GROUP-5

Architecture Jobs (Level- Matric+ Dip in Architectural Assistantship)

1) General awareness, Reasoning, Mathematics, Science, History including Haryana related history, current affairs, literature, Geography, Civics, Environment, Culture etc.- (**Weightage 20%)**

2) Computer terminology, Fundamentals, word software, excel software, Power point, internet, web browsing, Communication, emails, downloading and uploading data on websites etc**. -**

(Weightage 10%)

3) Subject related syllabus- **(Weightage 70%)**

ARCHITECTURAL DRAWING

Introduction and relevance (need and importance) of the architectural drawing, Introduction to the Studio Environment, Line Work, Lettering using different pencils & pens, stencils, Introduction to Scale, Geometric Shapes, Orthographic Projections, Section of Solids, Development of surface, Isometric Views, Axonometric View, Perspective, Simple Perceptive, Introduction to Scio-graphics (in plans and Elevations), Introduction to Rendering.

THEORY OF DESIGN

Primary Elements of Design, Design Elements, Principles of Design, Relationship of form and functions, Relationship of Aesthetics and utility, Colours.

BUILDING MATERIALS

Building Stones, Bricks, Lime, Cement, Aggregates, Mortar, Concrete, Timber, Plastics, Alloys and Metals, Glass, building hardware (sizes, applications), Paints and Varnishes, Drying Oil, Pigment, Drier, Thinner, Floor Finishes (Laying sizes, availability, popular brand names, quality of polish, uses), Wall Finishes (along with application method), Ceiling Materials (Size, quality, their availability, types of finishes, uses, trade names and application methods, Roofing Materials, Additives and Admixtures, Adhesives, Kitchen and Toilet Fixtures.

MODEL MAKING

Introduction and Demonstration of model making materials and techniques, Block models of basic geometrical shapes like prisms, pyramids, cubes, cylinders etc., using, Handmade and ivory sheet, Thermo-coal, Mount Board/Sun Board/Balsa Wood strips. Composition of various geometrical shapes in different materials, Sculpture Making, Introduction to carpentry, Brick Masonry, Painting and Polishing.

BASICS OF INFORMATION TECHNOLOGY

1. Information Technology – its concept and scope, applications of IT, ethics and future with information technology 2. Impact of computer and IT in society. -- Computer application in office, book publishing, data analysis, accounting, investment, inventory control, graphics, air and railway ticket reservation, robotics, military, banks, Insurance financial transactions and many more,3. Generations of computer, block diagram of a computer, CPU, memory, data – numeric data, alpha

numeric data, processing of data. 4. Computers for information storage, information seeking, information processing and information transmission, computer organization, computer hardware and software; primary and secondary memory: RAM, ROM, PROM etc. Input devices; keyboard, mouse, scanner, etc ; output devices ; VDU and Printer(Impact and non-Impact printers), Plotter etc. Primary and Secondary Storage (Auxiliary Storage), Secondary storage; magnetic disks – tracks and sectors, optical disk (CD, CD-RW and DVD Memory) 5. Introduction to Operating Systems such as MS-DOS and Windows, difference between DOS and Windows 6. Basics of Networking – LAN, MAN, WAN.

BUILDING CONSTRUCTION

Masonry Construction, Brick work, Brick work in Foundation, Stone work, DPC, Brick work in super structure, Openings in Walls, Classification of Arches and Lintels, Joinery, Flooring, Roof and roof coverings, Staircases and ramps, Expansion joints, Form work and steel work, Finishes, Interiors of Buildings, Doors and Windows, Earthquake resistant building configuration, Riveted Connections and Welded Joints, Steel Sections, Steel Roofs, Frame and Sealed Connections Built Up Steel Columns and Beams.

HISTORY OF ARCHITECTURE

Pre-Historical Architecture and Introduction to History of Architecture, Western Civilization, Greek Civilization, Roman Civilization, Indian Civilization, Buddhist Architecture in India, Temple Architecture in India, Early Christian Architecture, Byzantine Architecture, Romanesque Architecture, Gothic Architecture, Renaissance Architecture, Islamic Architecture in India, Industrial revolution, Modern Architecture in Europe and America, Contemporary/post-Independence Architecture in India.

ARCHITECTURAL DESIGN

Proportion of Components of Human Body, Human Activities, Furniture Standards, Vehicles, Street furniture, Graphic Representation of plant material (ground cover, foliage, shrubs, trees) human figures and vehicles, Introduction of Structure Systems, Study of spaces and layout of furniture.

SURVEYING

Introduction, Chain surveying, Compass surveying, Levelling, Plane Table Surveying, Contouring, Instruments, Use of Modern Surveying equipment.

CLIMATOLOGY

General Introduction, Relation of Climate and comfort, Sun Control and shading devices, Wind control, Use of building materials with respect to climate, Criteria for site selection, Environment and Ecology.

BUILDING SERVICES

Water Supply, Drainage, Sound Insulation, Lighting and Electrical Fittings, Heat, Ventilation and Air Conditioning (HVAC), Vertical Transportation Systems, Fire Fighting Services, Integration of lighting, air-conditioning, acoustics and other services/systems in buildings.

STRUCTURE MECHANICS

Force system and Equilibrium, Centroid and Moment of Inertia, Stress and Strain, Shear Force and Bending Moment, Bending stresses in Beams, Analysis of Perfect Frames.

BUILDING BYE-LAWS

Need of building byelaws for urban development, Basic Terminology, Factors affecting planning of byelaws, Bye laws, Zoning, Residential and commercial building with respect to implementation of local Bye laws, various Performa's to be used, BIS and CPWD By-laws/standards for removing Architectural barriers for persons with disabilities (PWDs), Introduction to earthquake resistant regulations, Code provisions (IS-1893), seismic zoning, Preparation of one set of municipal drawing of a residential building already designed in A.D. showing all services along with Performa's.

WORKING DRAWING

Site Plan, foundation layout plan with benchmark, section details of foundations for brick external wall, brick internal wall, brick partition wall, brick toe wall, brick boundary wall and R.C.C Column, Ground Floor Plan, Terrace Plan, Section, Elevations, Details ofToilet, Kitchen etc.,Built-in furniture, Entrance gate, boundary wall and railing details.

COMPUTER APPLICATIONS IN ARCHITECTURE

Introduction to AutoCAD, Creating and Saving a new Drawing, Drawing Commands, Viewing an Existing Drawing, Modifying an Existing Drawing, Making and Inserting Blocks, Dimensioning and Text, Plotting Drawings, Project (Rendering of CAD drawing), Fundamentals of 3-D Drafting, converting an existing 2-D plan drawing compatible to 3-D drafting, 3-D Modelling, Demonstration of 3D max, Corel Draw, Adobe Photoshop as rendering tool for 3D blocks/ walk through etc.

ENVIRONMENTAL EDUCATION

Definition, Scope and Importance of Environmental Education, Basics of ecology, biodiversity, eco system and sustainable development, Basics of ecology, biodiversity, eco system and sustainable development, Sources of pollution, Solid waste management, Mining and deforestation, Environmental Legislation - Water (prevention and control of pollution) Act 1974, Air (Prevention and Control of Pollution) Act 1981 and Environmental Protection Act 1986, Role and Function of State Pollution Control Board, Environmental Impact Assessment (EIA), Role of Non-conventional Energy Resources, Current Issues in Environmental Pollution.

REINFORCED CEMENT CONCRETE

Introduction, Introduction to following methods of RCC design, Shear and Development Length, Singly Reinforced Beam (working stress method), Concept of Limit State Method (as per IS 456:2000), Singly Reinforced beam, Doubly Reinforced Beams, Behaviour of T beam, inverted T beam, isolated T beam and 'L' beams, One Way Slab, Two Way Slab, Axially Loaded Column, Prestressed Concrete.

QUANTITY SURVEYING AND VALUATION

Introduction to quantity surveying and its importance. Duties of quantity surveyor, Types of estimates, Measurement, Preparation of Detailed and Abstract Estimates from Drawings, Calculation of quantities of materials from working drawings, Analysis of Rates, Measurement Book and Billing, Valuation, Contractor-ship, Preparation of Tender Document based on Common Schedule Rates.

TOWN PLANNING

Overview of town planning: Principal elements and the location of public functions, Growth of the Industrial Town, Planning Process: Site Selection, Land uses in a town, their hierarchy and location. Types of town shapes with reference to circulation (Linear, Star, grid, Satellite), Introduction to Urban land uses & their management, Legislation and Urban Controls.

ADVANCED COMPUTER APPLICATIONS

File management, Customization, Layer management, Creating and Editing objects and parameters, Edit tools, Modifiers and application, Utilities and application, Materials and mapping, Rendering, Animation and walkthrough.

Important Note: The Weightage as mentioned against the syllabus is tentative & may vary.