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

Mid Semester Examination – March - 2019

Branch: B.Arch. (First Year)

Sem.:- II

Subject with Subject Code: Architectural Design-II

Marks: 60

(AR10020001)

Date: - 11/03/2019

Time: - 6 Hr.

Instructions: - 1.The candidates are instructed to work SIX hrs. Enlodge.

2. The design will be valued as a whole.

A Weekend Home

A businessman from Aurangabad wishes to construct a WEEKEND HOME for his family at Mhaismal where he can spend some quality time with his family once in a month and refresh mind & body for the next days of the month.

His family consists of **four** members only—

The businessman himself-45 years

His wife (housemaker) - 42 years

Son (College Going) --- 17 years

Daughter (School going) --- 12 years.

Many a times their friends with family also accompany them for the weekends. The plot owned by the businessman is located at Mhaismal surrounded by greenery and waterbody.

Design a weekend home responding to the climatic conditions and the expectations Of the client. It should provide serene and pleasant environment for rejuvenation of mind and body.

A. Design Requirements----

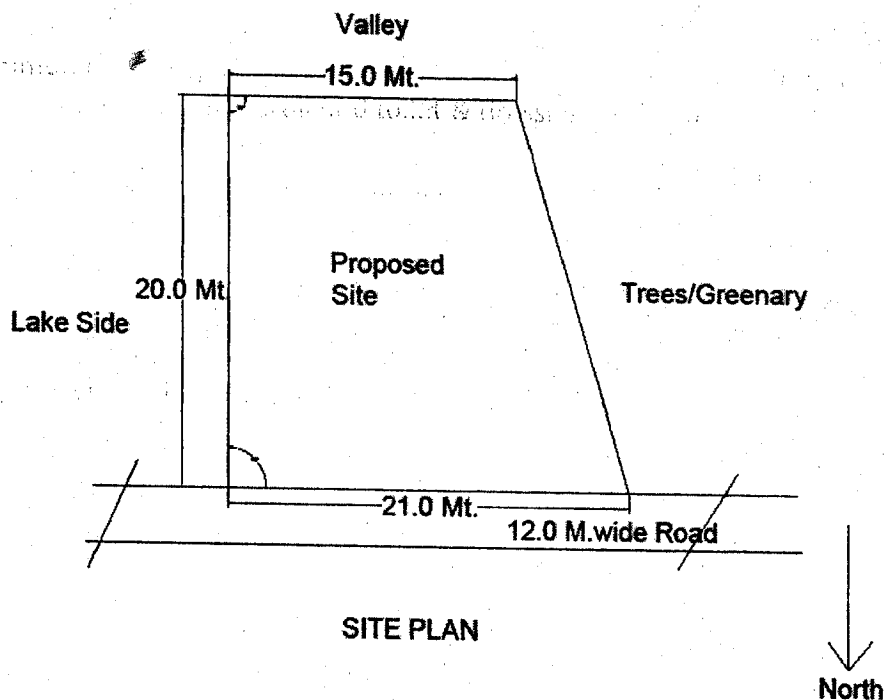
1. A car porch -----18 sq.mt.
2. Entrance lobby/verandah -----6 sq.mt.
3. A drawing hall + dining area----- 25-30 sq.mt.
4. Kitchen/ pantry + Store----- 12-15 sq.mt.
5. Common toilet (separate WC and Bath with wash basin) -----8-10 sq.mt
6. Master bed room with attached toilet & dressing ----- 20-15 sq.mt
7. Guest or Children bed room with attached toilet ----- 15-20 sq.mt
8. Outdoor landscape area. As per design.

B .Site details:-

The site is surrounded by trees having beautiful valley view on one side and lake view on the other side.

The approach road is 12 mt.wide.

The site is as per follows---



C.Drawing Requirements: -

1. Site Plan with landscaping----1:100
2. All floor plans----- 1:50
3. Two side Elevations---- 1:50
4. Two sections ----- 1:50
5. Sketch perspective view.

Side Margins are

1. Front =4.5 mt
2. All three sides= 2.3 mt.

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103
Mid Semester Examination – MARCH - 2019**

Branch: B.Arch (FIRST YEAR)

Sem.:- II

Subject:- Architectural Drawing & Graphics II

Subject Code: - AR10020002

Marks: 50

Date: -11 -03-2019

Time: - 3 Hours.

Instructions: - 1. Use A1 Drawing Answer sheets.

2. Do not erase construction lines.

3. Assume Suitable data if necessary.

4. All questions are compulsory.

Q. No.1:- Draw all three views of a pentagonal base prism with 3cm as base edges and 5 cm as axis height. The axis of the prism is perpendicular to HP and one of the side surface of the prism is parallel and closer to VP.

20 Marks.

OR

Q. No.1:- Draw plan, elevation, Isometric view and oblique view of a Cone with 3cm as base radius and 9cm as axis height. The cone is resting on its base on HP and axis is perpendicular to HP and parallel to VP.

20 Marks.

Q.No. 2 :- :- Draw two point perspective of the following figure a. from given Data

30 Marks.

PTO

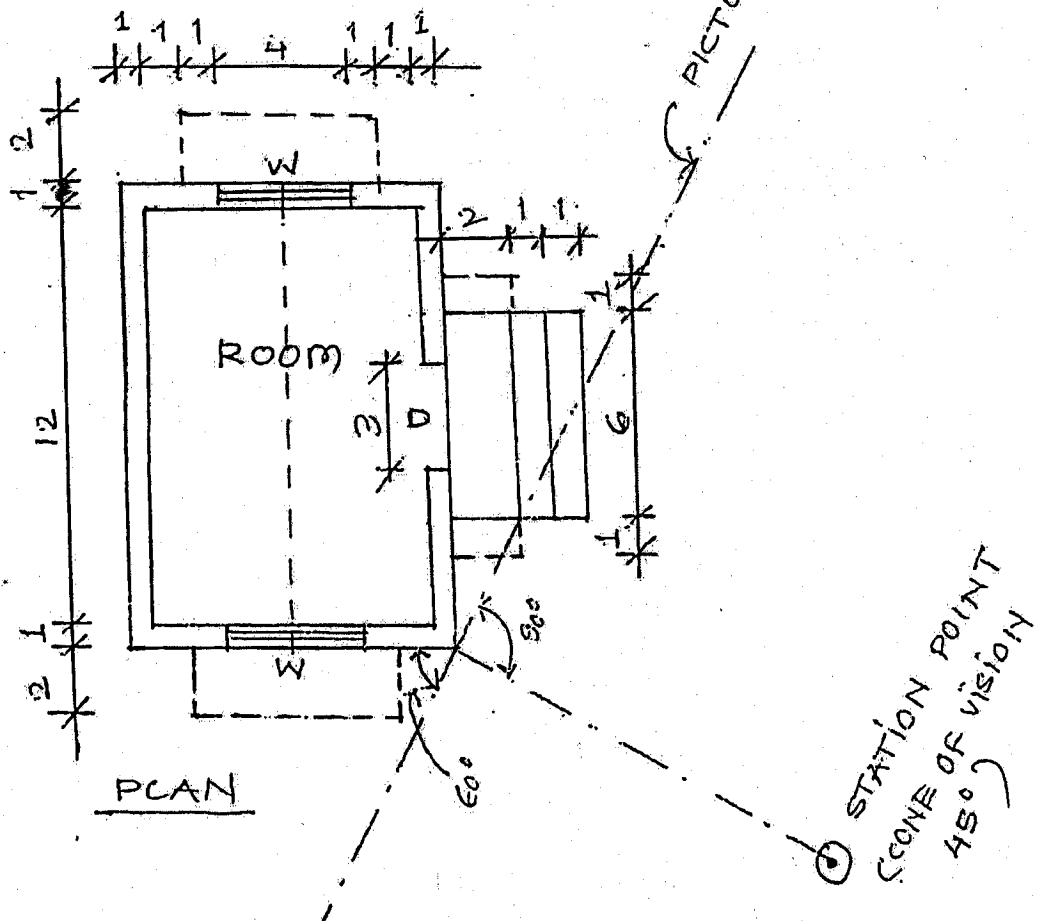
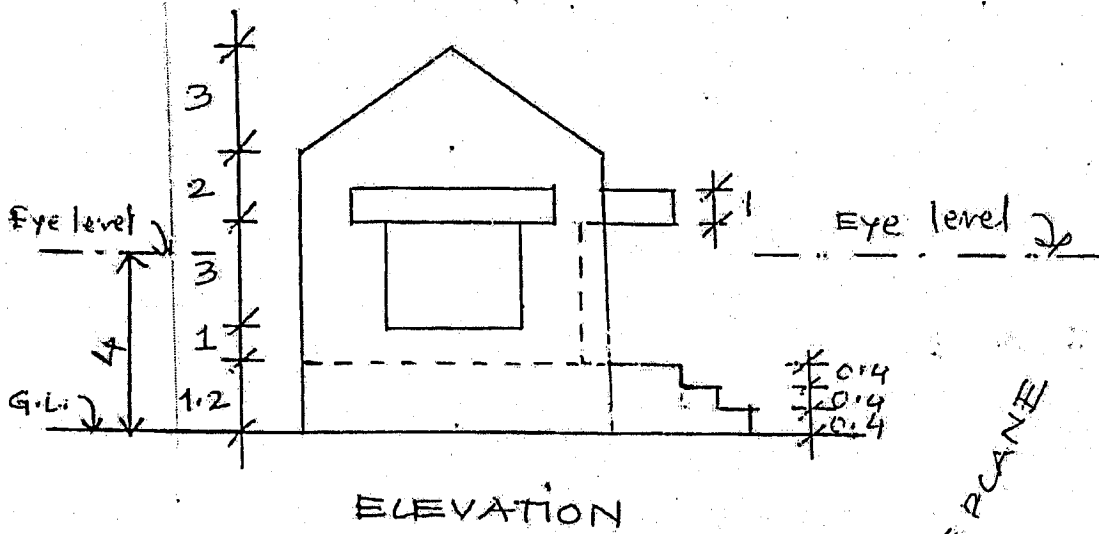


Figure a

Note: All dimensions are in cm.

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

Branch: B.Arch. (First Year)

Sem.:- II

**Subject with Subject Code: Building Construction
Technology & Materials-II (AR10020003)**

Marks: 50

Date: - 13/03/2019

Time: - 3 Hr.

Instructions: - Attempt any one from Q4 to Q5

(Marks)

- | | |
|--|----|
| 1) Explain the proportioning of concrete with its ingredients. | 10 |
| 2) Describe in detail market forms of steel & its uses in construction. | 10 |
| 3) Explain different types of mortar, their use and teste of mortar. | 10 |
| 4) Draw a neat & proportionate sketch of an external cavity wall showing details at Foundation Level and at lintel level. | 20 |

OR

- | | |
|---|----|
| 5) Draw a neat & proportionate sketch of a gypsum partition wall which is to be constructed In a hall admeasuring 4.5mt X 6.5 mt. to divide it in to two parts. Take height of wall 2.1 mts. use suitable size of a channel section and the gypsum sheet. | 20 |
|---|----|

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

Semester Examination- March- 2019

Branch: B.Arch (First Year Architecture)

Semester:II

Subject: History of Architecture -II

Marks: 20

Subject Code: AR10020005

Date:15/03/2019

Time: 1 Hrs.

Introduction:

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

Q.No.1 (A) Fill in the blanks

(4 Marks)

- a) Ashoka school pillars usually have _____ capital.
- b) Buddhist prayer halls are called as _____
- c) _____ style of temples have rekha deoul.
- d) At Delhi _____ mosque was constructed during slave dynasty.

(B) Match the following

(4 Marks)

- | | |
|---------------------------|-------------------|
| (i) Papanath Temple | a. Mahaballipuram |
| (ii) Arhai-din-ka-jhompra | b. Pattadakkal |
| (iii) Shore Temple | c. Barabar hills |
| (iv) Lomas-rishi | d. Ajmer |

Q.2

- 1 Give a note on Nagara Style?
or
- 2 Write on contribution of pallava?

(4 Marks)

Q.3

- 1 What are Stupas?
or
- 2 In brief write temple of Gupta Period?

(4 Marks)

Q.4

- 1 Brief on Buddhist cave architecture?
or
- 2 What was the role of religious reformers?

(4 Marks)

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LONERE-RAIGAD-402 103**

Semester Examination- March- 2019

Branch: B.Arch (First Year Architecture)

Semester:II

Subject: History of Architecture -II

Marks: 20

Subject Code: AR10020005

Date:15/03/2019

Time: 1 Hrs.

Introduction:

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

Q.No.1 (A) Fill in the blanks

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Q.2 1 Give a note on Nagara Style?

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Q.3 1 What are Stupas?

(4 Marks)

or

2 In brief write temple of Gupta Period?

Q.4 1 Brief on Buddhist cave architecture?

(4 Marks)

or

2 What was the role of religious reformers?

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Mid Semester Examination – MARCH - 2019**

Branch: B.Arch First Year

Sem.:- _II

Subject:- Environmental Science-II

Subject Code: - AR10020004

Marks: 20

Date: -14-03-2019

Time: - 1 Hour.

**Instructions: - 1. The First question is compulsory
2. Answer any ONE out of the remaining.**

Q. No.1:- Define the following any four

8 Marks

- a) Environment
- b) List types of Ecosystems
- c) Ecological Adaption
- d) Ecological Succession
- e) Environmental Degradation

Q. No. 2:- What are Biodiversity hotspots of India. Explain each of them in Detail.

12 Marks

OR

Q. No.3:- Annalise the Climatic Global change and its impact.

12 Marks

**DR BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD-402103**

Mid Semester Examination B ARCH -2019

Branch:- B.Arch Second Year

Sem:-IV

Subject:- Architectural Design IV

Subject code:-AR20040001

Date:- 11/03/2019

Marks:-60

Time:- 6 hr

Facility Centre

The government of Maharashtra is intending to start multiservice Centre at Taluka level in all districts of Maharashtra. This Centre will be occupied with the latest technological online service, and these facilities may be catered on franchise basis also.

The villagers will be benefitted at larger extent.

Availing all the facilities at one place, May save villager's money and time and completing all sorts works in a day time they can return back to their homes.

Organizing all the services in proper sequence, order and interconnectivity among the various services is necessary.

REQUIREMENT:

1. **Post office:** 75 to 80 sq.m.
(3 counters, 1 head post master, 2 postage personal, 3 post man and a peon).
2. **Small bank:** 75 to 80 sqm.
(3 counter, a cashier, one administrator, 2 auditor, 2 peons).
3. **Agri Product Sale Purchase Office:** 100 sqm.
(3 counter, 1 agriculture office, 2 persons for crop loan, one accountant and a peon).
4. **Setu(Bridging Government &People):** 60 sqm.
(6 person counter, one administrator and one peon).
5. **District Educational Office:** 60 sqm.
(Inquire counter, one scholarship concerned, one head office, education loan counter, counter for certificate issuing).

6. Employment office:

(One samaj kalyan office, one scrutiny officer, one employment concerned, one advertising).

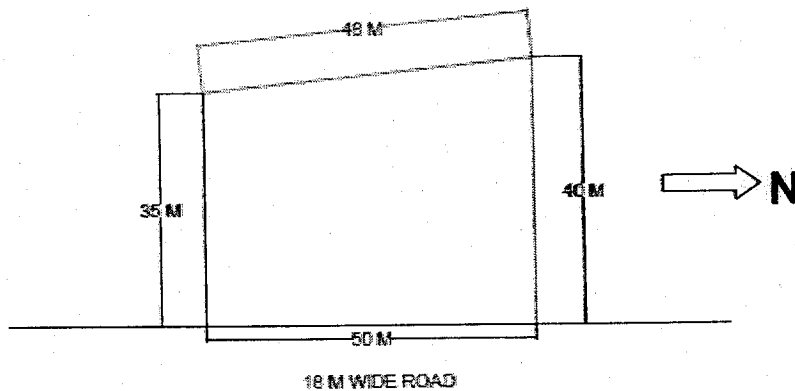
The structure has to be ground + one floor adequate semi covered spaces, spacious corridors, toilet block, etc.

Proper segregation of crowd will prove the efficiency of building.

Parking for all sorts of vehicle to be seen in site plan.

Drawing Requirements:

1. Site plan – 1:200.
2. Floor plan – (G+1) 1:100.
3. Elevation – one 1:100.
4. Section – 1:100.
5. Sketch view – appropriate.



Area of the plot 1840 sq.mt approx.

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,

LONERE-RAIGAD-402 103

Semester Examination- March- 2019

Branch: B.Arch (Second Year Architecture)

Semester: IV

Subject: Building Construction Technology and Materials -IV

Marks: 60

Subject Code: AR20040003

Date: 12/03/2019

Time: 3 Hrs.

Introduction: 1. All Questions are compulsory.
2. Draw sketches if required.

- Q.No.1** Why foundation is necessary for Building? Draw the detailed sketches (Plan and sections) of the following R.C.C foundations (Any Two) **(20 Marks)**
- a) Eccentric footing
 - b) Isolated Stepped footing
 - c) Strap foundation
- Q.No. 2** What are the advantages and disadvantages of cast in situ concrete and Precast concrete? **(10 Marks)**
- Q.No. 3** Describe in detail any of the two of the following type of Concrete? **(10 Marks)**
- a) Ready-mix Concrete
 - b) Light Weight Concrete
 - c) Plain Cement concrete
 - d) High Density Concrete
- Q.No. 4** Explain in detail the following cladding materials? **(10 Marks)**
- a) Alluminium Composite Panel (ACP)
 - b) Artificial tiles
 - c) Natural stone
 - d) Curtain Glass
- Q.No. 5** Write notes on followingg Insulating materials (Any Two) **(10 Marks)**
- a) Gypsum Boards
 - b) Rock wool
 - c) Acoustical plaster
 - d) Foamed Concrete

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RAIGAD -402 103
Mid Semester Examination – March - 2019

Branch: B.Arch (Second Year)

Sem.: IV

Subject : Building Services-II

Marks: 20

Subject Code: AR20040004

Date: 13-03-2019

Time: 1 Hr.

Instructions: Attempt any four questions of the following.

(Marks)

- | | | |
|---------------|--|------------|
| Q.No.1 | What are the significance of Building Services? | (5) |
| Q.No.2 | What are various types of equipment's used in an electrical substation; clarify with the help of substation layout. | (5) |
| Q.No.3 | What do you mean by visual tasks? What are the factors affecting visual task? | (5) |
| Q.No.4 | Define the following: | |
| | i. Visible light | (1) |
| | ii. Luminous flux and Luminous intensity | (4) |
| Q.No.5 | Explain types of wiring system with the help of appropriate figure. | (5) |

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

Branch: B.Arch (Second Yr)
Subject: Theory of Structures - III
Subject Code: AR20040006
Date:- 15/03/2019

Sem.:- IV
Marks: 20
Time:- 1 Hr.

Instructions:- Attempt any two from Q1 to Q4

(Marks)

- | | |
|--|-------|
| 1) Define : (any 3) a. Buckling b. Slenderness ratio c. Effective length d. Radius of Gyration | 6mks |
| 2) State the assumptions in Eulers Theory | 6mks |
| 3) State principle of Superposition | 06mks |
| 4) State effect of Continuity | 06mks |
| 5) A horizontal beam AB of span 5m is fixed at both ends and two equal downward forces of 10KN each are placed at equal distances 1m from either end. Find reactions, free moment and Fixed end moments. | 08mks |

OR

- | | |
|---|--|
| 5) A steel rod 5m long and 40mm diameter is used as a column with one end fixed and other hinged. Determine the critical load the column can carry by using Eulers Formula. | Take $E = 2 \times 10^5 \text{ N/mm}^2$ 08mks |
|---|--|

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LONERE-RAIGAD-402 103**

Semester Examination- March- 2019

Branch: B.Arch (Second Year Architecture)

Semester: IV

Subject: History of Architecture -IV

Marks: 20

Subject Code: AR20040005

Date: 14/03/2019

Time: 1 Hrs.

Introduction:

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

| | | |
|-------------------|---|-------------------|
| Q.No.1 (A) | Fill in the blanks | (4 Marks) |
| 1 | William Morris by profession was _____ (Artist, Writer, Architect, Socialist) | |
| 2 | Art and Craft movement in Japan was called as _____ (Shinle, Mingei, Victorian, Art Deco) | |
| 3 | The best known building of Antoni Gaudí _____ (Glasgow, Casa Milà, Crystal Palace, Kensington Palace) | |
| 4 | One of the Architects of the Expressionist movement _____ (William Jenney, Le Corbusier, Fritz Höger, FLW) | |
| (B) | Match the following | (4 Marks) |
| (i) | New Art | A German |
| (ii) | De Stijl | B America |
| (iii) | Jugendstil | C French |
| (iv) | Shingle | D Dutch |
| Q.2 | A Briefly explain the Art and Craft movement that flourished in Europe nation? or | (6 Marks) |
| | B Describe Chicago school architecture movement and mention any two building example? | |
| Q.3 | A Give a note on Jugendstil movement in Germany? or | (6 Marks) |
| | B Briefly write on skyscrapers giving example? | |