



SECOND SEMESTER EXAMINATION 2018/2019 SESSION

COURSE CODE: QTS324 COURSE TITLE: *Tendering & Estimating II*

TIME ALLOWED: 2 ½ Hours

CREDIT LOAD: 2 Units

INSTRUCTION: Attempt three (3) questions only

- 1(a)i. What do you understand by "Material Estimating"? (3 Marks)  
ii. What are the forms of allowance required to be made to address material wastage in estimating exercise? (5 Marks)
- (b) Write short note on each of the following:  
i. Bulking ii. Excavation & Earthwork iii. Site Preparation iv. Profit & Overhead (6 Marks)
- (c) As the Quantity Surveyor to a construction project, compute the quantity of laterite filling required for 140m<sup>2</sup> floor area and 150mm thick assuming normal ground. Make and state assumptions made where necessary. (6 Marks)
- 2(a) Analyse and synthesize the unit rate for excavating foundation trench from formation level not exceeding 1.00m maximum depth assuming common soil 0.29m<sup>3</sup> backactor at =N=25,000/hr. Make necessary assumptions required for your computation. (4 Marks)
- (b) Estimate rate for plain in-situ concrete (1:3:6 – 19mm aggregate) in foundation over 150mm but not exceeding 300mm thick. Consider 1m<sup>3</sup> of concrete and the cost of cement @ =N=50,000/Tonne. Assume machine mixing and placing of concrete. Make other necessary assumptions. (10 Marks)
- (c)i. Compute rate for BRC square mesh reinforcement in bed (m<sup>2</sup>) considering 10m<sup>2</sup> of mesh @ =N=1,500/m<sup>2</sup>. Make other necessary assumptions. (3 Marks)  
ii. Build up rate for 12mm diameter mild steel reinforcement in beam, slab, column and staircase (Kg) considering 1 Tonne of reinforcement @ =N=260,000/Tonne. Make other assumptions required. (3 Marks)
- 3(a) Estimate the quantity of decorative screen bricks in an area of 10m<sup>2</sup> using 225mm x 85mm x 250mm Classic Fledor (Tolaram Ceramic) bricks. (6 Marks)
- (b) Estimate the cost/m<sup>2</sup> for 225mm hollow sandcrete blockwork bedded in cement mortar (1:4) in wall. Consider 10m<sup>2</sup> of wall and hand mixed mortar. Make and state all assumptions made where necessary. (10 Marks)
- (c) Estimate the quantity (No.) of louvre blades required for 6mm clear sheet glass louvre blade 150mm wide and 825mm long fixed to metal clip for 10 No. 8 – blade louvre carrier jamb. (4 Marks)
- 4(a) Write short note on the following:  
i. Underpinning ii. Rubble Walling iii. Masonry Work (5 Marks)
- (b) Build up rate for wedging and pinning blockwork to existing with 2 layers felt bedded in cement mortar (1:3) 225mm wide --- m. Take cost of felt @ =N=500/layer; cement mortar @ =N=15,000/m<sup>3</sup>; quantity of mortar required = 0.02m<sup>3</sup>; Labour Gang (1:1); Skilled Labour @ =N=500.00/hr; Unskilled Labour @ =N=285.714/hr. Make other assumptions where necessary. (7 Marks)
- (c) Build up rate for 225mm coursed random rubble wall of Lime Stone in outer skin of hollow wall bedded and jointed in cement mortar (1:3) --- m<sup>2</sup>. Take cost of Lime Stone @ =N=13,750/m<sup>3</sup>; cement mortar @ =N=20,500/m<sup>3</sup>; quantity of mortar required = 0.25m<sup>3</sup>; Labour Gang (1:1). Make other assumptions where necessary. (8 Marks)

GOOD LUCK