

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA, VADODARA

Ph. D. ENTRANCE TEST (PET) 2025

Signature of Invigilator

Roll.
No.

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Paper - II
Architecture

Maximum Marks: 50

No. Of Printed Pages: 8

Instruction for the Candidate:

1. This paper consists of **FIFTY (50)** multiple choice type questions. Each Question carries **ONE (1)** mark.
2. There is no Negative Marking for Wrong Answer.
3. A separate OMR Answer Sheet has been provided to answer questions. Your answers will be evaluated based on your response in the OMR Sheet only. No credit will be given for any answering made in question booklet.
4. Defective question booklet or OMR if noticed may immediately replace by the concerned invigilator.
5. Write roll number, subject code, booklet type, category and other information correctly in the OMR Sheet else your OMR Sheet will not be evaluated by machine.
6. Select most appropriate answer to the question and darken appropriate oval on the OMR answer sheet, with black / blue ball pen only. **DO NOT USE PENCIL** for darkening. In case of over writing on any answer, the same will be treated as invalid. Each question has exactly one correct answer and has four alternative responses (A), (B), (C) and (D). You have to darken the circle as indicated below on the correct response against each item.
Example: (A) ● (B) ● (C) ● (D) ● where (B) is correct response.
7. Rough Work is to be done in the end of this booklet.
8. If you write your Name, Roll Number, Phone Number or put any mark on any part of the OMR Answer Sheet, except for the space allotted for the relevant entries, which may disclose your identity, or use abusive language or employ any other unfair means, such as change of response by scratching or using white fluid, you will render yourself liable to disqualification.
9. Calculators, Log tables any other calculating devices, mobiles, slide rule, text manuals etc are **NOT** allowed in the examination hall. If any of above is seized from the candidates during examination time; he/ she will be immediately debarred from the examination and corresponding disciplinary action will be initiated by the Center Supervisor as deemed fit.
10. **DO NOT FOLD** or **TEAR** OMR Answer sheet as machine will not be able to recognize torn or folded OMR Answer sheet.
11. **You have to return the OMR Answer Sheet to the invigilator at the end of the examination compulsorily** and must not carry it with you outside the Examination Hall. You are however, allowed to carry original question booklet on conclusion of examination.

Paper - II Architecture

Note: This paper contains **FIFTY (50)** multiple-choice questions. Each Question carries **ONE (1)** mark.

1	Which of the following is a core principle of Universal Design?			
	A	Design should prioritize aesthetics over functionality.	B	Design should be adaptable to individual needs.
2	C	Products should be designed for the average user.	D	Designs that are usable by the disabled only.
	How many surfaces are there in a hexagonal pyramid?			
3	A	Five	B	Six
	C	Seven	D	No surface
4	Which of the following is NOT a primary consideration in architectural anthropometrics?			
	A	Clearances	B	Building orientation
5	C	Seated and standing postures	D	Reach zones
	Which of the following statements is true about perspective projection?			
6	A	It simulates how objects appear smaller as they move further away from the viewer.	B	It uses parallel lines of projection
	C	It is equivalent to parallel projection.	D	It preserves the size of objects regardless of their distance from the viewer.
7	As per NBC, the minimum width for a standard car parking space is			
	A	2.75 meters	B	2.25 mt
8	C	3.00 mt	D	2.50 mt
	It is a vertical projection plane used to obtain the object's Perspective.			
9	A	Orthographic plane	B	Vertical plane
	C	Perspective picture plane	D	Horizontal plane
10	The critical path in a PERT/CPM network is defined as			
	A	The shortest path from the start to the finish	B	The path with the most activities
11	C	The path with the most resources	D	The path with the longest duration
	The ECBC provides minimum energy efficiency requirements for building systems. Choose the correct building systems.			
12	A	Building Envelope	B	HVAC and Electrical Power
	C	Service Water Heating and Lighting	D	All of the above
13	What are some examples of passive design strategies promoted by ECBC?			
	A	Daylighting and shading	B	Solar panels
14	C	High-efficiency HVAC systems	D	Smart lighting controls
	Name the book written by "Christopher Alexander"			
15	A	The Timeless Way of Building	B	Life of Le Corbusier
	C	A Pattern Language	D	Both A and C
16	The concept of "urban heat island effect" refers to			
	A	The natural variation in temperature across different regions	B	Increased temperatures in rural areas due to climate change.
17	C	Increased temperatures in urban areas due to human activities.	D	The cooling effect of large bodies of water in urban areas.
	Which of the following is a key principle of ecological urbanism?			
18	A	Designing cities that mimic natural ecosystems.	B	Prioritizing economic growth over environmental sustainability.
	C	Separating residential and commercial areas.	D	Maximizing the use of fossil fuels

13	What is the role of zoning regulations in city planning?			
	A	To designate land for specific uses	B	To determine the height and density of buildings.
	C	To establish building codes and safety standards	D	All of the above
14	What is the main purpose of thermal insulation in building design?			
	A	To create an efficient interior design for the building	B	To reduce energy consumption
	C	To reduce heat transfer between the interior and exterior	D	To reduce the weight of the building
15	What is the main benefit of using sustainable and eco-friendly building materials?			
	A	Increased reliance on fossil fuels	B	Decreased thermal comfort
	C	Increased initial cost	D	Reduced environmental impact
16	Which of the following is NOT a core principle of the circular economy?			
	A	Minimize waste and pollution	B	Reduce, Reuse, Recycle
	C	Linear consumption model	D	Design out waste and pollution
17	Which of the following best describes "paths" in Kevin Lynch's theory?			
	A	Channels that people use to move through the city.	B	Focal points or junctions where people meet.
	C	Large areas with a consistent character.	D	Boundaries between different areas of a city.
18	Choose the correct book name that focuses on improving urban form and urban design			
	A	The Concise Townscape	B	Fountain Head
	C	Life Between Buildings	D	None of the above
19	In a city, a surface drainage system should be designed to			
	A	The removal of excess water from the surface of the land.	B	Removal of water from the kitchen sink
	C	Removal of wastewater from the neighborhood.	D	Removal of water from the bathroom and toilets
20	What is unique about the ancient city of Kashgar?			
	A	The ancient city in China was ruled by the Chinese, Turkic, Mongol, and Tibetan empires	B	The ancient city in India was ruled by the Chinese, Turkic, and Mongol empires
	C	The ancient city in Afghanistan was ruled by the Mongols and the Tibetan empires	D	The ancient city in Egypt was ruled by the Greeks and the Mongol empires
21	Cities Varanasi, Madurai, Amritsar, Kanchipuram, Rameswaram, Kamakhya, and Nashik are prominent examples of			
	A	Cities in India have the most famous palaces.	B	Cities in India have most famous gardens.
	C	Cities in India are home to some of the most famous religious places.	D	Cities in India have the most famous food items.
22	Choose the correct option for Jaipur			
	A	Development of a green neighborhood	B	One of the first planned cities in India
	C	Developed in a single phase with a gridiron plan	D	Both B and C
23	Which architect is renowned for his work on the master plan of Chandigarh, India, and designed several of its government buildings?			
	A	Frank Lloyd Wright	B	Walter Gropius
	C	Le Corbusier	D	Antoni Gaudí

24	What is the main purpose of "Site and Services" in group housing?			
	A	To create a community of like-minded individuals	B	To ensure shared cost of amenities, land, and infrastructure
25	C	To provide individual plots for housing construction	D	To offer affordable housing for migrants
	What is the full form of MoHUA			
26	A	Ministry of Home and Urban Affairs	B	Ministry of Housing and Urban Affairs
	C	Ministry of Urban Housing	D	None of the above
27	Choose the example of a Low-rise, high-density scheme designed by Ar. B.V. Doshi.			
	A	Aranya Low-Cost Housing Development Scheme	B	Rajiv Awas Yojana in New Delhi
28	C	Sheikh Sarai Housing Complex built in South Delhi	D	DDA flats at Noida
	HUDCO's primary role is:			
29	A	Designing and building houses for low-income groups	B	Promoting sustainable housing and urban development
	C	Promoting sustainable housing and urban development	D	Providing low-interest loans for housing construction
30	Adaptive reuse, Clean energy, and bicycle parking are examples of			
	A	Correct Sustainable regional planning examples	B	Regional planning examples
31	C	Low-Cost Housing Neighbourhood	D	Correct Sustainable Urban Design examples
	Laminate flooring is generally known for being:			
32	A	Prone to scratches and dents	B	Very expensive
	C	Easy to clean	D	Waterproof
33	Pneumatic structures are:			
	A	Space frames	B	Membrane structures
34	C	Shell structures	D	Cable-stayed structures
	The foundation on which a footing supporting two or more columns is known as			
35	A	Cement footing	B	Strap footing
	C	Brick footing	D	Combined footing
36	Which of the following is a potential drawback of using Bamboo in construction?			
	A	It is too heavy to transport easily	B	It is easily damaged by fire
37	C	It is too strong for most applications	D	It is susceptible to insect and fungal attacks
	The horizontal distance between the supports of an arch is called the			
38	A	Soffit	B	Span
	C	Depth	D	Rise
39	A housing project designed by Le-Corbusier. Choose the correct option			
	A	Casa Battló Spain	B	Unité d' Habitation in Marseille
40	C	Fallingwater, Pittsburgh	D	Robie House, Chicago
	What is the name of the technique Gaudí used in Casa Batlló, characterized by broken tiles, often seen on the facade?			
41	A	Catenary arch	B	Trabeation
	C	Trencadís	D	Moresque
42	The Guggenheim Museum, Bilbao, and the Sydney Opera House, Sydney are examples of			
	A	Cubism	B	Minimalism
43	C	Bio morphism	D	Brutalism

37	The difference between the cost of the property and the accumulated depreciation cost is known as			
	A	Salvage Value	B	Market Value
	C	Book Value	D	Capital Value
38	What is a Gantt chart used for in project management?			
	A	Scheduling tasks and tracking progress	B	Risk management
	C	Resource allocation	D	Budget planning
39	The BREEAM, LEED and GRIHA are			
	A	Building Indoor Modeling	B	Green building types
	C	Comprehensive Sustainability assessment method and Green building rating systems	D	Commercial building rating systems with an energy consumption certificate
40	What is the role of a building's orientation in green building design?			
	A	It affects heating and cooling loads	B	It has no impact on sustainability
	C	It determines the building's height	D	It influences the color of the building
41	Marina Bay Sands in Singapore and Habitat 67 in Montreal, and Singapore's Jewel Changi Airport, designed by			
	A	Architect Le Corbusier	B	Architect Zaha Hadid
	C	Architect Moshe Safdie	D	Architect Charles Correa
42	Choose the correct example of a building designed in Gothic Architecture			
	A	Notre-Dame, Paris	B	The Cathedral of Seville
	C	The Basilica Church of Saint-Denis	D	All of the above
43	Choose the correct option for various temples like Karnak, Luxor, and Abu Simbel.			
	A	The example of Egyptian architecture	B	The example of Art Nouveau architecture
	C	The example of Organic architecture	D	The example of Modern architecture
44	Choose the correct option for Humayun's Tomb in Delhi, and Shalimar Bagh in Lahore			
	A	The garden is designed in the Char-Baugh style	B	The garden is designed in the Roman style
	C	The garden is designed in the Modern style	D	The garden is designed in the Japanese style
45	In CAD, a "spline" curve is defined by:			
	A	A series of tangent arcs	B	A mathematical equation defining a smooth curve
	C	A series of control points	D	A series of connected straight lines
46	The quality and characteristics of cement largely impact			
	A	The strength of a hardened concrete	B	The life of steel in concrete
	C	The final finish of a hardened concrete	D	None of the above
47	Which state in India has the highest number of UNESCO World Heritage Sites?			
	A	Uttar Pradesh	B	Madhya Pradesh
	C	Maharashtra	D	Rajasthan
48	Choose the name of a cost-effective technology			
	A	Ferrocement	B	Filler slabs
	C	Rat trap bond	D	All of the above
49	Which of the following is a key benefit of using BIM in construction projects?			
	A	Higher material costs.	B	Reduced collaboration among project teams
	C	Reduced design time.	D	Increased potential for clashes and errors.

50	Choose the correct option for Adobe Photoshop and Adobe Illustrator.		
A	Used for architectural design	B	It can replace AutoCAD software
C	It is the go-to software for doing edits and graphics to an architecture portfolio.	D	It is better than BIM

Rough Work: