DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103
Supplementary End Semester Examination – Dec - 2019

Branch:-	B. Arch		**Sem.:-** I
Subject: -	Architectural Design I (AR10100001)		**Marks:-** 50
Date: -	03/12/2019		**Time: -** 6 Hrs.

Instructions: -
1. All Questions are compulsory.
2. Do not erase construction lines.
3. Solve all questions on drawing sheets.

FY

Q. No.1   **50 Marks**

An architect wants to design the office in Pune. Architect's expertise is in the field of architecture and interior projects. The Site has a pleasant climate, proximity to Pune and good connectivity with nature.

Architect wants to create spaces which will help him to be more creative.

Architect has a small office with 2 staff members and a receptionist come office assistant. A area is needed for display of drawings or model.

This office can have open spaces or semi covered areas to explore design. Along with built office space.
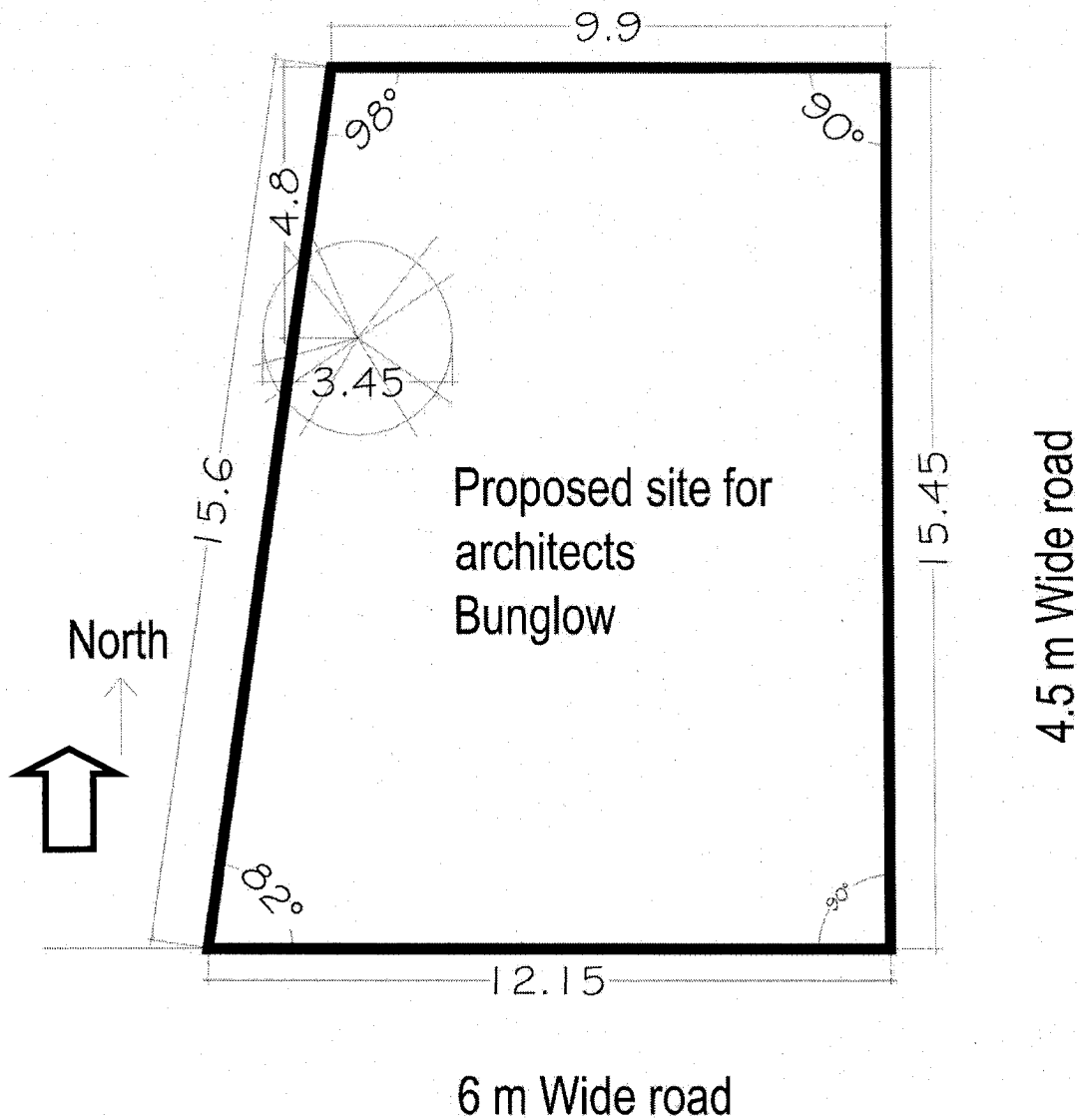
The requirements for Office are as below: (Total 50 Sq.m.)

Sr. no.	Requirement	Area in SQ.M.
1	Waiting and reception area	15
2	Sitting Area – Open	Adequate
3	Main architect office	15
4	Drafting area for 2 people	15
5	Utility area	05
6	Toilet as required	Adequate

- **Location of Site (Pune) : Site is located in Pune near Hinjewadi. The plot details are as follows.**

Note: 1. Suitable rendering and neat drawings will carry 10 % marks

2. Tracings required for rough work on design should be submitted along with answer sheets.

1

9.9

98°   90°

4.8

3.45

15.6   15.45

North

Proposed site for architects Bunglow

4.5 m Wide road

82°   90°

12.15

6 m Wide road

- **Mandatory Drawing requirements:**

1) Concept / thought process
2) Site plan   1:100
3) Floor plan(s)   1:50
4) Elevation (1 no.)   1:50
5) Section   (1 no.)   1:50
6) 3D sketches (optional)   Proportionate

*** End ***

2.

P-y

Branch: B. Arch   **Sem.:- I**
Sub:-Building Materials –I (BA18013T)   **Marks: 60**
Date:- 03/12/2019   **Time:- 3 Hr.**

Instructions to the Students

1. Each question carries 12 marks.
2. Attempt **any five** questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. 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. Distinguish the Following   **(12 Marks)**

   a) Igneous rocks and Sedimentary rocks
   b) Exogenous trees and Endogenous trees
   c) Intermittent kiln and continuous kiln

Q.2. Describe the operation of preparation of clay for the manufacturing of bricks. (With the help of necessary sketches)   **(12 Marks)**

Q.3. Explain the process of Manufacturing of ordinary cement by dry process method.   **(12 Marks)**

Q.4. Give the sketches of the following (any 3)   **(12 Marks)**

   a) Rotary Kiln
   b) Bull's trench kiln
   c) Rind gall
   d) Plug and feathers

Q.5. Describe in details any three types of Defects in timber   **(12 Marks)**

Q.6. Write short notes   (any 3)   **(12 Marks)**

a) Tunnel Kiln
b) Crushing test for stone
c) Field test for cement
d) Fine Aggregates

**Paper End *

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE
RAIGAD -402 103
Semester Supplementary Winter Examination: Dec-2019

Branch:- Bachelor of Architecture

Sem.:- I

Subject:- Architectural Drawing and Graphics-1(Manual)

Subject Code:- AR10100002

Marks: 50

Date:- 04-12-19

Time:- 3 Hr.

Instructions to the Students
1. The **First** question is compulsory.
2. Solve any *TWO* out of remaining questions.
3. Do not erase the construction lines.
4. Solve all questions on drawing sheets.
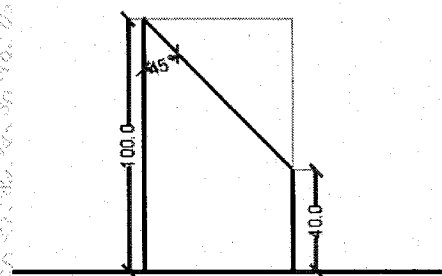5. Assume suitable data wherever necessary

Q. No. 1 Construct the following regular polygons of side length 60 mm, using any one method in each case -   **(5x2=10 Marks)**
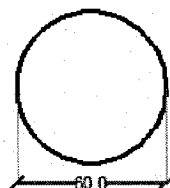   i.   Septagon
    ii.   Pentagon

Q. No. 2 Show the development of surfaces for the truncated cylinder shown in figure below-
(20 Marks)

Elevation

Plan   All dimensions are in mm

Truncated cylinder

Q. No. 3 A square pyramid, base 50 mm and axis 70mm long, has its base on H.P. and all the edges of base equally inclined to V.P. It is cut by a section plane, perpendicular to V.P., inclined at 45° to the H.P. and bisecting the axis. Draw its sectional plan, front elevation, sectional side elevation and true shape of section. **(20 Marks)**

Q. No. 4 Draw plan and three side elevations of a pentagonal pyramid, base 40mm edge and axis 65mm long, having base on the H.P. and an edge of the base parallel to the V.P. **(20 Marks)**

End of Paper

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD – 402 103
Supplementary Winter Semester Examination: Dec.- 2019

Instructions: 1. All Questions are compulsory.
2. Do not erase construction lines.
3. Solve all questions on drawing sheets.

Q. No. 1 Draw plan and isometric view of a triangle base pyramid of 60mm each side and height 80mm, standing on the H.P. with its axis perpendicular to the H.P.

(10 Marks)

OR

Q. No.1 Draw Isometric, Oblique and Axonometric views of a cube having size 5cm x 5cm x 5cm.   **(10 Marks)**

Q. No. 2 Attempt any ONE of the following: **(20 Marks)**

Draw exterior two point perspective drawing of cabin having size 3m x 3m x 2.7m height having one window (1.2x1.2)m and a door (0.9x2.1)m at front elevation. The plinth level is 0.45m. 2 steps are provided. Eye level- 1.7m, station point- 10m away from one corner, Picture plane is placed 1m away from the object. Wall- 0.23 m thick brick wall, Rcc slab- 0.15m thick., Lintel level- 2.1m above plinth level, sill level- 0.9m above plinth level. Chajja provided above window and door- 0.6m proj, 0.1m thick.

OR

Draw one point perspective sketch of a city-scape .Show Roads, Pathways, Buildings, People, Trees etc., in the drawing. Also, render the view with any of the colour medium.

Q. No. 3 Attempt any ONE of the following: **(20 Marks)**

a) Cast the sciography of the following objects (Fig. 1), assuming the light rays at 45° both in plan and elevation.
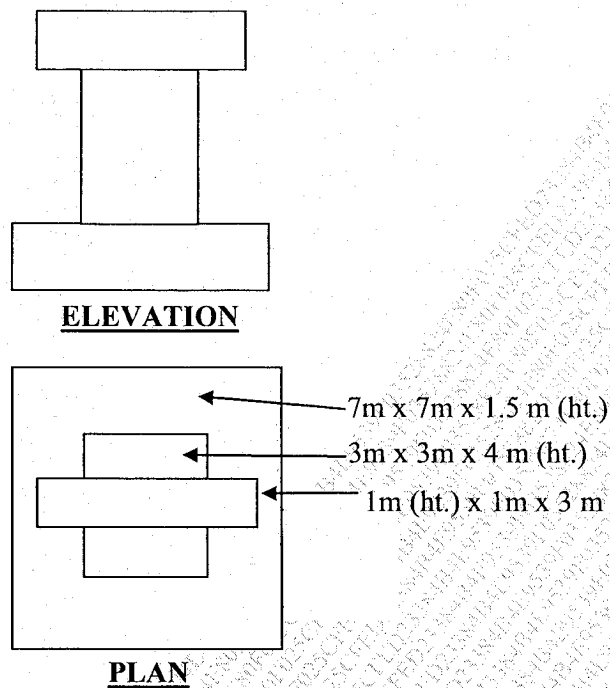
ELEVATION
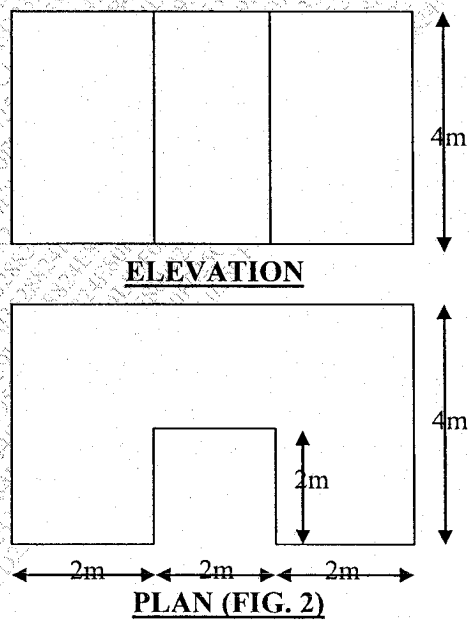
7m x 7m x 1.5 m (ht.)
3m x 3m x 4 m (ht.)
1m (ht.) x 1m x 3 m

PLAN
FIG . 1

OR

b) Cast the sciography of the following objects (Fig. 2), assuming the light rays at 45° both in plan and elevation.

4m

ELEVATION

4m

2m

2m   2m   2m

PLAN (FIG. 2)

----- END OF PAPER -----

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103
End Semester Examination – Winter Dec -2019

Branch: B. Arch
Subject:- Theory of Structure-I- (BA18014T)
Date -05/12/2019

Sem.:- I
Marks: 60
Time: - 2 Hrs.

Instructions: - 1. All Questions are compulsory

Q. No.1:- Solve all questions.   **20 Marks**
    i. Enlist the types of loads.
    ii.Enlist the types of Supports.
    iii. Define the Center of Gravity
    iv. Define the Moment of Inertia
    v. Enlist the types of loads.
    vi. what are the units of moment of inertia
    vii. What is the unit of C.G.
    viii. What is the unit of Point load
    ix. What is the unit of dead load
    x. What is the unit of U.D.L.
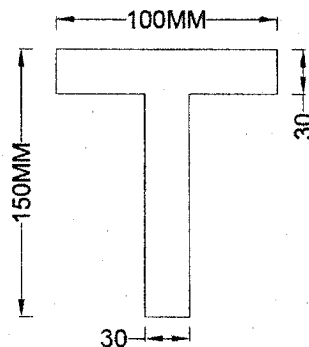
Q. No. 2:- Explain with neat Sketches any Two out of Three   **10 Marks**
    i. Explain the types of supports with neat sketch.
    ii. Explain the load distribution with neat sketch.
    iii. Explain the types of loads with neat sketch.
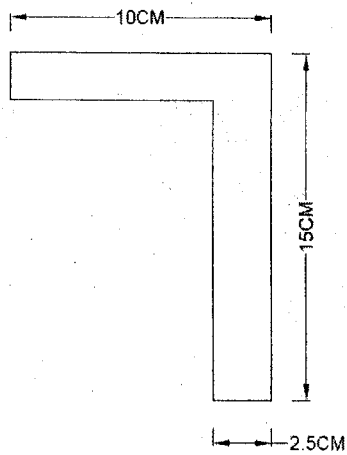
Q. No. 3:- Find the C.G. of the following fig   **15 Marks**

Q. No. 4:- :- Find the moment of inertia about centroidal X-X & Y-Y axis of an inverted L-section 15cm X 10cm X 2.5cm.   **15 Marks**

10CM

15CM

2.5CM

Paper End

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL
UNIVERSITY, LONERE – RAIGAD – 402 103
Winter Semester Examination – Dec – 2019

FY

Branch: B. Arch (First Year)   Sem.: I

Subject: Building Construction Technology & Materials-I   Marks: 50

Subject Code: AR10100003   Date: 05/12/2019   Time: 3 Hrs

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Instructions: 1. All Questions are compulsory.
                   2. Do not erase construction lines

Q. No. 1 Solve any TWO of the following: (10 Marks)

A)   What are the harmful ingredients in brick earth?

B)   Describe Classification of Lime.

C)   Explain important properties of cement.

OR

Q. No. 1 Explain in detail the Preparation of clay in the process of manufacturing   (10 Marks)
        of brick.

Q. No. 2 Attempt any ONE of the following: (20 Marks)

A)   Draw proportionate sketches of ANY FOUR of the following

        1) Queen – closer (Half)

        2) Bevelled closer

        3) Three Quarter Bat

        4) Mitred closer

        5) King closer

B)   Draw neat labeled sketches of Plan, elevation and isometric view with three successive
        courses of 1 and ½ bk thk wall in Double Flemish bond .

Q. No. 3 Attempt any ONE of the following: (20 Marks)

A)   Draw a sketch plan of two successive courses of one and half bk. Thk. Main wall and
        One bk. Thk. Cross wall in Cross junction in English Bond.

B) Draw a detail labeled section and plan of Load bearing foundation.

Thickness of bk. wall is 350-mm.and depth of foundation 1.45 m below the ground.

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----- **END OF PAPER** -----

Branch: B. Arch. (First year Architecture) Semester: II
Subject: Building Construction Technology & Materials-II (AR1020003) Marks: 50
Date: 05/12 /2019 Time: 3 Hrs.

Instructions: 1] All Questions are compulsory
2] Figures / structures to the right indicate full marks.
3] Assume suitable data, if necessary.
4] Neat diagrams must be drawn wherever necessary.

Q.No 1 Solve any **TWO** of the following. (10)
  a) Describe any two types of glass with properties.
  b) Explain Aluminum as a building material with its advantages.
  c) What are ingredients of different types of concrete?
  d) What is water cement ratio?

Q.No 2.Solve any **TWO** of the Following. (10)
  a) Explain the mixing process of Concrete.
  b) What are the advantages of using steel in construction?
  c) Explain the methods of curing of concrete.
  d) Write short note on mild steel.

Q.No.3 Attempt any **TWO** of the following. (15)
  a) Differentiate between PVC and u-PVC
  b) What is initial and final strength of Concrete?
  c) Write down any four materials used for wall cladding.

Q.No.4 Draw neat sketches of any **ONE** of the following. (15)
  a) Draw neat sketches of a Drywall using metal stud and gypsum sheets.
  b) Draw neat section with proper nomenclatures of external load bearing one and half brick thk wall from Foundation to Parapet wall.

_____Paper End_____

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103
End Semester Winter Examination – DEC. - 2019

Branch: B.Arch (First Year Architecture)   Semester: I

Subject: ENVIRONMENTAL SCIENCE I (AR10100004)   Marks: 60

Date: 06/12/2019   Time: - 3 Hours

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Instructions: - 1. ALL QUESTIONS are compulsory

2. Draw proper sketches wherever necessary.

Q. No.1:- Answer the following   (1 x 15M = 15 Marks)

Explain the characteristics of hot and dry climate, cold and cloudy and composite climate.

Q. No. 2:- Answer the following any THREE   (3 X 5M = 15 Marks).

1. Define solar altitude angle and solar azimuth angle which proper sketches.

2. Explain STACK VENTILATION with proper sketches.

3. Explain with proper sketches URBAN HEAT ISLAND EFFECT.

4. Write a note on thermal insulation.

Q. No. 3:- Answer the following in detail any TWO(2 X 10M = 20 Marks).

1. What do you understand by ventilation and write about importance of ventilation.

2. How to read a BIO CLIMATIC chart, explain it with sketches.

3. Write a note on lighting with the help of following points.

    a. Daylight

    b. Sources of daylight.

    c. Need of Daylight.

    d. Advantages of Daylight.

OR

Q. No. 3:- Answer the following in detail any TWO   **(2 X 10M = 20 Marks).**

1. Explain any three factors affecting airflow through the building.

2. What do you understand by solar shading and explain with sketches any two types of solar shading devices.

3. Explain with proper sketch EARTH SUN relationship and the distribution of radiation through atmosphere.

Q. No.4:- Write Short Notes on (Any 5)   **(5 x 2M = 10 Marks)**

1. List of Koppen's classification of Climate.
2. Name any four elements of climate.
3. Define Horizontal Shadow Angle
4. Enlist FOUR climatic variables that are considered in plotting a BIO CLIMATIC CHART.
5. Explain in short "CONVECTION"
6. Explain in short "TROPOSPHERE"
7. State the formula for calculating conduction heat flow rate (Q_c)

----------------THE END----------------

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103
End Semester Winter Examination – Dec. - 2019

Branch: B.Arch. (First Year Architecture)   Sem.:- II
Subject :- Environmental Science-II (AR10020004)   Marks: 60
Date:- 06/12/2019   Time:- 3 Hr.

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Instructions to the Students
1. Question no.1 is compulsory.
2. Attempt any Four questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

Q.1. MCQ / Fill in the blanks / Match the columns

A) The complex network of interconnected food change is called ----------   (1 M)
    i) Trophic level
    ii) Food web
    iii)Ecological pyramid
    iv) Ecology chain
B) The destruction of habitat of plants and animals is called----------------   (1 M)
    i) Habitat loss
    ii) Endemism
    iii) Endangered species
    iv) Flood
C) The following factor(s) is (are) responsible for degradation of soil------   (1 M)
    i) Chemical fertilizers
    ii) Landslides
    iii) Floods
    iv) All of the above
D) Leader of "Narmada Bachavo Andolan"   (1 M)
    i) Vandana Siva
    ii) Medha Patkar
    iii) Menaka Gandhi
    iv) Moyilamma

E) Which of the following is a biodiversity hotspot in India? (1 M)
- i) Nandadevi
- ii) Eastern Ghats
- iii) Aravalli
- iv) Western Ghats

F) Match the columns (5 M)

Column I	Column II
i) Ground water	a) Solid form of water
ii) Well	b) Wastage of water
iii) Snow	c) Water Management
iv) Drip Irrigation	d) Small water
v) Leaking Taps	e) Water Table

G) Define the following (any five) (10 M)
- i) Habitat and Niche
- ii) Eco-region
- iii) Bio-swales
- iv) Environmental movement
- v) Ecological Planting
- vi) Ecosystem
- vii) Water conservation

Q.2. Write short note (any two) (10 M)
- i) Chipko Movement
- ii) Contour Bund and well for rain water harvesting
- iii) Grey water
- iv) Name any two environment activist and their contribution

Q.3. Answer the following (any two) (10 M)
- i) Describe the value of Bio-diversity
- ii) What is environment? Explain various components of environment.
- iii) Explain about the climate change and its causes.

Q.4. Attempt any one of the following. (10 M)
- i) Explain the process of roof top rain water harvesting with the help of suitable diagram.
- ii) Explain the food web and the food chain with appropriate schematic diagram.

Q.5. Explain Global warming and its preventive measures in details. (10 M)

Q.6. Explain the Bio-geographic zones / regions of India in detail. (10 M)

Q.7. Write an essay on the theme:- Analyze the impact of environmental (10 M)
degradation on traditional communities.

_____ **Paper End** _____

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103
Winter Semester Examination – Dec. 2019

Branch: Architecture   Sem.:- I

Subject:- Culture and Built Form-I (BA18017T)   Marks: 60

Date:- 07/12/2019   Time:- 2 Hrs.

Instructions to the Students
1. Each question carries 12 marks.
2. Answer any 5 out of 6 questions.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately
   assume it and should mention it clearly.

Q.1. Answer of the following (any one)   **(12Marks)**

A) Describe with appropriate sketches any Neolithic Settlement.

OR

B) Outline the Architectural Character of Indus valley civilization with examples.

Q.2. Answer of the following   **(12Marks)**

A) Explain the tomb architecture of Egypt.

OR

B) What are the factors affecting Sumerian architecture? Explain any one example of Sumerian architecture.

Q.3. Write short notes on: (Any 3)   **(12 Marks)**

    a) Olmec Settlements.
    b) Yellow River valley civilization
    c) Impact of Agricultural revolution.
    d) Why Egypt was called "Gift of Nile" ?

Q.4. A)   **Fill in the Blanks:**   **(12 Marks)**

    1. This became the landmark in every city of Mesopotamian civilization.
            A. White temple.
            B. Palace.
            C. Ziggurat.
            D. Oval temple.

    2. The Queen's chamber is located in_____ of the Great Pyramid.
            A. Top.
            B. Bottom.

C. Centre.
D. Midway.

3. The Vedic Aryans divided their Political range into 3 Units. First unit was known
as_____.
    A. Vis.
    B. Jana.
    C. Grama.
    D. Kingdom.

4. Construction of pyramids took place in
    A. Old kingdom
    B. Middle kingdom
    C. New kingdom
    D. All of the above

5. Which one of the below were the inspiration for Egyptian column order.
    A. Lotus
    B. Acanthus
    C. Cyprus
    D. Ephesus

6. The Nile River flows through two important regions in Egypt called
    A. Upper Egypt and Lower Egypt.
    B. Eastern Egypt and Western Egypt.
    C. Mesopotamia.
    D. Nubia and Cairo.

B) Match the following   **(6 Marks)**

I.	Code of Hammurabi	Palace of Persepolis
II.	Ishtar gate	Collection of laws & edicts
III.	Sumerian cities	Egyptians writing
IV.	Cuneiform	Ur, Uruk, Warka
V.	Persian	Polychrome bricks
VI.	Hieroglyphs	Sumerians writing

Q.5. Answer the following in short: **(12 Marks)**
    a. Name any two Architectural elements of Vedic village.
    b. Pylons.
    c. Any two public structures of the Indus valley civilization.
    d. Papyrus.
    e. Inventions of Sumerians
    f. City State

Q.6. Answer of the following (any two)   **(12 Marks)**
a) Write a short note on prehistoric dwellings.
b) Explain temple architecture of Egyptians.
c) Why Hanging Garden of Babylon is known as the ancient wonder on world ?

--------- **Paper End** --------

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE, RAIGAD -402 103

End Semester Winter Examination – Dec. - 2019

Branch: B.Arch (F.Y)   Sem.:- I

Subject : History of Architecture 1 (AR10100005)   Marks: 60

Date:-   07-12-2019   Time:- 3Hr.

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Note: Question no.1 and 2 are compulsory. Solve any 3 questions out of the remaining questions.

Read the question paper carefully before attempting.

Q.1 Multiple choice questions :   (10 marks)

    1. _____ is a tangible form of culture.

        (a. Wada b. Mythology c. Folk dance d. language)

    2. Which of the following terminologies means Old Stone Age

        (a. Mesolithic b. Paleolithic c. Neolithic d. Paleontology)

    3. The Ziggurat of Ur at Namu was built by the _____.

        (a. Assyrians b. Persians c. Egyptians d. Sumerians)

    4. The Nile River flows through the lands inhabited by the ancient _____.

        (a. Egyptian b. Persians c. Roman d. Assaryan)

    5. The pyramid of Zoser at Saqqra is a Type of _____.

        (a. Bent pyramid b. Step pyramid c. Ramped pyramid d. True pyramid)

    6. The city of Mohenjo-Daro is known for which of the following buildings

        (a.Amphitheatre. b. Bridges c. The great bath d. Cul-de-sac)

    7. the Upanishads are a form of_____.

(a. Vedic Hut b. Cow gate c. Vedic utensils d. Vedic Literature)

8. _____ was the most common building material used in the during the Vedic period

(a. Granite Blocks b. Wood c. Lime stone d. Sand stone)

9. The Mahabharata was written by_____.

(a. Aryabhata b. Valmiki c. Arjun d. Kalidas)

10. _____were the earliest known major civilization in Mesoamerica

(a. Parthian b. Latin c. Andean d. Olmec)

Q.2 Write Short notes for the following Questions with sketches   (20 marks)

a. Paleolithic Age (5 marks)

b. Doric column of Greek origin (5 marks)

c. Mastabas of Egypt (5 marks)

d. Grid iron pattern of town planning (5 marks)

Q.3 Describe with neat sketches the palace of Sargon at Khorsabad.   (10 marks)

Q.4 Describe with neat sketches the design and characteristics of a typical Vedic Village

(10 marks)

Q.5. Describe with sketches the Greek temple Parthenon in detail.   (10 marks)

Q.6. Describe with sketches Roman Coloseum with special emphasis on Column orders and purpose of the building.   (10 marks)

Q.7. Explain the concept of Mayan ziggurats as religious buildings with examples. (10 marks)

Q.8. write about the Babylonian city of Ur with its plan sketched.   (10 marks)

_____Paper End_____

Branch: B.Arch (First Year Architecture) Semester -II
Subject:- History of Architecture-II (AR10020005) Marks: 60
Date: 07/ 12/ 2019 Time: - 3 Hr.

Instructions: - 1. The First question is compulsory

2. Answer any FOUR out of the remaining.

Fy

Q. No.1:- State weather the following statements are Ture or False or fill in the blanks where ever necessary:

20 Marks

1. The Stupa at Sanchi is a fine example of _____ style of architecture.

2. Buddhist prayer halls are called as_____

3. The first group of Chalukyan temple architecture is seen at _____.

4. _____ was the founder of The Slave Dynasty of the Delhi Sultanates.

5. Chenghis Khan was a ruler of _____ empire

6. The largest Hindu temple complex located in Cambodia is at_____.

7. _____ was a planned capital city of the Ming Dynasty of ancient China.

8. The Alhambra was built by _____ Rulers of Spain.

9. Gothic architecture is most famous for _____.

10. _____ is the part of the world where the Mayan civilization developed.

Q. No. 2:- Describe the characteristics features and origins of Buddhist Rock cut architecture.

10 Marks

Q. No.3:- Write a note on Nagara Style, with the help of neat sketches.

10 Marks

Q. No. 4:- Describe the architectural style of the Slave Dynasty rulers with neat sketches of one Example.

10 Marks

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Q. No. 5:- Write a short note on the architectural style and characteristics of Alhambra in Spain, Draw sketches where necessary.

10 Marks

Q. No. 6:- Describe the characteristics features of Romanesque architecture with suitable examples and sketches of one example.

10 Marks

Q. No. 7:- Describe the characteristics features of Gothic architecture with suitable examples and sketches of one example.

10 Marks

_____ Paper End _____

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

End Semester Examination – Dec - 2019

Branch: B.Arch (First Year)   Sem.:-II

Subject:- Theory of Structure-I (AR10200006S)   Marks: 60

Date:- 10/12/2019   Time:- 3 Hr.

Instructions to the Students
1. Each question carries 12 marks.
2. Attempt **any five** questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly

Q.1 (a) Define the following (any two)   **(04M)**
  i. Coplanar forces
  ii. Concurrent forces
  iii. Colliner forces

(b) Find the magnitude & direction of resultant for given force system.   **(08M)**
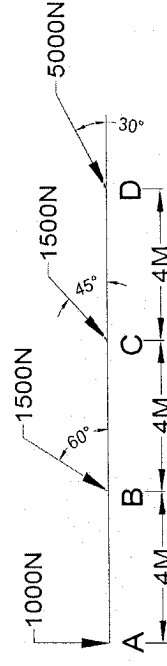
Q.2 (a) Find the C.G. of the following fig.   **(08M)**
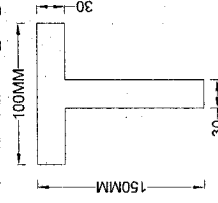
(b) Find the C.G. of semi circle & right angle triangle with figure   **(04M)**
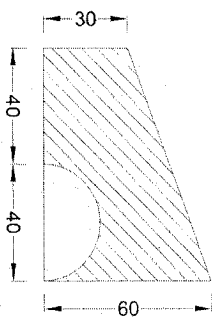
OR

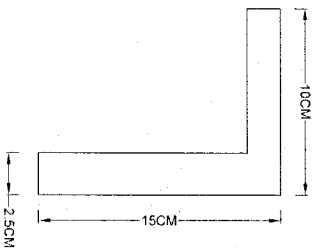**Q.2 (c)** Find the C.G. of the following fig.   **(08M)**
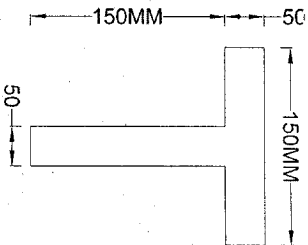
(d) Find the C.G. of semi circle & right angle triangle with figure **(04M)**

Q.3 (a) Find the moment of inertia about centroidal X-X & Y-Y axis of an inverted L-section 15cm X 10cm X 2.5cm. **(12M)**
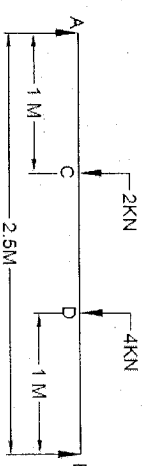

Q.4 (a) Find the moment of inertia about its C.G. for X-X axis & Y-Y axis. **(10M)**
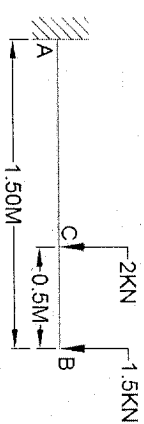

(e) What are the types of supports **(01M)**
(f) What are the types of loads. **(01M)**

Q.5 (a) Draw S.F.D. and B.M.D. for simply supported beam 2 m long carrying

point load as shown in fig. **(12M)**

Q.6 (c) Draw S.F.D. and B.M.D. for cantilever beam 1.5 m long loaded as shown in fig. **(10M)**

(d) Define shear force & bending moment **(02M)**

Paper End