

MGM UNIVERSITY

Department of Architecture

F.Y. B.Arch. –End Semester Examination

Program: B.Arch.

Semester :-II

Subject Code: - 20UAR0206B

Name of the Course: - Climatology

Marks: 100

Time: - 3 Hours

Instructions: -

1. Question No. 1 and No. 4 are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. If some part or parameter is noticed to be missing, you may promptly assume it and should mention it clearly

Multiple Choice Questions - 2 marks each

(20 Marks)

Q 1) In the air, the amount of water vapor is classified as?

- a) Wind
- b) Precipitation
- c) Humidity
- d) Temperature

Q 2) A good tool for understanding the behaviour of wind in a driven area is

- a) Wind rose
- b) Wind vane
- c) Wind Chart
- d) Wind Catcher

Q 3) What is defined as an imaginary line drawn through the North and South Poles?

- a) Equator
- b) Axis
- c) Latitude
- d) Meridian

Q 4) The summer solstice in India occurs around _____.

- a) 19th July
- b) 21st June
- c) 2nd October
- d) 16th April

Q 5) The temperature can be measured as

- a) Degree Celsius
- b) Degree Fahrenheit
- c) Percentage
- d) Both A & B

Q 6) Which of the following design elements is suitable for hot and dry climates

- a) Cavity wall
- b) Trombe wall
- c) Curtain wall
- d) Dry wall

Q 7) Windows should be avoided facing which direction in the northern hemisphere

- a) South
- b) East
- c) West
- d) North
- e)

Q 8) Shading devices can be

- f) Fixed
- g) Manual
- h) Automatic
- i) All of the above

Q 9) Monitor lighting, saw tooth lighting are types of

- e) Windows
- f) Doors
- g) Skylights
- h) None

Q 10) The _____ the windows, the _____ daylight but _____ the heat gain

- e) Larger, more, more
- f) Smaller, more, less
- g) Larger, more, less
- h) Larger, less, more

Write Short Notes on: (ANY 4) – 5 Marks each

(20 Marks)

Q 1) Describe any 3 ways in which weather and climate can affect us

Q 2) Describe immediate and after effects of severe weather

Q 3) Explain what is the effect of earth's tilt of rotational axis on earth

Q 4) What is daylighting, what are disadvantages of improper daylighting

Q 5) What is topography and describe its impact on climate

Attempt (ANY 4) long answer questions– 12.5 Marks each

(50 Marks)

Q 1) Explain shading devices, its importance and write about factors affecting daylight performance

Q 2) What is daylighting, write about Principles of daylighting with neat and labelled sketches

Q 3) Write about the impact of solar movement on climate

Q 4) Explain the passive design strategies used in Hot and Dry Climate with proper sketches

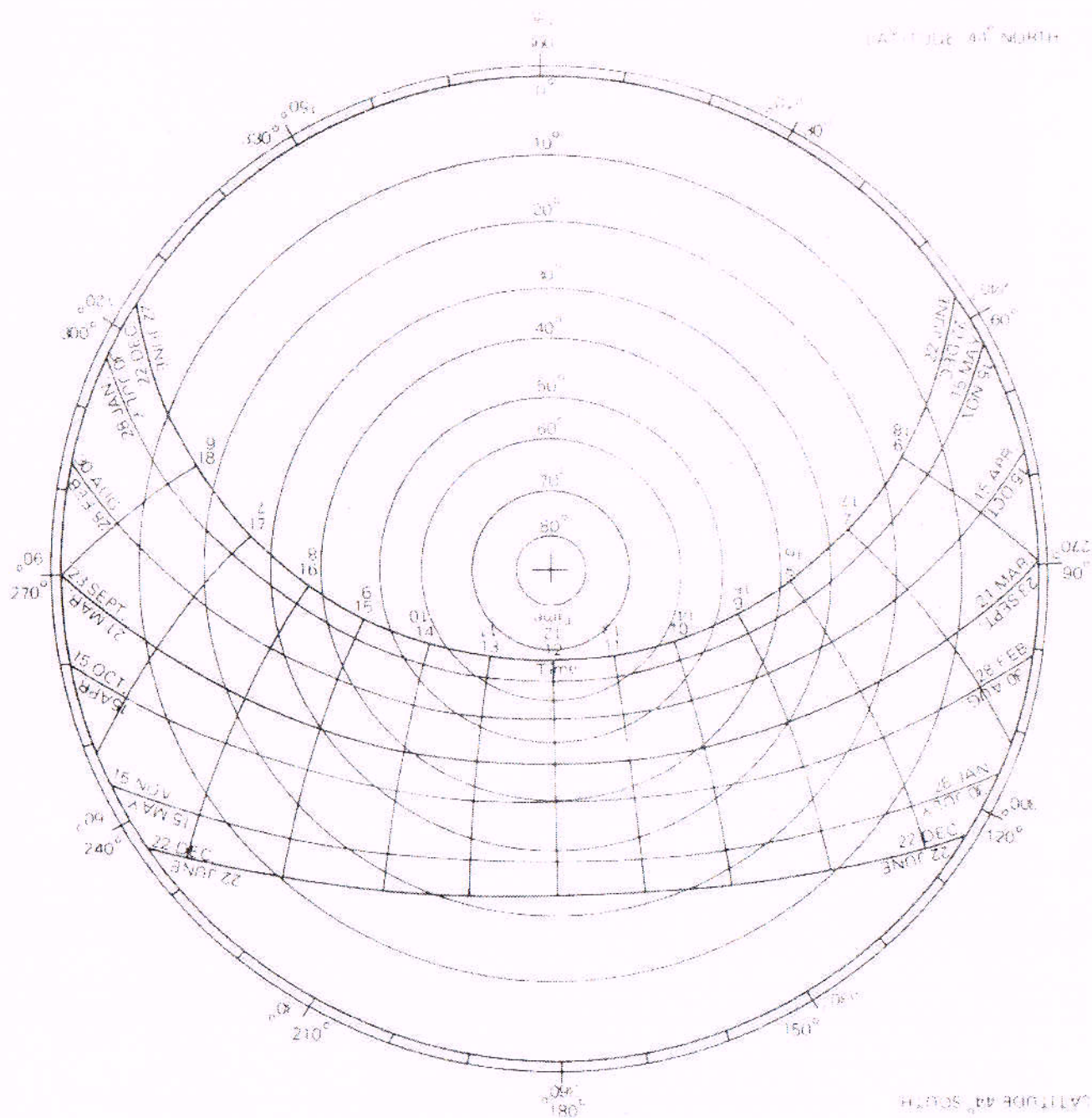
Q 5) Explain the use of solar chart and shadow angle protractor for working out shading devices for a building

Mark the following points on Solar Chart and find the Azimuth and Altitude for the same

(10 Marks)

1. 15th May 4 pm
2. 2nd March Jan 9 am
3. 15th April 2:30 pm
4. 30th July 2 pm
5. 15th Nov 7:45 am

AT 11:00 PM 44 SOUTH



MGM UNIVERSITY
End Semester Examination – May-June 2022

Program: B. Arch

Course Code - 20UAR0406B

Marks: 100

Sem.: IV

Name of the Course: Building Services - II

Time: 3 Hr

Instructions to the Students

1. Question number one is compulsory.
 2. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
 3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
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Q.1. A) Write True or False

(10)

- 1) High pressure and high temperature refrigerant evaporates in condenser and passes this heat to surrounding air blowing on the condenser coils.
- 2) Dehumidification of indoor air is accomplished by absorbing sensible heat in evaporator coils.
- 3) Compressor in an air conditioner takes refrigerant in liquid state and increases the pressure and temperature of refrigerant.
- 4) Reduction in pressure and temperature of refrigerant is done by T.X. valve.
- 5) Outdoor air coming in touch with Evaporator coil loses both sensible heat and latent heat.

Q. 1. B) Select the right answer from the options:

(10)

1. The unit of 2 Lux is equal to

- a) 2000 lumen per square feet
- b) 20 lumen per square meter
- c) 2 lumen per square meter
- d) 2 lumen per square feet

2. Luminous Efficacy of a lamp is given by

- a) Lux/Watt
- b) lumens/Watt
- c) Watt/ Lux
- d) Watt/lumens

3. The quantity of light/luminous flux falling on a unit area of a surface is

- a) Luminous flux
- b) Illuminance

- c) Luminance
- d) Luminous intensity

4. The fact that refractive indices differ for each wavelength of light produces an effect called

- a) Reflection
- b) Refraction
- c) Dispersion
- d) Absorption

5. Refractive Index of a material or substance is given as

- a) The ratio of the speed of light in a vacuum to the speed of light in a material through which it passes.
- b) The ratio of the speed of light in air to speed of light in a vacuum.
- c) The ratio of the speed of light in a vacuum to speed of light in air.
- d) The ratio of the speed of light in a material through which it passes to the speed of light in a vacuum.

Q. 2. Write short notes on ANY FOUR

(20)

- 1) Diffraction
- 2) Latent Heat and sensible heat
- 3) Tonnage in Air Conditioning
- 4) Absorption of light and colors

Q. 3. The methods followed in the past to cool and condition the air. Draw neat and properly labeled sketches.

(15)

Q. 4. Explain SLD for electrical Power System. Explain ohms law. Explain concept of series circuit and parallel circuit.

(15)

Q.5. Explain Central Split - unitary or packaged air conditioning system with the help of neat and labeled sketch.

(15)

Q. 6. Explain the following ONLY THREE

- a) Basic Photometric Quantities
- b) Concept of series circuit and parallel circuit
- c) Split air conditioners
- d) Tonnage in air conditioning

(15)

MGM UNIVERSITY
Department of Architecture
Second Year B.Arch. – Examination

Program: B.Arch

Sem: III Regular

Course Code- 20UAR0305D

Name of the course: History of Architecture - II

Marks- 100

Time: 3 Hours

Instruction to the students:

1. Question number **One** and **Two** are compulsory. **Attempt any five** of the remaining questions.
 2. Illustrate your answers with neat sketches, diagram etc., where ever necessary.
 3. If some part or parameter is noticed to be missing, you may promptly assume it and should mention it clearly.
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Q1. Multiple choice questions (2 marks each): (Compulsory)

(20 Marks)

1. The Indus valley civilization was well known for which of the following materials for building walls :
 - a. Wood.
 - b. Cement.
 - c. Burnt clay bricks.
 - d. Mud.
2. The cow gate was first utilized by which of the following people in the Indian subcontinent:
 - a. Mauryans
 - b. Buddhist
 - c. Dravidians
 - d. Aryans.
3. Which of the following Sites are holly places associated with Jainism:
 - a. Sanchi
 - b. Girnar
 - c. Konark
 - d. Khajuraho
4. _____ is a transition area between the Garbhagriha and the temple's main hall (mandapa)
 - a. Kalasha
 - b. Jagati
 - c. Shikhara
 - d. Antarala

Q3. Describe with neat sketches the architectural contribution of the Mauryan period with suitable examples. **(12 Marks)**

Q4. Write a short note on Barabar Hills Caves, describe its architectural characteristics with the help of neat sketches. **(12 Marks)**

Q5. Write a detail note on Jain temple city, with a suitable building example. **(12 Marks)**

Q6. What are the architectural characteristics of Dravidian style of temple Architecture? Explain with sketches. **(12 Marks)**

Q7. What is Mahayana Buddhism, how is it represented through architecture? Explain with the help of sketches. **(12 Marks)**

Q8. Write a short note on evolution of rock cut architecture with neat sketches. **(12 Marks)**

Q9. Write a detail note on Badami Caves of Chalukyas. **(12 Marks)**

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Bachelor of Architecture

First year (Semester I) Examination

Name of the course: Environmental Science

Course Code: 20UAR0106B

Feb / March – 2022

Time: 3 Hours

Marks: 100

Instructions:

1. Question No. 1 is compulsory.
 2. Illustrate your answers with neat and proportionate sketches wherever necessary.
 3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
 4. Draw sketches wherever necessary
-

Q1. Multiple Choice Questions:(2 marks each)

20 Marks

1. Which Act is also known as the Umbrella Legislation
 - a. The Water (Prevention and Control of Pollution) Act
 - b. Air (Prevention and Control of Pollution) Act
 - c. The Environment (Protection) Act
 - d. Wildlife protection Act
2. Which amongst the following is an example of non-renewable resource
 - a. Limestone
 - b. Sun
 - c. Wind
 - d. Water
3. A lake is an example of _____ type of ecosystem.
 - a. Marine Ecosystem
 - b. Fresh water Ecosystem
 - c. Terrestrial Ecosystem
 - d. Salt Water Ecosystem
4. Which amongst the following is the most traditional method of waste disposal
 - a. Incineration
 - b. Compaction
 - c. Landfill
 - d. Plastic roads

5. _____ refers to the population shift from rural to urban areas.

- a. Globalization
- b. Civilization
- c. Urbanization
- d. Modernization

6. A set of ecosystems brought together is called a _____.

- a. Biosphere
- b. Lithosphere
- c. Hydrosphere
- d. Earth

7. Deccan peninsula zone covers which of the following state in India?

- a. Madhya Pradesh
- b. Arunachal Pradesh
- c. Andhra Pradesh
- d. Mizoram

8. Ground water is recharged through structure called a _____.

- a. Storage pit
- b. Soak pit
- c. Cesspit
- d. Harvesting pit

9. Important Factors for successful EIA is

- a. Right Timing to initiate EIA
- b. Scoping and preparation of Terms of Reference
- c. The quality of the information
- d. All of the above

10. India has been divided into _____ biogeographic zones

- a. 12
- b. 15
- c. 10
- d. 9

Q2. Draw neat and labeled sketches (any 2)

10 Marks

1. Energy flow in an Ecosystem
2. Food Chain
3. Rain Water Harvesting System

Q3. Write Short Notes on (any 4)

20 Marks

1. Write a short note on Natural Resources
2. Describe in brief any 4 negative impacts of loss of Biodiversity?
3. Explain Rainwater harvesting and its benefits
4. Explain environmental Movements
5. What is the difference between grassland and forest ecosystem?

Q4. Long Answers (any 5)

50 Marks

1. Write about Disasters, types of disasters and disaster management
2. Explain what is an ecosystem? Describe any 2 different types of ecosystem with neat sketches and list out their unique characteristic.
3. Write a short note on Waste, sources and impacts of waste
4. Explain EIA and list out the steps involved in conducting an EIA if the Government is planning to construct a highway?
5. Describe in detail any three renewable sources of energy preferably with sketches.
6. Write a short note on Environmental Protection Act
7. Describe biogeographic zones in India and explain any 2 in detail

M. Arch Environmental Architecture (First Year) Semester: I

Subject: Green building Material Construction technologies

Subject Code: 20PEA0104B

Month and Year: February 2022

Time: - 3 Hours

Marks: 100 Marks

Q1. A. Tick the correct answer.

(10 marks)

1. What is the minimum point requirement for LEED platinum certification?

A. 36 B. 52 C. 42 D. 45

2. Negative environmental impacts can be mitigated by performing...

A. Preliminary Environmental Review. B. an Environmental Impact Assessment.
C. LCA D. Both A AND B

3. Which of the following is a reusable building material from demolished buildings when constructing new buildings?

A. plaster B. Paint C. Carpet D. Steel

4. Green building practices include

A. Only energy efficiency B. Only recycled materials
C. Only Environmental Protection D. All of these

5. Reducing indoor air pollutants helps with which of the following?

A. Lowering rental rates for the building B. Improving occupant productivity
C. Day lighting and views D. Reduced operational costs

Q1. B. Write short notes on any 5:

(10 Marks)

1. One way of recycling bricks and cement debris
2. Embodied energy
3. Low VOC paints
4. Green alternative to wood or steel for making furniture
5. Any 2 names of Green Building certifications in full form
6. Name any 2 ecofriendly materials and reason why.

Q.2 What are the pre requisites of IGBC CERTIFICATION for a green new building? Explain any 4

(10 Marks)

Q.3 Explain in detail the LCA process for a building material.

(10 Marks)

Bachelor of Architecture - First Year - Semester I Examination

Course name: Humanities

Course code: 20UAR0104H

Feb / March - 2022

Time: 3 Hours

Marks: 100

Instructions: - 1. Question no. 1 is compulsory.

2. **Attempt any 4** questions out of the remaining questions.

3. Figures to the right indicate full marks.

Q. No. 1: - Select correct answer from the given options and write the complete statement. (20 marks)

1. The 'Class' system is based on -----

- a. Birth
- b. Economic Status
- c. Skin Colour
- d. Literacy

2. The 'Caste' system is speciality of -----

- a. India
- b. China
- c. Europe
- d. USA

3. Social reform due to British rule in India is -----

- a. Transport facility
- b. Education
- c. Abolishing of 'Sati' system.
- d. Cricket

4. This is 100% Urbanised country

- a. USA
- b. Japan
- c. India
- d. Singapore

5. This is the largest populated city in the world

- a. Delhi
- b. Tokyo
- c. New York
- d. Mumbai

6. Future trend of Urbanization is stronger in ----

- a. Japan
- b. Australia
- c. Russia
- d. USA

7. A 'Fashion Garment' is a part of -----

- a. Traditions
- b. Values
- c. Civilization
- d. Beliefs

8. A 'Cultural Lag' is difference between ----

- a. Norms and values
- b. Traditions and thoughts
- c. life style and thinking
- d. knowledge and skills

9. This is a dissociative social process

- a. Assimilation
- b. Conflict
- c. Competition
- d. Accommodation

10. In Sociology, a Nation is -----

- a. Association
- b. Primary Group
- c. Institution
- d. Community

Q. No. 2: - Write in brief, similarities and differences between following terms.

(Any 2)

(20 marks)

(A) Accommodation & Assimilation

(B) Status & Role

(C) Competition & Conflict

Q. No. 3: - Draw neat sketches and explain the tools and implements made by prehistoric man.

(20 marks)

Q. No. 4: - Explain the process of "Urbanization" and its effects on society.

(20 marks)

Q. No. 5: - What do you understand by 'Culture'? Explain the elements of culture and the phenomenon of 'Cultural Lag'.

(20 marks)

Q. No. 6: -- What are social Institutions? Also explain the role of 'Family' in the process of socialization.

(20 marks)

Bachelor of Architecture- First Year- Semester I Examination

Course Name- Design Fundamentals in Architecture

Course Code - 20UAR0105D

February/March- 2022

Time: 3 Hours

Marks: 100

Instructions: 1. Question **1 & 2** are Compulsory

2. Attempt any **Four** of the remaining **Six** Questions (**Q. No. 3 to Q. No.8**)

3. Figures to the right indicate full marks

Q1. Multiple Choice Questions (2 Marks Each)

(20 Marks)

1. _____ was given conscious form and complexity so as to make it decorative.
 - a. Cloth
 - b. Food
 - c. Shelter
 - d. None of these
2. Position, orientation and visual inertia are the properties of _____.
 - a. Space
 - b. Nature
 - c. Water
 - d. Form
3. _____ improves surface quality in the work of art.
 - a. Material
 - b. Light
 - c. Sound
 - d. Texture
4. Overhead plane is like a _____.
 - a. Paper
 - b. Umbrella
 - c. Ceiling
 - d. Tree
5. _____ were inventors of golden ratio.
 - a. Romans
 - b. Egyptians
 - c. Indians
 - d. Greeks

6. _____ Balance means arrangement of elements around a central part.
- Radial
 - Symmetrical
 - Asymmetrical
 - Axial
7. _____ must be utilizing with their inherent qualities.
- Lines
 - Colours
 - Materials
 - None of these
8. The objective of _____ is to produce maximum visibility.
- Emphasis
 - Fenestration
 - Contrast
 - None of these
9. We move in time through a sequence of _____.
- Forms
 - Planes
 - Levels
 - Spaces
10. Activities determine the _____.
- Path
 - Space
 - Movement
 - Motion

Q2. Write short notes on any Four out of Five Questions (5 Marks Each)

(20 Marks)

- Organization of Space
- Proportion & Scale
- Truth in Architecture
- An Artist
- Textures & Patterns
- Fenestration

--- P.T.O ---

- Q3.** Explain in brief the scope of Architecture (15 Marks)
- Q4.** Describe the impact of built environment on human being. (15 Marks)
- Q5.** What is the meaning of massing? What is its significance in Architecture? (15 Marks)
- Q6.** State the importance of colour in architecture. (15 Marks)
- Q7.** Describe giving examples how the use of different building materials can enhance the aesthetics of a building. (15 Marks)
- Q8.** Discuss any three principles of circulation supported with neat sketches (15 Marks)

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MGM UNIVERSITY

Department of Architecture

First Year B.Arch. – Backlog Examination

Program: B.Arch

Sem: II Backlog

Course Code- 20UAR0206B (BAR20-125)

Name of the course: Climatology

Marks- 100

Time: 3 Hours

Instruction to the students:

1. Question number **One** and **Two** are compulsory. **Attempt any Two 10 Marks and Two 15 Marks Questions** of the remaining questions.
 2. Illustrate your answers with neat sketches, diagram etc., where ever necessary.
 3. If some part or parameter is noticed to be missing, you may promptly assume it and should mention it clearly.
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Q1. Multiple choice questions (2 marks each): (Compulsory)

(20 Marks)

1. What is defined as an imaginary line drawn through the North and South Poles?
 - a. Equator
 - b. Axis
 - c. Latitude
 - d. Greenwich meridian.
2. Change in hours of daylight and seasons of the earth are caused by _____.
 - a. Rotation
 - b. Revolution
 - c. Rotation & Tilt of axis
 - d. Revolution and Tilt of axis
3. The hemisphere of earth with the maximum tilt towards the sun will experience which of the following climates:
 - a. Summer
 - b. Winter
 - c. Autumn
 - d. Spring
4. The atmospheric conditions in a specific area and at a specific time are called _____.
 - a. Weather
 - b. Climate
 - c. Season
 - d. None of the above

5. _____ is another form of indication or expression of atmospheric humidity.
- Latency
 - Vapour pressure
 - Air pressure
 - Relative humidity
6. The unit of measurement for precipitation is _____.
- Cm
 - Km
 - Dm
 - Gm
7. Which of the following design elements is suitable for warm and humid climates.
- Water body
 - UCR mason
 - Cross ventilation
 - flat roof
8. In cold and dry climates windows should be places in which of the following directions?
- South
 - East
 - West
 - North
9. Day lighting is not responsible for providing:
- Visual comfort
 - Reduce energy use
 - Heat loss
 - None of the above
10. Which amongst the following is not a type of shading device?
- Cantilevers
 - Louvers
 - Stone Jalis
 - Doors

Q2. Short answer type questions (5 marks each) attempt any 6

(30 Marks)

- What is Climate?
- What is Relative humidity?
- What are summer and winter solstice?
- What are Latitudes & longitudes?
- What is glare?
- What are shading devices?
- What is a cavity wall?
- What is passive cooling?

MGM UNIVERSITY
Department of Architecture
S.Y. B.Arch. - End Semester Examination

Program: B. Arch

Course Code- 20UAR0307B

Marks: 100

Sem.: III

Name of the Course: Building Services - I

Time: 3 Hr

Instructions to the Students

1. Question number one is compulsory.
 2. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
 3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
- =====

Q.1. A) Match the following. (Attempt any six)

(12)

- | | |
|-----------------------|-------------------------|
| a) Ferrule | 1) River bed |
| b) Inspection Chamber | 2) Draw off appliance |
| c) Septic Tank | 3) Drainage maintenance |
| d) Catchment area | 4) Bath tub |
| e) Ablution fixture | 5) Terrace floor |
| f) Transpiration | 6) Weather effects |
| g) Expansion Joint | 7) Forestation |
| | 8) Anaerobic bacteria |
| | 9) WC |

Q. 1. B) Identify true or false. (Any four)

(08)

- a) Pressure increases with height.
- b) Dead end or Tree type network is same and mostly applicable to Indian cities.
- c) Sump pit is mandatory for water distribution.
- d) Ventilation is important for smooth functioning of drainage system.
- e) Domestic demand depends upon lifestyle and climatic conditions.

Q. 2. Enlist the types of distribution networks. Explain any two out of them with the help of neat sketches, functions, advantages, and disadvantages of each. (15)

Q. 3. Draw neat sketch and explain the functioning (any two) (10)

- a) Intercepting trap
- b) Gate valve
- c) Rigid joint

Q. 4. Draw a neat section showing service connection. Explain the significance, functioning of each element in detail. (15)

Q. 5. What is centralized hot water system? What are its two types? Explain each with neat sketches. (12)

Q. 6. What is indirect mode of water supply? Draw a neat, labeled section of RCC underground water tank. (12)

Q. 7. Write short note on the following (any four) (16)

- a. Gate valve and Ball Valve
- b. Pressure reducing valves
- c. Bottle trap and Floor trap
- d. HDPE pipes and steel pipes
- e. Loop type vent and wet type vent

MGM UNIVERSITY

Department of Architecture

First Year B.Arch. – Backlog Examination

Program: B.Arch

Sem: I Backlog

Course Code- 20UAR01015D

(BAR20-114) Name of the course: Design fundamentals in Architecture.

Marks- 100

Time: 3 Hours

Instruction to the students:

1. Question number **One** and **Two** are compulsory. **Attempt any Five** of the remaining questions.
2. Illustrate your answers with neat sketches, diagram etc., where ever necessary.
3. If some part or parameter is noticed to be missing, you may promptly assume it and should mention it clearly.

Q1. Multiple choice questions (2 marks each): (Compulsory)

(20 Marks)

1. The product of art is essentially intended to satisfy _____ needs.
 - a. Secondary
 - b. Primary
 - c. Tertiary
 - d. None of these
2. _____ was given conscious form and complexity so as to make it decorative.
 - a. Cloth
 - b. Food
 - c. Shelter
 - d. None of these
3. _____ is a physical phenomenon of nature
 - a. Sound
 - b. Light
 - c. Music
 - d. Flash
4. Position, orientation and visual inertia are the properties of _____.
 - a. Space
 - b. Nature
 - c. Water
 - d. Form

Attempt any five Questions

- Q1. Explain with sketches path and space relationship. (10 Marks)
- Q2. Write an essay on spatial organization. (10 Marks)
- Q3. State the significance of colour in architecture. (10 Marks)
- Q4. Discuss the seven lamps of architecture. (10 Marks)
- Q5. Describe giving examples how the use of different building materials can enhance the aesthetics of a building. (10 Marks)
- Q6. Describe any three principles of circulation supported with neat sketches. (10 Marks)
- Q7. Explain how architecture is a part of culture and write the aspects of culture. (10 Marks)

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Bachelor of Architecture-First Year – (I Semester) Examination

Name of the Course: Building Construction Technology & Materials- I TH
Feb / March - 2022

Course Code: 20UAR0102B

Time: 4 Hour

Marks: 100

Instructions:

1. Question No. 1 is compulsory.
2. Illustrate your answers with neat and proportionate sketches wherever necessary.
3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
4. Question No. 4. Should be solved on drawing sheet.

Q.1. Multiple choice questions: (2 Marks each)

20 Marks

1. Which of the following is not a type of continuous kilns?
 - a) Bull's trench kiln
 - b) Hoffman's kiln
 - c) Down-draught kiln
 - d) Tunnel kiln
2. What is the total percentage of aggregates in concrete by volume?
 - a) 50-60%
 - b) 70-80%
 - c) 85%
 - d) 50%
3. _____ is the lower half portion of the arch between the crown and the skewback.
 - a) Spandril
 - b) springing point
 - c) Haunch
 - d) Voussoirs
4. Which of the following is not a joint in stone masonry
 - a) Tongued and grooved joint
 - b) Dowel joint

- c) Raked joint
- d) Butt joint

5. Which of the following is not a variety of industrial timber ?

- a) Veneers
- b) Plywood
- c) Baulk
- d) Fibre boards

6. What is the size of fine aggregates?

- a) 4.75mm
- b) $< 4.75\text{mm}$
- c) $> 4.75\text{mm}$
- d) 12mm

7. Which one of the below is the next step after digging in the preparation of brick earth process?

- a) Tempering
- b) Site selection
- c) Cleaning
- d) Unsoiling

8. Which of the following statements about a frog is not true?

- a) A frog is used to indicate the trade name of the manufacturer
- b) It helps in cutting the brick in desired size
- c) It is a mark of depth about 10-20 cm
- d) It serves as a key for holding mortar

9. The shape of Hoffman's kiln is _____ in the plan.

- a) Circular
- b) Rectangular
- c) Hexagonal
- d) Trapezoidal

10. Which of the below should be avoided in brick masonry?

- a) Horizontal joints

- b) Queen closer
- c) Brick bat
- d) Vertical joints

Q. 2 Write short notes (any 3)

12 Marks

- a) Tunnel Kiln
- b) Crushing test for stone
- c) Classification of Stones
- iv) Advantages of Bamboo
- v) Any two types of Mud construction

Q.3. Answer the following questions in short (any 2)

08 Marks

1. What are aggregates? Describe in detail its classification according to the size.
2. Differentiate between Igneous rocks and Sedimentary rocks.
3. Explain the process of Bulking of sand.

Q.4. Answer the following questions in Detail (any 2)

20 Marks

1. Describe the operation of preparation of clay for the manufacturing of bricks.
(With the help of necessary sketches)
Tempering process and pug mill dig. Is expected
2. Describe the processes of manufacturing of cement in detail. (by any one process)
3. Explain the process of preservation of Timber in detail. Explain any four defects in timber.

Q. 5. Give the sketches of the following: (any 2)

10 Marks

1. Queen closer half and King closer
2. Pug mill
3. Hoffman's kiln

Q.6. Draft the following using appropriate scale (any 2)

30 Marks

- a) Draw plan of odd and even course, elevation and isometric of one and half brick thick wall in double Flemish bond.
- b) Draw plan of odd and even course, elevation and isometric view of two brick thick wall in English bond.
- c) Draw a simple foundation for a hall admeasuring 3.0 x 4.0 mts. In stone masonry.
 - 1. Take wall thk.350 mm
 - 2. Depth of foundation 1.75 mt. below the ground.

Draw- (Use appropriate scale)

- 1. Key plan & section
- 2. Detail foundation section
- 3. Plan of footing
- 4. Isometric view of foundation.

-----End of Paper-----

- c) Only (a)
- d) Both (a) and (b)

Q2	Attempt ANY 6 questions Each question carries 08 (Eight) marks	CO	BT level	Marks
a)	What are the advantages and disadvantages of Cloud Computing?	CO1	2	8
b)	With neat diagram explain Cloud File Systems.	CO2	3	8
c)	How to decompose a Monolithic Application into Microservices.	CO3	2	8
d)	What is cloud interoperability? Explain need of standardization in Cloud Computing and enlist standards given by various organizations.	CO4	3	8
e)	Explain Infrastructure-as-a-Service (IaaS) in detail.	CO2	2	8
f)	Elaborate the business model of eBay.	CO5	3	8
g)	Describe hybridization of business models with suitable example.	CO6	3	8
h)	What are the categories of security challenges in Cloud Computing? Explain in Detail.	CO4	2	8
i)	Explain cloud computing architecture in detail	CO1	2	8
j)	What are approaches to microservice discovery?	CO3	2	8

MGM UNIVERSITY

Department of Architecture

F.Y. B.Arch. –End Semester Examination

Program: B.Arch

Sem :-II

Subject Code:- 20UAR0205B

Name of the Course :-Theory of Structure-I

Marks: 100

Time:- 3 Hr.

- Instructions:-**
- (i) Assume suitable data, if necessary.
 - (ii) Figures to the right indicate full marks.

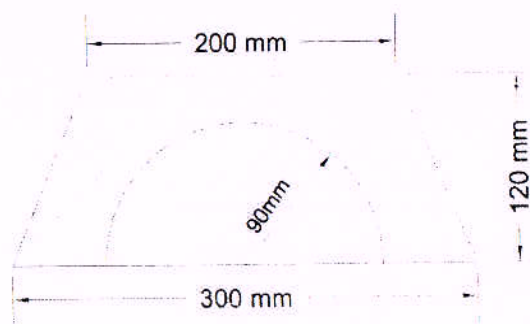
Q. No. 1:- Solve any FOUR

08 Marks

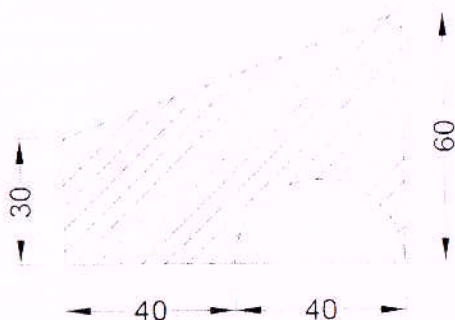
- (a) Find the C.G. of semi circle & right angle triangle with figure
- (b) Find the C.G. of trapezium & isolated triangle with figure
- (c) What are the types of loads?
- (d) What are the types of supports? Explain with neat sketch.
- (e) What are the types of loading? Explain with neat sketch.

Q. No.2 (a) A semicircle of 90 mm radius is cut out from a trapezium as shown is fig. Find the position of the center of gravity of figure.

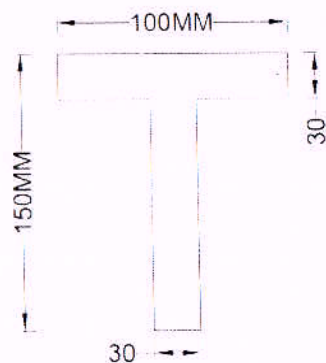
10 Marks



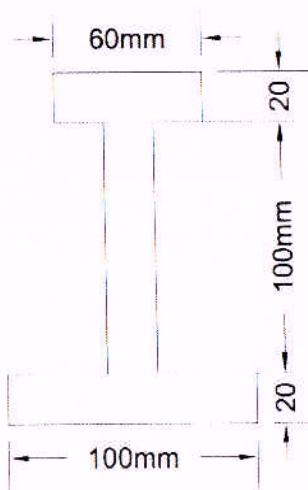
- (b) A semicircle area is removed from a trapezium as shown in fig. Determine the centroid of the remaining area
10 Marks



- Q.3 (a) Find the moment of inertia about its C.G.
15 Marks



- (b) Find the moment of inertia about its C.G.
15 Marks



- Q.4 Explain any TWO
12 Marks

- Theorem of parallel axis.
- Theorem of perpendicular axis.
- Explain the moment of inertia for rectangular section.

Q.7 Multiple Choice Questions

(20M)

1. Where the center of gravity of a circle lies?

a) At its centre b) Anywhere on its radius c) Anywhere on its circumference d) Anywhere on its diameter

2. Where will be the center of gravity of the 12cmX3cm section will lie in coordinates?

a) (6,3) b) (6,6) c) (6,1.5) d) (1.5,3)

3. Example for cantilever beam is _____

a) Portico slabs b) Roof slab c) Bridges d) Railway sleepers

4. U.D.L stands for?

a) Uniformly diluted length b) Uniformly developed loads c) Uniaxial distributed load
d) Uniformly distributed loads

5. A beam which extends beyond its supports can be termed as _____

a) Over hang beam b) Over span beam c) Isolated beams d) Tee beams

6. The axis about which moment of area is taken is known as _____

a) Axis of area b) Axis of moment c) Axis of reference d) Axis of rotation

7. Which of the following is Dead load in the form of

a) Snow Load b) Wind load c) Self Weight Wall d) Both A and B

8. What is MOI?

a) ml^2 b) mal c) ar^2 d) None of the mentioned

9. A beam is supported on more than two supports is known as.....

a) Cantilever beams b) Tee beams c) Continuous beams d) Fixed beams

10. Which of the following is not included in imposed load classification?

a) Residential Load b) Earthquake load c) Educational Load d) Industrial Load

Bachelor of Architecture-First Year – (I Semester) Examination

Name of the Course: Building Construction Technology & Materials- I TH
Feb / March - 2022

Course Code: 20UAR0102B

Time: 4 Hour

Marks: 100

Instructions:

1. Question No. 1 is compulsory.
2. Illustrate your answers with neat and proportionate sketches wherever necessary.
3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
4. Question No. 4. Should be solved on drawing sheet.

Q.1. Multiple choice questions: (2 Marks each)

20 Marks

1. Which of the following is not a type of continuous kilns?
 - a) Bull's trench kiln
 - b) Hoffman's kiln
 - c) Down-draught kiln
 - d) Tunnel kiln
2. What is the total percentage of aggregates in concrete by volume?
 - a) 50-60%
 - b) 70-80%
 - c) 85%
 - d) 50%
3. _____ is the lower half portion of the arch between the crown and the skewback.
 - a) Spandril
 - b) springing point
 - c) Haunch
 - d) Voussoirs
4. Which of the following is not a joint in stone masonry
 - a) Tongued and grooved joint
 - b) Dowel joint

- c) Raked joint
 - d) Butt joint
5. Which of the following is not a variety of industrial timber ?
- a) Veneers
 - b) Plywood
 - c) Baulk
 - d) Fibre boards
6. What is the size of fine aggregates?
- a) 4.75mm
 - b) $< 4.75\text{mm}$
 - c) $> 4.75\text{mm}$
 - d) 12mm
7. Which one of the below is the next step after digging in the preparation of brick earth process?
- a) Tempering
 - b) Site selection
 - c) Cleaning
 - d) Unsoiling
8. Which of the following statements about a frog is not true?
- a) A frog is used to indicate the trade name of the manufacturer
 - b) It helps in cutting the brick in desired size
 - c) It is a mark of depth about 10-20 cm
 - d) It serves as a key for holding mortar
9. The shape of Hoffman's kiln is _____ in the plan.
- a) Circular
 - b) Rectangular
 - c) Hexagonal
 - d) Trapezoidal
10. Which of the below should be avoided in brick masonry?
- a) Horizontal joints

- b) Queen closer
- c) Brick bat
- d) Vertical joints

Q. 2 Write short notes (any 3)

12 Marks

- a) Tunnel Kiln
- b) Crushing test for stone
- c) Classification of Stones
- iv) Advantages of Bamboo
- v) Any two types of Mud construction

Q.3. Answer the following questions in short (any 2)

08 Marks

1. What are aggregates? Describe in detail its classification according to the size.
2. Differentiate between Igneous rocks and Sedimentary rocks.
3. Explain the process of Bulking of sand.

Q.4. Answer the following questions in Detail (any 2)

20 Marks

1. Describe the operation of preparation of clay for the manufacturing of bricks.
(With the help of necessary sketches)
Tempering process and pug mill dig. Is expected
2. Describe the processes of manufacturing of cement in detail. (by any one process)
3. Explain the process of preservation of Timber in detail. Explain any four defects in timber.

Q. 5. Give the sketches of the following: (any 2)

10 Marks

1. Queen closer half and King closer
2. Pug mill
3. Hoffman's kiln

Q.6. Draft the following using appropriate scale (any 2)

30 Marks

- a) Draw plan of odd and even course, elevation and isometric of one and half brick thick wall in double Flemish bond.
- b) Draw plan of odd and even course, elevation and isometric view of two brick thick wall in English bond.
- c) Draw a simple foundation for a hall admeasuring 3.0 x 4.0 mts. In stone masonry.
 - 1. Take wall thk.350 mm
 - 2. Depth of foundation 1.75 mt. below the ground.

Draw- (Use appropriate scale)

- 1. Key plan & section
- 2. Detail foundation section
- 3. Plan of footing
- 4. Isometric view of foundation.

-----End of Paper-----

MGM UNIVERSITY
Department of Architecture
S. Y. Arch –End Semester Exam

Program: B. Arch

Semester –III

Course Code – 20UAR0303B

Name of the course –BCTM – III(TH)

Marks – 100

Time – 4 Hours

Instructions to the Students

1. Question number one is compulsory.
 2. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
 3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
 4. Question no 2 and 3 should be solved on drawing sheet. Answer any 2 out of remaining
 5. Choose appropriate scale and assume suitable data.
-

Q.1 Choose correct alternative.

1. Veneers are thin slices of _____ wood.
a. Artificial b. Synthetic c. Composite D. Sap
2. Slates are type of _____.
a. Roofing tiles b. flooring tiles c. Paving tiles D. Ceiling Tiles
3. A finish which is actually applied on site is known as –
a. Site Finish b. Finishing Coat c. Applied Finish d. Coating
4. After heating Gypsum turns into
a. Fine Powder b. Rock solid c. Thick Granules d. Liquid
5. A horizontal beam connecting two rafters in a roof truss is known as
a. Principle Rafter b. Ridge Beam c. Wall Plate d. Tie Beam
6. The large dressed Piece of timber is known as _____.
a. Timber b. Plywood c. Battens d. Seasoned wood
7. Veneers of non-precious wood are used in making
a. Plywood c. Sandwich Board
b. Veneer Board d. MDF
8. Waste wood particles are used to produce -

a. Particle board d. LDF

b. HDF board c. Both a and c

9. _____ are used to increase the strength of gypsum plaster.

a. wood Fibers b. Steel Reinforcement C. Cement d. Metal Sheets

10. Which of the following artificial wood is strongest in resisting sagging and bending.

a. Particle boards b. Chip board c. block board d. Ply board

11. HDF and MDF are types of _____.

a. Particle Board b. Fibre Board c. Synthetic Board d. Ceiling Board

12. The process of finishing the mortar joints is known as-_____.

a. Pointing b. Grinning c. Punning d. Plastering.

13. Thin slices of wood are _____ together to make plywood.

a. Nailed b. Pressed c. Melted d. glued

14. _____ roof trusses are used where span is 9.5 Meters.

a. Double Joist b. Queen Joist c. King post d. Queen post

15. Identify the false ceiling type.

a. Concealed grid

b. Exposed Grid

c. Crisscross grid.

d. None of these.



16. _____ trees grows _____ comparatively faster.

a. Hard Wood b. Dark wood c. Flexi wood d. Soft Wood

17. In plywood grade CWR, BWR, What W stands for?

a. Warp b. Water c. Washable d. None of these

18. Flush Doors are made up of _____.

a. Plywood b. HDF c. LDF d. Block Board

19. Soffit Cleat is fixed to _____.

a. Top of slab. b. Top of False Ceiling c. Base of Slab d. Base of Ceiling.

20. In 1:1:6 mortar ration what 1 stands for?

a. Cement and sand b. Lime and Sand c. Cement and Lime D. Cement and Water

Q. 2 Design a wooden floor for a hall at 2nd floor with the help of following data

- Size of the hall - 3.75 X 7.5 mtrs
- Floor to floor height - 3.6 mtrs
- Wall thickness – 230 mm

Drawing Requirements

Key plan, key section

Detail plans and sections

Joinery between various members

Q. 3 Design a roofing truss for a ware house of size - 6 meters × 10 meters

Clear height 3.6 mtrs

Drawing Requirements

Key plan, key section

Detail plans and sections

Joinery between various members

Q4. Write a detailed note on Exposed grid false ceiling explain the joinery, fixing of electrical fixtures with the help of sketches.

10

Q.5 Write a detail note of types of partition walls. Draw neat and labelled sketches

10

Q.6 Write a note on application of paints.

10

MGM UNIVERSITY
Department of Architecture

S. Y. Arch –End Semester Exam

Program: B. Arch

Semester –III

Course Code – 20UAR0303B

Name of the course –BCTM – III(TH)

Marks – 100

Time – 4 Hours

Instructions to the Students

1. Question number one is compulsory.
 2. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
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 4. Question no 2 and 3 should be solved on drawing sheet. Answer any 2 out of remaining
 5. Choose appropriate scale and assume suitable data.
- =====

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- Floor to floor height - 3.6 mtrs
- Wall thickness – 230 mm

Drawing Requirements

Key plan, key section

Detail plans and sections

Joinery between various members

Q. 3 Design a roofing truss for a ware house of size - 6 meters × 10 meters

Clear height 3.6 mtrs

Drawing Requirements

Key plan, key section

Detail plans and sections

Joinery between various members

Q4. Write a detailed note on Exposed grid false ceiling explain the joinery, fixing of electrical fixtures with the help of sketches.

10

Q.5 Write a detail note of types of partition walls. Draw neat and labelled sketches

10

Q.6 Write a note on application of paints.

10

MGM UNIVERSITY

Department of Architecture

F.Y- B. Arch. – End Semester Examination – Backlog

Program: Bachelor of Architecture

Sem: II

Course Code: 20UAR0202B (BAR20-122 TH)

Name of the Course: BCTM- II TH

Marks: 100

Time: 3 HrS

Instructions:

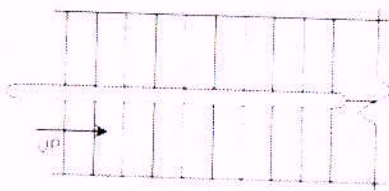
1. Question No. 1 is compulsory.
2. Illustrate your answers with neat and proportionate sketches wherever necessary.
3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
4. Use 1:5 or 1:10 scale for blown up details
5. Use millimeters (mm) while drawing.

Q.1. Multiple choice questions:

10 Marks

- i. _____ is a very light roof covering.
 - a) Shingles
 - b) Patent tiles
 - c) Thatch
 - d) Trafford asbestos cement tile
- ii. The Mangalore tile is one of _____ type of tiles.
 - a) Asbestos cement
 - b) Patent
 - c) Trafford
 - d) Corrugated
- iii. _____ sheets are obtained from the cement which is mixed with about 15% of asbestos fibre.
 - a) Asbestos cement
 - b) Corrugated Galvanized iron
 - c) Trafford
 - d) Shingles
- iv. The vertical portion between each tread on the stair is called:
 - a) Going
 - b) Nosing
 - c) Winder
 - d) Riser
- v. _____ stairs are a variation of L shaped stairs.
 - a) Winder
 - b) Spiral
 - c) Half turn
 - d) Switch back

vi. The figure below represents a:



- a) Dog-legged stairs
- b) Turning stairs
- c) Straight stairs
- d) Well stairs

vii. In _____ all steps lead in one direction only.

- a) Turning steps
- b) Circular steps
- c) Straight steps
- d) Geometrical steps

viii. Stair turning through one right angle is known as a _____ stair.

- a) Quarter- turn
- b) Half-turn
- c) Dog-legged
- d) Open navel

ix. In _____ windows, the shutters are allowed to swing around the pivot.

- a) Swing
- b) Sliding
- c) Pivoted
- d) Glazed

x. _____ windows are similar to the sliding doors and the shutter moves on the roller bearings, either horizontally or vertically.

- a) Sliding
- b) Swinging
- c) Rolling
- d) Metal

Q2} Draw the proportionate sketch with detail labelling and dimension of members from the following- (any four)

20 marks

- A) Draw different Types of roofs
- B) Fixing of teak wood louvered to door
- C) Fixing of handrail to staircase
- D) Fixing of glass louvered to teakwood panel
- E) Different types of panel door

Q3) Solve any two

40 marks

- a) A Timber staircase is to be constructed from the floor of a shop having size of 4.0 m x 8.0 m to reach to the Mezzanine floor of height 2.1m. The total height of the shop is 4.2 m. Draw key plan, key section, Enlarged detail of fixing of Trade to Riser , fixing of Trade to Stringer and isometric view of cut stringer
- b) Draw neat and labelled Section of the queen post roof truss for a span of 9 mt x 18 mts shed, with wall thickness as 0.23 mt and brick pier of 0.4 X 0.4 mts placed centre to centre, draw Key plan , enlarged section, and blown up details of joinery.

c) Draw a teakwood and glazed casement window which is 0.9 X 1.2 mts.

Draw- plan elevation and section (1:10)

Details of fixing of Glass to style (1:5)

Fixing detail at glazing bar (1:5)

Q4 Solve any one

30 marks

A) Design a king post roof Truss for a shade admeasuring 3.6 x 9 mts (1:20). Draw plan elevation & section showing all details of members (1:10 or 1:5). Draw joinery detail of king post to tie beam and Strut (1:10 or 1:5).

OR

B) Draw a corner window with size 1.2mt width from both sides and 1.2 mt height. (1:10)
Draw plan elevation and section (1:5)
Detail of fixing of corner post to horizontal post (1:5)
Fixing of frame and style glass and bead (1:5)

.....End of Paper.....

MGM UNIVERSITY
Department of Architecture
F.Y.B.Arch. – End Semester Examination – Backlog

Program: Bachelor of Architecture	Sem: 1
Course Code: 20UAR0102B (BAR20-112 TH)	Name of the Course: Building Construction Technology & Materials- I TH
Marks: 100	Time: 3 Hr

Instructions:

1. Question No. 1 is compulsory.
2. Illustrate your answers with neat and proportionate sketches wherever necessary.
3. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.
4. Question No. 4. Should be solved on drawing sheet.

Q.1. Multiple choice questions: (2 Marks each)

20 Marks

i) What is the shape of a brick that has not been cut?

- a) Cube
- b) Cuboid
- c) Trapezoidal
- d) None of these

ii) The depression provided in the face of a brick during its manufacturing is called:

- a) Frog
- b) Furrow
- c) Groove
- d) Scallop

iii) Stones are obtained from rocks that are made up of:

- a) Ores
- b) Minerals
- c) Chemical compounds
- d) Crystals

iv) What is sand composed of?

- a) Silica
- b) Silicon
- c) Silicon oxide
- d) Quartz

v) A building can be mainly divided into how many components?

- a) 2
- b) 3
- c) 6
- d) 8

vi) Mortar is a mix of

- a) Water, cement and fine aggregate
- b) Husk, jaggery and mud
- c) Water and cement
- d) All of above

vii) Which of the following is not a type of bamboo joint?

- a) Bevelled
- b) Flute mouth
- c) Tongue and Groove
- d) Fish mouth

viii) Which of the following is a hand tool used for quarrying?

- a) Plier
- b) Hammer
- c) Quarrying wire
- d) XSM

ix) Match the following:

P. adhesives	(i) sand, cement, and water
Q. mortar	(ii) tree trunk
R. brick	(iii) vegetable starch
S. timber	(iv) clay

- a) P-(iii), Q-(iv), R-(i), S-(ii)
- b) P-(i), Q-(iii), R-(ii), S-(iv)
- c) P-(iv), Q-(ii), R-(i), S-(iii)
- d) P-(iii), Q-(i), R-(iv), S-(ii)

x) Match the following:

(P) Widening joint	(i) Dovetail joint
(Q) Lengthening joint	(ii) Tongue and Groove joint
(R) Bearing joint	(iii) Half-Blind Dovetail joint
(S) Finger joint	(iv) Table joint

- a) P-i, Q-iv, R-ii, S-iii
- b) P-ii, Q-iv, R-i, S-iii
- c) P-iii, Q-i, R-ii, S-iv
- d) P-iv, Q-ii, R-i, S-iii

Q.2. Write short notes (Any 6) : (5 Marks each)

30 Marks

- i) What are the important qualities of brick?
- ii) Explain the Bulking of sand in detail.
- iii) What are the important properties of mortar?

- iv) List down any three uses of bamboo as a building element and write any three advantages of bamboo construction.
- v) Distinguish between Igneous rocks and Sedimentary rocks.
- vi) Define Exogenous trees and Endogenous trees.
- vii) Fine Aggregates
- viii) Field test for cement.

Q.3. Answer the following: (Any 3)

30 Marks

- i) Describe the operation of preparation of clay for the manufacturing of bricks.
(With the help of necessary sketches)
- ii) Describe in details any three types of Defects in timber.
- iii) Explain the structural components of building with the help of necessary sketches.
- iv) Explain the process of Manufacturing of ordinary cement by dry process method.

Q.4. Draft neatly the following with appropriate scale :

20 Marks

- i) Draw plan and three successive courses of one brick thick wall in English bond.
(1:100)
- ii) Draw a detail section and plan of Load bearing foundation showing all its important nomenclature. (1:10)
Take -Thickness of brick wall is 350 mm.
Depth of foundation 1200 mm below the ground.
Size of footing 900 X 900 mm. (Assume suitable data & mention it)
Draw---
Key plan & Section (1: 50)
Detail Foundation section. (1:10)
Plan of Foundation. (1:10)
Isometric view of Foundation.

-----End of Paper-----

MGM UNIVERSITY
Department of Architecture
First Year B.Arch. – Examination

Program: B.ArchSem: II Regular

Course Code- (20UAR0204D) Name of the course: History of Architecture - I

Marks- 100

Time: 3 Hours

Instruction to the students:

1. Question number **One** and **Two** are compulsory. **Attempt any five** of the remaining questions.
 2. Illustrate your answers with neat sketches, diagram etc., where ever necessary.
 3. If some part or parameter is noticed to be missing, you may promptly assume it and should mention it clearly.
-

Q1. Multiple choice questions (2 marks each): (Compulsory)

(20 Marks)

1. Earliest known phase of Stone Age is called _____.
 - a. Mesolithic
 - b. Neolithic
 - c. Paleolithic
 - d. Cretaceous
2. Preferred building material for prehistoric hunting and gathering human beings living in cold and frigid climate would be _____.
 - a. Wood
 - b. Clay
 - c. Stones
 - d. Animal bones
3. The Mesopotamian civilization received water from which of the following rivers?
 - a. Indus River
 - b. Yellow River
 - c. Tigris River
 - d. Nile River
4. The ramped Ziggurat can be found in which of the following places?
 - a. Khorsabad
 - b. Dashur
 - c. Ur
 - d. Persepolis

5. The material preferred by the Egyptians for building monumental structures was?
 - a. Marble
 - b. Limestone
 - c. Clay Bricks
 - d. wood
6. Which of the following temples is carved out of a single piece of rock ?
 - a. Temple of Kom Ombo
 - b. Temple of Luxor
 - c. Temple of Amon
 - d. Temple of Abu Simbel
7. The lion Gate is located in which of the following structures?
 - a. Treasury of Atreus
 - b. palace of Mycenae
 - c. Palace of Minos
 - d. Palace of Sargon the II
8. Greek theatres were built upon?
 - a. Mountain slopes
 - b. Flat land
 - c. Mountain peaks
 - d. River valley
9. The Aqueduct is a structure built by the Romans for?
 - a. Building Roads
 - b. Entertainment
 - c. Supplying Water
 - d. None of the above
10. The space built by Romans for public discussions is called?
 - a. Propylon
 - b. Agora
 - c. Forum
 - d. Basilica

Q2. Write Short notes / Sketches or both on any four questions (5 Marks each)

(20 Marks)

1. The hanging garden, Babylon.
2. Tholos tomb.
3. Erechtion.
4. Draw a neat Section of the Great pyramid of Giza (Khufu/Cheops)
5. Egyptian columns
6. Write a short note on Chinese civilization

Attempt any 5 Questions (Total 60 Marks)

Q3. How did settling down near a river valley bring about social change? What building materials can a river valley provide? Explain with sketches. **(12 Marks)**

Q4. Explain with neat sketches the architectural works produced during the Sumerian Period and the materials used for building the structures. **(12 Marks)**

Q5. How did the religious beliefs of the ancient Egyptians influence their architecture? Explain the materials and design of a stepped pyramid with neat sketches. **(12 Marks)**

Q6. Explain with neat sketches the optical correction method utilized by the Greeks in their architecture? **(12 Marks)**

Q7. List the structures built by the Romans for sporting events. Describe any one such structure with neat and labelled sketches. **(12 Marks)**

Q8. What are the differences between a Greek and Roman theatre? Explain with the help of neat sketches. **(12 Marks)**

Q9. Explain with neat sketches the Greek column orders. **(12 Marks)**

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