DR. KALAM POLYTECNIC COLLEGE, AVANAM

DEPARTMENT OF CIVIL ENGINEERING

UNIT-I

SUBJECT:21064/ESTIMATING&COSTING-II

PART-A

1. What is specification?
2. Name the various types of specification.
3. Name the provision in a specification.
4. What is the standard specification?
5. Differentiate general specification and detailed specification.
6. What particulars are to be incorporated in a detailed specification of materials?
7. What is the necessity of a specification?
8. Mention any two departments which have developed their own specification .
9. What are the advantages of standard specification?
10. What is report writing?
11. Write any two points to be considered while writing a technical report for a project.
12. What are the details required for writing a general report on a project?
13. What are the necessities of report writing?
14. What are the different documents accompany the report?

PART-B

1. Explain the essential requirements of specification. **(APR 2014)**
2. Explain the types of specification. **(APR 2014)**
3. Write a detailed report to accompany the estimate for the construction of a school building. **(APR 2014, 16)**
4. Write a detailed specification involved in the construction of a slab culvert.. **(APR 2014)**
5. Define report writing. Write the documents to accompany the report. **(APR 2014)**
6. What are the points to be considered while writing technical reports?
7. Write a detailed specification involved in the construction of a Tar road.
8. Write a detailed specification involved in the construction of a concrete road.
9. Write a detailed specification for brick work in CM 1: 5 for super structure. **(APR 2016)**
10. Write general specification for any six items of work involved in the formation of water bound macadam road. **(APR 2015)**
11. An estimate has been prepared to give water supply to a village. Write a report for this estimate. **(APR 2015)**

UNIT-II

PART-A

1. What is valuation?
2. Write any two different between cost and value.
3. Write the purpose of valuation.
4. Define capital cost.
5. Define cross income and net income.

6. Define outgoings and capital value.
7. Define sinking fund.
8. Define depreciation.
9. Define salvage value and obsolescence.
10. Define book value and year purchase.
11. Define market value and mortgage.
12. Write the types of leases.
13. Write the methods of valuation of land.
14. Define rend calculation.

PART B

1. An owner occupied property is required to be valued for the wealth tax purpose on land and buildings. The following particulars are available. Find the present value of the property. **(APR 2016)**

Value of the land	Rs3,25,000
Cost of building	Rs12,00,000
Age of building	45 YEARS
Estimated cost of repairs	Rs90,000
Depreciation to be allowed for the building	0.7% per annum

2. Calculate the fair rent for a building to be used for residential purposes from the following data. **(APR 2016)**

Cost of building at the present market rate	Rs1,80,000
Age of the building	20 years
Materials used	RCC and teak wood
Area of the plot	200 m^2
Cost of land in the locality	Rs350/m^2

Sanitary, Water supply amenities and electrical fittings Rs20,000

3. Find the value of a free hold property with following particulars.

Area of land = 600 m^2

Build up area = 200 m^2

Gross annual rent = Rs72, 000/-

Permissible built up area = 50% of area of plot

Estimate life of structure = 50 years

Estimated rate of open land = 800 m^2

Interest on capital = 8% and interest on redemption of capital 5%

Outgoings =30% of gross rent. **(APR 2015)**

4. Differentiate scrap value and salvage value. Explain it. **(APR 2014)**
5. What are the different methods of valuation of buildings?**(APR 2014)**
6. Mention five important outgoings of a property.
7. Work out gross rent and net rent per month of a building which is constructed at a cost of Rs. 200000/- on a free holdProperty. The area of the land is 150 m^2 and the cost of land is Rs. 5000/- m^2 Assuming the outgoings including sinking fund is Rs.20000/- per annum. Expected net rent is 6% of land and 12% of cost construction. **(APR 2014)**
8. Distinguish between scrap book and market value. **(APR 2014)**
9. Write short notes on: (a) Market value (b) Rateable value (c) Deferred value (d) Lease (d) Mortage

UNIT-III

PART-A

1. 1.What is data?
2. Prepare the data for cement mortar 1:5 – 1m^3
3. Write any two materials for which the lead cost is more than their actual cost.
4. What is mean by Ferro cement?
5. Why rate are to be analyzed separately for each project site?
6. What do you mean by observed data?
7. What is timbering of trenches?
8. What is manhole ?
9. Give example for sub data?
10. Define the term rate analysis?
11. What particulars you need to arrive to the rate for construction of a manhole?
12. What is lead statement?
13. What is schedule of rates?
14. Write the factors affecting the rate analysis?

PART B

1. Analyze and determine the rate for the following items of work with the given data. (A) Providing and fixing 25mm dia GI pipe to wall, ceiling and floor, including fittings, clamps and making good the wall, ceiling and floor -10m

Materials required for 10m

25mm dia GI pipe -10m

Fittings and wastages @ 15% of cost of pipe

White lead, hemp oil LS

Cement, sand and grit LS

Labors required

Plumber-0.83 no

Mazdoor -0.67 no

Add 1% for water charges

Cost of materials

25mm dia GI pipe - Rs175/m

Cost of labour

Plumber - Rs600 each /day

Mazdoor category 1 - Rs400 each / day **(APR 2016)**

2. Supplying and fixing in position CI man hole covers with CI frames (heavy duty) of size 60cm×60cm of best approved quality as per standard specifications etc., complete complying with standard specification.

Materials Required

Man hole cover - 1 No

Cement mortar - 0.004m^3

Mason 1st class - 0.04 No

Mazdoor 1st class - 0.35 No

Cost of Materials

Man hole cover - Rs.2500/ each

Cement - Rs.6000/ ton

Sand - Rs.500/ m^3

Mason 1st class - Rs.500 each/day

Mazdoor 1st class - Rs.400 each/day

Mixing charge - Rs.150/m^3 **(APR 2016)**

3. Supplying and fixing in position of Indian water closet size 580×440mm with glazed earthen ware of approved quality with p or s trop with sand cushion and forming flooring all-round the closet using 40mm broken jelly in lime concrete 1:2:5 mix, 100mmthick and finishing the top required slope and including necessary connection to cast iron soil pipe by dismantling brick masonry or floor slab without leakage etc .Complete complying with standard-1 no.

Material required

Water closet 580mm -1No

C.I pipe 100mm	-0.6m
Sand for filling	-0.45m^3
Brick jelly 40mm	-0.11m^3
Plumber I class	-1No.
Plumber II class	-0.25 no.
Mason I class	-1 No.
mazdoor I class	-1No.
White cement	-1kg
Cement	-6kg
Spun yarn	-0.40kg
Sundries	-L.S

Cost of materials

Indian water close	- Rs3000/set
C.I pipe	- Rs300/m
Sand	- Rs500/m^3
Brick jelly 40mm	- Rs300/kg
White cement	- Rs50/kg
Cement	- Rs6000/ton
Spun yarn	- Rs25/kg

Cost of labour

Mason I class	- Rs600/each/day
Mazdoor I class	- Rs500/each/day
Plumber I class	- Rs650/each/day
Plumber II class	- RS600/each/day

4. Wooden frame for doors-wood work in frame, wrought framed and fixed of size 1.20× 2.00m door without sill.

Material required

Timber	-0.056m^3
Carpenter I class	-1/16 Nos.
Carpenter II class	-0.75No.
Helper	- 0.5 No.
Sundries	-L.S.

Cost of materials

Timber	- Rs55000/m^3

Cost of labour

Carpenter I class	- Rs600/each/day
Carpenter II class	- Rs500/each/day
Helper	- Rs300/each/day

5. Analyze and determine the rates for the following items of work with the given data,

(A) (i) Earth work excavation in trench up to 1.5m depth for laying sewers in ordinary soil including dressing, leveling in gradient, ramming and removing surplus earth up to 30m distance -1 m^3

(ii) Earth work excavation in trench for 1.5m to 3m depth- 1 m^3 **(APR 2014)**

6. (i) Soling 150mm thick with laterite stones of 150mm size and blindage with 20mm thick gravel rate for 10 m^2

   (ii) Laying water bound macadam over the existing soling by spreading metal (IRC 50mm size and IRC 40mm size in equal Proportion) with required camber to an average thickness of 100mm and blindage with 25mm thick including dry rolling and wet rolling using power. **(APR 2014)**

UNIT-IV

PART-A

1. Write two methods for taking off quantities.
2. Mention two advantages of group system over trade system.
3. Why the lump sum provisions are being made in the estimate of an over head tank?
4. Where steining walls are provided?
5. Write any two items involved in rain water harvesting.
6. How you estimate the quantity steel reinforcement in RCC work?
7. What is lump sum provision?
8. What will be the unit of measurements for earth work excavation?
9. What are the uses of septic tank?
10. Define PCC and RCC.

PART-B

1. Take the quantity of earth work excavation of septic tank with dispersion trench. **(APR2015)**
2. Take the quantity of brick work of septic tank . **(Oct15,APR15,16)**
3. Take the quantity of the following item of work for the open well with masonry steining Brick work in CM 1:4 in steining (b) Plastering with CM 1:3 in steining. **(Oct15 , APR 16)**
4. Determine the quantity of following works in the over head tank. R.C.C 1:2:4 for footing (b) Plain cement concrete 1:1.5:3 (c) Plastering with CM 1:3 **(APR 2014)**
5. Take the quantity of plastering cement concrete 1:3:6 of septic tank.

UNIT-V

PART-A

1. Write any two items involved in WBM road.
2. What are the works involved in the construction of side drains for a road?
3. State the unit of measurements for foundation concrete.
4. What is wearing coat in slab culvert? State the unit of measurements.
5. Write the expansion for WBM.
6. What are the works involved in construction of single span slab culvert? APR 16
7. Define culvert. APR 16
8. What will be the unit of measurements for the plastering in Tee Beam Bridge? APR 16

PART-B

1. Take the quantities foe TEE beam bridge.
   (a) R.R masonry in CM 1:6
   (b) Earth work excavation for foundation. (c) R.C.C 1:1.5:3 for deck slab **(APR 2014)**

2. Take the quantities of following items for slab culvert.
    (a) Plain cement concrete 1:4:8 for abutment and pier
    (b) R.R masonry in CM 1:6
    (c) (c) R.C.C 1:1.5:3 **(APR 2015)**
3. Take the quantities of following items for cement concrete road.
    (a) Earth work excavation for foundation. (**OCT 2015)**
    (a) Take the quantities of cement concrete 1:3:6 using 40mm ISS HBG metal for base course and wearing Coat cement concrete of grade M30 75mm thick using 6mm ISS HBG metal. **(APR 2014)**
4. Take the quantities of following items for water bound Mecadam road
    (a) Wearing coat (b) Earth work embankment **(APR 2016)**