

**SYLLABUS FOR COMPUTER BASED RECRUITMENT TEST (CBRT)**  
**FOR THE POST OF ASSISTANT PROFESSOR ARCHITECTURE**  
**UNDER**  
**GOA COLLEGE OF ARCHITECTURE**  
**(Advt No. 03 Year 2021)**

- I. General English including Grammar** - **05 marks**
- II. General Knowledge, Current Affairs and Events of National and International Importance** - **10 marks**
- III. Logical Reasoning and Analytical Ability** - **10 marks**
- IV. Core:** - **50 marks**

**INTRODUCTION TO ARCHITECTURE & PRICIPLES**

Definitions of Architecture in terms of Art , Humanities , sociology , design , engineering , technology , environment , ecology and many more with its Origin , context for architecture for humanism , functional, aesthetic and psychological-outline of components and aspects of architectural form-site, structure, materials, services, expression, character, experience and Introduction to the formal vocabulary of architecture , architectural form and space –relationship between architectural built form and open spaces form and circulation , spatial organization , orientation with ARCHITECTURAL CHARACTER style, across various periods in global .

**HISTORY , ART & HUMANITIES – Criticism**

Relationships between people and Architecture at different historic times with social sciences, laws , evolution of civilization, Cultural ideas , ,ideas of modernism and the architecture of the 20th Century with its interpretations , styles , periods , importance of chronology in Goa , Indian context & world history

Architecture theory and its application with references across the industrial age in India and the world during mediaeval, Islamic , modern Portuguese , Europe – gothic , renaissance , baroque, Asia , renaissance , Stylistic transformations : Neo- classicism, Gothic Revival and institutionalization of architecture - imperial power, Islamic , Prehistoric period , ancient / river valley civilization , Rock cut architecture , and temples in Goa and India , and the world.

**VERNACULAR ARCHITECTURE**

Traditional knowledge of skills within communities , artisan and communities , economic constraints , industrial and manmade context in Culture and architecture . contemporary architecture , with social responsibility & environmental sustainability with focus on sites , historic , built and unbuilt , high tech and vernacular with elements of Architecture , technology , social and natural sustainability

**VISUAL ARTS AND CRAFTS**

Elements and principles and Expressions of ideas through two and three dimension , various techniques of Art & Crafts with visual & graphical techniques . Graphic design , Theories of oriental and occidental histories , traditional Indian paintings , modern art and art from west , Europe and the world . , Contemporary art and ideas in art in 21<sup>st</sup> century with regionalism and cultural media , visual expression .Applied art and graphic techniques , photography ,etc

**THEORY & DESIGN**

Architectural design through Natural and built environment exploring Architectural characters , at micro and macro level , in context to individual and community with landscape and natural environment , principals of site planning , climatology and energy conservations for sustainable materials in neighborhood urban and rural connect , design solutions with construction techniques , infrastructural services , environmental and landscapes , socio economic cultural and environmental conditions at macro / micro level . Design theories with research in architecture . Heritage typologies in Conservation, Preservation and Adaptive reuse . Principles of HOUSING ISSUES – in INDIAN CONTEXT in neighborhood / housing morphology for Multi

dwelling communities with principles of site planning , natural features , environment , density pattern and lessons from traditions . Significance of TECHNOLOGY in Architecture with Automation , structures , in construction and design with software, operation , environmental and other controls .

### **TECHNICAL DRAWINGS**

Medium of communication , basic vocabulary architecture through drawings , 3D Shape's , and projections , isometric projections , perspectives , SCIOGRAPHY , PERSPECTIVE , Concepts and methods of one point and two point perspective drawing applying rendering techniques , GRAPHIC COMMUNICATIONS with Computer generated representations in Digital Architecture with design conceptualization & development with fundamentals of computer systems and digital era . with 3d construction profiles , animation layouts with multi disciplinary data exchange .

### **BUILDING CONSTRUCTION/ TECHNOLOGY AND MANAGEMENT**

Properties of building materials and applications along with processes , construction details , geo hydro topographic systems , tools and techniques , earth sciences w r t climatology and ecology , indoor and outdoor . Heat controls , radiation ,ventilation , solar energy and its technical applications .use of Timber as a primary building elements , construction techniques for steel and aluminum , along with retaining walls , foundation , roofs , staircases , windows , doors , joinery details. RCC as a contemporary building materials and its application with seismic consideration and structural stability modules . Project management and project life cycle , with computer software in project management with estimating and projects scheduling for architectural projects w r t building materials and construction techniques in Digital Era with Project management methodologies& specifications .

### **BUILDING SERVICES**

WATER SUPPLY,SANITATION AND SURFACE DRAINAGE . with building services of water supply , sanitation and their integration in design in high rise buildings in residential and commercial buildings using national building code at macro and micro level with Water – assessment , purification , distribution , storage , conservation , water harvesting , regarding , Solid waste management , disposal of water management in urban and rural context. FUNDAMENTALS OF LIGHTING/ ELECTRICAL - Principles of light design – Electromagnetic radiation, waves, nature of vision, measurement of lighting. FIRE SAFETY: GENERAL design GUIDELINES OF Fire safety, NBC guidelines , and space requirements for fire fighting equipment's and significance of National Building code .

### **STRUCTURES**

Concepts of Load bearing and framed structures , w r t resiliency , structural systems , Properties of structural materials like steel , timber , cement concrete, brick , stones, etc . knowledge of stress , composite sections , in calculations of sections in steel and RCC structure ,shear force and bending moment for cantilever and simply supported beams , shear stress , type of trusses and their stability and limitations , Along with elements with their appropriate use of nature forces acting on structural systems .

### **Architecture practice**

Legal and statutory provisions concerning architectural practice as regards to the architects Act 1972, building development regulations , legislation ,etc in India and abroad , with Office , project and human resource management in architectural practice with case studies on Great masters works movements in architectural history.

**Note:**

**Duration for C.B.R.T : 75 Minutes**

**Maximum Marks for C.B.R.T : 75 Marks**