

Board of Master Plumbers
Resolution No. 1, Series of 1995
Promulgation of Syllabi of Subjects in the Master Plumbing

Licensure Examination

WHEREAS, Sec. 12 of R.A. No. 1378: "The Plumbing Law" states that all applicants for registration as Master Plumber shall be required to pass the examination;

WHEREAS Sec. 13 of the supra law provides that the scope of the examination shall consist of these subjects: Plumbing Arithmetic, Plumbing Code, Plumbing Design and Installation, Practical Problems, Oral Practical Problems and experiences;

WHEREAS Memorandum Circular No. 08, Series of 1992 of the Commission directed every Board to prescribe and adopt a syllabus for every examination subject;

WHEREAS every syllabus containing the concepts/topics with the corresponding level of knowledge/ proficiency shall be the basis of questions and problems that will be inputted into the question banks; and

WHEREAS after consultation with the National Plumbers/ Plumbing Engineering Association of the Philippines, the only accredited association of the Master Plumbers/ Plumbing Engineers came out with the syllabi of the examination subjects;

NOW, THEREFORE, by virtue of Sec. 04 and 05 of R.A. No. 1378 and Sec. 6 (a) of P.D. 223, the Board hereby RESOLVED, as it now RESOLVES, to prescribe, issue and adopt the syllabi of subjects, in the Master Plumbing Licensure Examination (annex "A").

FURTHER, RESOLVED, upon approval hereof by the Commission, this resolution shall be effective after fifteen (15) days following its publication in the Official Gazette or any newspapers of general circulation.

FURTHERMORE, RESOLVED, the syllabi shall be enforceable three (3) months prior to the first applicable examination schedule and upon effectivity of the herein resolution.

FINALLY, RESOLVED, that this Resolution shall be disseminated and circularized to all concerned and the accredited Association of Master Plumbing/ Plumbing Engineers (NAMPAP). Done in the City of Manila this 30th day of January, 1995.

ALBERTO J. AZARCON
Chairman

FLORENTINO M. GARCIA BENJAMIN B. HAYAG
Member Member

Attested to:

CARLOS G. ALMELOR
Secretary, Regulatory Boards

Approved:

HERMOGENES P. POBRE
Commission Chairman

MARIANO A. MENDIETA ARMANDO C. PASCUAL
Commission Member Commission Member

The Master Plumbing Licensure Examination Syllabus

PLUMBING CODE

Scope

- A. Code of Ethics
- B. Permits
- C. Plumbing Terms
- D. General Regulations
- E. Quality and Weight of Materials
- F. Joints and Connections
- G. Traps and Cleanout
- H. Water Supply and Distribution
- I. Plumbing Fixtures
- J. Ventilation of Rooms and Fixtures
- K. Minimum Trap Diameters, Drain Size and Fixtures Unit Value (Tables)
- L. Maximum Fixtures Unit on one stock
- M. Maximum permissible height and size of vents
- N. Construction of a septic vault
- O. Hot water and steam waste
- P. House Drain and house sewer
- Q. Horizontal branches
- R. Special waste
- S. Inspection and Test
- T. Special Provisions

Description

A. Code of Ethics

The topic deals with the basic knowledge of general guidelines of character, rules and regulations as covenant in the plumbing practice. This includes moral obligation and relationship with clients and benefactors.

B. Plumbing Terms

Definitions of various plumbing terms, phrases and words used to define and interpret activities in plumbing.

C. Permits

Documentation of requisites to the activities undertaken in the plumbing project such as applications, applicants and general conditions to be observed.

D. General Regulations

Application of alignment and pitch of pipe with inspection of the horizontal and vertical elevation above and below ground lines, pipe protection and workmanship including studies of prohibited fittings and dead end in pipe installation.

E. Quality and Weight of pipes

Study of different materials and their quality such as pipe, metal sheet lead and ferrules used in plumbing.

F. Joints and Connections

Basic knowledge of joints and connections on different pipes use in plumbing.

G. Trap and Clean out

Choices and different trap types and sizes of their protection, requirements for various plumbing fixtures, classification of clean out, equivalent, location and its construction along pipe installation.

H. Water supply and distribution

Basic knowledge on the quality and redeems of potable water to meet standards of purity including sources, storage and distribution to the building from the water main through underwater into independent pipes network to the different fixtures.

I. Plumbing Fixtures

Knowledge of all kinds of receptacles used such as water closets, urinal, bathtub, wash basin, wash tray bidet, slop sink, and similar fixtures. Definition of locations, conductors, ventilation including requirements on swimming pool and roof extensions.

J. Ventilation of rooms and fixtures

The topic deals with the basic knowledge of ventilation requirements of rooms in all establishments with water closets and urinals.

K. Minimum trap diameter, drain size and fixture unit valve

The study of different plumbing fixtures as presented in table form with the corresponding nominal size of trap and waste pipe required and equivalent fixture unit values assignment for easy reference of practitioners.

L. Maximum fixture unit on one stock

The topic deals with the soil and waste stack installation and its connections, size requirements for each type of plumbing fixtures and their root terminal and below ground installation.

M. Maximum permissible length of main vent for soil and waste stack

Basic knowledge of the waste disposal system of a building and the general fixtures of a septic tank, working performance.

PLUMBING ARITHMETIC

Scope

- A. Modern Algebra
- B. Trigonometry
- C. Geometry
- D. Physics
- E. Financial Arithmetic

Description

A. Modern Algebra

Basic theory of real numbers, equation functions and graph, equation functions and graph, exponent and exponential fractions.

B. Trigonometry

Basic concepts in trigonometric functions, solution of triangles, vectors, trigonometric functions of sum and differences.

C. Geometry

Basic concepts in the theory and applications of plane coordinate system, equation and their loci, straight lines, conic sections, plane and spherical surfaces.

D. Physics

Understanding of the science of physics, language of physics, matter, theory of forces and motion, vector, velocity and acceleration, matter and energy, kinetic theory of matter specifically the behavior of liquids, solids, air and other gases. Heat and temperature, expansion, change of state and its transference.

E. Financial Arithmetic

Basic concept of financial facts such as simple interest and simple discount, compound interest, simple annuities, amortization and sinking fund, depreciation and general annuities.

PRACTICAL PROBLEMS AND EXPERIENCES

Scope

- A. Plan Reading and Interpretation
- B. Plumbing Materials
- C. Plumbing Fixtures and Appliances
- D. Hand and Machine Tools
- E. Maintenance and Repair
- F. Bill of Materials and Estimates
- G. Obligations and Contracts

Description

A. Plan reading and interpretation

Reading and interpretation of plans, symbols and legends and specifications.

B. Plumbing materials

Shapes, sizes, dimensions, qualities and uses of different kinds and classes of pipes, fittings, gauge, valves and regulators.

C. Plumbing fixtures and appliances

Shapes, sizes, dimensions, qualities and uses of different kinds and classes of plumbing fixtures and appliances; sizes, dimension, heights and location of water supply and discharge drains.

D. Hand and Machine tools

Different kinds of hand and machine tools and their uses for cutting, reaming, threading, caulking, flaring and brazing, welding joints and connections of different pipes and fittings; hand and machine for removing stoppages of drains, and repair of leaks and rusted pipes.

E. Maintenance and repair

Periodic and regular inspection and serving of pipes and fittings, controls, valves, regulators, plumbing fixtures, appliances, pumps and similar equipment; repair of leaks and rusted pipes.

F. Bill of Materials

Quantity take-off, bill of materials, cost estimates based on plans and specification.

G. Obligations and contracts

Obligations and contracts documentations, project technical reporting, inspection and acceptance of materials and workmanship.

SANITATION PLUMBING DESIGN AND INSTALLATION

Scope

- A. Development of sources of water for rural residences
- B. Waste water treatment and disposal for building and premises
- C. Water supply and distribution system
- D. Sanitary drainage and ventilating system
- E. Storm and sub-surface drainage system
- F. Water heating system
- G. Dry and wet sand pipes
- H. Water pumps, tank, cistern, sewage
- I. Installation and workmanship
- J. Plan and specification

Description

A. Development of sources of water for rural residences

Determine the amount and quality of water, develop source and provide sanitary measures against contamination and pollution.

B. Wastewater treatment and disposal for building and premises

Method of sewage treatment and disposal, design and construction of septic tank, privy, cesspool, seepage.

C. Water supply and distribution system

Planning and design of water supply, distribution, branch and all pipings to fixtures, appliances, appurtenance within the building and premises.

D. Sanitary drainage and ventilating system

Planning and design of house drains, house sewers, horizontal branches, stacks, vents, drains, traps, cleanouts, special waste, manhole and appurtenance within the building and premises.

E. Storm and sub-surface drainage system

Planning and design of ground and sub-surface drains, downspouts, floor and roof drains, area drains, catch basins, manholes and appurtenances within the building and premises.

F. Water heating system

Planning and design of hot water supply and return pipes, water heaters and appurtenance within the building and premises.

G. Dry and wet standpipe

Planning and design of dry and wet standpipes, fire for fire protection within the building and premises.

H. Water pump, tank cistern, sewage and scum pit

Sizing the capacity of elevated and hydropneumatic tanks, cistern, sewage and scum pits and appurtenances within the building and premises.

I. Installation and workmanship

Methods and techniques of pipe laying and installation, joints and connections, pipe hangers and supports, storage and protection from damages, inspection and acceptance of workmanship.

J. Plan and specification

Preparation of orthographic working drawings, isometric, schematic diagrams, riser diagrams, details, symbols and legends and specifications.