaining to registration of contractors for Employees' provident Fund and Employees' Insurance. (Chapter III and Chapter IV)

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**SYLLABUS FOR THE TECHNICAL QUESTIONS FOR THE POSTS OF  
ASSTT. EXECUTIVE ENGINEER (M/E) – (ELECTRICAL)/ EXECUTIVE  
ENGINEER (ELECTRICAL)/ EXECUTIVE ENGINEER (MECHANICAL)**

**(A) Mechanical Engineering:**

- (i) Diesel Engines components and different maintenance requirement
- (ii) Different types of Gear boxes and their uses for power transmission
- (iii) Hydraulic power transmission, circuit basic, different types of Valves etc.
- (iv) Types of Centrifugal pumps, Positive displacement pumps and their application
- (v) Different material like Mild steel, Stainless steel etc
- (vi) Different types of mechanical coupling and uses.

**(B) Electrical Engineering:**

- (i) Various types of Electrical motors, starters and their application
- (ii) Basic electrical circuit, switch gears, various types of cables. Over load protection of motor etc
- (iii) Basic electronics, SCADA Automation.
- (iv) Working principle of Air-conditioners and refrigerators including it's cycle.

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**SYLLABUS FOR THE TECHNICAL QUESTIONS FOR THE  
POST OF DY. SECRETARY**

**A. Acts/Laws**

- (i) Major Port Authority Act 2021
- (ii) Right to Information Act, 2005
- (iii) Industrial Disputes Act, 1947
- (iv) Minimum Wages Act, 1948
- (v) Factories Act, 1948
- (vi) Employees Compensation Act, 1923
- (vii) Contract Labour (Regulation & Abolition) Act, 1970
- (viii) The Sexual Harassment of women at work place (Prevention, Prohibition and Redressal) Act, 2013.

**B. Other topics related to Personnel Management**

- (i) Principles of Manpower planning
- (ii) Recruitment process and procedure
- (iii) Time and motion study
- (iv) Performance Appraisal
- (v) Industrial Relation policy
- (vi) Motivational policies
- (vii) Misconducts and disciplinary action process.

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**SYLLABUS FOR THE TECHNICAL QUESTIONS FOR THE POSTS OF  
SR. WELFARE OFFICER & DY. MANAGER (WELFARE)**

Provisions from the following Acts & Rules pertaining to working of all posts of Welfare Officers in the Industrial establishment.

- (i) The Code on Wages, 2019
- (ii) The Industrial Relations Code, 2020
- (iii) The Code on Social Security
- (iv) The Occupational Safety, Health and Working Conditions Code, 2020
- (v) The Dock Workers (Safety, Health & Welfare) Regulations, 1990
- (vi) The Right to Information Act, 2005.
- (vii) Rules governing other service conditions such as overtime, night weightage, holidays etc.
- (viii) Reservation in services for SC/ST/OBC and PWD.
- (ix) Major Port Authorities Act, 2021.
- (x) The Maharashtra Co-operative Societies Act 1960: Provision pertaining to registration bye-laws and day-to-day running of the Co.Op Society's.

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**Syllabus for IT questions common for all posts**

- (i) Use of Computers Technology and IoT in Office Management.
- (ii) Office automation applications such as MS office, Word, Excel Spreadsheet and analytics, Power Point Presentation.
- (iii) Web browsing & web technology.
- (iv) Network system.
- (v) General Awareness about Information Technology, Website, Generative AI, etc.
- (vi) Uniform code, Google Indic etc.

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