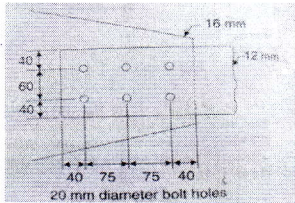




Q. No.	Questions	Marks	Levels of Bloom's taxonomy	CO's
Part I				
1)	Explain the term tension member & shear leg.	4	Understand	CO3
2)	Design a bridge truss diagonal subjected to a factored tensile load of 310KN. The length of the diagonal is 3.1m. The tension member is connected to a gusset plate 14 mm thick with one line of 20 mm diameter bolts of grade 8.8.	16	Apply	CO3
3)	<p>(i) A plate tension member is shown in fig. It is connected to a 12 mm thick gusset plate. Determine the block shear strength of the gusset plate.</p>  <p>(ii) Calculate the design compressive load for a ISHB 350 @ 661.2 N/m. Effective length of column is 7m with respect to z-axis and 5 m with respect to y-axis. Use Fe 410.</p>	16	Apply	CO3&CO4
Part II				
1)	Distinguish between laterally restrained and unrestrained beams with the help of sketches.	4	Understand	CO5
2)	Determine the load carrying capacity of ISMB 600 @ 1.202kN/m used as a cantilever beam of 3 m effective span. Also check for i) Shear, ii) Web buckling, iii) Web crippling. Assume stiff bearing length, $b_1 = 270$ mm, and iv) Deflection. Take $f_y = 250$ N/mm ² , $E = 2 \times 10^5$ N/mm ² .	16	Apply	CO5
3)	Design a laterally unsupported beam for the following data: Effective span: 4m Maximum bending moment: 550kNm Maximum shear force: 200kN Grade of steel: Fe 410	16	Apply	CO5



Shri Shankaracharya Institute of Professional Management & Technology

Department of Civil Engineering

Class Test – II Session- Jan-June, 2023

Month- June

Sem- 6th Subject- Disaster Management

Code-C000604(094)

Time Allowed: 2 hrs

Max Marks: 40

Note: - Question Q1 is compulsory. Attempt any 2 questions from Q2, Q3, and Q4.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
PART-I				
Q1	Explain briefly the early warning system in disaster management.	[4]	Understand	CO3
Q2	Schedule the mitigation tools for reducing risks associated with floods.	[8]	Apply	CO3
Q3	Describe the concept and significance of Disaster Preparedness. What are the measures adopted for Disaster Preparedness?	[8]	Understand	CO3
Q4	Describe the details about the construction techniques required for the mitigation of damaged structures.	[8]	Understand	CO4
PART-II				
Q1	Explain the disaster management act 2005.	[4]	Understand	CO4
Q2	Identify the steps to be taken for Rehabilitation. Describe briefly the role of various agencies in the Rehabilitation process.	[8]	Understand	CO5
Q3	Discuss the long-term relief measures in Disaster Management.	[8]	Understand	CO5
Q4	Explain the pre-disaster, during, and post-disaster measures for any major type of disaster.	[8]	Understand	CO5



Shri Shankaracharya Institute of Professional Management & Technology

Department of Civil Engineering

Class Test – II Session: January - June, 2023 Month – June

Semester – 6th Subject – EEE&C, Code – C020613(020)

Time Allowed: 2 hrs Max Marks: 40

Note: -Question (a) is compulsory. Attempt any two from b, c and d form Part I and Part II.

Q. No.	Questions	Marks	Levels of Bloom's taxonomy	COs																											
Part- I																															
(a)	Evaluate the quantity of materials for 200 cum concrete work in foundation.	[4]	Evaluate	CO3																											
(b)	Analyze the rate for cement concrete flooring 1:3:6.	[8]	Analyze	CO3																											
(c)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Distance in Meter</th> <th>RL of Ground</th> <th>RL of Formation</th> </tr> </thead> <tbody> <tr> <td>1000</td> <td>51.00</td> <td>52.00</td> </tr> <tr> <td>1040</td> <td>50.90</td> <td rowspan="11" style="text-align: center; vertical-align: middle;"> </td> </tr> <tr> <td>1080</td> <td>50.50</td> </tr> <tr> <td>1120</td> <td>50.80</td> </tr> <tr> <td>1160</td> <td>50.60</td> </tr> <tr> <td>1200</td> <td>50.70</td> </tr> <tr> <td>1240</td> <td>51.20</td> </tr> <tr> <td>1280</td> <td>51.40</td> </tr> <tr> <td>1320</td> <td>51.30</td> </tr> <tr> <td>1360</td> <td>51.00</td> </tr> <tr> <td>1400</td> <td>50.60</td> </tr> </tbody> </table> <p>Formation width of road is 10 m. Side slope are 2:1 in banking and 1.5:1 in cutting.</p>	Distance in Meter	RL of Ground	RL of Formation	1000	51.00	52.00	1040	50.90		1080	50.50	1120	50.80	1160	50.60	1200	50.70	1240	51.20	1280	51.40	1320	51.30	1360	51.00	1400	50.60	[8]	Apply	CO2
Distance in Meter	RL of Ground	RL of Formation																													
1000	51.00	52.00																													
1040	50.90																														
1080	50.50																														
1120	50.80																														
1160	50.60																														
1200	50.70																														
1240	51.20																														
1280	51.40																														
1320	51.30																														
1360	51.00																														
1400	50.60																														
(d)	Analyze the rate for birck work with first class brick 1:3		[8]	Analyze	CO3																										
Part- II																															
(a)	Differentiate between SMD and Retention Money.	[4]	Analyze	CO4																											
(b)	Discuss the different types of a valid contract and legality of contracts.	[8]	Understand	CO4																											
(c)	Describe the different types of tenders and tender documents.	[8]	Apply	CO4																											
(d)	Describe the method of depreciation.	[8]	Understand	CO5																											



Q. No.	Questions	Marks	Levels of Bloom's taxonomy	CO's
Part I				
1)	Explain segregation and bleeding in concrete.	4	Understand	CO2
2)	What is workability of concrete? What are the factors which affect workability and also briefly explain any one test to measure the workability.	8	Understand	CO2
3)	What is admixture in concrete? Explain mineral admixture with example.	8	Understand	CO2
4)	Design a concrete mix for M25 using IS Code 10262-2019 guidelines. Assume other conditions yourself.	8	Create	CO4
Part II				
1)	What do you understand by special concrete. What is the need of special concrete.	4	Understand	CO5
2)	Explain in details the non-destructive testing of concrete using rebound hammer test.	8	Understand	CO4
3)	Write short note on : Light weight concrete & Self compacting concrete	8	Understand	CO5
4)	Explain with appropriate sketches how a 'tremie' is used to place concrete underwater.	8	Understand	CO5

Shri Shankaracharya Institute of Professional Management & Technology
Department of Civil Engineering

Class Test – II Session: Jan-June 2023 Month – June



Semester – 6th Subject – Environmental Engineering Code –C020612(020)

Time Allowed: 2 hrs.

Max Marks: 40

Note-In Part-I&II, Question No. 1 is compulsory and solve any two from Question No. 2, 3 and 4.

Q. No.	Questions	Marks	Levels of Bloom's taxonomy	CO's
Part I				
1)	Discuss various types of sanitation systems by giving their advantages and disadvantages.	4	Understand	CO3
2)	Derive the hydraulic elements of a circular sewer. Determine the size of a circular sewer running half full for 600lps discharge. Assume $S = 0.0001$ & $N = 0.012$	8	Apply	CO3
3)	A 2% Solution of sewage is incubated for 5 days at 20°C . The depletion of oxygen was found to be 4mg/L. Determine the BOD of the sewage. What will be the 3-day BOD when the temperature changes to 37°C ? Take k (at base 10) = 0.1 per day at 20°C . Also calculate the ultimate BOD?	8	Apply	CO3
4)	Explain the purpose of Grit Chamber. Explain its working with a neat and labelled diagram	8	Understand	CO3
Part II				
1)	Differentiate between attached growth system and suspended growth system with relevant examples.	4	Understand	CO4
2)	Explain construction and working of a conventional trickling filter with the help of a neat and labelled diagram. Also list out the operational troubles of trickling filters.	8	Analyze	CO4
3)	Determine the dimensions of a high-rate trickling filter for the following data: 1) Sewage flow = 3 MLD 2) Recirculation ratio = 1.5 3) BOD of Raw Sewage = 250 mg/L 4) BOD removed in primary tank = 25% 5) Final effluent BOD desired = 30 mg/L 6) Depth = 1.5 m By what % the diameter will have to be modified if it is designed as a standard rate trickling filter for the same data?	8	Apply	CO4
4)	Explain in detail any two from the following: 1) Oxygen Sag Curve 2) Self-Purification of Streams 3) Methods of waste disposal	8	Analyze	CO5