



# ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ ਜਲੰਧਰ

## PUNJAB TECHNICAL UNIVERSITY JALANDHAR

Max. Marks: 90

Time: 90 Mins.

### Entrance Test for Enrollment in Ph.D. Programme

#### Important Instructions

- Fill all the information in various columns, in capital letters, with blue/black ball point pen.
- Use of calculators is not allowed.
- All questions are compulsory. No negative marking for wrong answers.
- Each question has only one right answer.
- Questions attempted with two or more options/answers will not be evaluated.

Stream (Engg./Arch./Pharm./Mgmt./App.Sci./Life Sci.)	ARCHITECTURE
Discipline / Branch	ARCHITECTURE
Name	
Father's Name	
Roll No.	Date: 19-11-2011
Signature of Candidate	
Signature of Invigilator	

Q. 1 In which Indian city would you find the mosque with "Shaking Minarets"?

- (a) Hyderabad
- (b) Lucknow
- (c) Ahmedabad
- (d) Allahabad

Q. 2 Everyone knows 'The Taj Mahal'. It was built by the Emperor Shah Jahan, but for whom?

- (a) Jahani Mahal
- (b) Farida Mahal
- (c) Mumtaz Mahal
- (d) Toba Begum

Q. 3 The Petronas Towers are located in

- (a) Kuala Lumpur
- (b) Petronas
- (c) Hong Kong
- (d) Taipei

Q. 4 The Empire State Building, Manhattan, New York has how many floors

- (a) 88
- (b) 45
- (c) 178
- (d) 102

Q. 5 The Channel Tunnel (Chunnel) provides an underwater railway link between Great Britain and continental Europe. It connects Folkestone, England to Sangatte, France and takes about 35 minutes to cross. How many tunnels is it comprised of?

- (a) two
- (b) four
- (c) one
- (d) three

Q. 6 Sydney Opera House is one of the most recognizable images of Australia. It is located on Bennelong Point and reaches out into Sydney Harbour. It was designed by whom?

- a) Ero Saarinen
- (b) Bruno Taut
- (c) Alvar Alto
- (d) John Utzon

Q. 7 To protect the Taipei 101, against typhoon winds which special feature was introduced in the tower

- (a) Observation Deck
- (b) Tuned Mass Damper
- (c) Curtain Walls
- (d) Pile Foundations

Q. 8 The Pompidou Centre, Paris (completed 1977) was designed by

- (a) Richard Rogers
- (b) Jacques Herzog
- (c) Le Corbusier
- (d) Richard Meir

Q. 9 The pyramids outside the Louvre museum (completed 1989) were designed by

- (a) Le Corbusier
- (b) Christopher Wren
- (c) I M Pei
- (d) Alvar Alto & Lucio Costa

Q. 10 The Guggenheim Museum in Bilbao (completed 1997) was designed by

- (a) Frank Gehry
- (b) Mario Bota
- (c) Mies Vander Rohe

- (d) Jacques Herzog
- Q. 11 Where are the famous Dilwara temples situated?
- (a) Banaras
  - (b) Mt. Abu
  - (c) Jaipur
  - (d) Udaipur
- Q. 12 The magnificent capital city of the Mughal Empire between 1571 and 1585, during the reign of Emperor Akbar was
- (a) Kurukshetra
  - (b) Mathura
  - (c) Agra
  - (d) Fatehpur Sikri
- Q. 13 Belur Math is the headquarters of Ramkrishna mission established by Swami Vivekanand. In which city is it located?
- (a) Vrindavan
  - (b) Banaras
  - (c) Calcutta
  - (d) Delhi
- Q. 14 The enormous temple of the two Shiva Lingams is situated on an island on the south eastern tip of Indian peninsula. Which is this famous place?
- (a) Tirupati
  - (b) Dwarka
  - (c) Rameshwaram
  - (d) Somnath
- Q. 15 Situated in the 'pink city', this magnificent structure is also called 'The palace of winds'. Name it?
- (a) Hawa Mahal
  - (b) Sheesh Mahal
  - (c) Saheliyon ki Baari
  - (d) Lake Palace
- Q. 16 Which of the following buildings is an example of Byzantine architecture?
- (a) Hagia Sophia in Istanbul, Turkey
  - (b) Doge's Palace in Venice
  - (c) Royal Courts of Justice in London, England
  - (d) Versailles in France
- Q. 17 Which architectural style popularized the use of synthetic building materials such as glass, plastic and steel?
- (a) Art Nouveau
  - (b) Postmodernism
  - (c) Industrial Revolution
  - (d) Art Deco
- Q. 18 In which of these countries can you find the following famous man-made constructs: The Great Wall, The Grand Canal and Tiananmen Square?
- (a) United Kingdom
  - (b) Japan
  - (c) China
  - (d) Australia
- Q. 19 Which organization established three criteria which determine whether or not a building is tall?
- (a) Council on Tall Buildings and Urban Habitat
  - (b) The Executive Council on World Architecture
  - (c) World Council of Structures
  - (d) Council Dedicated to Architectural Design
- Q. 20 Which letter of the alphabet does the Burj Khalifa get its floor plan shape from?
- (a) H
  - (b) Y
  - (c) T
  - (d) B
- Q. 21 In a Project Schedule which of these comes first
- (a) Construction Administration
  - (b) Design Development
  - (c) Contract Negotiation
  - (d) Mobilisation of site
- Q. 22 Written information that clarifies or modifies the building documents, often issued during the bidding process.
- (a) Change Order
  - (b) Addendum
  - (c) Alternate
  - (d) Substitution
- Q. 23 A type of substructure in a building without a basement, an unfinished accessible space below the first floor.
- (a) Basement
  - (b) Slab on fill
  - (c) Weep Hole
  - (d) Crawl Space
- Q. 24 Which of these is **not** part of the structural system of a building?
- (a) Foundations
  - (b) Columns and Beams
  - (c) Doors And Windows
  - (d) Roof Framing Systems
- Q. 25 A clamping device used in carpentry; consist of long bar with adjustable clamping jaws.
- (a) Bar Clamp
  - (b) Chisel
  - (c) Hammer
  - (d) Clamp Master
- Q. 26 What material is the Eiffel Tower, Paris made up of?
- (a) Galvanised iron
  - (b) Steel
  - (c) Copper
  - (d) Cast Iron

Q. 27 What do you call concrete without reinforcements

- (a) Hollow Concrete
- (b) Stand Alone concrete
- (c) Plain Concrete
- (d) Unreinforced Concrete

Q. 28 A hydraulic cement made by burning a mixture of clay and limestone in a rotary kiln and pulverizing the resulting clinker into a very fine powder.

- (a) Portland
- (b) Puzzolana
- (c) Calcine
- (d) Mortar

Q. 29 Substances added to a concrete batch immediately before or during its mixing in order to alter or enhance specific property of concrete.

- (a) Aggregates
- (b) Admixtures
- (c) Water
- (d) fine aggregates

Q. 30 ----- are used to resist tensile and shear stresses induced by superimposed loads.

- (a) Main Reinforcements
- (b) Binders
- (c) Retarders
- (d) Secondary Reinforcements

Q. 31 Air-entertaining agents are used for

- (a) Reduce water requirements of concrete
- (b) Increasing the concrete's resistance to freezing
- (c) Speed up setting time.
- (d) Acts as plasticizers

Q. 32 A rigid relatively slender structural member. Designed primarily to support axial, compressive loads applied at the member ends.

- (a) Columns
- (b) Beams
- (c) Struts
- (d) Foundations

Q. 33 A reinforced concrete footing for perimeter column or foundation wall extended to support an interior column load.

- (a) Combined Footing
- (b) Raft Footing
- (c) Strip Footing
- (d) Matt Footing

Q. 34 Which of the following is a process of transferring a portion of the load of the wall to temporary footings and done when the excavation does not go much below the adjoining footings and when the material is fairly solid.

- (a) Footing
- (b) Scaffolding
- (c) Shoring
- (d) Deep Foundation

Q. 35 Is equipment used for surveying to measure horizontal and vertical angles to obtain land elevation.

- (a) Transit
- (b) Surveyor's Level
- (c) Construction laser
- (d) Clear Hose with Water

Q. 36 A leveling instrument capable of vertical and horizontal line check.

- (a) Level Rule
- (b) Spirit level
- (c) Surveyor's Level
- (d) Steel Tape Measure

Q. 37 A School of design established in Germany

called "Bauhaus" was founded by

- (a) Le Corbusier
- (b) Louis Kahn
- (c) Walter Gropius
- (d) Peter Behrens

Q. 38 Art Nouveau is known as International Style,

In Germany it is also known as

- (a) Ecole des Beaux
- (b) Modernist
- (c) Liberalist
- (d) Jugendsstil

Q. 39 \_\_\_\_\_ is a hard, strong, tough and rigid thermoplastic for household and industrial applications.

- (a) ICI Polyethylene
- (b) PolyVinyl Chloride
- (c) Ziegler Polyethylene
- (d) Polypropylene

Q. 40 What do you call the concept in Architecture, which is the result of intellectual, Social, Religious & Political conditions developed at a given place by a given people?

- (a) Architectural Style
- (b) History of Architecture
- (c) Historical Style
- (d) Architectural Character

Q. 41 '*Ornament equals Crime*' reflects the architectural style of

- (a) Adolf Loos
- (b) Le Corbusier
- (c) Victor Horta
- (d) Eric Mendelson

Q. 42 The building which was known as "The Falling Water" designed by Frank Lloyd Wright is called

- (a) Kauffman House
- (b) Prairie House
- (c) Farnsworth House
- (d) Robie House

- Q. 43 Which of the following indicates the brightness or dullness of a color?
- (a) Chroma
  - (b) Hue
  - (c) Intensity
  - (d) value
- Q. 44 To whom are coated tension structures attributed as a contribution to architecture
- (a) Frei Otto
  - (b) Robert Maillart
  - (c) Peter Luigi Nervi
  - (d) Eugene Freyssinet
- Q. 45 In perception of space, which sense affects placement of rooms which could limit unpleasant odors
- (a) Visual
  - (b) Thermal
  - (c) Auditory
  - (d) Olfactory
- Q. 46 Which of the following explains the mechanism by which the concept of territoriality operates, particularly in animals?
- (a) Prevents communication with each other
  - (b) . Coordinates individual activities and separates them (individuals) in groups
  - (c) Provides a frame in which things are done - places to learn, play or hide
  - (d) insures propagation of species by controlling density
- Q. 47 Who wrote "Treatise de Architectura"
- (a) Vitruvius
  - (b) Doxiadis
  - (c) Palladio
  - (d) Bernini
- Q. 48 "Beauty grows from necessity, not from repetition of formulas" was spoken by
- (a) Eero Saarinen
  - (b) Marcel Breuer
  - (c) Eliel Saarinen
  - (d) Eric Mendelson
- Q. 49 Architect of the TWA or the John F Kennedy Airport was
- (a) Eric Mendelson
  - (b) Eero Saarinen
  - (c) Marcel Breuer
  - (d) Eliel Saarinen
- Q. 50 Architect of "Notre Dame du Haut, Ronchamp was
- (a) Peter Behrens
  - (b) Le Corbusier
  - (c) Mies Vander Rohe
  - (d) Auguste Perret
- Q. 51 Symmetry resulting from the arrangement of similar radiating parts about a center point or central axis
- (a) Formal Symmetry
  - (b) Radial Symmetry
  - (c) Axial Symmetry
  - (d) Centralised Symmetry
- Q. 52 A movement founded by a group of Dutch painters & architects who abolish all styles & liberate art from representation & individual expression
- (a) De Stijl
  - (b) Modernism
  - (c) Art Nouveau
  - (d) Jugendstijl
- Q. 53 Architect of Petronas Towers in Malaysia is
- (a) Cesar Pelli
  - (b) Norman Foster
  - (c) Richard Rogers
  - (d) Peter Eisenman
- Q. 54 Different historical styles when combined are termed as
- (a) Realism
  - (b) Surrealism
  - (c) Eclecticism
  - (d) Romanticism
- Q. 55 The Architect who said that "Modern Architecture need not be Western" was
- (a) Kenzo Tange
  - (b) Fumihiko Maki
  - (c) Minoru Yamasaki
  - (d) Toyo Ito
- Q. 56 The type of lighting that carries light through cables.
- (a) Fiber Optics
  - (b) Halogen Lights
  - (c) LEDs
  - (d) LECs
- Q. 57 For a reading lamp placed on the side, the bottom edge of the shade should be:
- (a) above eye level
  - (b) at eye level
  - (c) below eye level
  - (d) angled
- Q. 58 The \_\_\_\_\_ is the inside wall of a recessed fixture. It affects the quality of the Light.
- (a) Baffle
  - (b) Waffle
  - (c) Reflector
  - (d) Wall Washer
- Q. 59 Fluorescent lamps last \_\_\_\_\_ as long as incandescent bulbs.
- (a) half
  - (b) 2-3 times
  - (c) 10-13 times
  - (d) 100 times

- Q. 60 The light from an incandescent bulb has a \_\_\_\_\_ tint.
- (a) Diffused
  - (b) Bluish
  - (c) Reflecting
  - (d) Reddish
- Q. 61 The Tallest building in the world as per The Council on Tall Buildings and Urban Habitat (CTBUH) is
- (a) Burj Khalifa, Dubai
  - (b) Petronas Tower
  - (c) CNN Tower
  - (d) Taipei 101
- Q. 62 The measurement and study of the size and proportion of the human body
- (a) Ergonomics
  - (b) Anthropometrics
  - (c) Human scale
  - (d) Proxemics
- Q. 63 Putting a direct, angled light on a surface enhances its
- (a) Colour
  - (b) Lumens
  - (c) Intensity
  - (d) Texture
- Q. 64 Light that highlights a small object or area is called
- (a) Task Lighting
  - (b) Accent lighting
  - (c) Ambient Lighting
  - (d) Diffused Lighting
- Q. 65 In 1947, R. Buckminster Fuller patented the design that he is still best known for today, the
- (a) Geodesic Dome
  - (b) Dymaxion House
  - (c) the Megamall
  - (d) the Mac mansion
- Q. 66 Which kind of fixture directs most of its light up to reflect off of the ceiling?
- (a) Halogen
  - (b) Reflector
  - (c) Chandelier
  - (d) Torchiere
- Q. 67 An arch rotated 360 degrees on its axis is called
- (a) Vault
  - (b) Sphere
  - (c) Dome
  - (d) Barrel Vault
- Q. 68 The use of steel-frame construction and the elevator made possible what type of architecture?
- (a) Domestic Architecture
  - (b) Post and Lintel Construction
  - (c) Skyscraper
  - (d) balloon Frame Construction
- Q. 69 As seen in Hagia Sophia, the transitional section between the dome and the rectangular base is a
- (a) Pendentive
  - (b) Voussoir
  - (c) Keystone
  - (d) Nave
- Q. 70 A necropolis is a
- (a) City of Dead
  - (b) City of Tomorrow
  - (c) City of three million
  - (d) Contemporary City
- Q. 71 Identify the software that compresses the size of a large file
- (a) Winword
  - (b) Zipper
  - (c) 3-D max
  - (d) Winzip
- Q. 72 In order to cancel a command in AUTOCAD press the \_\_\_\_\_ key(s).
- (a) Esc (escape)
  - (b) F1
  - (c) Break
  - (d) Ctrl+Alt+Del
- Q. 73 The Coordinate Display gives the \_\_\_\_\_.
- (a) layer name and color
  - (b) measurements of the screen
  - (c) location of the cursor (crosshairs)
  - (d) scale of the drawing
- Q. 74 GRID (F7) can be turned On to \_\_\_\_\_.
- (a) display the current location of the cursor
  - (b) give a reference of units of length (dots) on a plotted or printed drawing
  - (c) display a visual reference of units of length on the screen
  - (d) change the Limits of the drawing area
- Q. 75 In AutoCAD, the default setting direction "straight down" would be measured as \_\_\_\_\_ degrees.
- (a) 90
  - (b) -90
  - (c) 220
  - (d) -220
- Q. 76 ORTHO command in AUTOCAD is used to
- (a) force lines to a horizontal or vertical alignment
  - (b) straighten crooked lines
  - (c) make the crosshairs "jump" to regular intervals
  - (d) display the current cursor location

Q. 77 GRID (F7) in AUTOCAD can be turned On to \_\_\_\_.

- (a) display the current location of the cursor
- (b) give a reference of units of length (dots) on a plotted or printed drawing
- (c) display a visual reference of units of length on the screen
- (d) change the Limits of the drawing area

Q. 78 A computer drawing should be created \_\_\_\_ using real-world units.

- (a) to a proportion of the actual object
- (b) true size
- (c) to a standard scale
- (d) proportional to the size of the screen

Q. 79 The primary difference between the Model tab and the Layout tab(s) is \_\_\_\_

- (a) the Model tab is used for drawing in 3D and a Layout is used for drawing in 2D
- (b) the Model tab is where you create the drawing and a Layout tab represents the sheet that you will plot or print on
- (c) the color of the background
- (d) the Model tab displays the drawing you are copying from and the Layout tab is where you lay out the new drawing

Q. 80 Rene Descartes is associated with which of the following approaches to knowledge generation?

- (a) Empiricism
- (b) Rationalism
- (c) Expert opinion
- (d) None of the above

Q. 81 Research that is done to examine the findings of someone else using the "same variables but different people" is

- (a) exploration
- (b) hypothesis
- (c) replication
- (d) empiricism

Q. 82 Which of these is not a method of data collection

- (a) Questionnaires
- (b) Interviews
- (c) Experiments
- (d) Observations

Q. 83 A census taker often collects data through which of the following?

- (a) Standardized tests
- (b) Interviews
- (c). Secondary data
- (d). Observations

Q. 84 When each member of a population has an equally likely chance of being selected, this is called:

- (a) A nonrandom sampling method
- b). A quota sample
- c) A snowball sample
- d) An Equal probability selection method

Q. 85 In data analysis of the grounded theory approach, the step which focuses on the main idea, developing the story line, and finalizing the theory is called \_\_\_\_.

- a. Open coding
- b. Axial coding
- c. Selective coding
- d. Theoretical saturation

Q. 86 In a research the number of police officers and the number of crimes are positively related. This relationship is:

- a. A casual relationship
- b. A direct relationship
- c. A probabilistic causal relation
- d. A spurious relationship

Q.87 When a researcher identifies so completely with the group being studied that he or she can no longer remain objective you have what is called \_\_\_\_.

- a). Culture shock
- b). Going native
- c) Regression
- d) Cultural relativism

Q. 88 What term refers to the insider's perspective in research methodology?

- a). Ethnocentrism
- b). Emic perspective
- c). Etic perspective
- d). Holism

Q. 89 Where do you provide a step-by-step account of what the researcher and participants did during the research study?

- (a) Introduction
- (b) Abstract
- (c) Procedure
- (d) Design

Q. 90 The type of qualitative research that describes the culture of a group of people is called \_\_\_\_.

- (a) Phenomenology
- (b) Grounded theory
- (c) Ethnography
- (d) . Case study