Code: 15O-1307 CIVIL

THIAGARAJAR POLYTECHNIC COLLEGE, SALEM

Autonomous Final Semester 2020 Examinations

DIPLOMA IN CIVIL ENGINEERING **Reg. No.**

CONSTRUCTION MANAGEMENT

Year/Sem: III / VI (EVEN-III) **Time : 2 hrs**

Date & Session: 23.09.2020/FN **Max. Marks : 50**

PART-A **(4 x 2 = 8 Marks)**

Note: (i) Answer any FOUR questions. (ii) All the questions carry equal marks.

1 What do you mean by work order?

2 What is sub contract?

3 Define the term: cash book

4 Draw time versus cost optimization curve.

5 What are the elements of quality?

6 What do you mean by code of ethics?

7 Define: MIS

8 Explain the term: Time value of money

PART-B **(4 x 3 = 12 Marks)**

Note: (i) Answer any FOUR questions. (ii) All the questions carry equal marks.

9 Write short notes on administrative approval and technical sanction.

10 Explain the term work charged establishment.

11 Describe in detail about job layout.

12 What do you mean by crashing and explain the need for crashing an activity?

13 What are the categories of disputes and explain the modes of settlement?

14 Write a note on Employees Provident Fund (EPF) act.

15 What are the functions of NIDCO?

16 Explain about financial feasibility.

PART-C **(3 x 10 = 30 Marks)**

Note: i) Answer any THREE questions ii) All the questions carry equal marks

17 Explain in detail about various stages of a construction project. 10

18 Describe in detail about types of contract. 10

19 Write down the qualities required for an efficient construction manager. 10

20 The following are the three time estimates of activities. Compute the average expected time for each activity. Draw the project network. Calculate T_E, T_L and slack for each mode. Identify the critical path. What is the expected project length? 10

Activity	1-2	1-3	1-4	2-5	3-5	4-6	5-6
t_O	1	1	2	1	2	2	3
t_L	1	4	2	1	5	3	6
t_p	7	7	8	1	14	10	15

21 i) Write a note on payment of wages act. 5
ii) Explain in detail about ethical issues. 5

22 i) Write a note on concepts of entrepreneurship. 5
ii) Explain the uses of computer in Construction industry. 5

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THIAGARAJAR POLYTECHNIC COLLEGE, SALEM

Autonomous Final Semester 2020 Examinations

DIPLOMA IN CIVIL ENGINEERING **Reg. No.**

HYDRAULICS

Year/Sem: III / VI (EVEN-III) **Time : 2 hrs**

Date & Session: 24.09.2020/FN **Max. Marks : 50**

PART-A **(4 x 2 = 8 Marks)**

Note: (i) Answer any FOUR questions. (ii) All the questions carry equal marks.

1 Define Hydraulics.

2 Define gauge pressure.

3 What is a notch?

4 What is cippoletti weir?

5 Why canals are lined?

6 What is venturiflume?

7 What is priming?

8 If the coefficient of contraction is 0.65 and the coefficient of velocity is 0.96. Find the Coefficient of discharge.

PART-B **(4 x 3 = 12 Marks)**

Note: (i) Answer any FOUR questions. (ii) All the questions carry equal marks.

9 What do you mean by intensity of pressure and pressure head? Write the relationship between them.

10 How does viscosity of a fluid vary with temperature?

11 What are the major difference between Venturimeter and Orificemeter?

12 Write a note on the head loss due to sudden contraction. Write the formula to calculate it.

13 Distinguish between weir and notch.

14 Write the methods of rainwater harvesting.

15 Draw the characteristic curves of centrifugal pump.

16 The discharge of water flowing in a 7m wide and 2 m deep canal is $12m^3/s$. Find the Critical depth of the canal.

PART-C **(3 x 10 = 30 Marks)**

Note: i) Answer any THREE questions ii) All the questions carry equal marks

17 The vacuum pressure at a point A in pipeline carrying water was measured by a U-tube manometer. The deflection of mercury between limbs was 0.05m and the free surface of mercury in the open limb was 0.10m below A. Find the pressure at A in absolute units in terms of meter of water. 10

18 A Triangular plate of 0.9 sq.m surface area is immersed in water with the base above the apex. The plane of plate is inclined at 25^o with the free water surface and the 1m wide base is parallel to and at a depth of 2m from free water surface. Find the total pressure and the position of centre of pressure. 10

19 Calculate the flow of water in lph through a 40cm x 15cm Venturimeter. The differential gauge connected to the mouth and throat reads 25cm of mercury. Assume the coefficient of discharge as 0.98. 10

20 A rectangular weir, 10m long is divided into 5 equal bays by 4 vertical piers each 0.3m thick. Find the discharge over the weir when the head of water flow is 0.9m. Take C_d=0.6. 10

21 An economical rectangular channel discharges 15 cumecs of water with a velocity of flow 1.6 m/s. Take Chezy's constant as 60. Find a) Depth of flow b) Bed width c) Bed fall. 10

22 Describe the tests available to determine the yield of a well. 10

Code: 15O-1402A CIVIL

THIAGARAJAR POLYTECHNIC COLLEGE, SALEM

Autonomous Final Semester 2020 Examinations

DIPLOMA IN CIVIL ENGINEERING **Reg. No.**

ADVANCED CONSTRUCTION TECHNOLOGY

Year/Sem: III / VI (EVEN-III) **Time : 2 hrs**

Date & Session: 25.09.2020/FN **Max. Marks : 50**

PART-A **(4 x 2 = 8 Marks)**

Note: (i) Answer any FOUR questions. (ii) All the questions carry equal marks.

1 What is Pile cap? Mention its objective.

2 What do you mean by pre-fabrication system?

3 Define Module. What is the purpose of it?

4 What is Seismograph? Define its objective.

5 Write down the values of Seismic coefficient for different zones.

6 Explain the terms Rehabilitation of buildings and demolition of buildings.

7 What do you mean by Modular kitchen? Why it is provided?

8 Explain the term shotcrete.

PART-B **(4 x 3 = 12 Marks)**

Note: (i) Answer any FOUR questions. (ii) All the questions carry equal marks.

9 Write down the advantages of precast concrete piles.

10 Explain the production process and uses fibre reinforced concrete.

11 What are the requirements of an Ideal structural joint?

12 Write down the precautionary measures to minimize the danger of fire.

13 What are the effects of seismic forces on buildings?

14 Write short notes on Transverse cracks in RCC slab and sunshade.

15 Explain shortly about zero Energy house.

16 Write short notes on Lift car interior.

PART-C **(3 x 10 = 30 Marks)**

Note: i) Answer any THREE questions ii) All the questions carry equal marks

17 How a pile is tested for load bearing capacity? Explain the traditional load test. 10

18 Describe in detail about the Modular Co-ordination system. 10

19 Explain in detail about Manufacture of precast concrete elements. 10

20 Explain in detail about fire extinguishing arrangements provided in buildings. 10

21 Explain in detail about
i) Repairing of plastering works. 5
ii) Making opening in Masonry. 5

22 Explain in detail about Roof Insulation. 10