[4959] - 1015

B.E. (Civil)

QUANTITY SURVEYING, CONTRACTS AND TENDERS

(2012 Pattern)

Time : 2½ Hours]   *[Max. Marks : 70*

Instructions to the candidates :-

   1)   *Answer Q.No 1 or2, 3 or 4, 5 or 6, 7 or 8, 9 or 10,11 or 12.*

   2)   *Neat diagram should be drawn wherever necessary.*

   3)   *Figures to the right indicate full marks.*

   4)   *Use of electronic pocket calculator is allowed.*

   5)   *Assume suitable data, if necessary.*

Q1) a)   What is an estimate? Hence state the different types and state under which conditions the particular estimate is prepared. **[3]**

     b)   What do you mean by contingencies? How much provision is made for contingencies while preparing estimate? **[3]**

<div align="center">OR</div>

Q2) a)   Explain the following with suitable example; **[3]**

        i)   The provisional sum item   ii)   Prime cost items

     b)   Explain the method of measurement and rule for making deductions for openings for following items; **[3]**

        i)   Plastering to the wall surface, and

        ii)   Brick masonry in superstructure.

Q3) Figure 1(A) & 1(B) shows plans & section of residential building. Determine the quantities of following items. **[8]**

        i)   Excavation in foundation

        ii)   UCR masonry in CM (1:6) in foundation

        iii)   Damp proof course

Q4) Refer Figure 1(A) & 1(B), determine the quantities of following items. **[8]**

    i)   12 mm thick internal plaster.

    ii)   Steel reinforcement in slab for both rooms is 8mm Dia. bars provided at 120 mm c/c along short and long span with alternate bars bent up at support. Determine the quantity of reinforcement.

Q5) a)   A person wish to sell his building at Rs 15.00 lakhs. The life of building may be considered as 80 years and scrap value as 10%. Find the depreciated value on the building if the current age of building is 20 year also at what price the building should be purchased. **[4]**

    b)   State true or false and comment on the following. **[2]**

        i)   The amount of sinking fund to be accumulated is nothing but the total depreciation of the property.

        ii)   Value of a building may be higher than it's estimated cost.

Q6) What is reversionary value of land? Hence determine the present value of a building including land using following data. **[6]**

    i)   Income available from the property : Rs 96000/- per annum.

    ii)   Life of the property: 80 years.

    iii) The rate for redemption of is 6% and rate of interest on Government securities is 5%.

    iv) All outgoings: 35% of gross income.

    v)   Present cost of land: Rs 30 lacs.

Q7) a)   Explain the purpose of Rate analysis. What factors should be considered while working out rate per unit for an item and explain how specification of an item of work affect the rate of an item? **[4]**

    b)   Determine the material requirement for construction of 126 Cu.m of brick masonry in C.M. (1:6), also determine the quantity of water required if W/C ratio for the mortar is 0.55. **[8]**

c) Prepare the rate analysis for Brick masonry in CM1:6 for super structure. The following rates for material & labour may be considered for rate analysis. **[6]**

   i)   Cement = Rs 300/bag

   ii)   Sand = Rs 1400/m³

   iii) Aggregate = Rs 1400/m³

   iv) Bricks = Rs 4500/1000No

   v)   Steel = Rs 38,500/ MT

Labour rate/day

   i)   Head mason = Rs 600/-

   ii)   Mason = 450/-

   iii) Mazdoor = Rs 350/-

   iv) Bhisti/ Helper = Rs 300/-

<div align="center">OR</div>

Q8) a) Draft a detailed specification with respect to materials, labour, workmanship, mode of measurement etc for the UCR masonry foundations and plinth. **[6]**

b) What are the different factors to be considered while drafting specification of an item and explain the step by step method of drafting a specification?

[6]

c) Explain: **[6]**

   i)   Advantages & Disadvantages of open specification

   ii)   Restricted Specification

   iii) General specification for second class building

Q9) a) Explain the unbalanced tender with suitable example. **[4]**

b) Write short note on (any three) : **[6]**

   i) Security deposit

   ii) Pre-bid conference

   iii) Liquidated damages

c) Prepare a tender notice to be advertised in news paper for extension of a college building. The estimated amount is Rs 1.75 crores and work is to be completed in 15 months. Give also the pre qualification criteria's. **[6]**

OR

Q10) a) Explain the purpose of administrative approval and technical sanction during execution of civil engineering works. **[6]**

b) Explain the organizational set up of P.W.D giving the hierarchy of the officers in the P.W.D. Explain the duties & responsibilities of each. **[6]**

c) What is the necessity of engaging daily labour by P.W.D. Explain Muster Roll (MR). Draft a page of Register of Muster Roll form. **[4]**

Q11) a) Compare Lump Sum Contracts and Item Rate Contracts with reference to **[6]**
   i) nature of agreement,

   ii) contract documents and

   iii) advantages

b) Explain the followings (any two) with suitable examples. **[6]**

   i) Valid contract

   ii) Null of void contract

   iii) Termination of contract

c) What is a contract document and explain the contents of a contact document. **[4]**

Q12) a) Define Arbitration and need for arbitration. What are the powers and duties of arbitrators? **[6]**

b) What are the different types of arbitration and explain any one. **[4]**

c) Explain the necessary precaution the Engineer-in Charge should take to avoid arbitration. **[6]**

FIGURE NO. 1 A
PLAN

SCHEDULE OF OPENING

1. DOOR = D = 1.2 X 2.1

2. WINDOW = W = 1.5 X 1.4

NOTE:

ALL WALLS ARE 0.23 m THICK
ALL DIMENSIONS ARE IN METERS

R.C.C. SLAB 0.15 m THICK

P.C.C. 0.1 m THICK
RUBBLE SOLING 0.3 m THICK
MURRUM FILLING 0.2 m THICK

FIGURE NO. 1 B
SECTION

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