

Q. No. 2:- (Explain with neat Sketches any Two out of Three)

10 Marks

1. Elaborate Micro economics & Macro economics concept and its effect on economy.
2. Explain the Concept of Neo-classical economics.
3. Explain the difference between ecological economics and natural resource economics.

Q. No. 3:- (Write Short notes on any Two out of Three)

10 Marks

1. Explain Externalities in detail.
2. Explain characteristics of common pool resources.

Q. No. 4:- (Draw sketch and explain in details any One out of Two)

10 Marks

1. Discuss Pigovian tax.
2. Elaborate polluter pays principle with example.

Q. No. 5:- Discuss common pool resources, public goods with examples.

10 Marks

Q. No. 6:- Explain Coase Theorem.

10 Marks

Q. No. 7:- Elaborate tragedy of commons along with one example.

10 Marks

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

Branch: M. Arch (ENV)

Sem:- I

Subject: - Environmental Economics

Subject Code: - MAREA20100003

Date: - 18/11/2019

Time: - 3 Hrs.

Marks: 60

Instructions: - 1. Q. No. I is compulsory

2. Answer any FOUR out of the remaining.

20 Marks

Q. No. I:- MCQ/Define/Fill in the blanks/Match the pairs etc.

1. For the following five questions, match the term with its correct definition. (1)

The name given to a tax which makes the firm pay for all the pollution damage it creates with each extra unit of output.

1. Coase theorem
2. Pigouvian
3. Existence value
4. Tradeable permits
5. Option value
6. First law of Thermodynamics

2. The value we place on an asset now as regards functions which might be exploited sometime in the future. (1)

1. Existence value
2. Pigouvian
3. First law of thermodynamics
4. Tradeable permits
5. Option value
6. Coase theorem

3. Establishes the principle that energy can neither be created nor destroyed. (1)

1. Pigouvian
2. First law of thermodynamics
3. Tradeable permits
4. Option value
5. Coase theorem

4. In environmental economics, an outcome is said to be economically efficient if (1)

1. Consumer surplus is maximized
2. All resources are put to their highest valued use
3. Everybody can be made better off
4. Future generations have the same opportunities as current ones
5. Profit is maximized

5. Any economic system will produce destructive environmental impacts if the _____ within the system are not structured to avoid them. (1)
1. Incentives
 2. Ethics
 3. Prices
 4. Property rights
 5. None of the above
6. The stock of natural and environmental resources that sustain ecosystems, the economy and the well being of individual is referred to as _____. (1)
1. Renewable resources
 2. Biological diversity
 3. Ambient quality
 4. Natural capital
 5. Human capital
7. According to economists, people pollute because (1)
1. They have low self esteem
 2. They are inconsiderate and rude
 3. It is the least expensive solution to the problem of what to do with their residuals from production and consumption
 4. They only care about maximizing profits
 5. None of the above
8. In a privately managed fishery, the owner manages the business for maximum profit. When managed in this fashion, the rent of fish stock in the fishery will be (1)
1. Maximum.
 2. Less than maximum, but not zero.
 3. Zero.
 4. Negative.
9. According to the law of demand, (1)
1. The higher the price, the larger the quantity supplied.
 2. The higher the price, the larger the quantity demanded.
 3. The higher the price, the smaller the quantity supplied.
 4. The higher the price, the smaller the quantity demanded.
10. What does efficiency means (1)
1. Maximization of society's total net benefits.
 2. Maximization of an individual's total net benefits.
 3. Both of the above.
 4. None of the above.
11. Free riding of public goods occurs because (1)
1. Non-payers cannot be excluded from consuming public goods.
 2. Public goods are "free."
 3. It is immoral to pay for public goods.
 4. Public goods have no value to people.
12. Circle the correct/best statement. (1)
1. Because of free riding, private entrepreneurs hesitate from supplying public goods.
 2. Because of free riding, amount of contributions raised for environmental causes understates the marginal social benefit of these causes.
 3. A market provision of public goods (e.g. provision by activist organizations) would be lower than the efficient level of output of public goods.

4. All of the above are correct. (1)
13. Economics approach is called anthropocentric because (1)
1. Environmental resources are evaluated based on their uses to human beings.
 2. Environmental resources are evaluated based on their uses to all living beings, human or non-human.
 3. Even a small environmental degradation from an action is considered unacceptable, irrespective of the magnitude of benefits of the action to human beings.
 4. Even a large environmental degradation from an action is considered acceptable, if there are at least some benefits to human beings.
14. How much would you be willing to pay for 10% improvement in air quality is likely to depend on (1)
1. The current level of air quality.
 2. Your income level.
 3. Your attitude/preference for environmental quality.
 4. All of the above.
15. Use the two characteristics of public goods – non-rivalry and non-excludability – to identify which of the following is the best example of a public good. (1)
1. The Disney World amusement park
 2. A textbook in environmental economics
 3. An emergency warning siren located on top of the tallest building on your campus
 4. Garbage collection service provided by a local government on a monthly fee basis
16. The threshold level of emissions is (1)
1. Zero level of emissions.
 2. The minimum level of emissions to begin to cause damage.
 3. The maximum level of emissions.
 4. None of the above.
17. The Coase theorem states that the private sector can achieve environmental efficiency, as long as property rights are clearly assigned (1)
1. True
 2. False
18. A beach is best described as: (1)
1. A private good
 2. An open access good
 3. A public good
 4. A common pool resources
19. Hardin's "Tragedy of the Commons" is a particularly instructive example of how people manage common resources. What are the defining characteristics of common pool resources? (1)
1. Excludability and subtractability
 2. Common use and privatization
 3. Accountability and monitoring
 4. All of the above
 5. None of the above
20. A mixed economy: (1)
1. Allocates resources via supply but not demand
 2. Allocates resources via demand but not supply
 3. Allocates resources via supply & demand
 4. Allocates resources via market forces and govt. intervention

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE – RAIGAD -402 103
End Semester Examination – OCT/NOV - 2019**

Branch: M.Arch (GEN)

Sem.:- III

Subject:- Advanced Landscape Design & Materials

Subject Code: - (MAR20300003)

Marks: 60

Date: - 18/11/2019

Time: - 3 Hrs.

Instructions: - 1. Q.No. 1 is compulsory

2. Answer any FOUR out of the remaining.

Q. No.1:- a) Match the following

4 Marks

- | | |
|----------------------|----------------|
| 1. Parterre | Chinese garden |
| 2. Ha- ha walls | Mughul Garden |
| 3. Char-bagh | French Garden |
| 4. The summer Palace | English Garden |

Q. No.1:- b) Answer in 1 or 2 sentences

16 Marks

1. Define Glade.
2. Explain Land Reclamation.
3. What is Grading?
4. State difference between climbers and creepers.
5. Explain Terracing.
6. State difference between Monoecious and Dioecious plants.
7. Define Peristyle.
8. Define Espalier. Draw and name different patterns.

Q. No. 2:- State and explain with sketches any 5 structures built in gardens (Garden Structures).

10 Marks

Q. No. 3:- How to design a Rain Garden? (Support with sketches)

10 Marks

Q. No. 4:- Explain in detail English Garden style. Include history and characteristics.

10 Marks

Q. No. 5:- Explain with diagrams

10 Marks

- a. Topiary
- b. Parterre
- c. Quincunx

Q. No. 6:- Short note with Diagram: DEWATS

10 Marks

Q. No. 7:- State and Explain characteristics of Mughal Gardens.

10 Marks

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

Branch: M.Arch (GEN)

Subject:- Advanced Building Technologies (MAR20300004)

Date: - 20/11/2019

Sem.:- III

Marks: 60

Time: - 3 Hrs.

Instructions: - 1. Q.No. 1 is compulsory

2. Answer any FOUR out of the remaining.

Q. No.1:- MCQ/Define//Fill in the blanks/Match the pairs etc.

20 Marks

1. Write any 4 major components of HVAC system
2. Postmodernism is a broad movement that developed in the _____ across philosophy, the arts, architecture, and criticism, marking a departure from modernism
 - a. Beginning of 20th century
 - b. Mid- to late 20th century
 - c. Mid- to late 19th century
 - d. None of above
3. What are the 3 elements of the fire triangle?
4. _____ extinguishers are designed for use on flammable metals
 - a. Class A
 - b. Class B
 - c. Class C
 - d. Class D
5. List any 4 systems that can be monitored or controlled by a BMS

Q. No. 2:- Explain with neat Sketches any Two out of Three

10 Marks

- i. Modernism
- ii. Post-modernism
- iii. Industrial revolution and its impact on construction Industry

Q. No. 3:- Write Short notes on any Two out of Three

10 Marks

- i. CCTV camera
- ii. Sick Building Syndrome
- iii. Lessons from failures

Q. No. 4:- (Draw sketch and explain in details any One out of Two)

10 Marks

- i. Passive fire protection system
- ii. Active fire protection system

Q. No. 5:- Write a note on AEES (Architectural Exposed Structural Steel) with supporting sketches

10 Marks

Q. No. 6:- Discuss in detail HVAC system with supporting hand sketches

10 Marks

Q. No. 7:- Discuss Building Management System in detail.

10 Marks

******Paper End******

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,

LONERE – RAIGAD -402 103

End Semester Winter Examination – 2019

Branch: M. Arch.

Sem.:- III

Subject:- Law and Legislation for Environmental Control

Subject Code: - MAREA20100005

Marks: 60

Date: - 20.11.2019

Time: - 3 Hrs.

Instructions:

1. The First question is compulsory
2. Answer any FOUR out of the remaining.

Q. NO. 1.

Write down Definitions of following (20 Marks)

1. "Factory" as defined in factories Act.
2. "Adolescent" as defined in factories Act.
3. "Hunting" as defined in Wild Life (Protection) Act .
4. "Forest produce" as defined in Indian Forests Act.
5. "Antiquity" as defined in Ancient Monuments and Archeological Sites and Remains Act.
6. "Protected Monument" as defined in Ancient Monuments and Archeological Sites and Remains Act.
7. " Hazardoud waste" as defined in Hazardous wastes management and handling rules.
8. "Biologicals" as defined in Bio medical wastes management and handling rules.
9. "Bio degradable waste" as defined in Solid wastes management rules.
10. "Domestic Hazardous waste" as defined in Solid wastes management rules.

Q. NO.2. Write Short note on any two of following three

(10 Marks)

- a General duties of occupier as provided in Factories Act
- b. General duties of manufacturers as provided in Section 7-B of Factories Act

c. Latrines and urinals as provided in Section 19 of Factories Act

Q. NO. 3. Explain, duties of occupier as provided in Rule 4 of Bio Medical Waste Management rules 2016. (10 Marks)

Q. NO. 4.

Discuss jurisdiction and powers of Appellate Authority as provided in National Environment Appellate Authority Act. (10 Marks)

Q. NO. 5. Explain preservation of protected monuments by agreements. (10 Marks)

Q. NO. 6. Explain, duties of waste generators as provided in Rule 4 of Solid Waste Management rules 2016. (10 Marks)

Q. NO. 7. General restrictions on Undertaking Prospecting and Mining operations, comment in view of the Mines and Minerals Act. (10 Marks)

Paper End

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

Branch: M. Arch (ENV)

Subject:- Climate Responsive Design- I (MAREA10100002)

Date: 03 / 12/ 2019

Sem.:- I

Marks: 60

Time: - 3hrs

Instructions: - 1. Q. No. I is compulsory

2. Answer any FOUR out of the remaining.

3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.

Q. No.1:- Define & briefly explain the following:

**(Marks)
20 Marks**

- a) Earth- Sun relationship
- b) Bio-climatic chart
- c) Altitude & Azimuth angles
- d) Thermal Comfort
- e) Daylight & ventilation

Q. No. 2:- Explain with neat Sketches: (Any Two)

10 Marks

- a) Mahoney Tables
- b) Courtyard planning for Hot-dry climate type
- c) Perimeter to Area (P/A) ratio

Q. No. 3:- What is the difference between climate & weather ? Elaborate on the importance of studying climatology.

10 Marks

Q. No. 4:- What is a psychrometric chart? How can it be used to evaluate the comfort conditions for a particular climate type ?

10 Marks

Q. No. 5:- With the help of a case, explain passive daylighting & ventilation strategies with respect to any climate type.

10 Marks

Q. No. 6:-What is the purpose of thermal comfort scales ? Briefly explain the use of 'effective temperature nomogram' & 'bio-climatic chart' .

10 Marks

Q. No. 7:- State the thermal balance equation & explain all the terms & formulae related to the equation.

10 Marks

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Paper End

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

Branch: M.Arch (General)

Sem.:- I

Subject: - Contemporary Architecture:Theories & Trends (MAR10100002)

Marks: 60

Date: 03/12/2019

Time: - 3 Hr.

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

Q. No.1:- Fill in the blanks (any Five)

15 Marks

1. The most elegant bridges have been designed by structural engineer architect _____.
2. The only lady architect _____ of deconstructivist era.
3. The Bauhaus was established in _____ in Germany.
4. The gigantic alien like building style is _____.
5. The style Deconstructivism is characterized by an absence of _____
_____ or _____.
6. _____ is also known as Structural Expressionism, is a type of Late Modern architectural style that emerged in the 1970s.
7. The term "Less in More" was coined by _____.

Q. No. 2:- Explain the Architectural style, features and about pioneer architect of the building "Heydar Aliyev Center, Baku, Azerbaijan".

15 Marks

Q. No.3:- Compare with the advantages and disadvantages according to climate, the building materials used in the Modern, Postmodern and deconstructivist style to the materials in Art Nouvelle and Art & Crafts Movement in your own view.

15 Marks

Q. No. 4: - Elaborate the ideals behind the style "Critical Regionalism" with suitable building of its Style.

15 Marks

Q. No. 5: - When and where the Industrial revolution was started? What were its effects on the building construction and evolution of architectural styles.

15 Marks

Q. No. 6: - Briefly discuss Frank Lloyd Wright's view on organic architecture with example. 15 Marks

Paper End

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

Branch: M.Arch (Environmental Architecture) First Year
Subject:- Green Building Materials and Technology (MAREA10100003)
Date: - 05 /12 /-2019

Sem.:- 1
Marks: 60
Time: - 3 Hr.

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

Q. No.1:-

A. Write in pairs, Conventional vs. Green, building materials for the following building components: **5 Marks**

- i. Facades
- ii. Window glazing
- iii. Roofs
- iv. Foundations
- v. Interior partition

B. Match the following:

5 Marks

- | | |
|-------------------------|---------------------------------------------------|
| i. Embodied Energy | a. Cradle to grave |
| ii. Life Cycle analysis | b. Energy output/energy input% |
| iii. Green building | c. Cool roofs |
| iv. Energy efficiency | d. Eco-friendly, energy efficient and sustainable |
| v. Green technique | e. MJ/Kg |

Q. No. 2:- Write short notes on any two:

10 Marks

- A. Goals and scope in LCA process
- B. Ferrocement
- C. Eco boards
- D. Environmental Impact assessment

Q. No.3:- Explain in detail any two green alternatives for construction technologies for framing and foundation of the building. **10 Marks**

Q. No. 4:- How can Environmental impact of Construction Industry be kept in check by green interventions at various stages of construction (pre, during and post) ? **10 Marks**

Q. No. 5:- Give example and write in detail about two conventional materials used in an alternative green construction technique. **10 Marks**

Q. No. 6:- Write in brief about Environmental Impact Assessment **10 Marks**

Q. No. 7:- Explain the importance of embodied energy and Life cycle analysis of green building materials **10 Marks**

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

Winter End Semester Examination:– Dec-2019

Branch: M. Arch (GENERAL)

Subject:- URBAN DESIGN (MAR10100003)

Date: - 05/12/2019

Sem.:- I

Marks: 60

Time: - 3 Hrs.

- Instructions: -**
1. Q. No. 1 is compulsory
 2. Answer any FOUR out of the remaining.

Q. No.1:- (A) Match the columns.

8 Marks

- | | |
|--------------------|----------------|
| 1. Linear city | a. Jaipur |
| 2. Grid City | b. New Delhi |
| 3. Ancient City | c. Timgad |
| 4. Roman City | d. Mumbai |
| 5. Greek City | e. Shrirangam |
| 6. Futuristic City | f. Bangalore |
| 7. Temple city | g. Chandigarh |
| 8. Garden City | h. Harappa |
| | i. Priene |
| | j. Bhubaneswar |

(B) Fill in the blanks.

12 Marks

1. According to Kevin Lynch “Image of the City” is decided by following factors

a) _____ , b) _____ , c) _____ , d) _____ & e) _____

2. Accordingly to Bently, the quality of space depends on following factors

a) _____ , b) _____ , c) _____ , d) _____ , e) _____ , f) _____ & g) _____

Q. No. 2:- Explain with suitable example & neat Sketches any Two

10 Marks

1. Plaza as an urban space
2. Urban Texture
3. Radial City

Q. No. 3:- Write Short notes on any Two

10 Marks

1. Differentiate between Space & Place
2. Function as a determinant of Urban Form
3. Cognitive mapping

Q. No. 4:- Differentiate between ‘Conservative Surgery’ and ‘Cosmetic Surgery’ as methods of Urban Design intervention.

10 Marks

Q. No. 5:- What is the significance of surveys in design? Prepare a questionnaire for survey for proposed “shopping Mall” in a residential area in a city

10 Marks

Q. No. 6:- Elaborate on the importance of ‘Imageability’ as an integral component of the urban environment.

10 Marks

Q. No. 7:- Write an essay on evolution of Urban Design as a separate discipline, explain the place of Urban design in context of other disciplines dealing with built environment.

10 Marks

Paper End

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

Branch: M. Arch (ENV)

Subject:- Sustainable Development & Planning (MAREA10100004)

Date: - 07/12/2019

Sem.:- I

Marks: 60

Time: - 3 Hrs.

Instructions: - 1. Q. No. I is compulsory

2. Answer any FOUR out of the remaining.

3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.

Q. No.1:-Define and briefly explain the following.

20 Marks

- a) Local area planning
- b) Sustainable development
- c) Planned cities
- d) Housing shortage
- e) Global Warming

Q. No. 2:-Discuss any 3 issues of urban development with respect to the scenario in Indian cities.

10 Marks

Q. No. 3:- What is the importance of stakeholder participation in any planning process ? Elaborate the stages for stakeholder participation.

10 Marks

Q. No. 4:- Explain the term 'walkability'. Discuss with the help of a case, all the factors that affect walkability at the neighbourhood level.

10 Marks

Q. No. 5:- Elaborate on the town planning concepts in ancient India.

10 Marks

Q. No. 6:- Discuss the issues related to the housing scenario in India.

10 Marks

Q. No. 7:- Elaborate on the parameters that should be considered while designing secondary streets (streets with low to moderate traffic that give access to individual properties and few amenities) inside a neighbourhood.

10 Marks

Paper End

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,

LONERE – RAIGAD -402 103

Winter Semester Examination – Dec.- 2019

Branch: M. Arch (General)

Sem.: - I

Subject: Advanced Studies & Research Methodologies (MAR10100006)

Marks: 60

Date: - 07/12/2019

Time: 3Hr.

Instructions to the Students

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

Q.1 1. The height of the students in a classroom is

2X6=12

- a. Continuous data
- b. Categorical data
- c. Discrete data
- d. All of the above

2. The following graphical method can only be used for representing data for one variable:

- a. Pie chart
- b. Bar chart
- c. Histogram
- d. Box plot

3. Mode represents

- a. Most repeated value
- b. Least repeated value
- c. The central value
- d. The value between the maximum and the minimum

4. Median is a measure of

- a. Dispersion
- b. Skewness
- c. Central tendency
- d. Flatness of the data

5. Purpose of doing research is

- a. To identify problem
- b. To find the solution
- c. Both a and b
- d. None of these

6. Which method can be applicable for collecting Qualitative Data?

- a. Artifacts (Visual)

- b. People
- c. Media products
- d. All of these

- Q.2 a. How does literature review help to identify a research problem? 12
b. What are the steps in developing a research plan? Explain at least two of them in detail with examples.
- Q.3 Explain the various parts of writing a research report. 12
- Q.4 Write short notes on at least two methods of collecting data, for conducting research. 12
- Q.5 The municipality corporation of Aurangabad, wishes to develop a low-cost housing township. In this connection, it wants to gather the opinion of the people regarding their requirements and expectations for design, architecture and facilities. Based on the opinions of the public, the budget for the township would be worked out. Write a short note on the design of questionnaire for collecting the data, and how the data would be analyzed. 12
- Q.6 a. Explain the following terms: (i) mean, (ii) median, (iii) mode. 12
b. Explain the following terms: (i) mean deviation, (ii) variance, (iii) standard deviation.