

GENERAL AWARENESS & APTITUDE TEST

Compulsory for all Group B, C & MTS

PAPER- I
MARKS – 100.

	Mode of Examination	Scheme	No. of Questions	Marks
Paper I General Awareness & Aptitude Test	Written Test i) MCQ for Scheme (a) to (f). ii) Language Skills/ Basic Grammar can be of MCQ type or single word/idiom answer type (At least 2 questions from each category or not more than 3 questions from one type mentioned below) iii) English Comprehension questions will also be developed in MCQ iv) Descriptive Essay/Précis & Letter/ Application as per the required norm of the type and marks allotted to each question (One from the former two and one from the latter two)	a) General Intelligence and Reasoning	30 (1x30=30)	30
		b) General Awareness		
		c) Quantitative Aptitude	15 (1x15=15)	15
		d) Basic Computer Knowledge	05 (1x5=5)	05
		e) Language Skills/ Basic Grammar	25 (1x25=25)	25
		f) Comprehension	05 (1x5=5)	05
		g) Composition: Essay/Précis & Letter/ Application	02 (2x10= 20)	20
		TOTAL		

* From the given syllabus, questions have to be set for three different levels, viz,

(i) Graduate and above (ii) Class XII and (iii) Class X

Therefore, standards of the three levels have to be maintained in consistent with the educational qualifications prescribed for the post while developing the questions basing on the framed syllabus.

General Intelligence & Reasoning *

This component may include questions on analogies, similarities and differences, space visualization, spatial orientation, problem analysis, judgment, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning and figural classification, arithmetic number series, non-verbal series, coding and decoding, statement conclusion, syllogistic reasoning, etc.

General Awareness *

Questions in this component will be aimed at testing the candidate's general awareness of the environment around and its application to society. It will also be designed to test the knowledge of current events and of such matters of every day observations and experiences in their scientific aspect as may be expected of any educated person. The test will also include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography, Economics, General Policy & Politics and Scientific Research.

Quantitative Aptitude **

Questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be the computation of whole numbers, HCF & LCM, Decimals, Percentage, Ratio & Proportion, Averages, Interest, Profit and Loss, Time and distance, Time & Work, Heights and Distances, Bar diagram & Pie chart.

Quantitative Ability ***

Questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be the computation of number systems, LCM, Decimals, Percentage, Averages, Profit and Loss, Time and distance, Heights and Distances.

Language Skills/ Basic Grammar *

Questions in this component will be aimed at testing the language proficiency, especially the basic grammar and vocabulary: Prepositions, Articles, Modals, Verbs & Subjects, Adverbs, Adjectives, Parts of Speech, Tenses, Antonyms & Synonyms, and Idioms.

Comprehension: *

A text comprehensible by candidates of a particular category and will be aimed at testing the ability to understand the content of the given text and to perceive, abstract, infer, syllogise/compare, etc the information and meanings from it. Questions will include both direct and indirect testing.

Précis also falls in this category of comprehension but for the sake of question type, this is clubbed with the category of 'composition.' This will be aimed at an exercise in comprehending the given passage and orderly presenting the crux of indispensably crucial points of the given passage. Therefore, it will also be aimed at testing the ability of reading, writing, self-expression, etc. basing on the given text and presenting it in a summarized form.

Composition: *

This component will be aimed at testing the writer's composition ability in a particular type, especially the unity, orderly, brevity, style and personal touch to the subject treated. The form of a particular type will also be tested.

Note:

- * : For both Graduate level and below
- ** : Graduate Level
- *** : Below Graduate Level

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PLUMBER

PAPER- II MARKS – 100

Unit I: Theory

(20 marks)

Method of laying out pipes, alignment and joining. Description of various pipe joints, Description of Plumber's materials, Description and types of pumps. Description of pipe dies, their uses, care and precaution, Bending machine and method of bending. Method of bending pipes by hot and cold process, Air lock in pipes and its removal. Description of cocks & valves-their types, materials, inspection and testing of water supply system. Type of joints used for different materials, Method of bending Galvanized pipe Domestic drainage system: Concept of heat and temperature, General layout, specification of materials required and connection of pipes to mains, Sensor system for urinals and wash basin.

Unit II: Masons Hand Tools

(20 marks)

Fitter's hand tools, Types of files, pipes, Description of Carpenter's hand tools Gas welding, Mason hand tools-names, description and their uses. Method of making holes in walls and floors; Types of tools used and various Processes. Concept of bricks, lime and cement; Preparation of mortars with various materials of varying composition. Common brick joints. Description of bonds. Scaffolding & plastering. Method of construction of manhole etc. Plain cement concrete, RCC and its proportion, grades of coarse aggregate and fine aggregate, Knowledge of waterproofing compound; Identify plumbing services required for each type of building according to usage. Description of plumber tools and Equipments-ratchet, brace, threading die, pipe wrench, sliding wrench, spanner set, chain Wrench, etc., and their safety, Plumbing Symbols. Care & use of tools.

Unit III: Pipes and Pipe Fittings

(30 marks)

Different kinds of pipe and Pipe fitting and their description, specification and use. Composition of water; tests for water; static water pressures and measurement of pressures. Bursting pressure; Expansion of water on freezing and heating. Equipments and tools for hot gas welding and electric hot plate for PPR pipe joints Types of fittings for different joints & different pipes. Description of pipe fittings; Methods of joining and their uses; Precautions to be taken while fixing. Water purification stages and methods.

Different kinds of joints in joining pipes- GI,PVC/CPVCand HDPE etc.

- Use of hummed and asbestos pipes of different sizes.
- Method of laying out pipes alignment and joining.
- Description of various pipe joints- straight, Branch , Taft and blow, Expansion joints. Solders and fluxes used in joints.
- Description of Plumber's materials Lead, tin, Zinc, solder, copper, red leadetc. and their uses.
- Water supply system of a small town.

- Description and types of pumps, viz., suction pump, Centrifugal pump, etc., Contamination of water in a well.
- Description of pipe dies, their uses, care and precaution.
- Metric specification of various pipes.
- Standard pipe threads.
- Method employed for bending, Joining and fixing PVC pipe.
- Joining material for water
- Inspection chamber, septic tank, description of drains, cess pools, soak pits etc.
- Types of traps layout of drainage system
- Method of bending pipes by hot and cold process.
- Method of testing drainage lines
- Method of dismantling and renewal of the valves and pipes. Leaks in pipes and noises in plumbing.
- Installation of water meters. Air lock in pipes and its removal.
- Description of cocks & valves-their types, materials & advantages for particular work
- Type of joints used for different materials such as zinc, lead, copper, etc.
- Method of bending galvanized and other heavy pipes.
- Fire hydrants

Unit IV: Domestic Drainage System

(30 marks)

- General layout, one pipe system, specifications of materials required.
- Method of testing leakage. Different types of traps, ventilation, anti syphonage and sinks.
- Domestic hot and cold water.
- General layout and specification of materials required
- Connection of pipes to mains.
- Tracing leakage.
- Repairs to service main.
- Domestic boilers and Geysers.
- Method of ventilating pipe.
- Fixing of solar water system.
- Plumbing symbols and plumbing codes for all tools and materials
- Corrosion - causes and remedies, prevention.
- Corrosion due to electrolytic action.
- Effect of water and frost on materials.

Layout of pipes as per drawing

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