



Regulation R18

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Supplementary Examinations, April 2024

ESTIMATION AND COSTING

(Civil Engineering)

Subject code: 2P7AA

Maximum Marks: 70

Date: 23.04.2024 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Total 10 questions it consists.
 4. Part-B each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10X2M=20 Marks)

- 1 What is an Estimate?
- 2 Write any two uses of estimation?
- 3 What is the need of specification?
- 4 Write on blasting charges.
- 5 List four types of culverts.
- 6 Explain mid-ordinate method?
- 7 What is bar bending schedule?
- 8 Calculate the length of the stirrup for the beam of size 350x400mm with a clear cover of 30mm on all sides?
- 9 Write short note on Market value.
- 10 List the purposes of valuation.

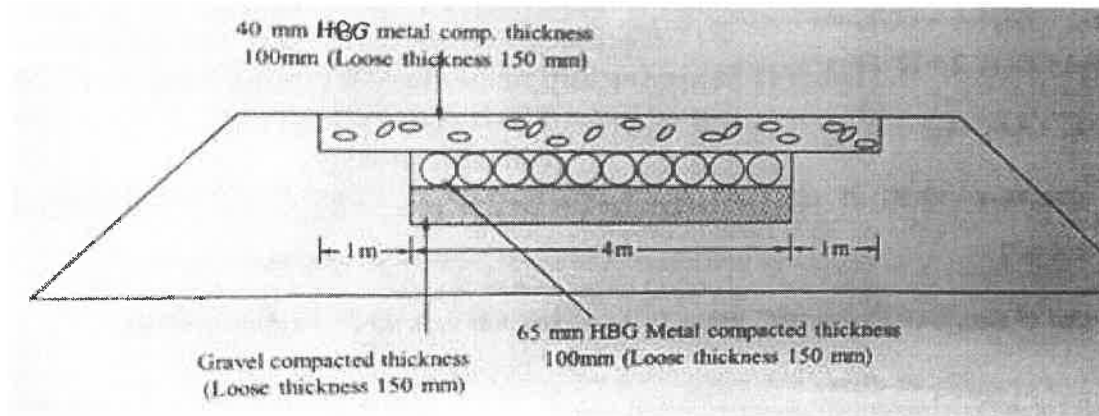
Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 What is an estimate? List out the different types of estimates? Explain in detail about all available estimates for a civil engineering structure? [10]
OR
- 12 What is an estimate? What is the data required for preparation of estimates, explain in detail? [10]
- 13 What are general specifications for 1st class brick Masonry? [10]
OR
- 14 Define the following:
 - a. Cost of material at source [3]
 - b. Cost of material at site [3]
 - c. Crushing charges [2]
 - d. Lead charges [2]
- 15 A WBM road is proposed to be laid as shown in the fig. below. Calculate the following items for a length of 1 km. [10]
 - a. Quantity of gravel required for base course
 - b. Quantity of 65mm HBG metal required
 - c. Quantity of 40 mm HBG metal required

d. Spreading of Gravel



OR

- 16 The formation width of road embankment is 9.0m. The side slopes are 2.5:1. The depths along the center line of road at 50.0m intervals are 1.2, 1.1, 1.4, 1.2, 0.9, 1.5 and 1.0m. It is required to calculate the quantity of earthwork by

a. Prismoidal rule b. Trapezoidal rule [5+5]

- 17 Estimate the quantity of steel for a column with an illustrative example of size 300x300mm and prepare a bar bending schedule. (Assume suitable data) [10]

OR

- 18 What are the points to be observed in recording measurements of works in Measurement Book? [10]

- 19 Explain the following terms with equations: [5+5]

a. Capitalized Value
b. Sinking Fund

OR

- 20 A residential building constructed 12 years ago is situated on a plot whose total area is 400m². The plinth area of the building is 240m². The present cost of construction of the building is Rs.1,30,000/- and the cost of the land is Rs.800/- per m². The rate of depreciation for the value of the building is 1%. Calculate the total value of our property. [10]