7th Sem CIVIL

Estimating & Costing

Date

1(a) What is an estimate & its object & data required for est. (See (A))

(b) ~~Different~~ Methods of preparing the estimate & main items of work.

2(a) Types of est. & method of building estimate.

3) Estimate the quantities of E shape & Two roomed building of E/W, Conc. & brick masonry.

4) Write the units of measurements & unit of payment of following E/W excavation, DPC, Shuttering, C.C. 1:4:8, R.C.C. 1:2:4, brick work, floor, Roof, painting, White Washing, Ballies, iron grills

5) Method used for Calculation of E/W in hill road & the fig. Canal sections.

6) a) What is analysis of rate (See (B)), its importance & steps for analysis of rate.

b) Out-turn an Average of Skilled Labour per day = E/work, CC 1:4:8, DPC, brick work Plastering, White Washing, Distempering, C.C. floor

7) Analysis of rate of R.C.C. 1:2:4, DPC 40 mm, C.M., White Washing, E/Work

8) Types of specification (Sec-(C)), necessisty & general specification of 1st class, 2nd & 3rd class building

9) Detailed specification of R.C.C. 1:2:4, brick masonry, Plastering White Washing, C.C. floor.

10 What is muster-Roll (Sec-D), its parts & where used also rules to maintain M.R.

11 a) What is Cash book & how it is maintained

b) MB. & guide lines to MB, procedure for making payment.

12 a) Types of payment made to Contractor.

b) Tender & procedure for Calling & acceptance of tender.

13 What is Valuation, its purpose & methods of Valuation & principle of Valuation

14 Explain the following:— Scrap Value, Salvage Value, Sinking fund, Depreciation, Earnst money, Security, Technical Sanction Administrative approval, departmental charges, Work charged estt. Deposite Work, Competetent authority.

15) a) A property fetch a net annual income of Rs 900 deducting all outgoing. Work out Capitalized Value of property if rate of ~~Property~~ interest is 6% per annum.

b) A machine has been installed in a factory at a Cost of Rs 10,000. Assuming life of machine is 20 years, Calculate the amount of annual installment of sinking fund required to be accumulate the Whole amount of 5% Compound interest.

Civil - 7th sem

Imp. Question

Subject - Ground Water

Date :

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Q:1 Explain Aquifer, its types and properties of Aquifers.

Q:2 Explain eqn of motion for steady and unsteady ground water flow.

Q:3 What do you mean by ground water exploration and what are the different methods of investigation

Q:4 Derive an expression for a flow with recharge and tile drain problem

Q:5 What is Thiem's equilibrium formula, and dupit's assumption for Confined and unconfined aquifer

Q:6 What do you mean by partial penetration and spherical flow in a well?

Q:7 Define Tube wells, and what do you understand by well screen installation Assembly.

Q:8 Types of Tubewells, with neat and clear sketch.

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Q:-9 Construction and working of tube-well (drilling, cable tool and hydraulic method).

Q:-10 What do you mean by pumping equipment and testing of pumps.

Q:-11 How you select a site for tubewell and how development is done in tubewell?

Q:-12 Define Recharge, and its types and explain recharge pits.

Q:-13 Difference b/w Artificial and Natural Recharge in Ground water

Q:-14 Explain recharge technique in infiltration, water spreading & flooding.

D.M.M

Q1 What is mitigation? What do you mean by disaster mitigation.

Q2 What do you mean by integrated approach? How integrated approach can be beneficial during a cyclone.

Q3 Describe role of civil engineer in disaster management

Q4 What is marine disaster? Give examples of war-time and peace time disaster.

Q5 How mitigation process can be carried out in coastal areas?

Q6 Name different types of hydrological disaster?

Q7 Give examples of Tsunami & ~~des~~ give details about them.

Q8 What are atmospheric disaster? Give details about the chernobyl disaster (1989) & how ~~they~~ ~~can~~ these disaster can be mitigated.

Q9 What is Land mass movement & what are its types

Q10 Give details about the disaster earthquake in bhuj, uttarkashi & Killari?

Q11 What are various forest related disaster? How forest fire can be spread and how it can be prevented from spreading

Q12 What are wind and water disasters? Give examples of these.

Q13 Describe any three mining disaster happened in the past. Give method of preventing mining disaster.

Q14 Give examples of three major earthquake happened & also what caused them. Describe in detail.

Q15 What causes cyclones and what are remedies for it.

Q16 What are qualities of an earthquake resistant structures? (10 points)

Q17 What is mitigation process for landslides.

Q18 What are simple configration in buildings

Q19 What are soft floors & what are there benefits & their elements.

Q20 How the foundation reacts during earthquake of a building

Q21 What is base isolation & what are it's benefits.

Q22. As a civil engineer how ~~will~~ you can you benefit in outbreak of a fire in a building.

IRRIGATION ENGINEERING - II

Q1 Write diff b/w Syphon aqueduct & Super passage

Q2 Design a syphon aqueduct for the following data:

(i) Discharge of canal : 60 cumec
(ii) Bed width of canal : 20m
(iii) ~~High~~ f Bed level of canal : 2m 260m
(iv) Be Depth of canal : 2m
(v) High flood discharge of drain : 450 cumec
(vi) High floor level of drain : 261 m
(vii) Bed level of the drain : 258 m
(viii) General ground level : 260 m
(ix) Silt factor = 0.9

Q3 What is cutoff? Describe briefly how cutoff may be used of river training measure.

Q4 The following data pertain to river bridge site

Maximum discharge = 24000 cumec
Highest flood level = 292 m
River bed level = 284 m
Avg dia of river bed material = 0.10m

Design guide bank including launching apron.

Q5 Give difference b/w Sarda type fall & Straight glacis fall.

Q6 Explain all the design steps of Sarda type fall.

Q7 Design a Sarda type fall for following data:-

(i) Full supply discharge : U/S / d/s = 45 cumec.

(ii) Full supply level : U/S / d/s = 118.80m / 116.80m

(iii) Full supply depth : U/S / d/s = 1.8m / 1.8m

(iv) Bed width : U/S / d/s = 28m / 28m

(v) Bed level : U/S / d/s = 116.50m / 115.00m

(vi) Drop : 1.5m

Q8 Write down design steps of Ogee or overflow spillway.

Q9 What are benifits of ogee or overflow spillway.

Q10 Design a vertical drop weir with following data

(a) Max. flood discharge = 2585 cumec

(b) H.F.L before construction = 255 m

(c) Min. water level = 248 m (d/s bed level)

(d) F.S.L of canal = 254m

(e) Allowable Afflux = 1m

(f) C (coefficient of creep) = 12

Assume any data not given

Q11 What is barrage? How it is diff. from weir?

Q12 What is utility of launching apron? How are these designed.

Q13 Describe briefly with neat sketches the various types of weir.

Q14 What are two diff. conditions for transition design in Syphon aqueduct

(D.S.S-II) (VIIth sem, CIVIL)

Q-1 Numerical problems on square and rectangle for finding the shape factor?

Q-2 What is shape factor and load factor?

Q-3 Numerical problems on beams for finding the collapse load?

Q-4 Neumerical problems for beam and sway mechanism for finding the moment?

Q-5 Numerical and design procedure of circular water tank?

Q-6 Numericals and design steps of rectangular water tank?

Q-7 Explain staging in water tank, different types of codes used in water tank. Also Explain the stand pipe and stiffening Angle?

Q-8 Numericals and design steps of industrial building for load in roof and truss? [Example 11.2 ↓ DUGGAL]

Q-9 Different types of elements in Industrial building. Explain briefly?

Q-10 Explain the design loads which acts on the transmission line and microwave towers?

Q-11 Numerical and design steps of steel stack?

Q-12 Numerical on the microwave lattice tower and also the design steps of lattice towers?

Q-13 Explain various types of shapes of cold-formed steel structures?

Q-14 Define :- stiffened, Unstiffened Element and multi-stiffened element and Explain the procedure of effective design width?

Q-15 Find the column section properties and allowable load for column section?

Q-16 Determine the allowable load in two channel section per (m) run on the beam. Where the column acts as a beam?

Subject – HPG [CE – 7th sem]

Some Important Questions :-

Q1:- Compare hydropower with thermal power w.r.t. Indian conditions. What are the advantage of hydropower?

Q2:- Discuss the status of hydropower worldwide & also discuss the sources of energy.

Q3:- What is load duration curve? Explain with sketch. Discuss its use.

Q4:- What is a pumped storage plant? Explain the advantages of a pumped storage plant for short peak load duration.

Q5:- What are various types of surge shafts? Explain each.

Q6:- Write short note on:-

i) Water hammer
ii) Types of valves
iii) Anchor blocks
iv) Classification of penstocks.

Q7:- Explain the design theory of the draft tube.

Q8:- What are various types of powerhouse? Discuss them with the help of advantages & disadvantages of underground power-houses.

Q9:- What are the various types of hydraulic turbines? Briefly explain the various considera-tions

in the selection of a proper type of turbines for a hydro power station.

Q10:- Define the following terms:-

i) Load factor.
ii) Plant factor.
iii) Utility factor.
iv) Diversity factor.
v) Load curve.
vi) Unit power of hydraulic turbine.
vii) Unit discharge of hydraulic turbine.

Q11:- Explain run-of-river plants? Why these plants have not been adopted in this country.

Q12:- What is difference b/w storage & pondage? Support your answer with a neat sketch.

Q13:- Classification of hydro-power plants.

Q14:- Discuss the various types of pumped storage power plant.

Q15:- Discuss the firm power & sec° power in brief.

Q16:- Discuss the method of prediction of loads.

Q17:- Write a note on:-
a) reversible turbines
b) efficiency of pump storage plants.