**14CE703**

**Hall Ticket Number:**

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| **IV/IV B.Tech (Regular / Supplementary) DEGREE EXAMINATION** | | | |
| **January, 2021** | **Civil Engineering** | | |
| **Seventh Semester** | **Estimation & Quantity Surveying** | | |
| **Time:** Three Hours | | **Maximum: 6**0 Marks | |
| *Answer ALL Questions from PART-A.* | | | (1X12 = 12 Marks) |
| *Answer* ***ANY FOUR*** *questions from PART-B.* | | | (4X12=48 Marks) |
|  | | | **PART-A** |

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| 1. | a) | What is supplementary estimate? |  |
|  | b) | Differentiate between general and detail specifications? |  |
|  | c) | What is building cost index? |  |
|  | d) | Write the detail specification of half brick wall. |  |
|  | e) | List the out goings. |  |
|  | f) | What is the purpose of writing specifications?. |  |
|  | g) | What do you mean by degree of accuracy? |  |
|  | h) | What is the importance of borrow pits in earth work excavation? |  |
|  | i) | What is the difference between plinth area and floor area?? |  |
|  | j) | What do you mean by years purchase? |  |
|  | k) | Under what circumstances a revised estimate is prepared? |  |
|  | l) | What is the rent statement of residential building? |  |
| **PART-B** | | | |
| 2. | a) | Assume two roomed building with front verandah and Estimate the quantities of the following items.  i**)** Earth work in excavation ii) Lime concrete in foundation iii) First class brick work in 1:6 cement sand mortar in foundation and plinth | 12M |
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| 3. | a) | Differentiate between long wall, short wall method and center-line method for building estimates with clear illustration. | 7M |
|  | b) | Explain the deductions to be applied for  i) Lintels of doors ii) Semi-circular arch of radius ‘r’ | 5M |
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| 4. |  | Explain about earthwork in canals for different cases. | 12M |
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| 5. |  | Prepare a detail estimate of RCC square column with foundation footing from the following information  i) Size of footing 3.0mx3.0mx0.90m  ii) Steel reinforcement in the footing (HYSD bars of Fe-415 grade)  16mm Ø bars @ 150mm centre to centre in both ways at bottom.  12mm Ø bars @ 250mm centre to centre both ways at top.  Size of the column: 300mm x 300mm  Longitudinal Reinforcement in the column: 8 numbers 25mm Ø bars.  Traverse reinforcement in the column (ties): 8mm Ø @ 150mm centre to centre  Height of the column from footing top: 3.00m  Assume suitable cover to reinforcement. | 12M |
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| 6. | a) | Prepare detail specification for brick masonry in CM 1:6 | 8M |
|  | b) | Explain Mosaic flooring? | 4M |
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| 7. |  | Work out cost per unit for the following items of work (Assume suitable data) |  |
|  | a) | First class brick work in foundation in CM 1:6 | 6M |
|  | b) | PCC in 1: 3: 6 | 6M |
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| 8. | a) | Write a short note on organization of engineering department. | 6M |
|  | b) | Explain the importance of measurement book. | 6M |
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| 9. | a) | Differentiate between:  i) Gross income and Net income ii) Scrap value and Salvage value iii) Sinking fund and Capital value | 6M |
|  | b) | Total cost of construction of a newly construction building with three floors is Rs: 1,20,000.00. The building is  Constructed on a plot measuring 600 sq.m. purchased for Rs:18000.00 in 1969. The prevailing rate of plots in  the locality is Rs. 45.00 per sq.m. Work out the standard rent per floor per month assuming the following?   1. Municipal Taxes @ 35% of rateable 2. Collection and management charges @ 3% of the gross rent 3. Repairs and 1% on 9/10th cost of construction. 4. Sinking fund @ 5% for 65 years on 90% cost of construction.   Miscellaneous expenses @ Rs: 60.00 per month. | 6M |

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