

B. Arch 6th Semester (Part III) Final Semester Examination, 2009
Subject: Estimating and Specification of Properties (AR-604)

Full Marks: 35

Time: 2 hours

*Answer Question No. 1 (One) and any 3 (Three) from the rest. Answers must be brief and to the point.
Calculations are to be shown in suitable formats.*

1. Answer the following questions: 5 x 1 = 5
 - (a) The dry volume of 1 bag of cement is _____ cum.
 - (b) 100 m² of 5" thick brickwork requires _____ no. of bricks.
 - (c) For terrazzo flooring the ratio of marble powder: cement: marble-chips is _____.
 - (d) The compressive strength of a 1st class brick is _____.
 - (e) For construction of 10 cum of 250 mm thick brickwork _____ nos of masons are required.

2.
 - (a) What is an 'Approximate Estimate'? Mention the purposes of 'Approximate Estimate'. 1 + 2
 - (b) Compare between 'Unit Rate Method' and 'Bay Method' of estimating. 3
 - (c) A one storey rectangular guard's booth of size 4.5 m x 6 m. c/c alongwith 250 mm thick wall all along has one door (1 m. x 2.1 m.) and two windows [1.5 m(w) x 1.3 m.(h)]. Find
 - (i) D.P.C required (40 mm thick) for the structure and
 - (ii) Requirement of cement (in bags). Assume any data suitably. 2+2

3.
 - (a) What is 'Specification'? State the principles of writing 'Specification'. 1+2
 - (b) Discuss the process of 'Removal of Shuttering' for concrete work during building construction. 3
 - (c) A rectangular room of internal dimensions 5m.(L) x 3m.(W) x 3m.(floor Height) having one door (1.2 m. x 2.1 m.) and three windows [1.2 m. x 1.5 m., 2.2m. x 1.5m. and 1 m. x 1.5 m.] is to be plastered internally. Find out the quantity of internal plaster. Assume any necessary data suitably. 4

4.
 - (a) Discuss the salient features of 'Centre Line Method' of Estimating with suitable example. 3
 - (b) Mention the measurement unit of the following items: (i) Reinforcement (ii) Skirting (iii) Expansion joint (iv) D.P.C. (v) P.C.C. (vi) 125 mm thick brickwork. ½ x 6
 - (c) For a construction work, 96 cum of 250 mm thick brickwork is estimated. Prepare a suitable material and labour contract expenditure for the work. Assume any necessary data suitably. 4

5.
 - (a) Explain the terms 'Bill of Quantities' and 'Complete Estimate'. 1½ x 2
 - (b) Discuss briefly about various steps adopted for 'Marble Flooring' during building construction. 3
 - (c) IPS flooring (including skirting of 1' high) is to be done in a rectangular room of internal dimension 5.2 m. x 3.4 m. Prepare a suitable material estimate for the construction. Assume any necessary data suitably. 4

6.
 - (a) Mention the factors affecting the rate per unit of an item. 2
 - (b) Explain (any two) (i) Inspection Chamber (ii) Contingencies (iii) Flat Brick Soling 2 x 2
 - (c) Prepare a detail quantity estimate for 5 identical partly glazed (approximately 25%) and partly wooden paneled windows of opening size 2 m. x 1.5 m. Assume any necessary data suitably. 4