VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
First Semester

COMMUNICATION SKILLS
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Define Inter-Personal Speaking.
2. Define debate.
3. Write about Skimming.
4. Write briefly on Note-Taking.
5. Write Any Two steps involved in Note-Making
6. Write about direct questions in an Interview.
7. Define a Domestic Pump.
8. What are the parts of Memo.
9. What is a bibliography?
10. Write about Scanning.

PART – B (5 x 16 = 80 marks)

11. a) **Communication:**   What are the advantages of Written Communication.
OR
   b) **Paragraph Writing:** Write a paragraph on Life in a village and life in a city.

12. a) **Comprehension:**
   Read the following passage carefully and answer the questions.

The efficiency of a turbo-jet engine varies with the speed and altitude at which it operates. Whilst it is very efficient at supersonic speeds and high altitudes, it is not suited to the low condition, thrust augmenters or after-burners are often required to boost the power, and this entails heavy fuel consumption and restricts the range of the aircraft. On the other hand, propeller-driven aircraft cannot attain speeds much in excess of 500mph where as at low speeds are still acceptable for most civilian airliners, a type of engine known as turbo-prop was developed, which combined some of the advantages of both jet and piston-driven engines.

In the turbo-jet, the turbine is required to develop enough power to drive the compressor only; where as in the turbo-prop engine, it must supply power for the propeller also. As the propeller rotates, it drives rearwards a much larger column of air than that which is expelled from the jet-tube of the turbo-jet, but at a much lower velocity. Since most airports are situated in or near large centers of population, such reduction in the noise-level is a decided advantage.

(P.T.O)

The main disadvantage of the turbo-prop engine is, of course, the limitation imposed on the speed by the propeller, as a result of which it is likely to become obsolete on all except short-haul aircraft.

Questions:

1. Why are after-burners used in a turbo-jet?
2. How is the turbo-prop engine aircraft greater than the turbo-jet engine?
3. Why is the turbo-prop aircraft likely to become obsolete on all except short-haul aircraft?
4. Give the three types of aircraft mentioned in the passage.
5. What is common between turbo-jet and turbo-prop?
6. What is the disadvantage of the turbo-prop engine?

OR

b) **Read the following passage carefully and answer the questions.**

The heavy damage caused by the recent spell of rain has made the experts in Highways put forward a strong case for the laying of Cement Concrete Roads. They say that the advantages of CC roads for outstrip those of bituminous roads in cost, longevity, maintenance and riding comfort. They stress that while the Tamil Nadu government spends Rs. 10crores for relaying the bituminous roads in Madras alone after every Strong monsoon, the CC roads will last 40 years and require no maintenance. Moreover Cement is available in plenty now.

As Cement Concrete roads have smooth surface, they provide better riding comfort and the consumption of fuel will be less. Bituminous roads do not last long, because water penetrates the bitumen layer and seeps into the cavities below, thus forming a film between two. Later when vehicles ply over the wet surface, the upper layer is stripped away and pot holes are formed. But this doesn't happen on CC roads.
The CC roads have a few disadvantages. It is not easy to cut them open to Lay electricity of telephone cables. The visibility of CC roads is better only at nights. Joints pose a problem on CC roads.

Choose the best alternative:

1) The root cause for stripping is
a) poor supervision
b) lack of quality
c) vehicles plying on wet surfaces
d) the water between the two layers of the road

2) How could CC roads reduce the fuel consumption?
a) Bumpty roads increase the fuel consumption
b) Riding comfort is directly related to fuel consumption
c) Visibility will be better at nights
d) CC roads will not disintegrate due to ageing

3) During day time the visibility is better one)
   Cement concrete roads
b) Mud roads
c) Bituminous roads

Answer the following not more than 15 words each:

4. Why are the bituminous roads no longer an economical proposition?
5. Give two disadvantages of CC roads?
6. How is pot holes formed?

13. a) **Letter Writing:** Write an application for the post of student training in 4core architects, Chennai.Provide your bio-data to senior architect of the firm

<div align="center">OR</div>

b) **Flow chart:**
Read the following passage and draw a flow chart.

Silver occurs in ores of several metals. The froth process of extracting silver accounts for about 75 percent of all silver recovered. Here the ore is ground to a power, placed in large vats containing water suspensions of frothing agents and thoroughly agitated by jets of air. Depending on the agents used, either the silver-bearing ore or the gangue adhering to the bubbles of the froth is skimmed off and washed. The final refining is done using electrolysis.

14. a) **Report Writing:** Imagine that you are a Safety Engineer in a car manufacturing factory. There has been a fire accident in the factory and one of the workers has been badly hurt andis in the hospital. Your General Manager has asked you to send him a detailed report on the accident together with your recommendations for averting a similar accident in the future. Prepare a report accordingly.

<div align="center">OR</div>

b) Write a Group Discussion on India and Olympics

15.a) **Group Discussion:** Write a Group Discussion on Position of women in India

compared to other   nations.
<div align="center">OR</div>
b) **Make notes on the following**:

Aero planes have the reputation of being dangerous. They also have the grave disadvantage of being the most expensive form of transport. But nothing can match them for speed and comfort. Travelling at a height of 30,000 feet far above the clouds and over 500 miles per hour is an exhilarating experience. An aero plane gets you to your destination rapidly, for a few hours you settle back in a deep armchair to enjoy the flight. The real escapist can watch a free film show and sip Champaign on some services. But even when such refreshments are not available, there is plenty to keep you occupied. An aeroplane offers you an unusual and breathes taking view of the world. You soar effortlessly, over high mountains and deep valleys. You really see the shape of the land.

<div align="center">*****</div>

<div align="right">Sl.No.E B-245</div>

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
First Semester

MATHEMATICS

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Find the direction cosines of the line joining the two points
    are $(3,4,5)$ and $(7,9,8)$
2. Write the condition for co planarity
3. Find the equation of the sphere where the centre is the joining $(2,-3,1)$ and
    radius is 5 units
4. Find the equation of the sphere whose diameter is the join of $(2,-3,1)$ and
    $(1,-2,-1)$
5. Find the characteristic equation of the matrix $\begin{pmatrix} 1 & 2 \\ 0 & 2 \end{pmatrix}$.
6. Find the sum of and product of the Eigen values of the matrix A=$\begin{pmatrix} -2 & 2 & -3 \\ 2 & 1 & -6 \\ -1 & -2 & 0 \end{pmatrix}$.
7. Solve $x\dfrac{d^2y}{dx^2}+\dfrac{dy}{dx}=0$
8. Find the P.I of $(D+1)^2 y = x$.
9. Find $\dfrac{dy}{dx}$ when $y\sin x = x\cos y$
10. Define saddle point.

PART – B (5 x 16 = 80 marks)

11. a) i) Find the direction cosines of the line joining the two points $A(3,2,-1)$
    and $B(5,1,4)$.

    (ii) The coordinates of a point 'P' are $(3,12,4)$. Find the direction cosines of
    the line OP.

(p.t.o)

OR

b) Find the symmetric form of the given equation of the

    Straight line $x + y + z + 1 = 0 = 4x + y - 2z + 2$.

11. a) Find the equation of the sphere passing through the circle

    $x^2 + y^2 + z^2 - 6x - 2z + 5 = 0$, $y = 0$ and touching the plane $3y + 4z + 5 = 0$

OR

b)i) Find the equation of the sphere which passes through the point $(1, -2, 3)$ and

    the circle $z = 0, x^2 + y^2 + z^2 - 9 = 0$.

ii) Obtain the equation of the two tangent planes to the sphere

    $x^2 + y^2 + z^2 + 2x - y + 3z - 2 = 0$ which passes through the

    line $2x + y + z + 1 = 0 = x - y + 2z + 4$.

13. a) Find the Eigen values and Eigen vectors of the matrix $A = \begin{pmatrix} 2 & 2 & 0 \\ 2 & 1 & 1 \\ -7 & 2 & -3 \end{pmatrix}$.

OR

b) Verify Cayley -Hamilton theorem for the matrix $A = \begin{pmatrix} 1 & 0 & 3 \\ 2 & 1 & -1 \\ 1 & -1 & 1 \end{pmatrix}$ and hence find A^{-1}.

14. a) Solve $\left(D^3 - 3D^2 + 4D - 2\right) y = e^x + \cos 2x$.

OR

b) i) Evaluate $\int \cos^6 x\, dx$ by using reduction formula.

  ii) Evaluate $\int \sin^7 x\, dx$ by using reduction formula.

15.a) Show that the function $f(x, y) = x^3 + y^3 - 63(x + y) + 12xy$ is maximum at
    (-7, -7) and minimum at (3, 3).

OR

b) Find the extreme values of the function $f(x, y) = x^3 + y^3 - 12x - 3y + 20$.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Second Semester

HISTORY OF ARCHITECTURE-1
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write notes on a Vault.
2. Explain a Tuscan order.
3. Explain the term 'Atrium'
4. Write short notes on 'Early stone age' Architecture.
5. What are the three types of Tombs in Egyptian architecture.
6. Explain & sketch 'Papyrus capital'.
7. Write short notes on 'church of Nativity'.
8. Write the features of 'church of Holy Sepulcher', Jerusalam.
9. Explain 'Triumphal arches' with sketches.
10. Write the features of 'Column of Trajans' Rome.

PART – B (5 x 16 = 80 marks)

11. a) Explain the architectural features of Great pyramid of Cheops, Gizeh with sketches.

OR

    b) Explain the stepped pyramid of Zoser, Sakara with sketches.

12. a) Explain 'Rock – Hewn tombs' of Egypt with an typical examples with sketches.

OR

    b) Explain with sketches architectural features of the Palace of Peresipolis.

13. a) Explain in detail the Architectural character of Greece with examples and sketches.

OR

    b) Explain the architectural features of the following with sketches.
        a) Erectheion Athens
        b) Theatre, Epidaurus

14. a) Explain in detail the architectural features of Thermae of Caracalla, Rome with sketches.

OR

    b) Explain in detail the architectural features of Saint Peters Basilica at Rome.

15.a) Explain the architectural features of St.Clemente, Rome with sketches.

OR

    b) Discuss with sketches, the roman orders.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
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B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Second Semester

HISTORY OF ARCHITECTURE-1
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Second Semester

MECHANICS OF STRUCTURES-I

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. State the law of parallelogram of forces.
2. A force F is acting on a body. Resolve this force into force and a couple.
3. What do you mean by equilibrium of a body? State the three conditions of equilibrium.
4. Name the important types of supports and loads with sketches.
5. What are the assumptions made in finding out the forces in a frame?
6. What do you mean by "Analysis of frames'?
7. Define Moment of inertia.
8. What do you mean by Radius of gyration?
9. What do you mean by Poisson's ratio?
10. State the principle of superposition.

PART – B (5 x 16 = 80 marks)

11. a) Classify the force system, and explain briefly the types of coplanar forces with sketches.

OR

b) Find in magnitude and position of the resultant of the forces shown in following

cases:

(i)   200N   300N   400N   (ii) 150N   250N   100N   500N

         3m   4m   2m   4m   2m
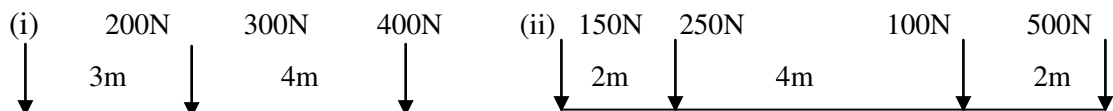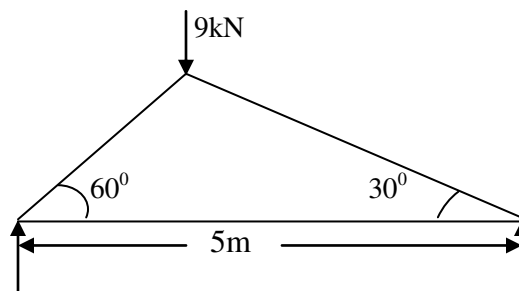
12. a) Write short notes on:

(i) Types of parallel forces.

(ii) Resultant of two parallel forces and

(iii) Support reactions with examples.

2

OR

b) A circular roller of radius 5cm and of weight 100N rests on a smooth horizontal surface and is held in position by an inclined bar AB of length 10cm as shown. A horizontal force of 200N is acting at B. Find the tension (force) in the bar and the vertical reaction at C.
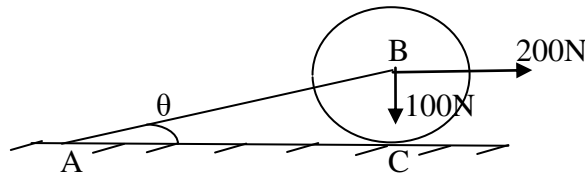
13. a) Find the forces in the members and reactions of the truss shown:

OR

b) Write short notes on:

(i)   Perfect and Imperfect frames

(ii)   Method of joints and

(iii)   Method of sections.

14. a) Find the moment of inertia of an Angle section 100mmx60mmx20mm size.

OR

b) Find the moment of inertia of T-section of 120mmx100mmx20mm size.

15.a) A load of 2MN is applied on a short concrete column of 500mmx500mm size. The column is reinforced with four steel bars of 12mm diameter, one in each corner. Find the stresses in the concrete and steel bars. Take the value of E for steel as $2.1 \times 10^{5N}/mm^2$ and for concrete as 1.4×10^5 N/mm^2.

OR

b) A rod is 3m long at a temperature of 15^0c. Find the expansion of rod, when the temperature is raised to 95^0C. If the expansion is prevented, find the stress induced in the material of the rod. Take E = 1×10^5 N/mm^2 and $\alpha = 0.000012$ per degree centigrade.

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Sl.No.B 153

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Second Semester

MECHANICS OF STRUCTURES-I

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Classify the types of coplanar and Non-coplanar force systems?
2. Define Varignon's principle of moments?
3. A simply supported beam of 6m length carries a point load of 8KN at a distance of 4m from left end. Calculate the reactions
4. What do you mean by equilibrium of a body? State the three conditions of equilibrium?
5. What is a perfect frame?
6. What are the assumptions made in finding out the forces in a frame?
7. What do you mean by Radius of gyration?
8. State the Parallel Axis Theorem.
9. State the principle of superposition.
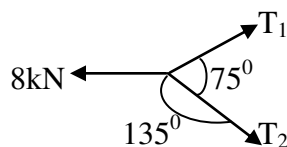10. Define Young's Modulus and Modulus of rigidity

PART – B (5 x 16 = 80 marks)

11. a) The resultant of two forces, when they act at an angle of 60^0 is 14N. If the same forces are acting at right angles, their resultant is $\sqrt{136}$ N. Determine the magnitude of the two forces.

OR

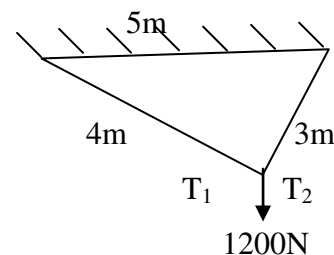b) Determine the forces T_1 and T_2 in each of the following:

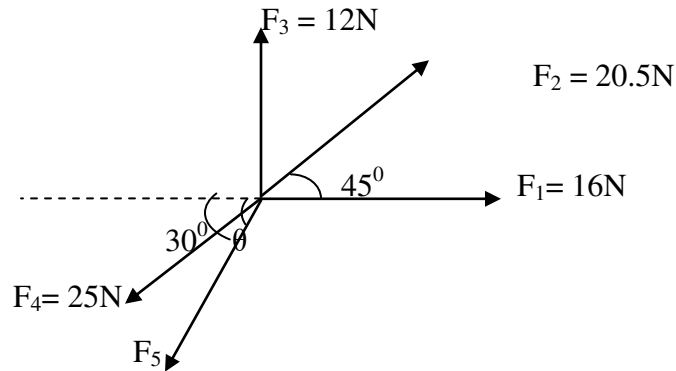(a)   (b)

12. a) Five forces are acting at a point on a body as shown, and the body is in equilibrium. If F1 = 18N, F_2= 22.5N, F_3 = 15N, F4 = 30N, find F_5 in magnitude and direction.

$F_3 = 12N$

$F_2 = 20.5N$

45^0

$F_1= 16N$

30^0 θ

$F_4= 25N$

F_5

OR

b) (i) A simply supported beam 6m long is loaded as shown: Find the reactions at A and B.

5kN   2kN/m   4kN

135^0

A   2m   C   2m   D   2m   B
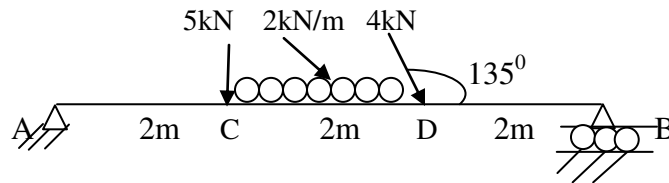
(ii) A beam 1.7m is loaded as shown: Find the reactions at the supports.

50N   20N   30N   15N

60^0 45^0 80^0

20cm   40cm   70cm   50cm
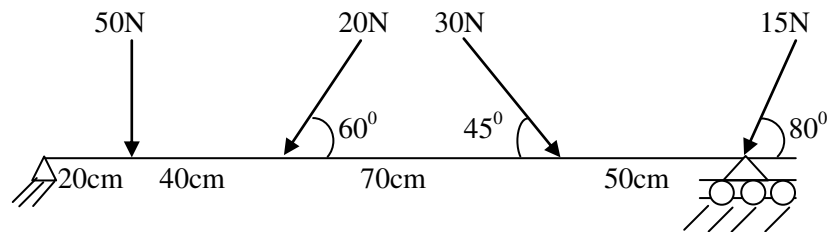
13. a) A truss of 9m span is loaded as shown in fig. Find the reactions and forces in members marked 1, 2 and 3.
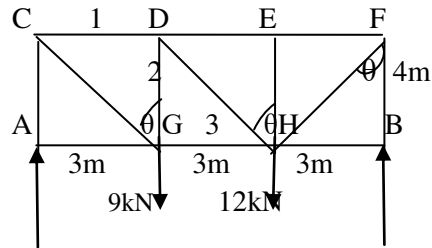
OR

b) Find the forces in the members 1, 2 and 3 of the frame shown in fig:
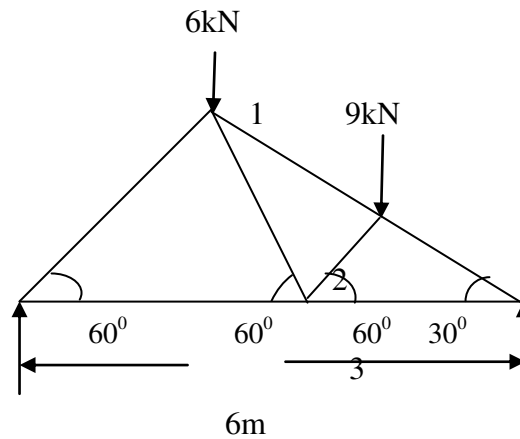
14. a) Write short notes on:

(i) Mass Moment of Inertia,

(ii) Perpendicular axis Theorem and

(iii) Parallel axis Theorem.

OR

b) Find the moment of inertia of a symmetrical I-section of

200mmx140mmx20mm size.

15. a) An axial pull of 40kN is acting on a bar consisting of three sections of length 30cm, 25cm and 20cm and of diameters 2cm, 4cm and 5cm respectively. If the Young's Modulus $= 2x10^5$ N/mm^2, determine: (i) stress in each section and (ii) total extension of the bar.

(P.T.O)

OR

b) (i) A steel rod 150mm long and 20mm in diameter is subjected to an axial load of 22kN. Determine the stress, strain and elongation of the rod.

Take $E = 2\times10^5 N/mm^2$.

(ii) Find the Young's Modulus of a brass bar of diameter 25mm and of length 250mm which is subjected to a tensile load of 50kN when the extension of the rod is equal to 0.30mm.

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Sl.No.E B-221

Sl.No.E B-236   Sub.Code:38012202

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Second Semester

HISTORY OF ART AND CULTURE
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write few words on any two architectural constructions in ancient Egypt.
2. Differentiate the art of Rome and Renaissance period.
3. Write a note on Dravidian Architecture.
4. Briefly write a note on Islamic Architecture**.**
5. Write a note on Indian paintings
6. Write briefly about the paintings in Ajanta, Ellora caves.
7. Differentiate perspective and depth
8. Write a note on music in India in ancient day.
9. How can you say that Culture and Sanskriti carry the same meaning?
10. How will you define the concept of culture?

PART – B (5 x 16 = 80 marks)

11. a) What are the art principles? Explain with sketches.
OR
   b) Explain Balance and its types with sketches.

12. a) What is Emphasis? How do we achieve Emphasis?

OR
   b) Explain the role of puppets in Indian art and Culture.

13. a) What are the general characteristics of culture?
OR
   b) . What were the achievements in the painting of the school of athens during the renaissance period?
14. a) What is Romanticism? Describe the expression of this style with the help of examples.
OR
   b) . Write briefly on Tanjore Paintings and their Character.

15.a) Elaborate on the influence of Gandhara Art on the Indian subcontinent**.**
OR
   b) . What is portrayed at the Ankor Vat? Why?

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Second Semester

HISTORY OF ARCHITECTURE-II
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is meant by Viharas?
2. Describe the salient features of Viharas.
3. Sketch neatly – TIGAWA TEMPLE.
4. Sketch neatly Durga Temple – Aihole.
5. Sketch and explain evolution of a Pallava Order.
6. Sketch and explain – "BhimaRatha".
7. What were the changes took over during the Pandya Period?
8. Explain about the Vaikuntha Perumal Temple, Kanchipuram.
9. Compare Dravidian and Indo Aryan styles.
10. Explain about the Khandharia Mahadev Temple.

PART – B (5 x 16 = 80 marks)

11. a) Write about "The Great Bath of Mohenjodaro", with adequate sketches.
OR
    b) What were the evolutions of Architectural forms during the invasions of Aryans.

12. a) Describe any one early Chalukyan Temples with neat sketches.
OR
    b) Explain about the architectural characteristics of Temple at Deogarh and Bitergaon.

13. a) Explain about the following:
    a. DraupadiRatha b.ArjunaRatha c. BhimaRatha.

OR
    b) Explain with sketches the Architectural features of the Temple city at Srirangam.

14. a) Give a comparative Study of the Temple Styles of South India.
OR
    b) Explain about the city planning of Srirangam.

15. a) Explain about the salient features of Indo – Aryan style at Orissa with suitable examples.
OR
    b) Explain in detail the architectural features of Dilwara Temple, Mt Abu.
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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Second Semester

ENVIRONMENTAL STUDIES
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is water logging?

2. Write any few uses of forest to mankind.
3. Brief the term (i) Genetic diversity (ii) Species diversity.
4. What are the various biogeochemical cycles? Write their importance.
5. What are the sources of water pollution?
6. Define eutrophication.

7. Mention the important causes of climate change.
8. Define water shed management.
9. What are the different types of population growth curves?
10. What is the main purpose of the national policy for children?

PART – B (5 x 16 = 80 marks)

11. a) Write about the use and over exploitation of ground and surface waters.
OR
    b) Explain the use, over exploitation and environmental effects of mineral resources.

12. a) Discuss ecological succession in an ecosystem.
OR
    b) Explain various types of Ecological pyramids.

13. a) Write about the sources and effects of noise pollution and What are the control measures to be followed.
OR
    b) Discuss nuclear pollution and its effect.

14. a) Explain the effect and control of global warming .

OR
    b) Explain the causes and effects of acid rain.

15.a) Write a brief account in family welfare programmes training and development.
OR
    b) Give the importance of value education based on the tradition and quotes of national leaders.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Third Semester

MECHANICS OF STRUCTURES-II

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Differentiate cantilever, simply supported and over-hanging beams.
2. Draw the SFD and BMD of a simply supported beam carrying a point load at a distance 'a' from left end and 'b' from right end.
3. What do you mean by 'Neutral Axis' of a beam section?
4. Write a note on bending stresses in symmetrical sections.
5. What are the relation between deflection, slope, shearing force and rate of loading?
6. Find the slope at the supports and maximum deflection of a simply supported beam of 200mmx300mm size and carrying an udl of 9kN/m run over the entire span of 5m.take value of E for the beam = $1 \times 10^{4} N/mm^{2}$
7. What do you mean by effective length of a column?
8. What is 'slenderness ratio'? State the limitations of Euler's formula?
9. State the Clapeyron's theorem of three moments applicable for continuous beams.
10. Draw the SF and BM diagrams of a fixed beam carrying two point loads at L/4 distance from each end.

PART – B (5 x 16 = 80 marks)

11. a) A cantilever beam of length 4m carries point loads of 1kN, 2kN and 3kNat distances of 1m, 2m and 4m from the fixed end. Find the maximum shear force and bending moment and draw the S.F and B.M diagrams for the cantilever.
OR
b) A cantilever of length 4m carries a uniformly distributed load of 1kN/m length run over the whole length and a point load of 3kN at a distance of 1m from fixed end. Find the maximum values of shear force and bending moment. Draw the S.F and B.M diagrams.

12. a) A steel plate of width 120mm and of thickness 20mm is bent into a circular arc of radius 10m. Determine the maximum stress induced and the bending moment which will produce the maximum stress. Take E = $2 \times 10^{5} N/mm^{2}$.
OR

b) An I-section of 225mmx100mmx7.5mm is simply supported over a span of

12m. If the maximum permissible bending stress is 80N/mm^2, what concentrated

load can be carried at a distance of 4m from one support?

13. a) A beam of uniform rectangular section of 200mm wide and 340mm deep is
simply supported at its ends. It carries a uniformly distributed load of 9kN/m
run over its entire length of 5m. If the value of E for the beam material is
$1x10^4$N/ mm^2, find (i) slope at the supports and (ii) maximum deflection.

OR

b) A beam of length 4.8m and of uniform rectangular section is simply supported
at its ends. It carries a uniformly distributed load of 9.375kN/m run over the
entire length. Calculate the width and depth of the beam if the permissible
bending stress is 7N/mm^2 and maximum deflection is not to exceed
0.95cm.Take E for the material of the beam as $1.05x10^4$N/mm^2.

14. a) A solid round bar 4m long and 6cm diameter is used as a strut. Determine the
crippling load for the column, if (i) both ends are hinged, (ii) one end fixed and
one end hinged, (iii) one end fixed and one end free and (iv) both ends are fixed.
Take E = $2x10^5$N/mm^2.

OR

b) A hallow circular column 2m long has one of its end fixed and the other end free
and has to support an axial load of 500kN. The internal diameter is 0.8 times the
external diameter. Allowing a factor of 4 calculate the external diameter and
thickness of the metal. Use Rankine's formula. Take σ_c = 330N/mm^2 and
a = 1/7500.

15.a) Find the Euler's crushing load for a hallow cylindrical cast-iron column 20cm
external diameter and 25mm thick if it is 6m long and is hinged at both ends.
Take E = $1.2x10^6$N/mm$^{2.}$ Compare the load with the crushing load as given by
Rankine's formula, taking σ_c = 550N/mm^2 and a = 1/1600.

OR

b) A fixed beam of length 5m carries a point load of20kN at a distance of 2m from
left end. Determine the fixed end moments and deflection under the load, if the

flexural rigidity of the beam is $1x10^4$kNm^2.(p670)

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Third Semester

HISTORY OF ARCHITECTURE -III
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is a "Barrel vault"
2. Write notes on "Clerestory".
3. What is sexpartite vaulting?
4. Write a note on the ceiling, columns adopted in the nave of Pisa cathedral.
5. Write a note on hammer-beam roofs of England .
6. Sketch and explain the need of a pinnacle in a flying buttress.
7. Sketch a fan vault and mention its parts.
8. Mention the Principal phases of Renaissance Architecture in Italy .
9. Compare the lighting in the interiors of Romanesque and Gothic cathedral.
10. Write a note on the vaulting system adopted in the nave of Pisa cathedral.

PART – B (5 x 16 = 80 marks)

11. a) Explain the Architectural characters of Romanesque Architecture in France
    with examples and sketches.

OR

  b) Explain the Architectural characters of Romanesque Architecture in England
     with examples and sketches.

12. a) Explain with sketches the evolution of Gothic Vaulting.

OR

  b) Explain with SKETCHES the different Timber Roofing in Gothic
     Architecture.

13. a) Explain the Architectural characters of Italian Gothic with examples and
       sketches.

OR

  b) Explain with sketches the Architectural features of "Milan Cathedral", Italy.

14. a) Explain the Architectural characters of Baroque and Rococo style with
       examples and sketches.

OR

  b) Write in detail the ideologies and works of Bramate

15.a) Explain the Architectural characters of different styles in British Renaissance
      with examples and sketches.

OR

  b) What is the contribution of Inigo Jones to English architecture?

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Third Semester

HISTORY OF ARCHITECTURE -III
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write notes on "Clerestory".
2. What is a "Quoin"?
3. Write a note on external massing in Pisa cathedral.
4. Sketch the cross section of the dome of Pisa baptistery.
5. The purpose of the flying buttress in Notre Dame , Paris.
6. What are the disadvantages of a flying buttress?
7. Mention the possible timeline of Gothic architecture in Italy and France.
8. Write a note on the vaulting systems in Renaissance Architecture.
9. Mention the two distinctive style that emerged in English Renaissance.
10. Sketch and explain a "piers.

PART – B (5 x 16 = 80 marks)

11. a) Explain the Architectural characters of Romanesque Architecture in Italy with examples and sketches.

OR

   b) Explain with sketches the Architectural features of Notre Dame Cathedral at Paris.

12. a) Explain the Architectural characters of French Gothic with examples and Sketches.

OR

   b) Explain with sketches the structural systems and decoration in different phases of French Gothic.

13. a) Draw a part through the Nave of Westminster Abbey and discuss it.

OR

   b) Explain Doge's palace with neat sketches.

14. a) Write in detail the ideologies and works of Brunelleschi.

OR

   b) Write in detail the ideologies and works of Michelangelo.

15.a) Write about the ideologies and works of Inigo Jones towards Renaissance Architecture.

OR

   b) What is the contribution of Inigo Jones to English architecture?

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Sl.No.E B-247   Sub.Code:38012303

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Third Semester

CLIMATOLOGY
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Briefly explain the climatic elements-Temperature and Humidity.
2. Define microclimate.
3. Define azimuth angle.
4. What are Shadow masks?
5. Explain the use of design aid for climate design in buildings
6. What is the use of Trombe walls?
7. What is Greenhouse effect?
8. What is Solar cooling.
9. What is wind shadow?
10. Define daylight?

PART – B (5 x 16 = 80 marks)

11. a) Enumerate the elements of climate? How are they measured.

OR

b) Briefly explain the factors that affect the microclimate of a site.

12. a) What is 'Orientation'? Discuss in detail, how a building should be oriented in relation to sun & wind.

OR

b) What is a azimuth altitude? Explain with the help of sketches their use in climatic design.

13. a) What is Mahoney's table? How is it used for climatic analysis?

OR

b) What are some of the traditional methods for rain protection and air movement in India.

14. a) What are the objectives of thermal control?

OR

b) What are the design guide lines for comfort ventilation?

15. a) Define conductance, resistance & thermal capacity of building materials.

OR

b) What are the five basic strategies to promote effective use of sun light? How does room reflectance play a role in light distribution (use diagrams to explain)

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Third Semester

THEORY OF DESIGN 1

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are the primary shapes?

2. Write short notes on pyramid.
3. What is "shape"?

4. Describe 'Form' in architecture.

5. What is a 'concept' for an architectural design problem?

6. What are the types of spatial organizations?

7. What are the six types of configuration of paths?

8. Explain light and shade.

9. What is hierarchy?

10. Define Rhythm and Repetition?

PART – B (5 x 16 = 80 marks)

11. a) Giving examples from important public architecture, explain the most
    important aspects of Roman architecture.
OR
    b) State the significance of Aesthetics in Architecture.

12. a) Compare the style & character of Greek Houses with Roman Houses.
OR
    b) Explain the ideologies and philosophies of contemporary Architects with their

    works.

    a) Lecorbusier

    b) Louis Khan

13. a) Architects have cited different inspirations for their designs–philosophies, accidental means, rational processes, and so on. provide any 5 illustrations for this.

OR

b) Describe the three types of approaches in buildings.

14. a) Describe paths & its six types of configuration of paths.

OR

b).Explain the various proportioning systems with sketches.

15.a) Explain the tools of composition which could be analyzed in a building.

OR

b) Distinguish Rhythm and Balance. Highlight the visual and emotional effects of rhythm and its use in Architectural design.

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Sl.No.E

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Third Semester

THEORY OF DESIGN 1
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are linear elements?
2. What is dimensional transformation?
3. Any two design methodologies followed by an architects..
4. Define 'Architecture'
5. Give two examples for linear organization
6. What are the three types of approaches in buildings?
7. Define 'Scale' in terms of architecture
8. Define Unity and Harmony
9. What is hierarchy?
10. What are the primary shapes?

PART – B (5 x 16 = 80 marks)

11. a) Describe in detail about the effects of the Sphere, cylinder and the cube in creating architectural mass and space.

OR

b) Explain the three types of character in buildings.

12. a) Compare the style & character of Greek Houses with Roman Houses.

OR

b) Explain the style & character in the medieval period architecture.

13. a) Describe the following articulations with sketches

   a) Edges and corners articulation

   b) Surface articulation

OR

b) Describe the building circulation elements with examples.

14. a) Explain the various proportioning systems with sketches.

OR

b) Describe the advantages of applying the ordering principles in the organization of forms or spaces. Explain the application of any three ordering principles in the designing of buildings with neat sketches.

15.a) Describe in detail the principles used in architecture or Designing.

OR

b) Explain the ideologies and philosophies of contemporary Architects with their works

a) Mies vander Rohe

b) F.L.Wright

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Third Semester

BUILDING SERVICES-I

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What do you mean by rate of demand?
2. Write a short note on quality requirement of water used for domestic purposes.
3. What is a jack well and sketch the plan?
4. Name the methods of layout of distribution pipes in water supply schemes.
5. Differentiate between 'sullage' and 'sewage'.
6. Write a note on 'Gully trap'.
7. Brief a note on 'Wood sewers'.
8. Why sewers of non-circular shapes are used other than circular shapes?
9. Name the roof top rain water harvesting methods in urban areas.
10. What is a modified injection well?

PART – B (5 x 16 = 80 marks)

11. a) What is meant by variations in rate of demand? Discuss in detail.
OR
   b) Discuss about the quality of water required for some of the common trades.

12. a) What are the various materials used in water pipes? Briefly discuss the advantages and disadvantages of each of them.
OR
   b) Write short notes on :
    (i)   Water meters and   ii) Maintenance of water supply distribution system.

13. a) Compare stone-ware and cement concrete sewers. State the properties of cement-concrete sewers.
OR
   b) What are the types of non-circular sewers? Briefly discuss each with neat sketches.

14. a) Explain briefly the commonly adopted tests on drain pipes in a house drainage system.
OR
   b) Write short notes on:
    (i)   Wash Basin and   ii) Water Closets.

(P.T.O)

15.a) Briefly explain the method of rain water harvesting through recharge shaft.
<div align="center">**OR**</div>
b) Explain with sketches the following ground water recharging techniques:
  (i) Soak ways
  (ii) Recharge trenches and Recharge troughs.

<div align="center">*****</div>

<div align="right">Sl.No.B 142</div>

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Third Semester

BUILDING SERVICES-I

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are the requirements of water for cooking and bathing in domestic purposes?
2. What is the rate of demand for sanitation purposes?
3. What is a 'dug well'?
4. Write a note on tube wells?
5. What do you mean by 'Refuse'?
6. Write a note on 'Gully trap'.
7. Brief a note on 'Wood sewers'.
8. What is a corrugated iron sewer? Where it is used?
9. What is the need of rain water harvesting?
10. What is a cesspool?

PART – B (5 x 16 = 80 marks)

11. a) What are the effects of variations on the design of various units of water supply schemes.

OR

b) What are the surface sources of water supply? Briefly explain each.

12. a) Narrate briefly with sketches, the types of springs as the source of water supply.

OR

b) Describe with sketches the various methods of layout of distribution pipes in a water supply project.

13. a) Discuss briefly the house drainage system and the general principles adopted for a house drainage system.

OR

b) Compare stone-ware and cement concrete sewers. State the properties of cement-concrete sewers.

14. a) Enumerate the points to be noted in preparing the detailed plans for house drainage system and sketch the drainage plan of a building.

OR

b) What are the advantages and disadvantages of a septic tank?

15.a) Briefly explain the method of rain water harvesting through recharge shaft.

OR

b) Explain the step by step approach of rain water harvesting for Thatched roofs.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fourth Semester
HISTORY OF ARCHITECTURE –IV
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Explain with sketches the form and functions of a minaret.
2. Briefly explain any 2 morphological components of a mosque?
3. List out the 3 phases of development of architecture in Indo Islamic period.
4. Explain about the materials used in Alai Darwaza.
5. Neatly sketch the plan of Jami masjid Jaunpur.
6. Explain about the Rewa kund.
7. Define "Rauza"?
8. Briefly explain about the ceiling carvings of Jami Masjid, Chamapnier.
9. Brief out 'Birbal's House'
10. Write about the site layout of Fathepur sikiri.

PART – B (5 x 16 = 80 marks)

11. a) Explain with sketches the architectural characters and components of a mosque.
OR
b) Explain in detail about the Evolution of mosques?

12. a) Explain with sketches the Architectural characters of Khirki Masjid.
OR
b) Discuss in detail about the "Sikander's Lodhi tomb.

13. a) Detail out about the Jahaz Mahal in Malwa style.
OR
b) Write short notes with sketches the Architectural features of the following
    i)   Bahadur's Palace
    ii) Rawa Kund.

14. a) Discuss in detail about the salient features of Jami Masjid Ahamedabad.
OR
b) Elaborate with sketches the architectural characters of Rani rupavathi's mosque.

15.a) Explain with sketches the architectural characters of Humayun's Tomb.
OR
b) Explain with sketches the architectural characters of important buildings in Fathepur Sikri.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fourth Semester

HISTORY OF ARCHITECTURE –IV
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Explain with sketches the form and functions of a minaret.
2. Define 'Sahn' and give a neat sketch.
3. List out the 3 phases of development of architecture in Indo Islamic period.
4. Explain about the materials used in Alai Darwaza.
5. Sketch and explain about the prayer hall at Jami masjid Jaunpur.
6. State the significance of arches used during the malwa style.
7. Explain about the material used in the construction of Jami Masjid, Ahamedabad.
8. Neatly sketch the gateway of Teen Darwaza.
9. Write about 'Diwan i khas' in Fathepur Sikri.
10. Write short on Char baugh garden.

PART – B (5 x 16 = 80 marks)

11. a) Discuss in detail about the types of Islamic Architecture.
OR
   b) Discuss in detail about the morphological components of a mosque.

12. a) Discuss in detail about the "Sikander's Lodhi tomb.
OR
   b) Explain with sketches the development of a dome from a square base.

13. a) Write short notes with sketches the Architectural features of the following
      i)   Hindola Mahal
      ii) The Darwaza's
OR
   b) Elaborate with sketches the architectural characters of Jami Masjid at Mandu.

14. a) Elaborate with sketches the architectural characters of Rani rupavathi's mosque.
OR
   b) State the history and importance of Jami Masjid Ahamedabad with neat sketches.

15.a) Sketch neatly and explain the architectural features of Taj Mahal',Agra.
OR
   b) Write short notes with sketches the Architectural features of the following buildings in Fathepur Sikri.
   i)   Buland Darwaza
   ii)   Tomb of Salim Chisti

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fourth Semester

DESIGN OF STRUCTURES - I
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Define 'knot' and 'knot hole' in wood.
2. What do you mean by sapwood and shake?
3. Write a note on 'rivet lines'.
4. Draw the diagram of types of rivet heads and name them.
5. How can you define 'weld'?
6. Draw and mark the various zones of a typical weld.
7. What are 'headers' and 'trimmers'?
8. What are the limitations of (i) effective span and (ii) deflection of beams?
9. Differentiate a column and strut.
10. What do you mean by 'Radius of gyration'?

PART – B (5 x 16 = 80 marks)

11. a) Briefly narrate the various defects occurred in timber as specified in National Building Code of India.

OR

b) Briefly explain the types of Rolled structural steel sections used as structural members including its classifications, designations and uses.

12. a) A single riveted lap joint is used to connect plate of 10mm thick. If 20mm diameter rivets are used at 55mm gauge, determine the strength of joint and its efficiency. Assume hand driven rivets are used. Working stress in shear in rivets = 80N/mm^2, working stress in bearing in rivets = 250N/mm^2 and working stress in axial tension in plates = $0.6f_y$, and f_y = 260 N/mm^2.

OR

b) A single riveted lap joint is used to connect plate of 12mm thick. If 22mm diameter rivets are used at 70mm gauge, determine the strength of joint and its efficiency.

13. a) Design a suitable side fillet weld to connect two plates 100mmx10mm and 120mmx12mm, and to transmit a pull equal to full strength of the thin plate.

OR

2

b) Write short notes on:
   (i) Specifications of butt weld
   (ii) Specifications of fillet weld.
   (iii) Slot and Plug weld.

14. a) A simply supported beam of 12m span is made of MB 600, @ 1.226kN/m.The associated properties are: Depth = 600mm, width of flange = 210mm, thickness of flange = 20.8mm, thickness of web = 12mm, $I_{xx} = 91813 \times 10^4 mm^4$, $I_{yy} = 2651 \times 10^4 mm^4$, and $Z_{xx} = 3060.4 \times 10^3 mm^3$. Determine the total uniformly distributed load that this beam can carry. The top flange is fully restrained laterally.

OR

b) A class room is 7mx15m. It is provided with 120mm thick stone patties over rolled steel beams spaced 3m c/c. A wearing coat of 20mm thick cement concrete is provided over 160mm thick lime concrete. The effective length of compression flange would be equal to the effective span of beam. Design rolled steel beams. The ends of beams shall not be free to rotate at the bearings.

15.a) Design a rolled steel beam section column to carry an axial load of 900kN. The column is 5m long and adequately restrained in position and direction at both ends.

OR

b) A column member made up of beam section WB450, @ 0.794 kN/m, having a clear span of4.30m. Determine the safe load carrying capacity of the column.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fourth Semester

DESIGN OF STRUCTURES – I

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are prohibited defects in wood?
2. Name the meaning of the following designated steel sections:
    (i)ISMB 550, @1.037kN/m. (ii) ISLC200, @0.206kN/m (iii)ISA6545,
    @0.041kN/m and (iv) ISHT 150,@0.294kN/m.
3. Draw the diagram of types of rivet heads and name them.
4. Write a note on 'rivet lines'.
5. What are the types of fusion welding?
6. What is meant by effective throat thicknesses?
7. Differentiate main and subsidiary beams.
8. Define a spandrel beam.
9. Differentiate a column and strut.
10. Name and draw the sketch of any four built-up compression members.

PART – B (5 x 16 = 80 marks)
11. a) Briefly narrate the various defects occurred in timber as specified in National
      Building Code of India.

OR

   b) Briefly explain the types of Rolled structural steel sections used as structural
      members including its classifications, designations and uses.

12. a) A single riveted lap joint is used to connect plate of 10mm thick. If 20mm
      diameter rivets are used at 55mm gauge, determine the strength of joint and its
      efficiency. Assume hand driven rivets are used. Working stress in shear in rivets =
      80N/mm^2, working stress in bearing in rivets = 250N/mm^2 and working stress in
      axial tension in plates = 0.6f$_y$, and f$_y$ = 260 N/mm^2.

OR

b) Write short notes on:
   (i)   Types and uses of rolled steel sections.
   (ii)   Failures of a riveted joint.
   (iii)   Assumptions made in the design of riveted joints.

13. a) Explain briefly with sketches the various Imperfections occur in welding.

OR

b) Two plates of 16mm are connected by (i) double-U Butt weld, (ii) a single-U Butt weld. Determine the strength of the welded joint in tension in each case. Effective length of the weld is 200mm. Allowable stress in butt weld in tension is 142N/mm^2.

14 a) A simply supported beam of 9m span is made of WB 500, @ 0.952kN/m.The associated properties are: Depth = 500mm, width of flange = 250mm, thickness of flange = 14.7mm, thickness of web = 9.90mm, $I_{xx} = 52290.9 \times 10^4$mm^4, $I_{yy} = 2987.8 \times 10^4$mm^4 and $Z_{xx} = 2091.6 \times 10^3$mm^3. Determine the total uniformly distributed load that this beam can carry. The top flange is fully restrained laterally.

OR

b) Design a rolled steel beam section column to carry an axial load of 1120kN. The column is 6.2m long and adequately restrained in position but not restrained against rotation at both ends.

15.a) A column member made up of beam section WB450, @ 0.794 kN/m, having a clear span of4.30m. Determine the safe load carrying capacity of the column.

OR

b) Write short notes on:
   (i)   Design procedure of compression members,
   (ii)   Continuous and discontinuous members, and
   (iii)   Built-up compression members.

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Sl.No.E –B-202

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fourth Semester

THEORY OF DESIGN-II

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is creative thinking?
2. How can a design be evaluated?
3. Explain the context for Design Problems.
4. Do you agree with the Analysis – Synthesis – Evaluation model of the design?
5. What are feature s of Deconstructivist style?
6. Explain proximity.
7. What is lateral thinking?
8. Describe the significance of '*brain storming*' for design thinking
9. What are the tasks of a critic?
10. What do you understand by the term 'Metaphor' in the context of design?

PART – B (5 x 16 = 80 marks)

11. a) What are the factors to be considered in a design process?

OR

b) Explain the Renaissance theories of proportion in detail.

12. a) "Architectural design depends on the use of materials". Enlarge on this
    statement with examples.
OR
b) Give an overview of the design methodology movement in terms of the context
   for its birth, what it hoped to be achieved and its ultimate limitations.

13. a) Explain the concepts followed by architects
    a) Less is more
    b) Less is bore
    c) Ornamentation is a crime.

OR

(p.t.o)

b) Explain how climate played a role in the designs of Ar. Charles Correa?

14. a) State the definition of architecture as given by any four architects. Support the statement with your views.

OR

b) List the various types of creativity techniques and explain briefly about each.

15.a) What were the issues addressed by Ar. B.V.Doshi while designing the IIM Bangalore? Elaborate with sketches and relevant points.

OR

b) What are Analogies and metaphors – state how these are significant in the process of design.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fourth Semester

THEORY OF DESIGN-II
(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are space generators?
2. What is meant by constraint in design process?
3. What do you mean by vernacular?
4. Explain proximity?
5. What is meant by 'style'?
6. What are the features of Art Nouveau?
7. Differentiate between convergent thinking and divergent thinking.
8. What is the manifesto of post modern movement?
9. What are the tasks of a critic?
10. What is critical evaluation?

PART – B (5 x 16 = 80 marks)
11. a) What are the factors to be considered in a design process?

OR

   b) Elucidate on examples in history that use space modulation.

12. a) Give brief account of the history of design and place in Tamil Nadu with two
         apt examples.

OR

   b) Discuss the various architectural elements and their part played in modulating
        space the quality of architectural space.

13. a) Explain the ideologies and philosophies of architects with their works
         a. Lecorbusier
         b. Louis I Khan

OR

b) Explain the concepts followed by architects
     a) Less is more
     b) Less is bore
     c) Ornamentation is a crime

14. a) What were the ideals of classical post modernism? Elaborate with two apt examples.

OR

b) "Architecture exists only if there is a purpose or need behind its creation"- Substantiate the statement.

15.a) Critically analyze the design of TERI building by Sanjay Mohe and explain how he has designed to create and energy efficient building

OR

b) Differentiate between interpretive and descriptive criticism.

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Sl.No.E –B-204

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fourth Semester

BUILDING SERVICES – II
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is the difference between illumination and light?
2. Mention the advantages and types of artificial lighting.
3. Which lighting scheme produces the higher efficiency? why?
4. State Maintenance factor.
5. Define circuit.
6. What do you meant by distribution circuit?
7. List out the different types of Maintenance.
8. What do you meant by load estimation?
9. Write the importance of insulating materials.
10. Define Utillisation factor.

PART – B (5 x 16 = 80 marks)

11. a) Explicate the concept of light waves with suitable diagrams.

OR

    b) Elucidate the principle operation of Sodium vapour lamp with its necessary diagrams.

12. a) Write the brief notes on various factors consider for designing the lighting scheme.

OR

    b) How to plan the lighting layout for kitchen and living room? Explain.

13. a) What do you meant by flood lighting? Explain with the necessary diagrams.

OR

    b) Explicate the function of street lighting with suitable diagrams.

14. a) Briefly explain the procedure of branch circuit design for buildings.

OR

    b) Explain the safety methods consider for the building.

15.a) Distinguish between Tungsten Filament and Fluorescent Tubes.

OR

    b) How to plan the street lighting and factory lighting? Explain.

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Sl.No.E B-215   Sub.Code: 38012404

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fourth Semester

BUILDING SERVICES – II
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Mention the advantages and types of artificial lighting.
2. Define Luminous flux and luminous intensity.
3. Give the example of semi indirect and semi direct lighting.
4. State Maintenance factor.
5. Define circuit.
6. List out the types of insulating materials.
7. Mention the importance of load estimation.
8. What do you meant by I.S.Codes?
9. Write the formula of total lumens.
10. State the importance of Maintenance.

PART – B (5 x 16 = 80 marks)

11. a) With a neat sketch explain the constructional features, operating principle and
    application halogen lamp.
OR
   b) Write the brief notes on Visual Comfort and visual task requirement.

12. a) How to prepare the lighting layout for school and theatres? Explain.
OR
   b) How to plan the street lighting and factory lighting? Explain.

13. a) What do you meant by flood lighting? Explain with the necessary diagrams.
OR
   b) Briefly explain the circuit and elements of building wiring systems.

14. a) Briefly explain the procedure of branch circuit design for buildings.
OR
   b) Write and explain the IS codes for electrical work safety.

15. a) How the stroboscopic effect eliminated in fluorescent lamps in industrial
     fittings.
OR
   b) Explicate the different types of lighting schemes used in a building with its
     suitable diagrams.
*****

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fifth Semester

DESIGN OF STRUCTURES - II
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Classify types of Portland cement used for construction works?

2. Write a note on bulkage of aggregates.
3. What is the necessity of compacting of concrete?

4. What do you mean by 'characteristic strength'?

5. Write a note on ultimate load design.

6. Write a note on limit state method of design.

7. Write the IS 456-2000 procedure of arriving the design stress in concrete.

8. What are k_1, k_2, k_3 and mention its values.

9. Differentiate one-way and two-way slabs.

10. With sketch show the position of main reinforcements in one way slabs.

PART – B (5 x 16 = 80 marks)

11. a) What do you mean by workability of concrete? What are the factors affecting

    workability of concrete?

OR

   b) Write short notes on:

     (i)   Le Chatelier's soundness test on cement,

     (ii)   Strength of concrete and

     (iii)   Concrete mix design methods.

12. a) Explain in detail the properties of concrete: Elasticity, creep and shrinkage.

   State the importance of applications of these properties in concrete works.

OR

b) What are the fundamental assumptions that are made in the application of elastic theory to beams in working stress method? Explain in detail.

13. a) What are the assumptions made in the design of limit state of collapse in flexure? State the comments made on the assumptions with diagrams of stress-strain curves for concrete and steel.

OR

b) Design a balanced singly reinforced concrete beam section for an applied load of 48KN-m using limit state method. The width of the beam is limited to 230mm. Use M15 concrete and mild steel bars. Also determine the area of reinforcement.

14. a) A beam, simply supported over an effective span of 7m, carries a live load of 15kN/m. Design the beam using limit state method. Use M20 grade concrete and HYSD bars of grade Fe415. Keep the width of the beam equal to half the effective depth. Assume unit weight of concrete as 2.4 kN/m^3.

OR

b) A concrete beam of 6m has 300mm breadth and 500m effective depth. Design the beam as doubly reinforced if it is subjected to a bending moment of 200kN-m. Use Fe415 grade steel and M20 grade concrete. (limit design method)

15.a) Design a reinforced concrete slab for a room having inside dimensions of 3mx7m. The thickness of supporting wall is 300mm. The slab carries 75mm thick lime concrete at its top, the unit weight of which may be taken as 20kN/m^3. The live load on the slab may be taken as 2kN/m$^{2.}$ Assume the slab to be simply supported at the ends. Use M 20 concrete mix and Fe 415 grade steel.

OR

b) Design a RCC floor slab for a room having inside dimensions 3mx12m and supported on all sides by walls of 23cm thick brick wall. The super imposed load may be taken as 4kN/m^2. Use M20 concrete and Fe415 steel reinforcement.

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Sl.No.E B-220   Sub.Code:38012501

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

DESIGN OF STRUCTURES II

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write a note on Ordinary Portland Cement.
2. Differentiate initial and final setting time of cement.
3. What do you mean by Creep of concrete?
4. Write a note on water-cement ratio.
5. Define Neutral axis and Moment of resistance of a beam section.
6. Briefly make a note on ultimate load design method.
7. Write the IS 456-2000 procedure of arriving the design stress in concrete.
8. What do you mean by 'limiting moment of resistance' in a beam section?
9. Differentiate one-way and two-way slabs.
10. With sketch show the position of main reinforcements in one way slabs.

PART – B (5 x 16 = 80 marks)

11. a) Explain briefly the standard consistency test and setting time test on cement
    using Vicat apparatus.

OR

    b) What do you mean by workability of concrete? What are the factors affecting

    workability of concrete?

12. a) What are the fundamental assumptions that are made in the application of
    elastic theory to beams in working stress method? Explain in detail

OR

    b) Design a RCC beam to carry a load of 5.5kN/m inclusive of its own weight on
    an effective span of 6m.Use M20 concrete and Fe415 steel reinforcement. Keep
    the width of the beam equal to $2/3^{rd}$ the effective depth. The permissible stress
    in steel and concrete are not to exceed $7N/mm^2$ and $230N/mm^2$ respectively and
    m = 13.

13. a) Write short notes on:

       (i) Merits and demerits of working stress method,

       (ii) Merits and demerits of ultimate load design method and

       (iii) Flanged sections

OR

  b) Design a balanced singly reinforced concrete beam section for an applied load of 48KN-m using limit state method. The width of the beam is limited to 230mm. Use M15 concrete and mild steel bars. Also determine the area of reinforcement**.**

14. a) A beam, simply supported over an effective span of 7m, carries a live load of 15KN/m. Design the beam using limit state method. Use M20 grade concrete and HYSD bars of grade Fe415. Keep the width of the beam equal to half the effective depth. Assume unit weight of concrete as 2.4 KN/m^3.

OR

  b) A concrete beam of 6m has 300mm breadth and 500m effective depth. Design the beam as doubly reinforced if it is subjected to a bending moment of 200kN-m. Use Fe415 grade steel and M20 grade concrete. (limit design method)

15.a) Design a reinforced concrete slab for a room having inside dimensions of 3.3mx7m. The thickness of supporting wall is 230mm. The slab carries 75mm thick lime concrete at its top, the unit weight of which may be taken as 20kN/m^3. The live load on the slab may be taken as 2.5kN/m$^{2.}$ Assume the slab to be simply supported at the ends. Use M 20 concrete mix and Fe 415 grade steel.

OR

  b) Design a RCC floor slab for a room having inside dimensions 3mx12m and supported on all sides by walls of 23cm thick brick wall. The super imposed load may be taken as 4kN/m^2. Use M20 concrete and Fe415 steel reinforcement.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fifth Semester

CONTEMPORARY ARCHITECTURE

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Describe 'ART DECO' movement?
2. 'Less is More'-who said it and why?
3. Explain "Less is more" & who's Idiom is this?
4. Explain 'Werk bund Exhibition'
5. What is Art Nouveau style?
6. Give any five important works made by Le Corbusier.
7. Give any five important works made by F.L Wright.
8. List any five characteristic features of contemporary Indian Architecture.
9. Explain the qualities of art that arouse of ʹNew objectivityʹ proposed by De Stijl.
10. Discuss the salient Feature of futurist Manifesto.

PART – B (5 x 16 = 80 marks)

11. a) In detail write about the paris and the great exhibition expositions and their influence on the development of modern architecture?

OR

b) What was the design philosophy of Frank Lloyd Wright. Elaborate briefly with sketches on any two of his main examples.

12. a) What were the premises on which post modernism was established? What Were the contributions of JOHN PORTMAN and MICHAEL GRAVES.

OR

b) Write in detail on the architecture of Ar. TADAO ANDO with any two of his works.

13. a) What was Peter Eisenmann's theory on architecture? How did he put them into practice in his works? Elaborate with any two of his works.

OR

b) Ar.DEAN D'CRUZ designs forms from the past with modern invention. Elaborate on any two of his works to elucidate this point.

14. a) Discuss with examples and sketches, the major traits of Indian architecture in the post independent years. Highlight the influence of traditions, environmental consciousness as well modern technology on these development traits.

OR

b) i) How did Deutscher Werkbund followed by the Bauhaus movement ushered in international style of architecture? Elaborate with examples.

ii) Highlight the impact of this movement (Bauhaus) on world architecture and subsequent reactions in a pluralistic approach.

15. a) What is modernism? discuss how twentieth century architecture is a product of modernity. In what ways did modern architecture distinguish itself from traditional architecture?

OR

b) How did the works of Louis Kahn influence the architecture of the Indian Subcontinet?

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Sl.No.B - 158

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

CONTEMPORARY ARCHITECTURE

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Describe 'ART DECO' movement?
2. Explain 'skin and bone' concept.
3. What were the goals of the Deutscher Werk Bund?
4. Discuss the salient Feature of futurist Manifesto.
5. Describe 'FUTURISM'?
6. List out the variety of fields that were influenced by expressionism apart from architecture.
7. Give any five important works made by F.L Wright
8. Arts and crafts Movement" – outline its salient features.
9. Write short note on "Ledoux"?
10. What do you understand by the term "Expression" in Architecture?

PART – B (5 x 16 = 80 marks)

11. a) What was the design philosophy of Frank Lloyd Wright? Elaborate briefly with sketches on any two of his main examples.

OR

   b) Elaborate briefly with sketches the contribution of Edwin Lutyens towards architecture in India.

12. a) Discuss in detail the works of Antonio Saint Elia and his contribution towards Futurism.

OR

   b) What is Cubism? Discuss with relevant case studies the influence of cubism in Architecture.

13. a) Write briefly on the following architects:
    1. F.L.Wright
    2. Lecorbusier
    3. Mackintosh

OR

b) What are the ideals of Art Nouveau movement and the features of its architecture? Discuss the ideas and works of Antonio Gaudi.

14. a) Explain how the planning of New Delhi is an expression of dominance and an imperial vision in India. Brief out the debates that preceded the decision to implement an 'Indian Style' in the making of it.

OR

b) What is modernism? discuss how twentieth century architecture is a product of modernity. In what ways did modern architecture distinguish itself from traditional architecture?

15.a) Discuss how architecture in Russia has been influenced by its revolution?

OR

b) Elaborate the following buildings with sketches
   1. House of falling water
   2. Lake Shore Apartments
   3. Guggenheim Museum.

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Sl.No.E B-223

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fifth Semester

VERNACULAR ARCHITECTURE

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write short notes on Forms & Structures used in Desert West buildings.
2. Define Kachha Architecture.
3. What are the design elements of Vernacular Architecture?
4. Write short notes on Features of columns found in Ramnad mansions.
5. Brief out the decorative elements found inside the Rajasthani Buildings.
6. What are the kinds of plaster techniques used in olden Indian villages?
7. Brief out the Special features of Post Independence buildings of India.
8. Write short notes on Vedic Period huts.
9. Define Pukka Architecture.
10. Brief out the Roof techniques followed in Coastal Kerala areas.

PART – B (5 x 16 = 80 marks)

11. a) Compare the Binasar village huts with Toda huts of south.
OR
   b) Describe the Characteristic Features of typical Kerala style houses for
      Nambuthiri, Nair, Brahmin communities.

12. a) Describe the Characteristic features of Chettinad houses in Tamilnadu.
OR
   b) Describe the Vernacular Architecture during Islamic & Colonial period.

13. a) Explain the features of colonial buildings of Kerala & Tamilnadu.
OR
   b) Explain Pukka & Kaccha style buildings and their features.

14. a) Describe the features of Rajasthani fortified towns & their buildings.
OR
   b) Describe the Vernacular Architecture of South India.

15.a) Explain the features of Post Independence era buildings.
OR
   b) Explain the features of Shekhawati mansions in Rajasthan.
*****

Sl.No.E B-241   Sub.Code:38012503

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

VERNACULAR ARCHITECTURE

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What do you understand by vernacular architecture?

2. Define Pukka Architecture

3. Brief out the decorative elements found in Rajasthani Buildings

4. Write short notes on the construction techniques of roofing patterns of old Rajasthani huts

5. Write few characteristics features of Colonial buildings in kerala.

6. Write short notes on spatial planning concepts in Agraharams.

7. Sketch and explain the types of windows used in a traditional pre- Portuguese house of Goa

8. Write notes on construction materials used in traditional buildings of Goa.

9. Write notes on Earth Construction.

10. Write notes on importance of courtyards in traditional houses of Jaisalmer.

PART – B (5 x 16 = 80 marks)

11. a) Explain the different types of Vernacular Architecture in detail with examples.
OR
   b) Explain the characteristic features of Morrocco dessert fortresses with sketches.

12. a) Describe the Architectural features of mansions (Havelis) of Rajasthan
OR
   b) Explain the characteristic features and construction techniques of climatic

      responsive rural residential houses in Kashmir.

13. a) Explain in detail the Architectural elements and construction techniques

      adopted in the houses of Chettinad in Tamilnadu

OR
b) Describe the Architectural features of Padmanabhapuram palace at Kerala.

14. a) Describe the home typologies and settlement planning of Pondicherry.
OR
b) Explain in detail the building Materials used & methods of construction adopted

in   Vernacular buildings of Goa

15.a) Describe the architectural features of designing and planning of high profile

houses in Jaipur

OR
b) Explain the Architectural features of Mann Mandir Palace in Gwalior.

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Sl.No.E B-241

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fifth Semester

SITE PLANNING

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Define Grading plan.
2. Define slope, its types & uses.
3. Define project drawings? Why are they necessary for the water supply scheme.
4. Define surface runoff.
5. Define ecology.
6. List out the usual common sanitary fittings.
7. What are the possible/ suggested sources of data?
8. What are the minimum contents of an Ecological Profile?
9. Discuss the 'Topography' in a water supply scheme.
10. Why are water supplies to be protected?

PART – B (5 x 16 = 80 marks)

11. a) Discuss in detail about the recording of existing conditions in the research & analysis phase.
OR
    b) Elaborate the art & nature of site planning.

12. a) Explain in detail the sources of fresh water and its uses.
OR
    b) Discuss in detail the systems of supply of water.

13. a) Draft the outline of an Ecological Profile (six chapters) & discuss the entities of any two chapters.
OR
    b) Elaborate man made characteristics in site planning.

14. a) Describe location of activities and linkages.
OR
    b) How density plays an important role in site planning.

15. a) Discuss in detail i) Circular method, ii) Radial method of layout of distribution pipes.
OR
    b) Discuss the two methods of sewage disposal.

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Sl.No.E B-226   Sub.Code:38012504

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

SITE PLANNING
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Define Layout plan.
2. Define Planting plan.
3. Discuss briefly about Man Made Characteristics in site analysis.
4. Define' rhythmical continuity'.
5. Define project drawings? Why are they necessary for the water supply scheme?
6. What are the underground sources of water?
7. List out the usual common sanitary fittings.
8. Who are responsible for ecological profiling?
9. What are the minimum contents of an Ecological Profile?
10. What are the possible/ suggested sources of data?

PART – B (5 x 16 = 80 marks)

11. a) Discuss in detail about the recording of existing conditions in the research &
       analysis phase.

OR

   b) Elaborate the art & nature of site planning.

12. a) Describe the process of site analysis.

OR

   b) Explain Albedo, conductivity and Air Movement.

13. a) Discuss in detail all the points of importance in a water supply scheme.

OR

   b) Discuss in detail the systems of supply of water.

14. a) Discuss in detail i) Circular method, ii) Radial method of layout of distribution
       pipes.

OR

   b) Discuss the entities of the i) Population and Social Profile, ii) Infrastructure/
      Utilities/Facilities.

15.a) Describe ground form & ground texture.

OR

   b) Describe how rocks, earth & plants play their role in visual form.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)

B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fifth Semester

SOCIO- ECONOMIC STUDIES
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. State two similar points in sociology and economy
2. Who said 'Sociology is a science'?
3. Give any two examples of social group.
4. What is secondary Group?
5. Give two characteristics of culture.
6. What you meant by migration?
7. What do you mean by inflation and building cost?
8. Mention the five major divisions of Economics.
9. Write short notes on Culture.
10. Define the term Building Economics.

PART – B (5 x 16 = 80 marks)

11. a) 'Sociology is a science of society' Discuss.
OR
   b) Discuss-problems of slum, migration, problems related to public health.

12. a) Discuss the salient features of open class system.
OR
   b) Discuss the essential elements of social structure.
13. a) Write about the concept of Housing.
OR
   b) Write about the land use and its influence on Urban Economics.
14. a) Write about Social changes due to Urbanization.
OR
   b) Analyze the concept of social system.
15.a) Discuss-brief idea on the forms of business organizations and professional firms.
OR
   b) Write an essay on Indian Living Standard and its comparison with other
      countries.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

SOCIO- ECONOMIC STUDIES
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Give two characteristics of sociology?
2. State two similar points in sociology and economy.
3. Write any two characteristics of an Association.
4. What are the types of social groups?
5. Give two aims of socialization.
6. Who is at the top of the Hierarchy in caste system?
7. What are the problems of slum?
8. What is downward mobility?
9. Write short notes on Community.
10. State the Limitations of Micro Economics.

PART – B (5 x 16 = 80 marks)

11. a) Sociology is a science of society' Discuss

OR

b) 'Elaborate the origin and development of Sociology.

12. a) Elaborate the characteristics of Indian c a s t e system.
OR
b) Explain the characteristics of caste-system.

13. a) Write about the Economic evolution of urban renewal.
OR
b) Discuss –Urbanization in India.

14. a) Write about Social changes due to Urbanization.
OR
b) Analyze the concept of social system.

15.a) Write an essay on Indian Living Standard and its comparison with other
countries.
OR
b) Explain in detail about the energy crisis and building construction.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Fifth Semester

BUILDING SERVICES – III

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are air conditioning systems?
2. State the criteria for selection of type of air condition.
3. What are the methods of artificial cooling?
4. List various applications of refrigeration and air conditioning.
5. What do you mean by 'delta' in lifts?
6. What is an 'Escalator'?
7. Write a note on fire extinguishers.
8. What are the fuel sources of fire?
9. Write a note on Automatic Sprinkler System.
10. What is the meaning of 'PASS'system in using fire extinguishers?

PART – B (5 x 16 = 80 marks)
11. a) Explain in detail with sketches the working principles of thermo electric
        refrigeration system.
OR
    b) Explain in detail the construction and working of two door refrigerator-freezer
        combination with diagrams.

12. a) Write a note on:
    (i)   Split air conditioner and   ii) Central DX Plants.
OR
    b) State and explain the application of refrigeration systems in chemical and
        process industries.
13. a) What are agricultural elevators? Briefly explain the applications.
OR
    b) What are the common types of outdoor elevators? Explain each briefly.
14. a) Discuss briefly the points to be born in mind with regard to the precaution
        against fire**.**
OR
    b) Give an elaborate explanation of fire detection and warnings and also training to
        the staffs for protection of fire.
15.a) What are the fire prevention measures to be implemented when a building is in
        occupation.
OR
    b) What are the places where oxygen is used as fuel? Explain the oxygen safe
        guards while using it as a fuel.
*****

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

BUILDING SERVICES – III

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are the functions of 'compressor' and 'condenser'?
2. Write a note on Natural Refrigeration achieved in olden days.
3. Write a note on evaporative cooling.
4. What are the criterions for the selection of air conditioning system?
5. What are the classifications of elevators according to building types?
6. Write a note on 'industrial elevators'.
7. What is a fire triangle?
8. Write a note on escape fighting.
9. Write a note on housekeeping in fire safety.
10. What is the specification for corridors and passageways for fire safety?

PART – B (5 x 16 = 80 marks)
11. a) What are the classifications of artificial refrigeration systems? Explain any two
        types with sketches.
OR
    b) Explain in detail with sketches the working principles of thermo electric refrigeration
        system.

12. a) Write a note on:
    (i)   Split air conditioner and
    ii)   Central DX Plants.
OR
    b) State and explain the application of refrigeration systems in chemical and process
        industries.

13. a) What are agricultural elevators? Briefly explain the applications.
OR
    b) What are the common types of outdoor elevators? Explain each briefly.

14. a) What are the classifications of fire extinguishers and which type of fire extinguishers are suitable for each type of fire.

OR

b) Give an elaborate explanation of fire detection and warnings and also training to the staffs for protection of fire.

15.a) Write notes on
   (i)   Work place fire hazards and
   ii)   Fire prevention measures.

OR

b) Brief in detail the fire prevention measures with respect to fuel.

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Sl.No.E B-241

Sl.No. B.AR-141   SUBJECT CODE:
                                                       38012507

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH -DEGREE EXAMINATIONS- NOV/DEC 2018
FIFTH SEMESTER
ELECTIVE I - LANDSCAPE DESIGN
(Candidates admitted under 2012 Regulations-CBCS)

Time : Three Hours   Maximum Marks:100
                                                       Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1   Define with sketch Axis Mundi.

2   Define with sketch the principle **'Hierarchy'** during 15th century.

3   Define 'Unity' - a principle of Landscape design.

4   Define 'Rhythm' - a principle of Landscape design.

5   Sketch the 'Hydrologic Cycle'.

6   What are the elements of the 'Persian garden'?

7   Define with sketch the principle **'Balance'** during 6th to 15th century.

8   Define the role of 'Scale' as a tool to adjust the Landscape design
     principles.

9   Sketch the landscape design process and label.

10   Sketch any two examples of 'informal landscaping'.

PART-B (5 x 16 = 80)

11
a.   Explain Cosmological Landscape with any two examples.
                              OR

b.   Explain Landscape and Architecture with any two examples.

12   With sketches explain the perception of pedestrians due to various
a.   character, nature and rate of flow
                              OR

     Explain in detail about 'Plant material' as the design element in landscape
b.   designing.

13

a.   Explain in detail the relevance of 'Vegetation' in site planning.

OR

(P.T.O)

2

b.   What are the purposes of interior landscaping? Detail the advantages and disadvantage of interior landscaping.

14

a.   Chart out the difference between gardening and landscaping.

OR

b.   Discuss in detail with sketches, the design principles practiced in15th century.

15

a.   Discuss how Individuals interpret the 'spatial feeling' differently.

OR

b.   Explain in detail about the 'Mughal Garden'.

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Sl.No. B.AR-141

Sl.No.E B-225   Sub.Code:38012507

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Fifth Semester

ELECTIVE-LANDSCAPE DESIGN
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Why were the gardens developed?
2. Define ancient gardens.
3. Define with sketch the principle **'Reduction'** during 15th century.
4. Define with sketch the principle **'Hierarchy'** during 15th century.
5. Define the role of 'Colour' as a tool to adjust the Landscape design principles.
6. Define 'Unity' - a principle of Landscape design.
7. Define 'Simplicity' - a principle of Landscape design.
8. Sketch the effects of wind flow due the built forms.
9. List the 'Cultural Factors' involved in the study of site & site Analysis.
10. Define 'Mughal gardens'.

PART – B (5 x 16 = 80 marks)

11. a) Explain Cosmological Landscape with any two examples.
OR
   b) Explain Genius Loci with any two examples.

12. a) Discuss in detail about the landform issues to be addressed in landscape design.
OR
   b) Explain in detail about the use of 'Colour' as an element of landscape design.

13. a) Sketch the various ways of using brick for paving and wall patterns.
OR
   b) Chart out the table of Slope requirements for various land uses.

14. a) Explain in detail about the 'Egyptian Garden'.
OR
   b) Explain in detail about the 'Mughal Garden'.

15.a) Explain in detail about 'Plant material' as the design element in landscape designing.
OR
   b) Explain in detail about the 'Greek & Roman Garden'.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Sixth Semester

DESIGN OF STRUCTURE – III

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What are the important end conditions of columns? Give sketches.
2. Write a note on cover to reinforcement in columns.
3. What are the values of ratios of span to effective depth to control deflection of a (i) cantilever beam,(ii) simply supported beam and (iii) continuous beam.
4. Give the values of shear force coefficients for continuous beams and slabs under dead and live load conditions.
5. Define 'rise' and 'tread'.
6. Draw the sketch of a dog-legged stair and mark the details.
7. How can you proportion a rectangular combined footing?
8. Write a note on compaction piles.
9. Name the common types of retaining walls.
10. What are the modes of failure of retaining walls?

PART – B (5 x 16 = 80 marks)

11. a) Explain in detail the assumptions made in the design of columns under Limit State Method.

OR

b) Design a circular column to carry an axial load of 1600 kN. Use M15 grade concrete and Fe415 grade steel.

12. a) Design a reinforced concrete beam supported on two walls 500mm thick, spaced at a clear distance of 6m. The beam carries a super imposed load of 30kN/M. the size of the beam is restricted to 300mmx500mm. Use M15 concrete and Fe415 steel.

OR

b) Narrate the basic rules for the design of beams and slabs as per IS Code.

13. a) Design the stairs for a public building, supported on wall on one side and stringer beam on the other side. The horizontal span of stairs is 1.4m. The risers are 120mm and tread 300mm. Use M20 concrete and Fe415 steel.

OR

b) Design a dog-legged stair for a building in which the vertical distance between floors is 4.6m, the stair hall measures 3.0x6m, and the live load may be taken as 2500N/m^2. Use M20 concrete and Fe 415 steel reinforcement.

14. a) A square column 500mmx500mm carries an axial load of 1500kN.Design the column and a square footing for the column. The safe bearing capacity of the soil is 225kN/mm^2.Use M20 concrete and Fe415 steel.

OR

b) Write short notes on
      (i)   Strap and Mat footings
      (ii)   Combined footings
      (iii)   Pile cap

15.a) What are the loads subjected on a cantilever retaining wall? Name the modes of failures of the retaining wall and discuss about each with sketches.

OR

b) Design a T-Shaped cantilever retaining wall to retain earth embankment 3m high above ground level. The unit weight of earth is 18kN/m^3 and its angle of repose is 30^0. The embankment is horizontal at its top. The safe bearing capacity of soil may be taken as 100kN/m^2 and the co-efficient of friction between soil and concrete as 0.5. Use M20 mix. Take σ_{st} = 190N/mm^2.

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Sl.No.E –B.203

Sl.No.B 180   Sub.Code:38012602

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Sixth Semester

CONTEMPORARY ARCHITECTURE-II
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Brief out any one work of Paul Rudolf.
2. Write notes on the approach of Christopher Alexander in the book pattern language
3. Explain about the principles followed by Robert Ventury?
4. What are the later trends followed in modern architecture?
5. Define Organic Architecture.
6. Give a brief note on Metabolism in Architecture.
7. Explain about the planning of Chandigarh by Le Carbusier?
8. Explain about the emergence of later trends in architecture?
9. Outline any four cost effective Technologies propagated by Laurie Baker.
10. What do you mean by low cost construction?

PART – B (5 x 16 = 80 marks)

11. a) Principles and works of Paul Rudolf, and the factors which contributed to their style of architecture.

OR

b) Explain the role of modern materials and technology in the contemporary architecture of India. Illustrate through the works of various architects.

12. a) Emergence of later trends in modern architecture by Aldo Rossi.

OR

b) Detail out about the writings of Christoper Alexander?

13. a) What do you mean by regionalistic architecture? Explain the same through case studies?

OR

(p.t.o)

b) What do you mean by Brutalism? Explain about any one of the architect who contributed the style of Brutalism?

14. a) What was the impact on International style of Architecture in India?

OR

b) The works of Le Corbusier in India and their impact on architecture.

15.a) Discuss in detail on the influence of the following architects on Indian architecture.
   a. AnantRaje
   b. Laurie Baker

OR

b) BalakrishnaDoshi is a Traditional Vernacular Architect- Justify with suitable Case studies.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Sixth Semester

CONTEMPORARY ARCHITECTURE-II

(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Brief out any one work of Paul Rudolf.
2. Explain "Less is bore" &who's Idiom is this?
3. Explain about the principles followed by Robert Ventury?
4. What are the later trends followed in modern architecture?
5. Define METABOLISM with one building example?
6. What do you mean by Metabolism in Architecture?
7. Explain about the impact of International style of Architecture in India.
8. Explain about the planning of Chandigarh by Le Carbusier?
9. What was the principle followed by Charles correa in his projects?
10. What do you mean by low cost construction?

PART – B (5 x 16 = 80 marks)

11. a) Principles and works of Paul Rudolf, and the factors which contributed to their style of architecture.

OR

   b) Paul Rudolf factors that contributed to their style of Architecture and their impact?

12. a) Emergence of later trends in modern architecture by Aldo Rossi.

OR

   b) Discuss about the principles and works of Christoper Alexander?

13. a) Define Brutalism in Architecture? Explain the same with case studies?

OR

b) What is meant by Archigram in architecture and their emergence of regionalistic architecture?

14. a) What was the impact on Architecture made by Louis Khan? Explain through their works.

OR

b) What was the impact on International style of Architecture in India?

15.a) Laurie Baker was renowed for his initiatives in cost effective, energy efficient architecture. Elaborate with any two of his works.

OR

b) Low cost Technology – by Laurie Baker explain through his works.

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Sl.No.E –BAR-201

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Sixth Semester

ESTIMATION, QUANTITY SURVEYING AND SPECIFICATIONS

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What do you mean by Plinth Area Estimate?
2. Differentiate Floor area and carpet area.
3. State the specifications for foundation and plinth for first class buildings?
4. What are the general specifications for floors of 3rd class buildings?
5. Differentiate skilled and unskilled labours.
6. Write a note on cost of materials at site.
7. Define 'sinking fund'.
8. Write a note on rental method of valuation.
9. Write a note on tenders.
10. Write a note on Notice Inviting Tenders(N.I.T)

PART – B (5 x 16 = 80 marks)

11. a) What are the important points to be noted while preparing the detailed
    estimates?

OR

b) Briefly narrate the important data to be collected while preparing estimates.

12. a) What are the general specifications for second class buildings? Explain briefly.
OR
b) Give the detailed specifications for 'Terrazzo flooring' and 'Marble floorings'.

13. a) Calculate the cost of one cubic meter of Brick work in Cement Mortar 1:5 (one
    cement and five of sand) in foundations and basements, using second class
    ground molded chamber burnt bricks of size 9"x4$_{3/8}$"x2$_{3/4}$ " including proper
    laying, curing, cost of all materials, tools and plants etc., complete in all
    respects.

OR

(P.T.O)

b) What are the classifications of labourers? Briefly explain each about their works, education, skills, etc. and about their wages.

14. a) What are the methods of Valuation? Briefly explain each of them.

OR

b) Explain the following:
(i)   Fixation of rent in Government building.
(ii)   Fixation of rent in private building and
(iii)   Annual maintenance of buildings.

15.a) Write a model copy of letter written by the Superintending Engineer, PWD to the contractor for accepting the tender quoted by the contractor for the construction of a Panchayat office building.

OR
b) What are the main principles of taking 'measurements' in a building structure?

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Sl.No.E –B-206

Sl.No.E B-213   Sub.Code: 38012604
VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Sixth Semester

BUILDING ACOUSTICS
(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks
Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is absorption co- efficient?
2. Give the 'Sabine's Formula' for regular spaces and large capacity spaces.
3. What is a Cavity or Helmhottz resonator?
4. What are Space Absorbers?
5. List the factors affecting the 'aural environment' of an Auditorium.
6. What is raking of floor?
7. Tabulate the maximum acceptable noise levels for various types of buildings.
8. What is sound insulation?
9. Define outdoor noise.
10. Write the checklist for effective use of barriers for noise reduction.

PART – B (5 x 16 = 80 marks)
11. a) Discuss in detail the behavior of sound in rooms.
OR
    b) Discuss in detail the terms i) Sound, ii) Frequency & Pitch, iii) Sound pressure & Loudness.

12. a) Explain in detail the three types of sound absorbing materials.
OR
    b) Elaborate the check list for effective absorption of sound.

13. a) Discuss in detail about the acoustical defects and give suggestions for elimination of each one of them.
OR
    b) With neat sketch explain the method of setting out raked seating in an auditorium & balcony.

14. a) Explain in detail i) external noise control thro' site planning, ii) internal noise control thro' sound absorptive treatment, iii) internal noise control thro' barriers.
OR
    b) Explain in detail the means of achieving 'noise reduction' in residential buildings.

15.a) With neat sketches explain the effects of traffic noise over built forms & solutions to control.
OR
    b) Explain in detail the constructional measures for sound insulation.
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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Sixth Semester

ELECTIVE: DISASTER MANAGEMENT

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is cyclone?
2. Describe tsunami.
3. Define NGO.
4. Describe global warming.
5. What is trauma?
6. Define cyber terrorism.
7. What is Bioterrorism?
8. Define avalanche. List out three parts of avalanches.
9. Describe risk assessment.
10. Explain trigger mechanism.

PART – B (5 x 16 = 80 marks)

11. a) Describe natural disaster and list out the natural disaster.

OR

b) Define mining and explain methods of extraction.

12. a) Explain a) causes of forest fire. b) Classification forest fire c) Types of forest fire.

OR

b) What are the hazardous effects of volcanic eruptions? Explain.

13. a) Explain nine strategies of emotional intelligence.
OR
b) Explain the recent trends in disaster information provider.

14. a) What is the major challenge in disaster management for quick reconstruction technology?

OR

b) What is meant by post disaster stage? Explain clearly.

15. a) Explain assessing risk and vulnerability.
OR
b) How the mitigation and perception of earthquake is done in India? Explain.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Sixth Semester

ELECTIVE: - BUILDING PHOTOGRAPHY
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. What is difference between SLR and DSLR?
2. What is megapixel?
3. What is use of White Balance?
4. List down any two difference between prime lens and tele lens.
5. What is the meaning of cropped sensor.
6. Brief about the metering in SLR
7. What is the use of Exposure?
8. What is fashion photography
9. What is photojournalism
10. What is Polaroid camera

PART – B (5 x 16 = 80 marks)

11. a) Explain in detail about the role of Perspective, vanishing points and converging lines in architectural photography

OR

   b) Elaborate the following using simple pictorial representation?
      a. Depth of Field
      b. Light/ Shadows

12. a) Elaborate in detail about the different metering modes in SLR\ DSLR
OR
   b) Explain the following in detail?
      a. Camera Obscura
      b. Daguerreotype
      c. Kodak & film

13. a) Explain and list down the different parts of the camera.
OR

b) Elaborate in detail about "The rule of thirds"

14. a) Define focal length and depth of field. elaborate in detail about their
application in photography

OR

b) Elaborate the following in detail
a. Emphasis
b. Pattern
c. Balance

15.a) Describe in detail about the Exposure mode programs on DSLR

OR

b) Explain the following in detail?
a. Shutter Speed b. Aperture

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Sl.No.E B-218

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Ninth Semester

PROFESSIONAL PRACTICE - I
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Define the term "Deficient Service", as described by COA's Professional Liability.
2. What are the Objectives of the IIA?
3. Define scope of work under Landscape Architecture.
4. Define the clause arbitration of COA.
5. List out the structures mentioned under Schedule A of IIA.
6. Define Normal Services & Additional Services.
7. Other than Tenders what are the modes of execution of works?
8. Explain Daily Labour.
9. List out the parts under group 1 of the NBC 2016.
10. Tabulate the width of the roads in a residential layout.

PART – B (5 x 16 = 80 marks)

11. a) Write about the privileges of members and Formation of Chapters & Centers.
OR
b) Write about the Code of Professional Conduct as described by the IIA.

12. a) Explain how an architect should render his services (under what stages) for an urban design project. Also chart out the schedule of payment.
OR
b) . Explain how an architect should render his services (under what stages) for an Interior Architecture project. Also chart out the schedule of payment.

13. a) a) Explain the term total construction cost as specified by IIA. b) List out the various types / complexity of structures under schedules – A, schedule – B& schedule – C.
OR
b) You are appointed as the Architect for a Parcel Office cum go down, Scope inclusive of Architectural services, Interior design and landscape Architecture. The cost of the works completed are i) Office building – Rs. 32,00,000/-, ii) Interior works - Rs. 13,82,000/-, & iii) Landscape works - Rs. 23,90,000/-. Calculate your professional fees as per the COA's scale of charges and list out the schedule of your payment for various stages.

14. a) Write about Cost plus Fixed Fee with Bonus & Penalty tender. Illustrate with Examples.

OR

b) Write about Acceptance of Tender & Special Features for Acceptance.

15.a) Detail the structures permissible in the minimum prescribed set back areas.

OR

b) Detail out the spaces which are excluded from FSI & Coverage Computation as per the DCR.

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Sl.No.E B-211

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Ninth Semester

HUMAN SETTLEMENTS

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Discuss on natural and man made environment.
2. Write the elements of human settlement and brief any 2 of them.
3. Name the science of human settlement and explain in detail
4. Write about the EKISTICS elements?
5. Write short notes on subject plan.
6. Discuss on population density and distributions in the settlement.
7. Write short note on FIRE.
8. Write short note on IDSMT.
9. Write short notes on micro level planning.
10. Write down the scope of Micro level Planning.

PART – B (5 x 16 = 80 marks)

11. a) Elements of human settlements and their interaction in development.

OR

   b) Write in detail about S.E.P and settlement planning.

12. a) Name the Architects who contributed to the human settlement planning and explain any two of them.
OR
   b) "OUT LOOK TOWER" – Explain.

13. a) Name the settlement levels and give appropriate examples.
OR
   b) Discuss in detail about the structure Plan of a settlement.

14. a) Explain "IUDP" "IDSMT" related to human settlement planning.
OR
   b) Discuss in detail about Mega city.

15.a) Discuss in detail about micro level planning.

OR

   b) Explain the scope and context of Rural settlement structure.

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Sl.No.B.151   Sub.Code: 38012903
VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)

B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018

Ninth Semester

CONSTRUCTION MANAGEMENT

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write three managerial functions in a project.
2. Define bar chart.
3. Define Latest start time.
4. Define free float of an activity.
5. State any two basic difference between PERT and CPM.
6. Define the term "ACTIVITY" in a network.
7. What is 'cost' and 'project cost management'?
8. What do you mean by resource levelling?
9. Computer applications in construction projects.
10. Write any two project management tools.

PART – B (5 x 16 = 80 marks)

11. a) Write an essay on project work breakdown.

OR

   b) Explain in detail about the work scheduling process.

12. a) Calculate the total float, free float and independent float for the project whose activities given below:

Activity	1-2	1-3	1-5	2-3	2-4	3-4	3-5	3-6	4-6	5-6
Duration(in weeks)	8	7	12	4	10	3	5	10	7	4

OR

(p.t.o)

b) Calculate the earliest start, earliest finish, latest start and latest finish and independent float of each activity of the project given below and determine the critical path of the project

Activity	1-2	1-3	2-4	3-4	3-5	4-5	4-6	5-6
Duration(in weeks)	6	5	10	3	4	6	2	9

13. a) . Construct the network for the project whose activities and the three time estimates of these activities (in days) are given below.
   a) Draw the network.
   b) What is the probability that the project will be completed in 27 days?

Activity	t_0	t_m	t_p
1-2	3	6	15
2-3	2	5	14
1-4	6	12	30
2-5	2	5	8
2-6	5	11	17
3-6	3	6	15
4-7	3	9	27
5-7	1	4	7
6-7	2	5	8

OR

b) Construct the network for the project whose activities and the three time estimates of these activities (in days) are given below. Compute,

Activity	$(a)t_0$	$(m)t_m$	$(b)t_p$
1-2	4	6	8
1-3	2	3	10
1-4	6	8	16
2-4	1	2	3
3-4	6	7	8
3-5	6	7	14
4-6	3	5	7
4-7	4	11	12
5-7	2	4	6
6-7	2	9	10

a) Draw the project network.
b) Find the critical path.
c) Find the probability that the project is completed in 19 days. If the probability is less that 20%, find the probability of completing it in 24 days.

(p.t.o)

14. a) What is the purpose of resource allocation? Mention the use of resource levelling and resource   smoothning. .

OR

   b) Classify and explain the risks in construction projects and what are the effects of risks in the organization?

15.a) Give an account of history and overview of CAD?

OR

   b) Why CPM is more important for controlling large projects? Justify your answer with one powerful software applicable for CPM.

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Sl.No.B.151

Sl.No.b.150   Sub.Code:38012904
VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Ninth Semester

ELECTIVE -HOUSING
(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write short note on quantitative analysis of housing.
2. Write down few type of survey conducted to asses the housing requirements.
3. Write down the difference between rural housing and urban housing.
4. Write short note on importance of housing in settlement planning.
5. How to overcome the housing deficit?
6. Write few words about public sector of housing.
7. Definition of slum.
8. Write down the advantage and disadvantage of the existence of slum in urban areas.
9. Write a short note on the land use pattern of residential areas.
10. Write short note on the causes of slum.

PART – B (5 x 16 = 80 marks)
11. a) Explain in detail about the status of housing in india.
OR
    b) Write in detail about Urban Housing and its structure in an Urban area.

12. a) Concept of high raised housing in urban areas.
OR
    b) Discuss in detail about the urban housing problems and the possible solutions.
13. a) Mention few public sector of housing and their role in urban housing – Discuss.
OR
    b) Write in detail of the projection of housing for the future.
14. a) Write in detail about the Tamilnadu slum clearance board.
OR
   b) Write down in details about the low cost housing techniques in relation with
        urban housing.
 15.a) Write a short note on E.W.S.

OR
   b) Discuss in detail controlling cost – Low cost construction and materials.
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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018
Ninth Semester

ENERGY & ENVIRONMENTAL CONCERN IN DESIGN
(Candidates admitted under 2012 Regulation-CBCS)
Time: Three hours   Maximum:100Marks
Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Define – Conduction.
2. Name different solar passive techniques.
3. What is Bio climate?
4. What are the shading devices?
5. What are types of sustainable architecture?
6. Explain earth shelter strategies.
7. Explain passive energy system.
8. Explain various earth energy systems for hot humid climate.
9. Explain thermal strategies .
10. What are the design elements which directly effect the thermal comforts of building?

PART – B (5 x 16 = 80 marks)

11. a) Explain with sketches how passive cooling techniques used in building can be energy efficient architecture.
OR
    b) Explain with sketches how thermal insulation for walls & roofs effect the thermal living comfort.

12. a) What is Atrium & how it is used in modern building to reduce the energy consumption.
OR
    b) Explain with sketches how in traditional architecture earth air tunnels are used to avoid artificial energy.

13. a) Explain with sketches the effects of water body towards the buildings in hot dry climate & hot humid climate.
OR
    b) What is evaporative cooling & how we can use it to get better energy Efficient building.

14. a) Explain landscaping and its advantages in Indian climate with examples.
OR
    b) Detail the role of thermal insulation in buildings.

15.a) Explain evaporative cooling with examples.
OR
    b) Explain the role of landscaping / vegetation with sketches effecting the micro climate of the site.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS – NOV/DEC-2018

Night Semester

ELECTIVE: BUILDING VALUATION TECHNIQUES
(Candidates admitted under 2012 Regulations-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)
1. Brief the valuers job in valuat.ion
2. How valuation helps to bank?
3. Brief about cost, Price, Value.
4. Write short note on Capitalized value.
5. How Valuation helps in Income tax?
6. Write short notes on market Value.
7. Write short notes on Valuation of lease hold property.
8. Write short notes on Valuation by depreciation method.
9. How deprivation affects the valuation?
10. Write short notes on legal issues in valuation.

PART – B (5 x 16 = 80 marks)
11. a) Write down the factors which are involved in income tax valuation.
OR
    b) In what way the date and the title of the property help in valuation and its
       impact in real estate.

12. a) Write in detail about arriving the depreciation value and its impact in valuation.
OR
    b) Write in detail about the factors affecting the land value.

13. a) Explain with example for the Following.

    a) Abstract method of valuation. b.Valuing by depreciation of cost

OR
    b) Explain with example for the Following.

        a) Valuation of lease hold and free hold properties.
        b) How valuation helps in legal issues.

14. a) What do you mean by capitalized value? Explain with an example.

OR

b) Write down the different and the similarity of cost, price, and Value.

15. a) Write in detail the different fields which need valuation with examples.

OR

b) Explain in detail about the valuation of a immovable properties, e.g., Residential Building.

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Sl.No.B -141

VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Tenth Semester
PROFESSIONAL PRACTICE - II

(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Who is called an Architect?
2. What are the external forces that at times affect the principal Architect?
3. Define Architectural competition and state its purpose.
4. Brief the Special competitions.
5. Write about Samples and Shop drawings.
6. Write about Storage of materials – under Conditions of Contract.
7. Define the term conciliation.
8. Define the types of Arbitrator.
9. Illustrate with an example the term Servient heritage.
10. List the modes of acquiring easements.

PART – B (5 x 16 = 80 marks)

11. a) What are the important aspects of practice and administration functions of the Chief Architect? What aspects are to be analyzed and answered by the architect himself regarding the office management?

OR

b) What are the elements which an architect should be aware of in general accounting for his Office?

12. a) What should be specified in the competition time table? Also write about the termination of the competition & appointment of Architect.

OR

b) Describe in detail the regulations governing the promotion & conduct of Architectural competitions as adopted by I.I.A

13. a) Write about Loss and expense caused by disturbance of regular progress of the works as described under conditions of Contract.
OR

b) Write about Insurance of the works against fire etc. as described under conditions of Contract.

14. a) What are the powers and duties of the Arbitrator?

OR

b) Write about Removal of Arbitrators and Misconduct of proceedings.

15.a) What are the modes of Acquiring Easements and discuss them in detail.

OR

b) Write about Easement of Drainage.
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Sl.No.E-B-207

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.ARCH -DEGREE EXAMINATIONS- APR/MAY - 2019
TENTH SEMESTER
ELECTIVE: WASTE WATER MANAGEMENT AND RECYCLING

(Candidates admitted under 2012 Regulations-CBCS)

Time : Three Hours

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

1
  What is anaerobic composting?
2
  What are the common methods of waste disposal?
3
  Define organic solid waste.
4
  What are the main sources of solid waste generation?
5
  How can I determine if a material is green or not?
6
  What are the uses of fly ash?
7
  What are the E-wastes in building industry?
8
  What do you meant by Biological Oxygen Demand (BOD)?
9
  Define human-made environment.
10
  What do you understand by 'Refuse Derived Fuel (RDF)?
PART-B (5 x 16 = 80)

11
a. Write down the on-site handling of solid wastes?
                                OR

b. Discuss various characteristics of municipal solid waste.
12
a. Explain the chemical transformation of solid waste.
                                OR

b.   Compare the solid waste generated in developed countries and developing countries.

13
a.   Describe various steps involved in water purification.

OR

b.   Explain in detail about general construction specification.

14
a.   What are the factors affecting the generation rate of solid waste in the society?

OR

b.   Explain in brief various equipments used for separation of solid waste.

15
a.   Define environmental degradation. Explain the factors causing environmental degradation.

OR

b.   Give your suggestions to save our environment from degradation.

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VINAYAKA MISSIONS UNIVERSITY, SALEM
(Deemed to be University)
B.Arch- DEGREE EXAMINATIONS –APR/MAY-2019
Tenth Semester

ELECTIVE-URBAN DESIGN
(Candidates admitted under 2012 Regulation-CBCS)

Time: Three hours   Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. Write down the importance of Urban Design
2. Write down few historical evidence of Urban Design.
3. Write short note on Urban Spaces.
4. Write a short note on Urban Transportation
5. How the Urban edges are determined?
6. Write down the interactive spaces in Urban Setup.
7. What is organization of Urban Spaces?
8. How an Urban area is identified?
9. Write short note on Urban Nature.
10. Write short note on Growth Foci.

PART – B (5 x 16 = 80 marks)

11. a) Write down the scope and objectives of Urban Design and explain in detail.

OR

b) Write in detail the Role of architect in Urban Design

12. a) Explain in detail about chotic and disorderly Urban Environment.

OR

b) Explain in detail the Role played by the population density in Urban Land use pattern.

13. a) Write in detail about Kevin Lynch's vision on Urban Environment.

OR

b) Write in detail about the role of an Urban designer on Urban Area.

14. a) Explain the Role of Elements of Town scape in Urban Design.

OR

b) What is decentralization in Urban Design and explain with a local case study.

15.a) Why do you need Urban Renewal and its impact on Urban Areas. Explain with a case study of any known place to you.

OR

b) Explain in detail about the Scope, need and the procedure in Urban Design.

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