Q.1 Write short notes on the following:
   a) Color sensation.
   b) Color contrasts.
   c) Color schemes.
   d) After image effect.

PART-A

Q.2 Define Symbolism. By giving examples, write in detail, about the color symbolism.

Q.3 Describe the research done on the psychology of color as studied by any two color theorists.

Q.4 Using colors, draw and describe Color Wheel.

PART-B

Q.5 Color is an important element in an interior space. Comment (In 250 words)

Q.6 Describe the factors which influence the way the color schemes are used in planning an interior design.

Q.7 Write various components to determine sustainability of paint product.
Q.1 Write short notes on the following with suitable sketches:
   a) Shape
   b) Forms
   c) Emphasis
   d) Balance

   **PART-A**

Q.2 Describe “Line”. How is it useful as an element of design?  

Q.3 Explain the key components that make up different style and describe their evolution and influences in our society.  

Q.4 Explain Gestalt principles, in detail, with sketches. Draw a composition, using any one of the laws of Gestalt theory.  

   **PART-B**

Q.5 What are the principles of design? What is radical balance?  

Q.6 What are the different major color harmonies?  

Q.7 Draw a composition, using any one of the principles of design.
HISTORY OF FURNITURE-I (351-105)

Q.1 Define (any four) the terms of the following:
   a) Marquetry
   b) Gilding
   c) Rosette
   d) Finials
   e) Stucco work
   f) Frescos

   PART-A

Q.2 Write a note on Roman Era discussing about furniture, culture, motifs & other key features.  

Q.3 Massive structures are one of the major characteristics of Egyptian Civilization. Describe other characteristics and furniture styles of this era, with suitable examples.

Q.4 Multipurpose furniture was one of the most prominent characteristic of Middle Age furniture. Briefly describe the furniture of this era with example.

   PART-B

Q.5 Discuss the salient features of Spanish Renaissance furniture, with suitable example.

Q.6 Restoration is considered as one of the most important period of furniture making. Briefly discuss the furniture making with key features, motifs, material etc. along with a neat furniture sketch.

Q.7 Describe Queen Anne furniture making with key features, motifs, material etc. along with a neat furniture sketch.
End Semester Examination, May 2018  
B. Sc. (Interior Design) – First Semester  
COMMUNICATION-I (351-107)

Time: 3 hrs.  
Max Marks: 40  
No. of pages: 1

Note: Attempt **FIVE questions in all; Q.1 is compulsory.** Attempt any **TWO questions from PART-A** and **TWO questions from PART-B.** Marks are indicated against each question.

Q.1 Write short notes on *(any two)* of the following:  
   a) Aggression v/s Assertiveness.  
   b) Affective writing skills.  
   c) Communication process.  
   d) Non-verbal communication.  

   **4×2**

**PART-A**

Q.2 Discuss in detail the communication process with the help of a diagram.  

Q.3 What are the various barriers in the process of listening?  

Q.4 What are the various ways of resolving conflicts?  

**PART-B**

Q.5 Write a paragraph on any one of the following topic in 300 words:  
   a) Social Networking sites: pros and cons.  
   b) A change that would improve our lives.  

Q.6 Write an email to your favorite teacher thanking him/her for all the efforts he/she has put in during the semester to make the subject interesting for you.  

Q.7 What is the importance of audience analysis in the process of writing?  


Q.1 Write short notes on the following:
   a) Paint
   b) Wood
   c) Metal
   d) Leather and Suede

   **PART-A**

Q.2 Write about various flooring materials and mention any two materials in detail. 8

Q.3 Recommend materials that will make less of an impact on our environment and are made from renewable resources. 8

Q.4 Explain how to calculate unit of measurement for different item of works in interior design. Write the unit of measurements of (any four) of the following:
   a) Flooring
   b) Painting of walls
   c) Skirting
   d) Side tables
   e) Fabric

   **PART-B**

Q.5 a) Define Sustainability. What are the three pillars of sustainability? 4
    b) What criteria should be considered in selecting sustainable materials? 4

Q.6 List out any two exterior materials and two interior finishing materials for a residence mentioning their components of composition. 8

Q.7 Differentiate between the following:
   a) Ferrous and Nonferrous metals.
   b) Leather and imitation leather, and write their impact on environment. 4×2
End Semester Examination, May 2018
B.Sc. (Interior Design) – Second Semester
HISTORY OF FURNITURE- II (351.205)

Time: 3 Hours   Max Marks: 40
No. of pages: 1

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO from Part-B. All questions carry equal marks.

Q.1 Discuss the social and economic reasons of the furniture construction changes over the decades.  

PART-A

Q.2 Why is Georgian period considered as golden age of furniture making? Explain the work of any two cabinet makers along with the neat sketches.  

Q.3 Sketch two different styles of furniture and write down their characteristics and also mention as an interior designer where would you use them in an interior space?  

Q.4 Explain furniture of Victorian era of early 19th to mid 19th century in details with neat sketches.  

PART-B

Q.5 Describe the works of two designers who were against the age of mass production and favoured the traditional craftsmanship.  

Q.6 Distinguish between different renowned designers and give examples on how they have influenced furniture designers of the 21st century?  

Q.7 Describe recycled furniture and its uses in today’s society. Suggest materials that can be used to create recycled furniture.  

End Semester Examination, May 2018
B.Sc. (Interior Design) – Second Semester
COMMUNICATION - II (351.207)

Time: 3 Hours
Max Marks: 40
No. of pages: 1

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Marks are indicated against each question.

Q.1 What are the effective presentation skills? How is it useful in interior designing? 8

PART-A

Q.2 How an audience analysis is conducted? Explain, why it is important? 8

Q.3 Write a short note on each:
   a) Body Language.
   b) Rapport 4x2

Q.4 Write a letter to the concerned authority in your College about the poor maintenance of sports area. 8

PART-B

Q.5 Write an email to congratulate or praise someone on a presentation. 8

Q.6 What are sentences and their different types? Give two examples each. 8

Q.7 Rearrange the following jumbled sentence into meaningful ones:
   a) So/to /itchy/is/that/I/wait/my / off./uniform/can’t / take / it
   b) I’d / thought / nervous / the / get / interview; / I / I / through / was / never / so
   c) Is / good / both / for / and / early / rising / old / adults
   d) you / betray / once / it’s / his / fault / someone / fault / betrays / it’s / he if / twice / if / your / you. 2x4
Q.1 Explain briefly:
   a) Cellulosic and Protein Fibers
   b) Warp and Weft Yarn
   c) Wales and Courses
   d) Calendaring & Mercerization.

PART-A

Q.2 List down the major components of textile products. Write about the fibers and yarns in detail.

Q.3 Explain the production methods used in manufacturing fabrics for end use applications in detail.

Q.4 Explain by giving examples, the advantages and disadvantages of specifying any four textiles in different applications.

PART-B

Q.5 Describe woven fabrics. List three basic weaves and weave variations in detail with sketches.

Q.6 Write down about the coloration, finishes and its categories in detail.

Q.7 List out the problems and ways the textile industry has addressed environmental and recycling issues.
End Semester Examination, May 2018
B.Sc. (Interior Design) – Second Semester
GENERAL EDUCATION (351.210)

Time: 3 Hours
Max Marks: 40
No. of pages: 1

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. All questions carry equal marks.

Q.1 Define listening. What are the barriers to listening and how to overcome them? 8

PART-A

Q.2 Explain as to how prepare for interview. Also, indicate the dress code of interview. 8

Q.3 Write a short note on:
   a) Phonetics
   b) Rapport 4x2

Q.4 What is communication process? Why is it important? 8

PART-B

Q.5 Define body language and why is it important to have its knowledge? 8

Q.6 What is group discussion? Write the Do's and don'ts of the same. 8

Q.7 What is a Memo? Explain as to what is to be written in a memo? 8
End Semester Examination, May 2018
B. Sc. (Interior Design) - Second Semester
WINDOW TREATMENTS AND SOFT FURNISHINGS (351.211)

Time: 3 hrs
Max Marks: 40
No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. All questions carry equal marks.

Q.1 Define the term ‘window treatment’. Discuss in detail the factors to be kept in mind, while selecting treatments for a window.

8

**PART-A**

Q.2 Define the terms of (any four) of the following:
   a) Heading
   b) Cornice
   c) Drapery
   d) Grommet Pleat
   e) Molding
   e) Valance.

4x2

Q.3 “Window treatment plays an important role in overall design”. Discuss in detail various types of curtains and their importance in treating a window.

8

Q.4 Write a note on ‘period style window treatment’.

8

**PART-B**

Q.5 Write short notes on (any two) of the following:
   a) Latest trends in window treatment.
   b) Pleats and their uses.
   c) Hardware and Accessories.

4x2

Q.6 Define ‘short furnishing’. Discuss in detail various parts of soft furnishing with suitable examples.

8

Q.7 Define ‘re-upholstery’. Discuss the advantages and disadvantages of re-upholstery in detail.

8
End Semester Examination, May 2018
B. Sc. (Interior Design) – Third Semester
LIGHTING (351-305)

Time: 3 hrs.  
Max Marks: 40
No. of pages: 1

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from PART-A and TWO questions from PART-B. Marks are indicated against each question.

Q.1 Define the following terms with sketches (any four):
   a) Luminaire.
   b) Lamp.
   c) Lux.
   d) Diffused light.
   e) Foot-candles.
   f) Task light.
   g) Recessed light.

   2×4

PART-A

Q.2 Discuss in detail various levels of lighting. Supplement your answer with appropriate sketches.

   8

Q.3 Briefly explain and draw neat sketches of various methods of light dispersment.

   8

Q.4 Write short notes on (any two) of the following:
   a) Briefly differentiate between artificial and natural light.
   b) Types of bulbs
   c) Criteria for fixture selection.

   4×2

PART-B

Q.5 Discuss in detail various types of light fixtures along with their uses in an interior space. (Use neat and appropriate sketches).

   8

Q.6 Define RCP. List various symbols used in the lighting layout.

   8

Q.7 Write short notes on the following:
   a) Lighting and Interior design.
   b) Lighting accessories.

   4×2
End Semester Examination, May 2018
B. Sc. (Interior Design) – Third Semester
MARKETING TECHNIQUES (351.307)

Time: 3 hrs.  Max Marks: 40
No. of pages: 1

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Marks are indicated against each question.

Q.1 Define the following terms (any four):
   a) Manufacturer.
   b) Niche Market.
   c) Business Plan.
   d) Marketing Mix.
   e) Marketing Strategy.
   f) Customer. 2×4

PART-A

Q.2 What is segmentation? How can you segment a market for an interior design firm? Discuss in detail. 8

Q.3 List out all the stages of new product development. Explain any one stage in detail relating the same with interior design. 8

Q.4 Define selling process. Briefly describe Lead Generating Method. 8

PART-B

Q.5 Define FAB. Justify through examples how can FAB be used to improve sells? 8

Q.6 Define the term Advertisement. Discuss in detail advertising strategy. 8

Q.7 Write short notes on (any two):
   a) Promotion.
   b) HRM.
   c) Positioning. 4×2
End Semester Examination, May 2018
B. Sc. (Interior Design) – Third Semester
LIVING GREEN (351.309)

Time: 3 hrs.               Max Marks: 40
No. of pages: 1

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Marks are indicated against each question.

Q.1 What do you understand by a “Green Home”? Elaborate by stating the methods by which you can make your home green and sustainable? 8

PART-A

Q.2 Define the following:
a) Biopool
b) Courtyards
d) Ecofriendly Garden. 2×4

Q.3 What is environment degradation? What are the various natural and manmade causes of environment degradation? 8

Q.4 Explain in detail any one Green Building Certification Program that is used in India to rate buildings with the help of an example of a building with the certification. 8

PART-B

Q.5 How can you make your interiors green by working on the following parameters?
a) Water efficiency.
b) Waste Efficiency. 4×2

Q.6 What are green materials? Give few examples of wall, ceiling and floor finishes that are ecofriendly in nature. 8

Q.7 What is sustainable transportation? How can you make transportation sustainable? Explain by examples. 8
Q.1 Define the terms of (any four) of the following:
   a) Vendor
   b) Resume
   c) Agreement
   d) Wholesaler
   e) Code of Ethics
   f) Project Management

PART-A

Q.2 Define the term ‘Resume’. Briefly describe physical appearance and areas to be included in a Resume.

Q.3 Define the term ‘Professional Image’. Discuss in detail the tips to improve the professional image.

Q.4 What is ‘professional development’? Discuss the various stages included in managing a design project in detail.

PART-B

Q.5 Define ‘business ethics’. Briefly discuss its types with suitable examples.

Q.6 Discuss the details of an agreement and its forms with suitable examples.

Q.7 Write short notes on (any two) of the following:
   a) Success Pitfalls
   b) Joint Ventures
   c) Showrooms.

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.
Q.1 a) Calculate the quantities of the following item or works from the plan given below:
   i) False Ceiling of the Bedroom.
   ii) Glazed Tiles in Toilet up to 2.10 m Height.

   b) Explain the following:
      i) Purpose and types of estimates.
      ii) Rate analysis.
      iii) Contingencies.
      iv) Specifications.

PART-A

Q.2 Name different types of estimates. Discuss a detailed estimate with its advantages in detail.

Q.3 Work out the rate analysis for the following:
   a) Painting one coat over a coat of priming on wood work.
   b) 12 mm cement plaster in cement mortar 1:6

Q.4 Write units of measurements of the following:
   a) Flooring.
   b) Molding.
   c) Glass partition.
   d) Dismantling of brick work.
   e) Sanitary fixtures.
   f) Painting of Door windows.
   g) False ceiling.
   h) Wall paneling.

PART-B

Q.5 Write short notes on the following:
a) Bill of Quantities and Abstract of Estimate.
b) Notice Inviting Tender.
c) Schedule and Non Schedule Items.
d) Item of Works and products related to Interior Design.

Q.6 Write down the cost of materials used in Interior work assuming suitable market rates:
   a) Glazed tiles in flooring and skirting.
   b) Joinery used in wood; steel; aluminum.
   c) Painting.
   d) Polishing.
   e) Plumbing.
   f) Partitions.
   g) Wall Paneling.
   h) False Ceiling.

Q.7  a) Discuss types of Specifications.
     b) Write down the detailed specification of 12mm thick cement plaster in cement mortar 1:4.
End Semester Examination, May 2018
Bachelor of Science (Interior Design) - Sixth Semester
MATERIAL FINISHES AND DESIGN TRENDS (351.610)

Time: 3 hrs
Max Marks. 40
No. of pages: 1

Note: Attempt any FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.

Q.1 Growth of communication and overseas sourcing has allowed blending the east and the west. Explain how it has created diversity in the use of furniture fabric and accessories? Support your answer with neat sketches.

PART-A

Q.2 Based on a design concept statement with neat 3D sketches, write on (any one) of the following drawing-cum-dining area:
   a) European.
   b) Asian.
   c) African.

Q.3 Define fabric, its types and properties of each fabric in detail.

Q.4 Explain the technology used for the fabrication of two materials available in the market for exterior and interior spaces.

PART-B

Q.5 Design and sketch two contemporary furniture pieces of latest trends and suggest a suitable space for them.


Q.7 Recycling is a major consideration today and interior designing has a lot to contribute in it. As an Interior Designer, suggest how will you re-use the old products differently and innovatively?
PART-A

Q.1 Write short notes on (any five) of the following:
   a) Tender Notice.
   b) BOT Contract.
   c) Values and Ethics.
   d) Arbitration.
   e) Target control.
   f) Bill of quantities.

PART-B

Q.2 What are the common misconducts in an organization? What are the benefits of managing “ethics” in any organization?

Q.3 What are the types of contracts? Explain any four types of contracts in detail.

Q.4 What are the importances of Schedule -A (Material Supplied by the owner)? Explain in detail.

Q.5 Prepare the full list of a contract document (Explain in detail (any two):
   a) Conditions of contract.
   b) Specifications.
   c) Contract drawing.

Q.6 What is a sub-contract? What are its special features?
Q.1 **Expand/fill in the blanks:**
   a) United Nations Conference on _______ and _______.
   b) Foreign institutional ________.
   c) World Trade ________.
   d) International ________ fund.
   
   **Answer in one word/sentence:**
   e) Write one stage of internationalization.
   f) What is socio-cultural environment?
   g) How India appears to be globalized?
   h) Who is licensor?
   i) What is franchise?
   j) What are the 4 Ps in international marketing?

**PART-A**

Q.2 What are the various motivations and means to expand the business abroad? Explain in brief.

Q.3 What do you think about the conflicting environment forces? How does environment affect international business?

Q.4 How do you perceive that a country is globalized? Illustrate.

**PART-B**

Q.5 What are the important issues in global operation? Why should the global marketing operation be effective?

Q.6 Explain the two innovations that have taken place in last 100 years that have accelerated international business.

Q.7 What are the challenges to international business? How are these being tackled?
Q.1 Write short notes on (any five) of the following:
   a) Types of quotas
   b) VER
   c) Colonialism
   d) WTO
   e) SAARC
   f) SAPTA

   PART-A

   Q.2 The world is going through a recession following the financial crisis. Domestic markets are being protected from input competition. Discuss these developments in the light of ‘Free Trade vs Fair Trade Theory’.

   Q.3 a) List down the points of difference between ‘Absolute Cost Theory’ and ‘Comparative Cost Theory’.
       b) What are various challenges in international purchasing?

   Q.4 Write short notes on:
      a) GATT
      b) Exchange control

   PART-B

   Q.5 a) Evaluate ‘Uruguay Round Agreement’ with special reference to India.
       b) Mention some of the objectives of WTO.

   Q.6 a) Analyze the reasons for the growing dominance of the MNCs.
       b) Elaborate the role of MNCs in India.

   Q.7 a) Write a short note on ‘IMF’.
       b) Discuss some of the preliminary steps that have to be taken before execution of an export transaction.
Q.1 Attempt (any two) of the following:
   a) Hofstede's dimensions of culture.
   b) Differentiate between mergers and acquisitions.
   c) Concept of social responsibility.
   d) Role of government in business.  

PART-A

Q.2 Do you feel that Indian economy has been benefitted by the process of globalization? Also state the response of Indian business towards globalization.  

Q.3 Explain the concept of political risk in international business. How can it be dealt with?  

Q.4 a) Explain various guidelines for successful international negotiation.  
   b) Explain the concept of ethical behavior in business with suitable examples.  

PART-B

Q.5 While going for HR (Human Resource) selections across the globe, what are the cross cultural issues that should be dealt with?  

Q.6 Explain (any two) international structures in detail:
   a) Global product based structure.
   b) International structure.
   c) Global matrix structure.  

Q.7 What is leadership? Explain strategies of leadership across cultures in detail.  

End Semester Examination, May 2018  
BBA (G) IB – Sixth Semester  
ADVANCE INFORMATION TECHNOLOGY (367.603 / BIB-DE-501)

Time: 3 hrs.  
Max Marks: 50  
No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory.** Attempt any **TWO** questions from **PART-A** and **TWO** questions from **PART-B.** Marks are indicated against each question.

Q.1 Attempt (any two) of the following:  
a) Input devices for multimedia.  
b) Teleconferencing and broadcasting.  
c) Internet service provider.  

**PART-A**

Q.2 a) Explain search engine concept? What are the different types of search engine?  
5  
b) Explain the working process of search engine.  
5

Q.3 “Intranet is a business tool.” Explain this concept with different application of intranet.  
10

Q.4 Write short notes on the following:  
a) Audio on internet.  
b) HTTP protocol.  
5×2

**PART-B**

Q.5 Explain “Multimedia”. Also explain the different building blocks of multimedia.  
10

Q.6 What is MS-Office? What are the different areas where MS-Office is useful?  
10

Q.7 Write short notes on the following:  
a) Sending and receiving electronic mails.  
b) How video conferencing is useful in business communication?  
5×2
Q.1 Explain the following:

a) Newton’s Law of Motion.
b) Free Body Space Diagrams.
c) Polygon of Forces.
d) Equilibrium.
e) Types of supports.
f) Types of Loads.
g) Law of Parallelogram of Forces.
h) Bow’s Notation.
i) Centre of Gravity.
j) Centroid.
k) Moment of Inertia.
l) Types of Trusses.
m) Method of Analyzing.
n) Forces in Members of Trusses.

Q.2 a) Differentiate between Coplanar Forces, Concurrent Forces with the help of a free hand diagram.

b) Find resultant of the forces shown in figure below:

Q.3 a) What are the types of supports?

b) Calculate reactions of beam show in figure given below:
Q.4  a) What are the sign conventions for forces and moments?
    b) Calculate reactions for the beam shown figure given below.

![Beam Diagram]

**PART-B**

Q.5  a) State the centroid of plane geometrical figures.
     i) Rectangle.
     ii) Circle.
     iii) Semicircle.
     iv) Quadrant.
     v) Triangle.
    b) Calculate the centroid of lamina in figure given below:

![Lamina Diagram]

Q.6  a) What do you understand by Radius of Gyration and Section Modulus?
    b) Calculate Ixx and Iyy for I section lamina shown in figure given below.

![I Section Lamina Diagram]

Q.7  a) What are the assumption made in analysis of a perfect truss?
    b) Analyze the truss shown in figure give below by any method.

![Truss Diagram]
PART-A
Q.1 Rewrite the following sentences correctly after tracing the error, if any:
   a) She’s married with a dentist.
   b) I must to call him immediately.
   c) Every students like the teacher.
   d) Although it was raining, but we had the picnic.
   e) I enjoyed from the movie.
   f) She can do drive.

   Fill in the blanks with appropriate words in the brackets:
   g) ______ house is in the middle of the meadows. (Their, There)
   h) The electricity is cut ______ for the next few hours. (off, out)
   i) We should worship _______ in the way our traditions permit. (idle, idols)
   j) The weather forecast states ________ storm in the evening. (Hail, hale)

1x6

PART-B
Q.2 Write short notes on the following:
   a) Extempore-key pointers to remember.
   b) Importance of communication in the field of architecture.
   c) Components of panel discussion.
   d) Corruption in Politics.
   5x4

Q.3 What is the difference between seminars, symposium and conferences.
   20

Q.4 What is business meeting? What are the ways of writing the minutes of meeting?
   20

Q.5 Write an essay on (any one) of the following:
   a) “Unity is the solution for most of the problems in India”.
   b) Evolving trends in the field of Architecture.
   10x2
Q.1 Explain the following:
   a) Stress and strain.
   b) Poisson’s Ratio.
   c) Volumetric Strain.
   d) Elastic Limit.
   e) Types of Stresses.
   f) Young Modulus.
   g) Relation between shear force and bending moment.
   h) Bulk Modulus.
   i) Factor of safety.
   j) Moment of resistance.
   k) Rigidity.
   l) Types of beams.
   m) Types of supports.
   n) Types of loads.

   **PART-A**

Q.2 a) Explain the terminology used in strength of materials.  
    b) Give the classification of materials. Differentiate between elastic materials and plastic materials.

Q.3 a) State the Hook’s Law.
    b) A steel rod ABCD 4.5m long and 25mm diameter is subjected to the forces as shown in the figure given below. If the value of Young’s modulus for the steel is 200 GPa, determine the deformation.

Q.4 a) Explain point of contra flexure.
    b) Draw shear force and bending moment diagrams for the beam shown in figure given below. Indicate numerical value at all important sections.
Q.5  a) What are the advantages of a fixed beam?  
    b) A fixed beam AB of span ‘L’ carries two concentrated loads of W each at a distance of L/3 from both the ends. Find the fixing moments and draw the bending moment diagram.

Q.6  A continuous beam ABCD simply supported at A,B,C,D is loaded as shown in figure given below. Find the moment over the beam and the reactions at the supports. Also draw shear force and bending moment diagrams.

Q.7  a) Write the theorem of Three Moments.
    b) A continuous beam ABC of uniform section, with span AB as 8m and BC as 6m, is fixed at A and simply supported at B and C. The beam carries a uniformly distributed load of 1 kN/m throughout its length. Find the moments along the beam and the reactions at the supports. Also draw the bending moment and shear force diagrams.
Q.1 Write short notes on the following:
   a) Mental mapping.
   b) Cultural relativism.
   c) Ethnocentrism.
   d) Society.
   e) Theory of Cultural Lag.
   f) Territorial spaces and its types.

**PART-A**

Q.2 Explain ‘Poverty and Ghettoziation’ with reference to slums in detail.
   10

Q.3 What do you understand by psychology and how is it important for architecture?
   10

Q.4 What is culture and concept of culture? Explain material and non-material culture in detail.
   10

**PART-B**

Q.5 What is Maslow’s law of hierarchy of needs? Explain with diagrams.
   10

Q.6 What do you understand by communication? Explain verbal and non-verbal communication in detail.
   10

Q.7 Explain theory and classification of territoriality according to “Altman”.
   10
End Semester Examination, May 2018
B.Arch. – Second Semester
CLIMATOLOGY (AR-209)

Time: 3 Hours

Max Marks: 70

No. of pages: 1

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Marks are indicated against each question.

Q.1 Write short notes on the following:
   a) Summer solstices
   b) Winter solstices
   c) Spring Equinox
   d) Autumn Equinox
   e) Relative humidity
   f) Lux meter

   5x6

PART-A

Q.2 Explain the importance and interpretation of psychometric chart in detail.
   10

Q.3 What is the importance of ventilation in building design? Explain any two passive design strategies for enhancing ventilation in detail.
   10

Q.4 Explain the importance of solar orientation. Explain with help of a diagram shading strategies for south and east side windows.
   10

PART-B

Q.5 Explain any three design strategies with help of neat sketches for cold climate to achieve comfortable indoor environment.
   10

Q.6 Explain types of climatic zones for India. Elaborate four characteristics of each type of climate.
   10

Q.7 Explain the functioning of trombe wall with help of neat sketches.
   10
End Semester Examination, May 2018
Bachelor of Architecture - Third Semester
HISTORY OF ARCHITECTURE-I (AR-304)

Time: 3 hrs
Max Marks: 60
No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 What were the salient features of Egyptian Architecture? Explain the process of evolution of tombs from a Mastaba to a pyramid, stating suitable examples with sketches.

12

**PART-A**

Q.2 Explain any one from the following:
   a) Sun temple, Konark.
   b) Greek theaters.

12

Q.3 What was Lothal in Indus valley and what did it signify?

12

Q.4 Explain Greek Orders, in detail with neat sketches. Bring out the refinements experimented by the Greeks, taking example of Parthenon.

12

**PART-B**

Q.5 Write an essay comparing the Churches planning and architecture characteristics of early Christian architecture and Byzantine architecture.

12

Q.6 Explain Roman town planning with reference to forum and its significance.

12

Q.7 Explain the difference in architectural style of raily Stone Age and New Stone Age. Catal Huyuk is the best example of an early Neolithic town where the transition to a fully settled existence has been satisfactorily achieved. Comment.

12
Q.1 Answer the following:

a) What is the ratio of section modulus of two beams, first one square and second one circular with side of square equal to diameter of circle?

b) Draw a free hand sketch showing distribution of shear stress in I-section.

c) Explain $\frac{1}{6}$ role in case of a masonry column.

d) Why in eccentric loading on a column, the maximum stress increases? Explain.

e) In a cantilever beam under UDL over its entire location, give location of maximum and minimum deflection and slope.

f) Name atleast four types of end conditions for a column.

g) Define bucking/crippling/critical load in case of a column.

h) Two beam, one is simply supported and other cantilever is having same cross section and same span and is under 1 kN/mtr UDL over their entire length. Find ratio of maximum deflection in the two cases.

$1\frac{1}{2} \times 8$

**PART-A**

Q.2 a) A simply supported rectangular beam is 150 mm wide and 300 mm deep. The span of beam is 4 mtr. What UDL the beam may carry if the bending stress not to exceed 120 N/mm².

b) A cantilever beam of span 4 mtrs is 60 mm wide and 150 mm deep. It is subjected to a UDL of 4.5 kN/m over its entire length. Find the maximum stress induced in the beam.

Q.3 a) A point load of 20 kN is acting at the free end of a cantilever beam of length 3 mtr. Determine the maximum deflection and maximum slope. Take $EI = 8 \times 10^{12} Nmm²$.

b) A cantilever beam 100 mm wide and 180 mm deep is projecting 2 mtr from a wall. Calculate the UDL which the beam can carry if the deflection at free end should not exceed 3.5 mm. Take $E = 200 \times 10^3 N/mm²$.

Q.4 Find Eulers crippling load for a hollow cylindrical steel column of 38 mm external diameter and 2.5 mm thick. Take length of column=2.3 mtr and it is hinged at both end. Take $E = 205 \times 10^3 N/mm²$. Also determine crippling load by Rankin formula using rankin constant $\alpha = \frac{1}{7500}$ and crushing stress $6335 N/mm²$. 
PART-B

Q.5  a) A hollow circular column having its external and internal diameter as 300 mm and 250 mm respectively carry a vertical load of 100 kN at the outer edge of the column. Calculate the maximum and minimum stress in the section.

b) In case of eccentric loading of a column why eccentricity is restricted to \( \frac{b}{6} \)? Explain.

Q.6  a) An I section is acting as a beam. The I section is 300 mm x 200 mm with a web thickness of 10 mm and flange thickness of 20 mm. The span of beam is 10 mtr and it carries a UDL over entire length. Sketch the shear stress distribution across the section.

b) Draw shear stress and bending stress distribution across depth of a rectangular beam in a neat hand sketch.

Q.7  a) A timber beam 100 mm wide and 200 mm deep is strengthened by a steel plate 100 mm wide and 10 mm thick screwed at bottom face of timber beam as shown. Calculate moment of resistance of the composite beam.

Take \( E_s = 20E_t \)

b) Find ratio of section modulus of a square beam and other a rectangular beam with same cross section area. The ratio of depth to width of the rectangular beam is 1.5 and the cross sectional area of the beams are 900 mm\(^2\).
Q.1 Write short notes on (any four):
   a) Define surveying.
   b) Define latitude and departure in traverse surveying.
   c) What is True Meridian?
   d) Define contour interval.
   e) Brief the term: ‘local attraction’.

\[2 \times 4\]

PART-A

Q.2 The following fore and back bearings were observed in traversing with a compass in place where local attraction was suspected.

<table>
<thead>
<tr>
<th>Line</th>
<th>F.B</th>
<th>B.B</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB</td>
<td>38º 30’</td>
<td>219º15’</td>
</tr>
<tr>
<td>BC</td>
<td>100º 45’</td>
<td>278º 30’</td>
</tr>
<tr>
<td>CD</td>
<td>25º 45’</td>
<td>207º 15’</td>
</tr>
<tr>
<td>DE</td>
<td>325º 15’</td>
<td>145º 15’</td>
</tr>
</tbody>
</table>

Find the corrected force and back bearing and the true bearing of each of the lines given that the magnetic declination was 10º W.

\[8\]

Q.3 a) There is an obstacle in form of a pond on the main chain line AB. Two points C and D were taken on the opposite sides of pond. On left of CD, a line CE was laid out 100 m in length and a second line CF, 80 m long was laid out to the right of CD such that E, D and F are in the same straight line. ED and DF were measured and found to be 60 m and 56 m respectively. Find out the obstructed length CD.

\[5\]

b) Explain how surveying can be classified.

\[3\]

Q.4 Explain how you would measure with a theodolite:
   a) Horizontal angle by repetition.
   b) Vertical angle.
   c) Magnetic bearing of line.

\[8\]

PART-B

Q.5 a) Describe various methods of contouring. Discuss the merits and demerits of each.

\[4\]

b) Brief with sketches, the uses of contour maps.

\[4\]
Q.6 The following consecutive readings were taken with a level and 5 metre leveling staff on continuously sloping ground at a common interval of 20 metres: 0.385; 1.030; 1.925; 2.825; 3.730; 4.685; 0.625; 2.005; 3.110; 4.485. The reduced level of the first point was 208.125 m. Calculate the reduced levels of the points by rise and fall method.

Q.7 a) Discuss applications of Remote Sensing in surveying.

b) What are various uses of total station?

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**End Semester Examination, May 2018**

Bachelor of Architecture - Third Semester

**THEORY OF ARCHITECTURE-I (AR-307)**

Time: 3 hrs

Max Marks: 60

No. of pages: 1

Note: Attempt **FIVE** questions in all; **Q.1 is compulsory**. Attempt any **TWO** questions from **Part-A** and **TWO** questions from **Part-B**. Each question carries equal marks.

Q.1 Compare and contrast Modernism and Post Modernism. Also, explain its characteristics. 20

**PART-A**

Q.2 Evaluate two different theories and characteristics of Brutalist and International Style Architecture. 10

Q.3 Write about Mies Vander Rohe's philosophies and his famous works. 10

Q.4 "Less is Bore" - Who coined the phrase? Explain the phrase with an example. 10

**PART-B**

Q.5 Discuss briefly on the works and philosophies of Walter Gropius. 10

Q.6 Write a note on Organic architecture. 10

Q.7 Explain architectural philosophies of Deconstructivism. Also, discuss about materials and technology used. 10
End Semester Examination, May 2018
Bachelor of Architecture – Third Semester
BUILDING SERVICES-I (WATER SUPPLY AND SANITATION) (AR-308)

Time: 3 hrs
Max Marks. 60
No. of pages:

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from PART-A and TWO questions from PART-B. Each question carries equal marks.

Q.1 Draw / Write down what you understand about the following (any four):
   a) Siphonage action.
   b) P, Q and S traps.
   c) Types of sanitary fixtures used in a residence toilet.
   d) Sedimentation.
   e) Two stack system.
   3x4

PART-A

Q.2 How does a septic tank work? Explain with a sketch or diagram.
   12

Q.3 Draw a sketch plain of a conventional toilet in a residence, showing the placement of shower, WC and Wash basin. Also, mark the position of door/window.
   12

Q.4 Write short note on the disposal of waste from the toilets and kitchen of an apartment in a multi storey building (say to storey).
   12

PART-B

Q.5 Explain the meaning of “segregation and recycling” in the field of solid waste disposal and management.
   12

Q.6 Write about the need and importance of storm water drainage system.
   12

Q.7 Enumerate the various materials from which overhead tanks are being made and can be made in future.
   12
Q.1 Explain the advantages of an early Christian Church. Give an example of a church describing its features from the following periods:
   a) Early Christian
   b) Byzantine.

**PART-A**

Q.2 What is Renaissance Architecture? Explain the contribution of Renaissance architect in the domestic architecture of that period.

Q.3 Compare the church architectures of Romanesque and Gothic periods.

Q.4 Explain the various architectural features of Baroque period with the help of examples.

**PART-B**

Q.5 What is the industrial revolution? How did the major inventions of industrial revolution impact the architecture of that period?

Q.6 Discuss the advent of modern architecture and explain its major architectural features with the help of sketches.

Q.7 How was Antony Gaudi an important architect of the Modern movement? Discuss his contributions in the modern architecture in detail.
Q.1 Answer the following questions:
   a) What is under reinforced sections?
   b) What is depth of neutral axis?
   c) What is strain?
   d) What is bond strength in terms of staircase?
   e) Explain two way slabs.
   f) What is effective length in column?

PART-A

Q.2 A RCC beam section 300 mm X 500 mm is reinforced with 4 bars of 16 mm diameter with an effective cover of 50 mm. The beam is simply supported over a span of 5 m. Find the maximum permissible Udl on the beam. Use M20 grade of concrete and Fe 500 steel.

Q.3 Derive the formula for strength of doubly reinforced section in flexure:
   \[ M_u = 0.36 f_{ck} b xu (d - 0.42x_u) + f_{ck} A_{se} (d - d') \]

Q.4 Design a cantilever balcony slab projecting 1.2 m from a beam. Adapt a line load of 2.5 KN/m². Use M20 concrete and Fe 415 steel.

PART-B

Q.5 Design a column, 4 m long restrained in position and direction at the both ends to carry an axial load of 1600 KN. Use M20 concrete and Fe 415 steel.

Q.6 Explain the following terms:
   a) Slenderness.
   b) Transverse reinforcement.
   c) Effective span in terms of staircase.
   d) Landing slab in staircase.

Q.7 A straight stair in a residential building is supported on wall at one side and by stinger on the other side, with a horizontal span of 1.2 meters. The risers are 150 mm and tread 300 mm. Design the steps. Use M20 grade of concrete and Fe415 steel. Take live load as 3 kN/m².
End Semester Examination, May 2018  
Bachelor of Architecture – Fourth Semester  
BUILDING SERVICES - II (ELECTRICAL INSTALLATION) (AR-406)  

Time: 3 Hours  
Max Marks: 60  
No. of pages 1

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.

Q.1 Explain the following along with diagrams:  
   a) Dimension flux.  
   b) Luminous intensity.  
   c) Dominance.  
   d) Luminance.  
   (Indicate SI unit for each).

PART-A

Q.2 Explain the following and indicate formula/unit wherever applicable:  
   a) Efficacy.  
   b) Colour rendering index.  
   c) Colour temperature.

Q.3 Draw the schematic diagram that shows the energy from generation to distribution and explain each of its stages. Explain its types and stages of installing protective devices during electrical installation.

Q.4 Calculate the number of lamps required in length and width of the room (design room lighting layout) size L-13m, W-5m, No. of luminaries-25.

PART-B

Q.5 Explain the following:  
   a) Fuses.  
   b) Circuit breakers.  
   c) Power.  
   d) Power equation triangle.

Q.6 Explain the various standards mentioned in national electrical code for electrical installation.

Q.7 Explain the following lighting schemes with help of well defined sketches:  
   a) Ambient lighting.  
   b) Accent lighting.
c) Task lighting.
End Semester Examination, May 2018
B.Arch. – Fourth Semester
THEORY OF DESIGN-II (AR-407)

Time: 3 Hours
Max Marks: 60
No. of pages: 1

Note: Attempt FIVE questions in all. Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal Marks.

Q.1 What are the architectural movements starting from 18th to 21st century? Explain the comparative analysis, theories, expressions and relevance of architecture movements as a social phenomenon.

12

PART-A

Q.2 Compare and contrast modern and postmodern architectural philosophies.

12

Q.3 What is Bubble Diagram? Explain 4 design factors which need to deal during the stage design.

12

Q.4 What is typical design process? Explain through a Flow Chart.

12

PART-B

Q.5 Discuss the elements and principles of design in detail.

12

Q.6 How building envelope act as space definer element? Discuss the characteristics of interior space of a building.

12

Q.7 Trace theories and expressions of two post-modernist architects in detail.

12
Q.1 Define Vernacular Architecture. What are the determinants of Vernacular Architecture? How Vernacular Architecture is influenced by:
  a) Local Needs.
  b) Local Construction Materials.
  c) Local Traditions.
Support answer with neat sketches and quote vernacular of at least 4 different areas of India.

PART-A

Q.2 Explain vernacular strategies of any one of the following:
  a) Rajasthan
  b) Leh

Q.3 Explain the Vernacular Strategies for the Earthquake Resistant Structures

Q.4 Enlist 3 vernacular materials and state the role of construction technology in vernacular architecture.

PART-B

Q.5 Detail Vernacular Structures and explain them:
  a) Kath-khuni style.
  b) Laterite Structure Goa.

Q.6 Explain vernacular strategies of the following:
  a) Orissa
  b) North East State

Q.7 Explain Vernacular Warli House and Bhonga House Structures.
End Semester Examination, May 2018
Bachelor of Architecture – Fifth Semester
HISTORY OF ARCHITECTURE-III (AR-504)

Time: 3 hrs

Max Marks: 60

Note: Attempt any FIVE questions in all. Q.1 is Compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.

Q.1 Write short notes on the following:
  a) Types of shikharas in North Indian Temples.
  b) Chaityas and Viharas.
  c) Gopurams.
  d) Lad Khan Temple at Aihole.

 3x4

PART-A

Q.2 Explain in detail the architectural features of Dilwara Temples at Mount Abu with the help of sketches.

12

Q.3 What are Stupas? How are they inspired from the Vedic Village? Explain “The Great Stupa at Sanchi”.

12

Q.4 What are the typical features of Dilwara Temples? Explain any one of the following:
  a) Shore Temple, MahaballiPuram.
  b) Vithal Temple.

12

PART-B

Q.5 Explain the characteristic features of the Hoysala Architecture, using one example of a temple from the Hoysala period.

12

Q.6 How is town planning and architecture of Indus Valley Civilization different from that of Vedic Villages? Explain.

12

Q.7 Explain the development of Hindu Temples in Orissa with the help of an example.

12
Q.1  Answer the following:
   a) Draw a free hand sketch of a counterfort Retaining Wall (RW) and mark its component.
   b) How do you calculate factor of safety of a RW against sliding?
   c) Explain $1/6^{th}$ rule in case of a RW.
   d) Why section of a counterfort RW is thinner than that of a cantilever RW of same height.
   e) Define welding.
   f) What is the difference between butt joint and lap joint? Explain with sketch.
   g) Name the types of Tension members.
   h) Mention the end condition and its corresponding effective length for two cases in case of a compression member.

$1\frac{1}{2} \times 8$

PART-A

Q.2  a) Draw a neat sketch of cantilever Retaining Wall (RW) and show main reinforcement in its various components.
   3
   b) The total height of a Cantilever type RW is 6 mtr and thickness of base stab is 50 cm. Design its sterol.
   9

Q.3  a) A cantilever type RW is of total height 5 mtr with its base slab thickness as 50 cm. The base slab width is 3.5 mtr whereas tow width is 1 mtr. The Width of stem is 25 cm throughout its height. Calculate the maximum and minimum stresses developed in base slab.
   8
   b) Write a short note on shear wall.
   4

Q.4  a) What are the advantages of a counterfort type RW over Cantilever type RW. Discuss.
   3
   b) The total height of a counterfort type RW is 7 Mtr with thickness of base slab = 0.5 Mtr. The counterfort is placed 3.5 mtr apart. Design the upright slab.
   9

(Use the following data in all questions of Part “A”)
Density of soil = 18000 kN/M$^3$
Density of Concrete = 25000 kN/M$^3$
Coefficient of friction = 0.6
Angle of repose = 30°
SBC of soil = 150 kN/M$^2$
Use M20 grade concrete and Fe 415 steel.

PART-B
Q.5  a) Discuss various failure modes of rivet.
   4

   b) A 100 mm X 10 mm plate is to be welded to a plate 150 mm X 10 mm by fillet weld of 6 mm size on all three sides as shown. Determine the necessary overlap.

   ![Diagram](image1)

Q.6  a) Describe how net area is calculated for single and double angle connection for a tensile member.
   4

   b) Design a welded connection for a truss member consisting of two angle ISA 50x50x6 mm placed back to back. It carries a tension of 100 kN and is connected to a gusset plate of 8 mm thickness. Gusset plate is placed in between the angle as shown. Design the fillet weld connection using weld on:
      i) Toe, back and end of angle.
      ii) Toe and back of angle.
      Permissible stress = 100 N/mm²

   ![Diagram](image2)

Q.7  a) Explain Radius of Gyration and Slenderness ratio.
   4

   b) Design a double angle discontinuous strut to carry 150 kN load. Length of strut between center of intersection is 4 Mtr.
Q.1 Explain the following:
   a) Life cycle cost of Building.
   b) Modular Coordination.
   c) Break even Analysis.
   d) Innovative construction techniques.
   
   **PART-A**

Q.2 Describe Industrialized building construction system and its contribution towards Buildings Economics.
   
   **PART-B**

Q.3 What are the role and importance of technologies, materials and various modular construction techniques in the economic performance of a building?
   
Q.4 Describe various design factors that should be considered in economizing building economics.
   
Q.5 Explain important factors for comparative analysis of Economics of low rise and high rise buildings.
   
Q.6 Write a short essay on “Effect of Demonetization and GST on Building economics or the real estate scenario of NCR”.
   
Q.7 Define Total Initial Project cost of a building and discuss the various components and their impacts on cost of a building.
Q.1 Explain three types of lighting provided in an indoor space; their differences, uses and applicability, with examples.

12

PART-A

Q.2 Explain with the help of sketches, behavior of sound waves in any enclosed space. (Explain any four).

12

Q.3 What is reverberation time? How does short and long reverberation time affect audience/listeners? Provide remedies to achieve optimum reverberation time.

12

Q.4 A shop has dimensions: Length 20 m and Width 10 m. The height of room is 2.7 m and working plane (where applicable) height is 0.7 m. Ts fluorescent lamp of 20w is used with lumen output of 2000 lumens. The required lux level in 450 lux. The air-conditioned shop has LLF-0.8 and UF – 0.74.
Calculate:
a) Room index.
b) Total no. of Lamps required.
c) Sketch lamp layout indicating lamps required in length and width of the room.

12

PART-B

Q.5 Explain the following:
a) Semi-indirect light.
b) Color rendering index (CRI)
c) Acoustics shadow.

12

Q.6 Explain different types of tungsten lamps. What are the differences between tungsten lamp and LED lamp (Provide four differences.)

12

Q.7 Explain with help of sketches three actions which can be taken to improve outdoor noise compatibility for any type of land use.

12
End Semester Examination, May 2018
B. Arch. – Fifth Semester
LANDSCAPE ARCHITECTURE-I (AR-508)

Time: 3 Hours
Max Marks: 60
No. of pages: 1

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.

Q.1 Write short notes on the following:
   a) Residential neighborhood open space order.
   b) Plants as a cosmetic treatment to the landscape design.
   c) Landscape and its relevance to architecture.
   d) Water management in landscape design.
   e) Role of lighting in landscape design.

4x5

PART-A

Q.2 How landscape contributes in “modifying the microclimate”? Explain through various examples and neat sketches.

10

Q.3 Write the common and botanical names for the following:
   a) Deciduous trees
   b) Evergreen tree
   c) Ornamental shrub
   d) Spiky plants
   e) Groundcovers.

10

Q.4 What are various factors effecting landscape design? Elaborate in detail with neat sketches and suitable examples.

10

PART-B

Q.5 Discuss in detail the selection criteria of plants on the basis of visual, functional, micro-climate and ecological aspects.

10

Q.6 Explain the salient features of any one historical garden.

10

Q.7 Describe in detail the significance of landscape in the contemporary context. Also validate the role and responsibility of the landscape architect in this scenario.

10
Q.1  

a) Calculate the quantities for (any two) of the following item of works from the plan given below:
   i) Earth Work in Excavation.
   ii) Brick Work in Superstructure.
   iii) 12mm thick C. plaster on internal walls.
   iv) Steel in RCC roof slab and lintels.

b) Explain the following:
   i) Types of estimates.
Q.2 a) What is an estimate? Why is it necessary before commencement of any work?  
   b) Write units of measurements of the following:
      i) Site clearance.
      ii) Sand filling under floors.
      iii) RCC in footings.
      iv) Brick work in foundation.
      v) Skirting.
      vi) Painting of walls.
      vii) Sanitary fixtures.
      viii) Wood work in door frames.
      ix) Polishing of windows.
      x) Plastering.
      xi) Steel in RCC work.
      xii) Excavation for pipeline of specified width and depth.  

Q.3 Name different types of estimates. Discuss a detailed estimate with its advantages in detail.  

Q.4 Write shot notes on the following:
   a) Bill of Quantities and Abstract of Cost.
   b) Notice inviting tender.
   c) Schedule and none schedule items.
   d) Administrative approval and technical sanction.
   e) Contingencies.  

Q.5 Work out the rate analysis for the following:
   a) 230mm thick brick masonry in superstructure in 1:6 cement mortar.
   b) 12mm thick inside cement plaster in cement mortar 1:4.  

Q.6 Justify the need of specification writing. How it can improve the quality of construction work of any project?  

Q.7 Write down the detailed specification of the following:
   a) First class brick work in superstructure in cement mortar 1:6.
   b) 12mm thick cement plaster in cement mortar 1:4.  
Q.1 Explain the following:
   a) Portuguese Colonial Architecture.
   b) French Colonial Architecture.
   c) Dutch Colonial Architecture.
   d) Louis Kahn in India.

   PART-A

Q.2 What is Indo-Sarcenic Architecture? Explain the characteristic features using one example.
   \[10\]

Q.3 How does Charles Correa use his concept of “Open to Sky” in his buildings? Explain.
   \[10\]

Q.4 Explain the ancient town planning concepts of Fatehpur Sikri.
   \[10\]

   PART-B

Q.5 How does the Capital Complex, Chandigarh qualify to be a Le Corbusier’s building? Explain.
   \[10\]

Q.6 Explain in detail any one building of A.P. Kanvinde that explains his design philosophies.
   \[10\]

Q.7 Explain any one typical housing project of Architect Raj Rewal.
   \[10\]
End Semester Examination, May 2018  
Bachelor of Architecture – Sixth Semester  
STRUCTURAL DESIGN-VI (AR-605)

Time: 3 hrs.  
Max Marks: 60  
No. of pages: 1

Note: Attempt THREE questions in all; Part-A is compulsory. Attempt any TWO questions from Part-B. Marks are indicated against each question.

PART-A

Q.1 Explain the following:  
   a) Principal rafter with diagram.  
   b) Principal tie with diagram.  
   c) Rigid frame with line diagram.  
   d) Grillage foundation.  
   e) Braced frame structure with line diagram.  
   f) Shear wall structure with line diagram.  
   g) Snow load.  
   h) Dead load for truss.  
   i) Joint of truss with diagram.  
   j) ISLB and ISA 100 mm × 75 mm × 10 mm with diagram.  

PART-B

Q.2 Design a grillage foundation to support a column. The load of column is 1200 kN. The size of base plate is 650 mm × 700 mm. The bearing capacity of soil is 100 kN/m². The permissible bending stress is 200 N/mm².

Q.3 Design the principal rafter of a fink type roof truss for the following data. Also, design it connection using 22 mm diabolts. Design compressive load is 150 kN, tensile load is 50 kN, rafter panel length 2.5 m, grade of steel Fe410, grade of bolt 5.6 Use standard safety factor as per IS-800.

Q.4 a) Write down ten points of design procedure of roof truss.  
   b) High-rise behaviour of a multistory building.  
   c) Draw a truss with nomenclature.
End Semester Examination, May 2018
Bachelor of Architecture – Sixth Semester
ARCHITECTURAL LEGISLATION (AR-606)

Time: 3 hrs  
Max Marks: 60

Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.

Q.1 Explain the following:
   a) Basement.
   b) Building Controls.
   c) National Building Code.
   d) Fire Protection.
   e) Building Bye Laws.
   f) Development Authority.
   g) Master Plan.
   h) Regional Plan.
   i) Heritage Regulation.
   j) Arbitration.
   2x10

PART-A

Q.2 Explain Architectural Legislation. Also define its need, role and importance in detail.  10

Q.3 How Building Controls help in development of a city? Explain its types, contents, role and importance in detail.  10

Q.4 Enumerate in detail the basic requirements of Documents/Drawing/NOC/etc that are necessary for submission of a building plan proposal to the competent authority.  10

PART-B

Q.5 Explain the purpose, main contents of National Building Code 2016 and its importance in detail.  10

Q.6 What is Heritage? Why it is necessary to protect Heritage? In the light of conservation, explain the role of heritage regulations.  10

Q.7 What is an Arbitration Act? Discuss in detail how an Arbitrator settles dispute between architect and contractor?  10
Q.1 Explain in detail various ways of water and waste management in Green Buildings. 12

**PART-A**

Q.2 Explain the following:
   a) Trombe wall
   b) Solarium
   c) Stack effect
   d) Window to wall ratio importance.
      3x4

Q.3 Explain four design strategies with the help of sketches to reduce heat transfer from building envelop (all building envelop components must be considered). 12

Q.4 Explain five important design strategies to be considered for a green building planned in cold climate. 12

**PART-B**

Q.5 Explain in detail key parameters considered in a green building rating system worldwide. 12

Q.6 What do you understand by energy-efficient building? Explain two strategies in detail to make a building energy efficient. 12

Q.7 What are the key issues to be taken care while designing an intelligent building? 12
End Semester Examination, May 2018
B. Arch. – Sixth Semester
BUILDING SERVICES IV (ENERGY SYSTEM AND HVAC) (AR-608)

Time: 3 Hours
Max Marks: 60
No. of pages: 1

Note: Attempt THREE questions in all. Part-A is compulsory. Attempt any TWO questions from Part-B. Marks are indicated against each question.

PART-A

Q.1 Answer the following with neat sketches, wherever required:
   a) What is common path of travel? 5
   b) Discuss the comparison between natural ventilation and mechanical ventilation. 5
   c) Define components of means of Egress. 5
   d) What is Fire Warning System? 5

PART-B

Q.2 a) Draw a sectional view of false ceiling showing coordinated drawing of chilled water or condenser, water pipe, supply air ducting and cable tray with clear dimensional indication. 10
   b) Show a 3 way valve operating in AHU with brief description for chilled water control in the system. 10

Q.3 a) What are the considerations for the location of sub-station and switch rooms? 10
   b) What is lift bank? Explain the handling capacity with its formula and clear description of each term. 10

Q.4 a) Describe the hot water central heating system with indication of chilling machine and boilers in plant room considering 3 floors of building. 10
   b) Write a short note on the factors considered in air-conditioning for human comfort. 10
Q.1 Write in short the history of the development of the subject Urban Design. Describe the basic objectives of Urban Design.

12

Q.2 Write and illustrate, with a suitable example, in a structured and sequential manner, the method of studying and analyzing a contemporary Urban Development, as an Architect cum Urban Designer.

12

Q.3 Discuss the importance of urban public spaces in cities making reference to streets and squares.

12


12

Q.5 Explain the types of urban control and their role and importance in urban design.

12

Q.6 Explain Public space diagram in detail with sketches.

12

Q.7 Explain determinants of Urban Form.

12
Q.1 Write short notes on the following:
   a) Significance of road user characteristics in Traffic Engineering.
   b) Objectives of traffic survey studies.
   c) Bus bays and lay byes.
   d) Central road fund.

   **5x4**

**PART-A**

Q.2 Explain the importance of urbanization in modern world in detail.

   **10**

Q.3 Explain traffic rotary with a diagram. What are the advantages and limitations in particular reference to traffic conditions in India?

   **10**

Q.4 Explain various transport modes and their characteristics in detail.

   **10**

**PART-B**

Q.5 What are the relative advantages and disadvantages of over-pass and under-pass with reference to a well-designed city like Chandigarh?

   **10**

Q.6 Explain the detrimental effects of traffic on the environment.

   **10**

Q.7 What are the types of parking surveys? Explain parking space inventory with diagrams in detail.

   **10**
Note: Attempt FIVE questions in all; Q.1 is compulsory. Attempt any TWO questions from Part-A and TWO questions from Part-B. Each question carries equal marks.

Q.1 Define the following:
   a) Ambience of an interior.
   b) Visual appeal of an interior.
   c) Focal point in an interior.
   d) Rhythm in an interior.

Q.2 Explain the principles of design.
   12

Q.3 Explain the elements of design.
   12

Q.4 Explain the characteristics of an interior space.
   12

Q.5 Draw a sketch, showing wall treatment of a theme Restaurant. Choose a suitable theme for the restaurant yourself.
   12

Q.6 Elaborate the role of lighting in a well-designed interior space, say a large Drawing Room.
   12

Q.7 Explain the importance of color and texture in the appearance of a public interior, say a Shopping Mall.
   12
Q.1 What do you understand by the term Slums? Explain briefly the origin and the problems associated with the slums. Revisit the Housing Scenario in NCR or with reference to any other city familiar with. Review the impact of Demonetization and CGST on real estate.  

20

PART-A

Q.2 Explain the role and importance of Housing in the light of Maslow’s law.  
10

Q.3 Explain several policies and schemes adopted by Government for Improvement of Slum.  
10

Q.4 What do you understand by Housing Finance Institutions.  
10

PART-B

Q.5 Write in detail the critical evaluation of Pradhan Mantri Awas Yojna.  
10

Q.6 Explain affordable housing and basic housing norms and standards for EWS, LIG and MIG by John Lang la Salle based on:
   a) Minimum volume of habitation.
   b) Provision of Basic Amenities.
   c) Cost of the House.
   d) Location of the House.  
10

Q.7 How HUDCO serves as the principal institution to finance Government-supported housing programmes?  
10
Q.1 Enumerate and explain, which according to you are the four most important fields of specialization which are required to design a smart city?

**PART-A**

Q.2 Define and explain what is a Smart City?

Q.3 Elaborate the role of information and communication technology in the making of a smart city for the future.

Q.4 Explain the bottlenecks faced in our country which is responsible for delay in the conversion of our cities into a smart one.

**PART-B**

Q.5 How can our municipal authorities deliver better civic services more efficiently? Explain.

Q.6 How best can we collect feedback from users and general public to enable its use in the making of a Smart City?

Q.7 Give few examples of international trends which are being used currently in the making of smart cities.