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## VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD

## B.E. (CBCS) IV-Semester Main Examinations, May-2019

Green Buildings
(Open Elective-II)
Time: $\mathbf{2}$ hours Max. Marks: $\mathbf{4 0}$
Note: Answer ALL questions in Part-A and any FIVE from Part-B

| Q.No | Stem of the question | M | L | CO | PO |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Part-A ( $5 \times 2=10 \mathrm{Marks}$ ) |  |  |  |  |  |
| 1. | What is an Air change? Draw a figure showing cross ventilation. | 2 | 1 | 1 | 1 |
| 2. | Define $631 / 2^{0}$ Rule. | 2 | 1 | 1 | 2 |
| 3. | Expand the terms GRIHA and LEED. | 2 | 1 | 2 | 7 |
| 4. | What is heat Island effect? | 2 | 1 | 2 | 1 |
| 5. | Explain the applicability of Bye laws? | 2 | 3 | 1 | 1 |
| Part-B ( $5 \times 6=30$ Marks) |  |  |  |  |  |
| 6.a) | What is meant by circulation in a building? Mention the types of circulation. | 2 | 1 | 1 | 1 |
| b) | Discuss about the following principles of planning of a Residential Building. <br> i) Aspect <br> ii) Prospect <br> iii) Privacy <br> iv) Sanitation | 4 | 1 | 1 | 1 |
| 7.a) | What are the factors to be considered for the selection of site for Residential building? Explain any two of the factors briefly. | 3 | 3 | 1 | 1 |
| b) | Explain the Building bye-laws with reference to open space requirements. | 3 | 3 | 1 | 1 |
| 8.a) | What is meant by orientation of buildings? | 2 | 1 | 1 | 1 |
| b) | Discuss the orientation criteria of residential building for Indian climatic conditions. | 4 | 3 | 1 | 1 |
| 9.a) | Explain the various benefits of green buildings. | 2 | 3 | 2 | 7 |
| b) | Discuss the design criteria of green building with reference to water conservation. | 4 | 3 | 2 | 7 |
| 10.a) | What are the principles of green Buildings? | 2 | 1 | 2 | 7 |
| b) | Describe how a green building can achieve energy efficiency. | 4 | 2 | 2 | 7 |
| 11.a) | What is green building? What are the objectives of green buildings? | 2 | 1 | 2 | 7 |
| b) | List out the various criteria followed in the certification of a green building by GRIHA. | 4 | 1 | 2 | 7 |
| 12.a) | What are the factors that affects the orientation of a building and explain in brief? | 3 | 1 | 1 | 1 |
| b) | Illustrate the case study of a LEED certified Green building. | 3 | 3 | 2 | 7 |

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

| S. No. | Criteria for gurestions | Percentage |
| :---: | :--- | :---: |
| 1 | Fundamental knowledge (Level-1 \& 2) | 59.6 |
| 2 | Knowledge on application and analysis (Level-3 \& 4) | 40.4 |
| 3 | *Critical thinking and ability to design (Level-5 \& 6) <br> (*wherever applicable) |  |

