Sir M.Visvesvaraya Institute of Technology

Bengaluru - 562157

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Department of Information Science and Engineering

Course File

Name of the Faculty : Bhavya.S

Academic Year : 2023-24

Name of the Subject with code : 21CV51

Semester and year : V^th

Name of the faculty Subject : Hydrology & water Resources Engg

SL No	Contents in Course File	Page Number
1.	Department Vision, Mission, PEOs, PSOs, POs	
2.	Subject Allotment order	
3.	Course Information sheet	
4.	Calendar of Events	
5.	Time Table of the class and Individual Time Table of the faculty	
6.	Student List	
7.	Syllabus copy for the course	
8.	Lesson Plan	
9.	Evaluation Pattern for the course	
10.	CO-PO-PSOs Mapping and justification	
11.	CO-PO Attainment sheet of the previous year for the same course Actions taken to improve the attainment and report MoM from DAAC(DEPT Academic Advisory Committee)	
12.	Lab Course Plan with CO/PO/PSO Mapping for Lab(IPCC) CO PO mapping print out sheet for Lab CO-PO Justification for the correlation given 1,2,3 for Lab CO-PO Attainment sheet for Lab CO-PO Attainment sheet of the previous year for the same lab course Continuous Improvement Evaluation (CIE) in Lab sheet.	
13.	Gaps in the curriculum as identified during the introduction of new scheme	
14.	Topics Beyond Syllabus to bridge the Gaps in the Curriculum	
15.	Internal Test Question papers with CO –PO mapping and Blooms Taxonomy with scheme of evaluation.	

16.	Internal Marks
17.	List of slow learners and attendance sheet of the remedial classes conducted and impact analysis.
18.	List of fast learners and their achievements
19.	Tutorial sheets(If applicable)
20.	Course Material
21	Pedagogical/Innovative Teaching
22.	Impact Analysis sheet of Assignment/Seminar/Workshop along with PO attainment
23.	Course end survey by the students.
24.	Student Feedback
25.	Result Analysis
26.	CO-PO Attainment sheet
27.	Additional Responsibilities if any .....

Signature of Staff

Signature of HOD

Dept. of Civ. Engg.
Bangalore-562

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY,
BENGALURU – 562157
DEPARMENT OF CIVIL ENGINEERING

VISION AND MISSION OF DEPARTMENT OF CIVIL ENGINEERING

VISION

- To create competent, disciplined quality Engineers and administrators of global standards in Civil Engineering with capability of accepting new challenges.

MISSION

- To impart quality education in civil engineering to raise satisfaction level of all stake holders.
- To serve society and the nation by providing professional civil engineering leadership to find solution to community, regional and global problems and accept new challenges in rapidly changing technology.
- To create competent professionals who are trained in the design, and development of civil engineering systems and contribute towards research & development activities.

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DEPARMENT OF CIVIL ENGINEERING

Program Educational Objectives (PEOs):

1. Graduates will become leaders in the industries associated with civil engineering and become professional entrepreneurs. They will be experts working in public sector, private sector, and international organizations.

2. Graduates will engage in continual learning by pursuing advanced degrees or additional educational opportunities through coursework, professional conferences and training, or participation in professional societies.

3. Graduates will adapt to different roles and responsibilities in multidisciplinary environment by respecting professionalism and ethical practices. They will contribute to the well-being of the society and environment through responsible practice of engineering profession.

Program Specific Objectives (PSOs):

1. Identify the broad context of civil engineering problems, including describing the problem Conditions, identifying possible contributing factors and generating alternative solution strategies.

2. Undertake laboratory, field and other data collection efforts using commonly used measurement techniques to support the study and solution of Civil Engineering problems.

3. Employ mathematics, science and computing techniques in a systematic, comprehensive and rigorous manner to support the study and solution of civil engineering problems.

4. Exhibit good teamwork skills and serve as effective member of multi-disciplinary project teams.

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DEPARMENT OF CIVIL ENGINEERING

Program Outcomes (POs)

PO's	Program Outcomes (POs)
PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
PO3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions for complex problems: ➢ that cannot be solved by straightforward application of knowledge, theories and techniques applicable to the engineering discipline as against problems given at the end of chapters in a typical text book that can be solved using simple engineering theories and techniques; ➢ that may not have a unique solution. For example, a design problem can be solved in many ways and lead to multiple possible solutions; ➢ that require consideration of appropriate constraints / requirements not explicitly given in the problem statement such as cost, power requirement, durability, product life, etc.; ➢ which need to be defined (modelled) within appropriate mathematical

	framework; and ➢ that often require use of modern computational concepts and tools, for example, in the design of an antenna or a DSP filter.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

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BENGALURU - 562157

DEPARTMENT OF CIVIL ENGINEERING

SUBJECT ALLOTMENT LETTER

Subject Allotment For ODD Semester 2023-2024

Ms Bhavya S, Asst. Professor – Department Of Civil Engineering has been allotted Theory and Lab Subject for the ODD Semester 2023-2024.

Sl. No.	Subject Code	Subject Name	SEMESTER
1	18CVL77	G.T.Lab	VII
2	21CV51	Hydrology & Water Resource Engineering	V
3	21CIV57	Environmental Studies	V - Mech
4	BSCK307	Universal Human Values	III
5	BESCK104A	Introduction to Civil Engineering	I

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COURSE INFORMATION SHEET

Course Name / Code	Hydrology and Water Resources Engineering / 21CV51		
Degree / Branch	B.E / CIVIL ENGINEERING		
Course Credit	3		
Course Category	Core Subject		
Course Teacher Contact Details	**Course Teacher Name**	**Contact Details**	
		Mobile	**E-mail**
	Ms. Bhavya S.	9900136198	bhavya_civil@sirmvit.edu
Head of the Department	Dr.Ravikumar H.		

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SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

ACADEMIC CALENDAR FOR EVEN SEMESTER 2023-24 - UG & ODD SEMESTER 2023-24 -PG

Particulars	8th Sem BE 2018 Scheme	6th Sem BE 2021 Scheme	4th Sem UG 2022 Scheme	2nd Sem BE 2022 Scheme	3rd Sem MBA 2023 Scheme	4th Sem MCA 2022 Scheme	4th MBA 2022 Scheme	4th Sem MTech	1st Sem MBA	1st Sem MCA	1st Sem MTech
Commencement of Even Semester	12-02-2024	29-04-2024	22-04-2024	06-03-2024	01-12-2024	22-04-2024	10-06-2024	22-04-2024	12-02-2024	12-02-2024	12-02-2024
Students Induction Programme /Internship/*Societal Project	NA	NA	NA	NA	22/04/24 to 06/06/24	NA	NA	NA	*08-07-24 to 13-07-24	NA	NA
Commencement of Classes	12-02-2024	29-04-2024	22-04-2024	06-03-2024	01-12-2024	22-04-2024	10-06-2024	22-04-2024	12-02-2024	12-02-2024	12-02-2024
Last Working Day	11-05-2024	31-07-2024	07-08-2024	29-06-2024	13-03-2024	27-07-2024	28-09-2024	27-07-2024	08-06-2024	08-06-2024	08-06-2024
Internship Viva/Practical / Viva Examination	NA	01-08-24 to 10-08-24	08-08-24 to 17-08-24	01-07-24 to 11-07-24	18-04-24 to 22-04-24	28-07-24 to 29-07-24	NA	NA	NA	10-06-24 to 15-06-24	10-06-24 to 15-06-24
Theory Examination	16-05-24 to 30-05-24	12-08-24 to 14-09-24	19-08-24 to 12-09-24	15-07-24 to 10-08-24	18-03-24 to 12-04-24	01-08-24 to 23-08-24	30-09-24 to 06-11-24	01-08-24 to 23-08-24	03-06-24 to 20-06-24	18-06-24 to 05-07-24	18-06-24 to 05-07-24
First Test Dates	March 22-23,2024	June 10-12, 2024	June 10-12, 2024	May 13-17,2024	Jan 22-27, 2024	May 31,2024	July 22-6,2024	NA	April 01-03, 2024	March 25-28, 2024	April 01-03, 2024
Second Test Dates	April 22,2024	July 03-04, 2024	July29-31, August 02,05, 2024	June 24-27,2024	March 04-09, 2024	June 28, 2024	September 17-23, 2024	NA	June 03-08, 2024	April 24-29, 2024	May 02-06, 2024
Third Test Dates	May 08-09,2024	July 25-27, 2024	NA	NA	NA	July 23, 2024	NA	NA	NA	May 25 -29, 2024	June 04-06, 2024
Submission of Report to University	NA	NA	NA	NA	NA	13-07-24 to 27-07-24	13-09-24 to 28-09-24	01-08-24 to 20-08-24	NA	NA	NA
Commencement of ODD Semester	NA	23-09-2024	16-09-2024	19-08-2024	10-06-2024	NA	NA	NA	15-07-2024	15-07-2024	15-07-2024

LIST OF HOLIDAYS (upto December, 2024)	
Mahashivarathri	08.03.2024
Good Friday	29.03.2024
Ugadi	09.04.2024
Ramzan	11.04.2024
May Day	01.05.2024
Basava Jayanthi	10.05.2024
Bakrid	18.06.2024
Muharram	17.07.2024
Independence Day	15.08.2024
Ganesh Chaturthi	07.09.2024
Id Meelad	16.09.2024
Gandhi Jayanthi	02.10.2024
Ayudha Pooja	11.10.2024
Vijayadashmi	12.10.2024
Valmiki Jayanthi	17.10.2024
Naraka Chaturdashi	31.10.2024
Rajyothsava Day	01.11.2024
Balipadyami	02.11.2024
Kanakadasa Jayanthi	18.11.2024
Christmas	25.12.2024

IMPORTANT DATES (Tentative)	
Photo Shoot	23 03-2024
Graduation Day	19-04-2024
College Day	TBA

VISVESVARAYA INSTITUTE OF TECHNOLOGY
SL. No. 6424
Date 26/7/24
SIR M. VIS. BANGALORE-562 157

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Krishnadevarayanagar, Kunasamaranahalli,
International Airport Road, BANGALORE-562 157

Sir M. Visvesvaraya Institute of Technology, Bengaluru - 562 157
Academic Year: 2023-24 Time Table – 5th Semester with effect from 25/11/2023

Sem: V	BRANCH: CIVIL ENGINEERING						Room No. E202		
Time → Day ↓	9.00 to 9.55 am	9.55 to10.50 am	10.50 to 11 am	11 to 11.55 am	11.55 to12.50 pm	12.50 to 1.35 pm	1.35 to 2.30 pm	2.30 to 3.25 pm	3.25 to 4.20 pm
MON	HWRE (21CV51) (BS)	DRCS (21CV53) (SP)	TEA BREAK	GT (21CV54) (GDS)	RM &IP (21CV56) (AJ)	LUNCH BREAK	TE (21CV52) (KVRP)	GS (21CV583) (AJ)	LG
TUE	HWRE (21CV51) (BS)	DRCS (21CV53) (SP)		TE (21CV52) (KVRP	GT (21CV54) (GDS)		RM &IP (21CV56) (AJ)	Skill Lab	
WED	GT (21CV54) (GDS)	HWRE (21CV51) (BS)		TE (21CV52) (KVRP)	DRCS (21CV53) (SP)		Forum Activities		
THU	Transportation Engg Lab (B1) (KVRP & RN) Geotechnical Engg Lab (B2) (GDS & SM)			GS (21CV583) (AJ)	RM &IP (21CV56) (AJ)		HWRE (21CV51) (BS)	Library	
FRI	ENV (21CV57) (SS)	GT (21CV54) (GDS)		DRCS (21CV53) (SP)	TE (21CV52) (KVRP)		ENV (21CV57) (SS)	Transportation Engg Lab (B2) (KVRP & RN) Geotechnical Engg Lab (B1) (GDS & SM)	
SAT	NSS/Sports/Yoga			NSS/Sports/Yoga			NSS/Sports/Yoga		

Sl No	Course code	Course Title	Faculty Names	Initials
1	21CV51	Hydrology & Water Resources Engineering	Bhavya S	BS
2	IPCC 21CV52	Transportation Engineering	KVR Prasad	KVRP
3	21CV53	Design of RCC Structural Elements	Pradeepa S	SP
4	21CV54	Geotechnical Engineering Theory & Lab	Subhadra G D & Sriram Mustapure	GDS & SM
5	21CV55	Transportation Engineering Lab	KVR Prasad & Ramya N	KVRP &RN
6	21CV56	Research Methodology & Intellectual Property Rights	Anitha J	AJ
7	21CV57	Environmental Studies	Shivanna S	SS
8	21CV583	Gender Sensitization	Anitha J	AJ
Class Advisor:	Ramya N			RN
Local Guardian:	Bhavya S			BS

Designation	Associate Professor & Time Table Officer	Head of the Department	Chief Time Table Officer	Principal
Name	Dr. Shivanna S	Dr. Ravi Kumar H	Prof. S B Halesh	Prof. Rakesh S G
Signature				

Dept. of Civil Engg.

PRINCIPAL

Staff Timetable
01305 - Ms. BHAVYA S

Sir M. Visvesvaraya Institute of Technology

Day	09:00 AM to 09:55 AM	09:55 AM to 10:50 AM	10:50 AM to 11:00 AM	11:00 AM to 11:55 AM	11:55 AM to 12:50 PM	12:50 PM to 01:35 PM	01:35 PM to 02:30 PM	02:30 PM to 03:25 PM	03:25 PM to 04:20 PM
Monday	**21CV51 - Hydrology and Water Resource Engineering (Lecture)** {CV - 5 th Sem - Nov_2023} [Classroom - E202]			Introduction to Civil Engg.			Batch-1 **18CVL77 - Geotechnical Engineering Laboratory (Lab)** {CV - 7 - Sept 2023}		
Tuesday	**21CV51 - Hydrology and Water Resource Engineering (Lecture)** {CV - 5 th Sem - Nov_2023} [Classroom - E202]			EVS MECH		Introduction to Civil Engg 18ES	Batch-2 **18CVL77 - Geotechnical Engineering Laboratory (Lab)** {CV - 7 - Sept 2023}		
Wednesday	**BSCK307 - Social Connect and Responsibility (Lecture)** {CV - 3 - Nov_2023} [Classroom - E201]	**21CV51 - Hydrology and Water Resource Engineering (Lecture)** {CV - 5 th Sem - Nov_2023} [Classroom - E202]				Introduction to Civil Engg.			
Thursday	EVS MECH						**21CV51 - Hydrology and Water Resource Engineering (Lecture)** {CV - 5 th Sem - Nov_2023} [Classroom - E202] Batch-3 **18CVL77 - Geotechnical Engineering Laboratory (Lab)** {CV - 7 - Sept 2023}		
Friday				Introduction to Civil Engg.					

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V Semester

Hydrology and Water Resource Engineering			
Course Code	21CV51	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3+0+0+0	SEE Marks	50
Total Hours of Pedagogy	40	Total Marks	100
Credits	3	Exam Hours	3

Course objectives: Make the students to learn

1. Concept of hydrology, components of hydrologic cycle, hydrologic processes such as precipitation, infiltration, evaporation and transpiration.
2. Estimation of runoff and use the concept of unit hydrograph.
3. Systems and methods of irrigation, crop water requirement.
4. Canals, canal alignment, design methods of canals. Computation of reservoir capacity.
5. Concepts of floods and droughts, importance of water conservation and water management.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Power point Presentation
2. Video tube, NPTEL materials
3. Quiz/Assignments/Open book test to develop skills
4. Adopt problem based learning (PBL)to develop analytical and thinking skills
5. Encourage collaborative learning, site visits related to subject and impart practical knowledge
6. Mini projects

Module-1	
Hydrology: Introduction, Global distribution of water and Indian water availability. Hydrologic cycle (Horton's) qualitative and engineering representation. **Precipitation:** Forms and types, measurement of rain fall using Syphon type of rain gauges, optimum number of rain gauge stations, consistency of rainfall data (double mass curve method), computation of mean rainfall, estimation of missing data, presentation of precipitation data, moving average curve, mass curve, rainfall hyetographs. **Losses from Precipitation:** Evaporation process, factors affecting evaporation, measurement using IS class-A Pan, reservoir evaporation and control. Factors affecting Evapo-transpiration. Infiltration, Factors affecting infiltration capacity, measurement by double ring infiltrometer, Horton's infiltration equation, infiltration indices.	8 hours
Teaching-Learning Process	Chalk and talk, Power Point Presentation& PBL

Module-2	
Runoff: Definition, concept of catchment, factors affecting runoff, rainfall – runoff relationship using regression analysis. **Hydrographs:** Definition, components of hydrograph, base flow separation, unit hydrograph, assumption, application and limitations, derivation from simple storm hydrographs, S curve and its computations, Conversion of UH of different durations.	8 hours
Teaching-Learning Process	Chalk and talk, Power Point Presentation & PBL

Module-3	
Irrigation: System of irrigation: surface and ground water, flow irrigation, lift irrigation. Methods of irrigation: surface, sprinkler and drip/micro irrigation. **Water Requirements of Crops:** Duty, delta and base period, relationship between them, factors affecting duty of water crops and crop seasons in India, irrigation efficiency, frequency of irrigation.	8 hours
Teaching-Learning Process	Chalk and talk, PowerPoint Presentation and Model preparation

Module-4

Canals: Types of canals. Alignment of canals. Definition of gross command area, cultural command area, intensity of irrigation, time factor, crop factor. Unlined and lined canals. Standard sections. Regime channels, Design of canals by Lacey's and Kennedy's method (No numerical examples). **Reservoirs:** Definition, investigation for reservoir site, storage zones determination of storage capacity using mass curves, economical height of dam.		8 hours
Teaching-Learning Process	Chalk and talk, Power Point Presentation and Field visits.	
Module-5		
Flood Management: Indian rivers and floods, Causes of floods, Alleviation, Levees and floodwalls, Flood ways, Channel improvement, Flood damage analysis. **Drought Management:** Definition of drought, Causes of drought, measures for water conservation and augmentation, drought contingency planning. **Water harvesting:** rainwater collection, small dams, runoff enhancement, runoff collection, Restoration and rejuvenation of water bodies (ponds and lakes)		8 hours
Teaching-Learning Process	Chalk and talk, Power Point Presentation and Mini-projects	

Course outcome (Course Skill Set)

At the end of the course the student will be able to :

1. Provide a background in the theory of hydrological processes and their measurement
2. Estimate runoff and develop unit hydrographs.
3. Find the water requirement and frequency of irrigation for various crops.
4. Find the canal capacity and compute the reservoir capacity.
5. Analyse floods and droughts. Emphasise on the importance of conservation of water and water bodies.

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BENGALURU-562 157
DEPARTMENT OF CIVIL ENGINEERING
V SEMESTER B.E CIVIL, ODD SEMESTER ACADEMIC
YEAR 2023-24

Sl. No.	USN	Name of the Student
1	1MV21CV001	BHUVAN GOWDA M N
2	1MV21CV002	GIRIDHAR C N HOMBALE
3	1MV21CV003	HANNA FATHIMA
4	1MV21CV004	MANJESH GOWDA S
5	1MV21CV005	N SAI AISHWARYA REDDY
6	1MV21CV006	NIKHIL GOWDA C
7	1MV21CV008	PUNITH GOWDA D L
8	1MV21CV009	RUCHITHA L
9	1MV21CV010	SAI VARUN N J
10	1MV21CV012	SINCHANA M B
11	1MV21CV013	SUNIKETH REDDY
12	1MV21CV014	C. LOHITH CHANDRA
13	1MV22CV400	CHANDAN Y K
14	1MV22CV401	CHANDRU R
15	1MV22CV402	GOWTHAM M
16	1MV22CV403	KEERTHI R
17	1MV22CV404	KSHIRALING KADAGANCHI
18	1MV22CV405	MONIKA V
19	1MV22CV406	RAMYADEEPTHI A
20	1MV22CV407	REDDAPPA N

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Ms. BHAVYA S | A.Y.: 2023-24 | Sem./Year: 5 | Course: 21CV51 - Hydrology and Water Resource Engineering | Slot Type: Lecture | Division: CV - 5 th Sem - Nov_2023			
No.	Course Content	Planning Title	Planning Description
1		Hydrology	Introduction, Global distribution of water and Indian water availability.
2		Hydrology	Hydrologic cycle (Horton's) qualitative and engineering representation.
3		Precipitation	Forms and types, measurement of rain fall using Syphon type of rain gauges, computation of mean rainfall, estimation of missing data.
4		Precipitation	optimum number of rain gauge stations, consistency of rainfall data (double mass curve method).
5		Precipitation	Presentation of precipitation data, moving average curve, Mass curve, rainfall hyetographs.
6		Losses from Precipitation	Evaporation process, factors affecting evaporation, measurement using IS class-A Pan, reservoir evaporation and control.
7		Losses from Precipitation	Factors affecting Evapo-transpiration. Infiltration, Factors affecting infiltration capacity.
8		Losses from Precipitation	Measurement by double ring infiltrometer, Horton's infiltration equation, infiltration indices.
9		Runoff	Definition, concept of catchment, factors affecting runoff.
10		Runoff	Rainfall – runoff relationship using regression analysis.
11		Hydrographs	Definition, components of hydrograph.
12		Hydrographs	Base flow separation, unit hydrograph.
13		Hydrographs	Assumption, application and limitations of hydrograph
14		Hydrographs	Derivation from simple storm hydrographs.
15		Hydrographs	S curve and its computations,
16		Hydrographs	Conversion of UH of different durations.
17		Irrigation	System of irrigation: surface and ground water.
18		Irrigation	flow irrigation, lift irrigation.

19		Irrigation	Methods of irrigation: surface, sprinkler.
20		Irrigation	Drip/micro irrigation
21		Water Requirements of Crops	Duty, delta and base period, relationship between them.
22		Water Requirements of Crops	Factors affecting duty of water crops.
23		Water Requirements of Crops	Crop seasons in India, irrigation efficiency.
24		Water Requirements of Crops	Frequency of irrigation.
25		Canals	Types of canals. Alignment of canals.
26		Canals	Definition of gross command area, cultural command area,
27		Canals	intensity of irrigation, time factor, crop factor. Unlined and lined canals. Standard sections.
28		Canals	Regime channels, Design of canals by Lacey's and Kennedy's method (No numerical examples).
29		Reservoirs	Definition, investigation for reservoir site
30		Reservoirs	Storage zones determination of storage.
31		Reservoirs	Capacity using mass curves.
32		Reservoirs	Economical height of dam.
33		Flood Management	Indian rivers and floods, Causes of floods.
34		Flood Management	Alleviation, Levees and floodwalls.
35		Flood Management	Flood ways, Channel improvement, Flood damage analysis.
36		Drought Management	Definition of drought, Causes of drought, measures for water conservation and augmentation.
37		Drought Management	Drought contingency planning.
38		Water harvesting	Rainwater collection, small dams, runoff enhancement.
39		Water harvesting	Runoff collection, Restoration.
40		Water harvesting	Rejuvenation of water bodies (ponds and lakes)

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EVALUATION PATTERN

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%.

The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50). A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 35% (18 Marks out of 50) in the semester-end examination(SEE), and a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together Continuous Internal Evaluation:

Three Unit Tests each of 20 Marks (duration 01 hour).

Two assignments each of 10 Marks.

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for 20 Marks (duration 01 hours)

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be scaled down to 50 marks (to have less stressed CIE,

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

GAP IDENFICATION

SUBJECT NAME: HYDROLOGY AND WATER RESOURCES ENGINEERING (21CV51)

The curriculum for 21CV51 includes essential topics such as hydrological cycle, surface water and groundwater hydrology, flood management, and water resource systems. However, the following gaps were identified:

1. Emerging topics like climate change impacts on hydrology and water resources, and integrated water resource management (IWRM) are inadequately covered.
2. Limited inclusion of real-world case studies to illustrate practical applications and contemporary issues in water resources management.
3. Insufficient emphasis on the use of Geographic Information Systems (GIS) and remote sensing technologies in hydrology.
4. Limited access to advanced software tools and platforms necessary for practical training in hydrology and water resources management.
5. Students report difficulty in grasping complex hydrological models and advanced concepts due to insufficient foundational knowledge provided.

ASSIGNMENT:1

SUBJECT: Hydrology and Water Resource Engineering (21CV51)

Sl.No	Questions	Co's	Po's	PI
1.	Explain with neat diagram of Hortons qualitative and Engineering representation of the hydrological cycle.	CO1	PO1	1.3.1
2.	Explain with neat sketch how its amount is measured using Symon's Rain gauge.	CO1	PO1	1.3.1
3.	List and explain the types of precipitation	CO1	PO1	1.3.1
4.	Explain with neat sketch the measurement using class A pan.	CO1	PO1	1.3.1
5.	Explain the presentation of precipitation data with neat sketch	CO1	PO1	1.3.1
6.	What is evaporation? Explain its factor affecting.	CO1	PO1	1.3.1
7.	Explain current Global and Indian water availability.	CO1	PO1	1.3.1
8.	Explain with neat sketch of double ring infiltrometer.	CO1	PO1	1.3.1
9.	Explain double mass curve.	CO1	PO1	1.3.1
9.	The average annual rainfall in cm at 4 existing raingauge stations are 105,79, 85 and 58 cm respectively. If the average depth of rainfall over the basin is to be estimated with in 10% error. Determine the additional number of raingauge required.	CO1	PO2	2.1.3
10.	A raingauge station P was inoperative for some time during a storm. The storm totals at three stations A, B and C are 65, 45, 35 mm respectively. The normal annual precipitation amounts at P, A, B, and C are 825,726,535 and 320mm.Estimate the storm precipitation at station P.	CO1	PO2	2.1.3
11.	Define Runoff and explain the factors affecting runoff	CO2	PO1	1.3.1
12.	Explain the rainfall runoff relationship using regression analysis.	CO2	PO1	1.3.1

Date | 10 | 01 | 2024 | Subject Code | 21CV51 |

USN | 1 | M | V | | | | | | | | |

Sir M. Visvesvaraya Institute of Technology
Bangalore 562 157
INTERNAL TEST PAPER

TEST NO	: 01	SEM	: V
COURSE/BRANCH	: BE (Civil Engineering)	MAX. MARKS	: 20
SUBJECT	: Hydrology and Water Resource Engineering	DURATION	: 60 min
Faculty Name :	Bhavya.S		

Instructions: Answer any one Question from each PART

CO – Course Outcomes PO – Program Outcomes; PI – Performance Indicator BL-Blooms taxonomy

Q.No	Question	Marks	CO	BL	PO	PI
	PART A					
1.a	Explain with neat diagram of Engineering representation of the hydrological cycle.	05	CO1	L1	PO1	1.3.1
1.b	Explain with neat sketch how its amount is measured using Symon's Rain gauge.	05	CO1	L1	PO1	1.3.1
	OR					
2.a	Explain with neat sketch the measurement using class A pan.	05	CO1	L1	PO1	1.3.1
2.b	What is evaporation? Explain its factor affecting.	05	CO1	L1	PO1	1.3.1
	PART B					
3.a	Define Runoff and explain the factors affecting runoff	05	C02	L1	PO1	1.3.1
3.b	A raingauge station P was inoperative for some time during a storm. The storm totals at three stations A, B and C are 66, 48, 38 mm respectively. The normal annual precipitation amounts at P, A, B, and C are 656,726.518 and 382mm.Estimate the storm precipitation at station P.	05	CO1	L2	PO2	2.3.1
	OR					
4.a	Explain the rainfall runoff relationship using regression analysis.	05	CO2	L1	PO1	1.3.1
4.b	The average annual rainfall in cm at 4 existing raingauge stations are 105,79, 70 and 66 cm respectively. If the average depth of rainfall over the basin is to be estimated with in 10% error. Determine the additional number of raingauge required.	05	CO1	L2	PO2	2.3.1

CO1 : Provide a background in the theory of hydrological processes and their measurement.
CO2 : Estimate runoff and develop unit hydrographs.

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SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU - 562157

DEPARTMENT OF CIVIL ENGINEERING

SCHEME OF EVALUATION

IA TEST NO.: 01

Subject: Hydrology & water Resources Engg	Branch: Civil Engg
Subject Code: 21CV51	Semester: V th
Faculty Name: Bhavya.S	Total Marks: 20

Q. No.	Description	Marks
1a.	Engineering representation of Hydrological cycle → 4m Diagram 1m 5m	
1b.	syman's raingauge explanation 4m Diagram 1m 5m	
2a.	Explanation & Class A. pan 4m Diagram 1m 5m	
2b.	Defination & evaporation 1M & factors affecting Evaporation 4m 5m	
3a.	Defination & runoff 1m Factors affecting run off 4m 5m	
3b	P_p = 61.89 mm 5m	

Q. No.	Description	Marks
4a.	Relationship b/w rainfall - runoff $R = a - bp$ Explanation	- 5m.
4b.	$C_v = 21.91$ $N = 4.8$ Additional gauge required $= 4.8 - 4 = 0.8$ ≈ 1	→ 5m.

Assignment:2

Subject Name: Hydrology and Water Resource Engineering (21CV51)

<table>
<tr><th>Sl.No</th><th>Questions</th><th>CO'S</th><th>PO'S</th><th>PI</th></tr>
<tr><td>1</td><td>Define Hydrograph and explain the components of a hydrograph with graph.</td><td>CO2</td><td>PO1</td><td>1.3.1</td></tr>
<tr><td>2</td><td>Explain base flow separation methods with neat diagram.</td><td>CO3</td><td>PO1</td><td>1.3.1</td></tr>
<tr><td>3</td><td>Define irrigation and explain the benefits and ill effects of irrigation.</td><td>CO3</td><td>PO1</td><td>1.3.1</td></tr>
<tr><td>4</td><td>Explain system of irrigation.</td><td>CO3</td><td>PO1</td><td>1.3.1</td></tr>
<tr><td>5</td><td>Explain methods of irrigation with sketch.</td><td>CO3</td><td>PO1</td><td>1.3.1</td></tr>
<tr><td>6</td><td>Explain duty, delta and base period and relationship between them.</td><td>CO3</td><td>PO1</td><td>1.3.1</td></tr>
<tr><td>7</td><td>The hourly ordinates of a two hour unit hydrograph are given below. Derive a 6-h unit hydrograph for the same catchment.
<table>
<tr><td>T(h)</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td></tr>
<tr><td>Q</td><td>0</td><td>1</td><td>2.7</td><td>5</td><td>8</td><td>9.8</td><td>9</td><td>7.5</td><td>6.3</td><td>5</td><td>4</td><td>2.9</td><td>2.1</td><td>1.3</td><td>0.5</td><td>0</td></tr>
</table></td><td>CO2</td><td>PO2</td><td>2.3.1</td></tr>
<tr><td>8</td><td>Derive the unit hydrograph from the given flood hydrograph.
In a typical 6-h storm, 4cm excess rainfall is occurring.the flow recording of the catchment as shown below. Derive the 6-h unit hydrograph.assume base flow is 100 m3/s.
<table>
<tr><td>T</td><td>0</td><td>6</td><td>12</td><td>18</td><td>24</td><td>30</td><td>36</td><td>42</td><td>48</td><td>54</td><td>60</td><td>66</td></tr>
<tr><td>Q</td><td>100</td><td>100</td><td>300</td><td>700</td><td>1000</td><td>800</td><td>600</td><td>400</td><td>300</td><td>200</td><td>100</td><td>100</td></tr>
</table></td><td>CO2</td><td>PO2</td><td>2.3.1</td></tr>
<tr><td>9</td><td>The 4-h unit hydrograph for a catchment is given in the table below. What would be the maximum ordinate of the S- Curve. Derive from this Hydrograph?
<table>
<tr><td>T</td><td>0</td><td>2</td><td>4</td><td>6</td><td>8</td><td>10</td><td>12</td><td>14</td><td>16</td><td>18</td><td>20</td><td>22</td><td>24</td></tr>
<tr><td>UH</td><td>0</td><td>0.6</td><td>3.1</td><td>10</td><td>13</td><td>9</td><td>5</td><td>2</td><td>0.7</td><td>0.3</td><td>0.2</td><td>0.1</td><td>0</td></tr>
</table></td><td>CO2</td><td>PO2</td><td>2.3.1</td></tr>
</table>

Date | 08 | 02 | 2024 | Subject Code | 21CV51 |

USN | 1 | M | V | | | | | | | |

Sir M. Visvesvaraya Institute of Technology
Bangalore 562 157
INTERNAL TEST PAPER

TEST NO	:	02	SEM	:	V
COURSE/BRANCH	:	BE (Civil Engineering)	MAX. MARKS	:	20
SUBJECT	:	Hydrology and Water Resource Engineering	DURATION	:	60 min
Faculty Name :		Bhavya.S			

Instructions: Answer any one Question from each PART

CO – Course Outcomes PO – Program Outcomes; PI – Performance Indicator BL-Blooms taxonomy

Q. No	Question	Marks	CO	BL	PO	PI
	PART A					
1.a	Define Hydrograph and explain the components of a hydrograph with graph.	05	CO2	L1	PO1	1.3.1
1.b	The hourly ordinates of a two hour unit hydrograph are given below. Derive a 6-h unit hydrograph for the same catchment.	05	CO2	L1	PO2	2.3.1
	OR					
2.a	Explain base flow separation methods with neat diagram.	05	CO2	L1	PO1	1.3.1
2.b	The 4-h unit hydrograph for a catchment is given in the table below. What would be the maximum ordinate of the S- Curve. Derive from this hydrograph?	05	CO2	L1	PO2	2.3.1
	PART B					
3.a	Define irrigation and explain the benefits and ill effects of irrigation.	05	CO3	L1	PO1	1.3.1
3.b	Explain system of irrigation.	05	CO3	L1	PO1	1.3.1
	OR					
4.a	Explain any two methods of irrigation with sketch.	05	CO3	L1	PO1	1.3.1
4.b	Explain duty, delta and base period and relationship between them.	05	CO3	L1	PO1	1.3.1

T(h)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Q	0	1	2.7	5	8	9.8	9	7.5	6.3	5	4	2.9	2.1	1.3	0.5	0

T(h)	0	2	4	6	8	10	12	14	16	18	20	22	24
UH	0	0.6	3.1	10	13	9	5	2	0.7	0.3	0.2	0.1	0

CO2: Estimate runoff and develop unit hydrographs.
CO3: Find the water requirement and frequency of irrigation for various crops.

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SIR MVIT

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU - 562157

DEPARTMENT OF CIVIL ENGINEERING

SCHEME OF EVALUATION

IA TEST NO.: 02

Subject: Hydrology & water Resource Engg	Branch: CV
Subject Code: 21CV51	Semester: V th
Faculty Name: Bhavya. S	Total Marks: 20

Q. No.	Description	Marks
1.a	Defination of Hydrograph	1M
	Components of Hydrograph	4 m
		5 m
1.b.	sum 0, 1, 2.7, 6, 10.7, 15.8, 19.9, 22.3	
	19.3, 15.4, 12-4, 9.2, 6.6, 4.2, 2.6, 1.3	-2½
	0.5, 0	
	ordinates of 6-hr UH	
	0, 0.83, 0.9, 2, 3.57, 5.27, 6.57, 7.43	
	7.77, 7.43, 6.43, 5.13, 4.13, 3.07, 2.2	-2½
	1.4, 0.87, 0.48, 0.17, 0	5 m
2 a.	method - 1 method - 2 method - 3 } —	5 m

2b.

Time	0	2	4	6	8	10	12	14	16	18	20	22	24
UH	0	0.6	3.1	10	13	9	5	2	0.7	0.3	0.2	0.1	0
s(t-d)	-	-	0	0.6	3.1	10.6	18	19.6	25.1	21.6	13	0.3	0.2	0.1
A(t)													

5 M

Q. No.	Description	Marks
2b)	T | 0 2 4 6 8 10 12 14 16 18 20 22 24 UH | 0 0.6 3.1 10 13 9 5 2 0.7 0.3 0.2 0.1 0 s(t-d) | - - 0 0.6 3.1 10.6 16.1 19.6 21.1 21.6 21.8 21.9 22 s(t) | 0 0.6 3.1 10.6 16.1 19.6 21.1 21.6 21.8 21.9 22 22 22	– 5m
3a)	Defination of irrigation Benefits of —11— ill effects of —11—	1m 2m 2m 5m
3b)	Explanation of system of irrigation	5m
4a)	Explain any 2 methods of irrigation Diagram	– 4m – 1m 5m
4b)	Defination of Duty, Delta & Base period $\Delta = \frac{8.64\,B}{D}$	– 3m – 2m 5m

ASSIGNMENT:3

SUBJECT: Hydrology and Water Resource Engineering (21CV51)

Sl.No	Questions	Co's	Po's	PI
1.	Explain factors affecting duty of water	CO3	PO1	1.3.1
2.	Define Irrigation Efficiency and Explain its types.	CO3	PO1	1.3.1
3.	A water course has a culturable command area of 1200 hectares. The intensity of irrigation for crop A is 40% and for B is 35% and both the crops are rabi crops. Crop A has a kore depth of 10cm and kore period of 10 days and crop B has kore depth of 16cm and kore period of 15 days. Calculate the discharge of water course.	CO3	PO2	2.3.1
4.	A channel is to be design for irrigating 5000 hectares in kharif crop and 4000 hectares in rabi crop. The water requirement for kharif and rabi are 60cm and 25cm respectively. The kore period of kharif is 3 weeks and for rabi is 4 weeks. Determine the discharge of the channel for which it is to be designed.	CO3	PO2	2.3.1
5.	Define Canal. Explain different types of canal based on alignment.	CO4	PO1	1.3.1
6.	Find the section and maximum discharge of a channel with the following data: Bed slope = 1 in 5000 Laceys silt factor = 0.95 Side slope = 1:1	CO4	PO2	2.3.1
7.	Define reservoir. Write a neat sketch, explain zones of storage in a reservoir.	CO4	PO1	1.3.1
8.	Design an irrigation channel with the following data: Full supply discharge = 6 cumec Rugosity coefficient N = 0.0225 CVR(m) = 1 Bed slope = 1 in 5000 Assume other reasonable data for the design.	CO4	PO2/3	2.3.1
9.	Explain types of investigation for reservoir site. Also points to consider for selecting the reservoir site.	CO4	PO1	1.3.1
10.	Explain alleviation, levees, floodwalls, and flood ways.	CO5	PO1	1.3.1
11.	Define drought and explain the causes of drought.	CO5	PO1	1.3.1
12.	Explain the runoff enhancement and runoff collection.	CO5	PO1	1.3.1

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Subject Code 21CV51

USN 1 M V

Sir M. Visvesvaraya Institute of Technology
Bangalore 562 157
INTERNAL TEST PAPER

TEST NO : 03 SEM : V

COURSE/BRANCH : BE (Civil Engineering) MAX. MARKS : 20

SUBJECT : Hydrology and Water Resource Engineering DURATION : 60 min

Faculty Name : Bhavya.S

Instructions: Answer any one Question from each PART

CO – Course Outcomes PO – Program Outcomes; PI – Performance Indicator BL-Blooms taxonomy

Q.No	Question	Marks	CO	BL	PO	PI
	PART A					
1.a	Explain factors affecting duty of water	05	CO3	L1	PO1	1.3.1
1.b	Find the section and maximum discharge of a channel with the following data: Bed slope = 1 in 5000 Laceys silt factor = 0.95 Side slope = 1:1	05	CO4	L2	PO2	2.3.1
	OR					
2.a	Define Irrigation Efficiency and Explain its types.	05	CO3	L1	PO1	1.3.1
2.b	Design an irrigation channel with the following data: Full supply discharge = 6 cumec Rugosity coefficient N = 0.0225 CVR(m) = 1 Bed slope = 1 in 5000 Assume other reasonable data for the design.	05	CO4	L2	PO2	2.3.1
	PART B					
3.a	Define drought and explain the causes of drought.	05	C05	L1	PO1	1.3.1
3.b	A water course has a culturable command area of 1200 hectares. The intensity of irrigation for crop A is 40% and for B is 35% and both the crops are rabi crops. Crop A has a kore depth of 10cm and kore period of 10 days and crop B has kore depth of 16cm and kore period of 15 days. Calculate the discharge of water course.	05	CO3	L2	PO2	2.3.1

Date | 04 | 03 | 2024 | Subject Code | 21CV51 |

OR

4.a	Explain alleviation, levees, floodwalls, and flood ways.	05	CO5	L1	PO1	1.3.1
4.b	A channel is to be design for irrigating 5000 hectares in kharif crop and 4000 hectares in rabi crop. The water requirement for kharif and rabi are 60cm and 25cm respectively. The kore period of kharif is 3 weeks and for rabi is 4 weeks. Determine the discharge of the channel for which it is to be designed.	05	CO3	L2	PO2	2.3.1

CO3 : find the water requirement and frequency of irrigation for various crops
CO4 : Find the canal capacity and compute the reservoir capacity.
CO5 : Analyze floods and droughts. Emphasise on the importance of conservation of water and water bodies.

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SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BENGALURU - 562157

DEPARTMENT OF CIVIL ENGINEERING

SCHEME OF EVALUATION

IA TEST NO.: 03

Subject: Hydrology & water Resource Eng	Branch: Civil Engineering
Subject Code: 21CV51	Semester: V th
Faculty Name: Bhavya. S	Total Marks: 20

Q. No.	Description	Marks
1.a	Explanation of factors affecting duty of water – 1 x 5	→ 5 m
1b.	Q = 6.74 m³/s V = 0.59 m/s A = 11 m² P = 12.33 m R = 0.93 m D = 1.11 m S = 9.2 m } ½ x 5 → 2.5 m	2.5 m
2.a	Definition of irrigation Efficiency Types of irrigation –"–	1 m 4 m 5 m
2b.	V_0 = 0.71 m/s Assume D = 1.25 m C = HH·HH. A = 8.45 m²	→ 5 m

Q. No.	Description	Marks
3a.	Defination of drought Causes of drought	1 M 4 M 5 M
3b.	Crop A D = 864 ha/cumec q = 0.56 m³/s Crop B D = 810 ha/cumec q = 0.52 m³/s	→ 5 M
4a.	Explanation of alleviation Levees flood walls flood ways	5 M

Hydrology and Water Resources Engineering (21CV51)

Assignment : 3

bhavya_civil@sirmvit.edu Switch account

Not shared

* Indicates required question

Name *

Your answer

USN *

Your answer

What is the time interval between the sowing and harvesting of crops? * 1 point

- Base period
- Kor period
- Crop period
- Season period

What is called as the percentage of C.C.A irrigated at a time in one crop season? * 1 point

- Gross Command Area
- Culturable cultivated area
- Culturable uncultivated area
- Intensity of irrigation

What is water conveyance efficiency? * 1 point

- The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal
- The ratio of water stored in the root zone and the water delivered to the field
- The ratio of water used beneficially and the water delivered to the field
- The ratio of water stored in the root zone and the water needed before irrigation

What is the correct formula for uniformity coefficient efficiency? * 1 point

- $Nd = 1 - d/D$
- $Nd = 1 + d/D$
- $Nd = 1 - D/d$
- $Nd = 1 + D/d$

Which type of canal does not need cross drainage structures? * 1 point

- Side Slope Canal
- Contour Canal
- Watershed Canal
- Field Channel

Which type of canal is most useful in hilly areas? * 1 point

- Side Slope Canal
- Contour Canal
- Watershed Canal
- Field Channel

Which type of canal is the farmer's responsibility? * 1 point

- Side Slope Canal
- Contour Canal
- Watershed Canal
- Field Channel

Canal irrigation is generally preferred in _____ * 1 point

- alluvial canal
- non-alluvial canal
- non-perennial canal
- feeder canal

Which of the following combination is not correct? * 1 point

- Feeder canal – no direct irrigation is carried out
- Protective canal – constructed as a relief work during the famine
- Lined canal – provided with a lining of impervious material on its bed
- Contour canal – provision of cross drainage works is not required

Which canal acts as an irrigation canal as well as a feeder canal? * 1 point

- Feeder canal
- Carrier canal
- Inundation canal
- Permanent canal

Which reservoir is also known as Mitigation reservoir? * 1 point

- Conservation reservoir
- Flood control reservoir
- Multipurpose dam
- Storage reservoir

What are the types of flood control reservoirs? * 1 point

- Multipurpose reservoir and Single purpose reservoir
- Storage reservoir and retarding reservoirs
- Distribution reservoir and Storage reservoir
- Distribution reservoir and multipurpose reservoir

How can Dams cause drought ? * 1 point

- By reducing rainfall levels
- By reducing water levels downstream
- By flooding land behind the dam wall
- none of the above

What is a drought ? * 1 point

- A period of highly variable rainfall
- When rivers fall below particular levels
- A period of below average precipitation in a specific region
- when there is no water for human or animal use

What natural factor cause drought ? * 1 point

- Rain failure
- Over cultivation
- Overgrazing
- None of above

Which of the following is a primary hazard of drought ? * 1 point

- Damage to wildlife
- Lack of water
- reduced tourism
- Damage to crop

The earth embankments contructed parrallel to river for flood protection are * 1 point
called

- Guide banks
- Levees
- Terraces
- Groynes

Flood ways are * 1 point

- Embankments
- Concrete walls
- ponds
- low laying areas

The flood may be caused due to * 1 point

- Breach of dam
- Heavy precipitation
- Failure of river embankment
- All of the above

What is called for the collection of rainwater for use? *

- ○ Rain collection
- ○ Rainwater harvesting
- ○ Rain digging
- ○ Rain water pumping

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ASSIGNMENT- 3

Name	USN	What is the time interval between the sowing and harvesting of crops?	What is called as the percentage of C.C.A irrigated at a time in one crop season?	What is water conveyance efficiency?	What is the correct formula for uniformity coefficient efficiency?	Which type of canal does not need cross drainage structures?	Which type of canal most useful in hilly a
Giridhar C N Hombale	1MV21CV002	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Hanna Fathima	1MV21CV003	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Manjesh Gowda	1MV21CV004	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
N Sai Aishwarya Reddy	1MV21CV005	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Nikhil Gowda C	1MV21CV006	Crop period	Culturable uncultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Punith Gowda D L	1MV21CV008	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Ruchitha L	1MV21CV009	Crop period	Intensity of irrigation	The ratio of the quantity of water	Nd = 1 – d/D	Side Slope Canal	Contour Canal

				delivered to the field and quantity of water pumped into the canal			
Sai Varun	1MV21CV010	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Sinchana. M. B	1MV21CV012	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Suniketh reddy	1MV21CV013	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
C LOHITH CHANDRA	1MV21CV014	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Chandan Y K	1MV22CV400	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Chandru R	1MV22CV401	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Gowtham M	1MV22CV402	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal

Keerthi R	1MV22CV403	Crop period	Gross Command Area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 + d/D	Watershed Canal	Side Slope Canal
Kshiraling Kadaganchi	1MV22CV404	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Monika.v	1MV22CV405	Crop period	Intensity of irrigation	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal
Ramyadeepthi.A	1MV22CV406	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Watershed Canal	Side Slope Canal
Reddappa	1MV22CV407	Crop period	Culturable cultivated area	The ratio of the quantity of water delivered to the field and quantity of water pumped into the canal	Nd = 1 – d/D	Side Slope Canal	Contour Canal

USN	Which type of canal is the farmer's responsibility?	Canal irrigation is generally preferred in _____	Which of the following combination is not correct?	Which canal acts as an irrigation canal as well as a feeder canal?	Which reservoir is also known as Mitigation reservoir?	What are the types of flood control reservoirs ?	The earth embankments contructed parrallel to river for flood protection are called	Flood ways are	The flood may be caused due to	How can Dams cause drought ?	What is a drought ?	What natural factor cause drought ?	Which of the following is a primary hazard of drought ?	What is called for the collection of rainwater for use?
1MV21CV002	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	when there is no water for human or animal use	Rain failure	reduced tourism	Rainwater harvesting
1MV21CV003	Field Channel	alluvial canal	Contour canal – provision of cross drainage works is not required	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	A period of below average precipitation in a specific region	Rain failure	Damage to crop	Rainwater harvesting
1MV21CV004	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Distribution reservoir and Storage reservoir	Levees	Concrete walls	All of the above	By reducing water levels downstream	when there is no water for human or animal use	Rain failure	Lack of water	Rainwater harvesting
1MV21CV005	Field Channel	alluvial canal	Contour canal – provision of cross drainage works is	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	A period of below average precipitation in a specific region	Rain failure	Lack of water	Rainwater harvesting

			not required											
1MV21CV006	Field Channel	alluvial canal	Protective canal – constructed as a relief work during the famine	Carrier canal	Flood control reservoir	Multipurpose reservoir and Single purpose reservoir	Levees	Embankments	All of the above	By reducing water levels downstream	A period of below average precipitation in a specific region	Rain failure	Lack of water	Rainwater harvesting
1MV21CV008	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	when there is no water for human or animal use	Rain failure	Damage to crop	Rainwater harvesting
1MV21CV009	Field Channel	alluvial canal	Protective canal – constructed as a relief work during the famine	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	Heavy precipitation	none of the above	A period of below average precipitation in a specific region	Rain failure	Damage to crop	Rainwater harvesting
1MV21CV010	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	A period of below average precipitation in a specific region	Rain failure	Lack of water	Rainwater harvesting
1MV21CV012	Field Channel	alluvial canal	Protective canal – constructed as a relief work during the famine	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	A period of highly variable rainfall	Rain failure	Damage to crop	Rainwater harvesting
1MV21CV013	Field Channel	alluvial canal	Feeder canal – no direct irrigation	Carrier canal	Flood control reservoir	Storage reservoir and	Levees	low laying areas	Failure of river embankment	By reducing water levels	when there is no water for human	Rain failure	Damage to wildlife	Rainwater harvesting

			is carried out			retarding reservoirs				downstream	or animal use				
1MV21CV014	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	when there is no water for human or animal use	Rain failure	Damage to crop	Rainwater harvesting
1MV22CV400	Field Channel	alluvial canal	Contour canal – provision of cross drainage works is not required	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	A period of below average precipitation in a specific region	Rain failure	Lack of water	Rainwater harvesting
1MV22CV401	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Distribution reservoir and multipurpose reservoir	Levees	Concrete walls	All of the above	By reducing water levels downstream	when there is no water for human or animal use	Rain failure	Lack of water	Rainwater harvesting
1MV22CV402	Field Channel	alluvial canal	Contour canal – provision of cross drainage works is not required	Carrier canal	Flood control reservoir	Distribution reservoir and multipurpose reservoir	Levees	Concrete walls	Heavy precipitation	By reducing rainfall levels	when there is no water for human or animal use	Rain failure	Damage to wildlife	Rainwater harvesting
1MV22CV403	Field Channel	alluvial canal	Contour canal – provision of cross drainage works is not required	Carrier canal	Flood control reservoir	Distribution reservoir and multipurpose reservoir	Levees	ponds	All of the above	By reducing rainfall levels	A period of highly variable rainfall	Rain failure	Damage to crop	Rainwater harvesting

1MV22CV404	Field Channel	alluvial canal	Contour canal – provision of cross drainage works is not required	Carrier canal	Flood control reservoir	Distribution reservoir and multipurpose reservoir	Levees	Concrete walls	Heavy precipitation	By reducing rainfall levels	when there is no water for human or animal use	Rain failure	Damage to wildlife	Rainwater harvesting
1MV22CV405	Field Channel	alluvial canal	Protective canal – constructed as a relief work during the famine	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	A period of highly variable rainfall	Rain failure	Damage to crop	Rainwater harvesting
1MV22CV406	Side Slope Canal	alluvial canal	Contour canal – provision of cross drainage works is not required	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	none of the above	A period of below average precipitation in a specific region	Rain failure	Lack of water	Rainwater harvesting
1MV22CV407	Field Channel	alluvial canal	Feeder canal – no direct irrigation is carried out	Carrier canal	Flood control reservoir	Storage reservoir and retarding reservoirs	Levees	low laying areas	All of the above	By reducing water levels downstream	when there is no water for human or animal use	Rain failure	Damage to wildlife	Rainwater harvesting

Visvesvaraya Technological University

IA / CIE Report Dec 2023 / Jan 2024 Examination.

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE

Branch : CV Scheme : 2021 Semester : 5

Sl NO.	USN	21CV51	21CV52			21CV53	21CV54	21CVL55	21RMI56	21CIV57	21CV583	STUDENT SIGNATURE
1	1MV21CV001	0	0 TH	0 PR	0 T	0	0	0	0	0	0	
2	1MV21CV002	35	18 TH	19 PR	37 T	35	38	49	33	46	49	
3	1MV21CV003	49	23 TH	19 PR	42 T	41	40	50	50	50	50	
4	1MV21CV004	32	18 TH	18 PR	36 T	34	33	47	40	48	49	
5	1MV21CV005	41	20 TH	19 PR	39 T	38	41	50	44	50	49	
6	1MV21CV006	37	18 TH	17 PR	35 T	33	34	47	30	48	48	
7	1MV21CV008	36	18 TH	19 PR	37 T	38	29	44	33	48	48	
8	1MV21CV009	41	20 TH	19 PR	39 T	34	39	50	50	48	48	
9	1MV21CV010	45	26 TH	18 PR	44 T	43	34	34	29	46	47	
10	1MV21CV012	45	22 TH	20 PR	42 T	45	48	50	50	49	49	
11	1MV21CV013	37	18 TH	18 PR	36 T	37	35	46	37	48	48	
12	1MV21CV014	43	24 TH	19 PR	43 T	42	44	50	45	48	46	
13	1MV22CV400	48	21 TH	19 PR	40 T	43	38	48	40	49	49	
14	1MV22CV401	45	19 TH	19 PR	38 T	43	40	50	42	50	49	
15	1MV22CV402	42	22 TH	19 PR	41 T	46	44	49	41	46	47	
16	1MV22CV403	42	24 TH	20 PR	44 T	47	41	50	44	50	50	
17	1MV22CV404	29	18 TH	18 PR	36 T	37	32	37	28	46	42	
18	1MV22CV405	47	25 TH	20 PR	45 T	46	42	50	50	49	47	
19	1MV22CV406	42	24 TH	20 PR	44 T	43	44	50	50	50	49	
20	1MV22CV407	43	21 TH	18 PR	39 T	44	45	49	48	46	48	
--x--	Faculty Signature									----xxxxxx----		

* - values are either optional subjects or the faculty has not yet entered the marks

TH - Theory part of CIE Marks (IPCC)

PR - Practical part of CIE Marks (IPCC)

T - Total CIE Marks (IPCC)

HOD

Seal and Signature

PRINCIPAL

Seal and Signature

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

SUBJECT : HYDROLOGY AND IRRIGATION ENGINEERING (21CV51)

LIST OF SLOW LEARNERS IN TEST:1

NIL

LIST OF MEDIUM LERNERS IN TEST:1

SL.NO	USN	NAME	MARKS
1	1MV21CV002	GIRIDHAR C N HOMBALE	10
2	1MV21CV004	MANJESH GOWDA S	08
3	1MV21CV006	NIKHIL GOWDA C	10
4	1MV21CV008	PUNITH GOWDA D L	08
5	1MV21CV013	SUNIKETH REDDY	08
6	1MV22CV404	KSHIRALING KADAGANCHI	AB
7	1MV22CV407	REDDAPPA N	12

ACTION TAKEN:

To enhance the learning outcomes for medium learners in Hydrology and Irrigation Engineering, we have implemented several targeted strategies:

1. Enhanced Learning Resources: We introduced a series of tailored study materials, including detailed notes, practical case studies, and interactive simulations specific to hydrology and irrigation. These resources are designed to address common learning gaps and reinforce key concepts.
2. Personalized Support: One-on-one tutoring was made available to provide targeted assistance based on individual learning needs. This personalized approach has helped learners grasp complex topics more effectively.
3. Progress Monitoring: Regular quizzes and feedback sessions were implemented to track learner progress and provide timely support. This ongoing assessment helps in identifying and addressing difficulties early on.

LIST OF FAST LEARNERS IN TEST:1

SL.NO	USN	NAME	MARKS
1	1MV21CV003	HANNA FATHIMA	20
2	1MV21CV005	N SAI AISHWARYA REDDY	15
3	1MV21CV009	RUCHITHA L	14
4	1MV21CV010	SAI VARUN N J	17
5	1MV21CV012	SINCHANA M B	14
6	1MV21CV014	C. LOHITH CHANDRA	16
7	1MV22CV400	CHANDAN Y K	19
8	1MV22CV401	CHANDRU R	17
9	1MV22CV402	GOWTHAM M	15
10	1MV22CV403	KEERTHI R	18
11	1MV22CV405	MONIKA V	20
12	1MV22CV406	RAMYADEEPTHI A	14

ACTION TAKEN:

To support and challenge fast learners in Hydrology and Irrigation Engineering, we have implemented several advanced strategies:

1. Research Opportunities: Fast learners were encouraged to engage in research projects and case studies, allowing them to explore specialized areas of interest within the field. This practical experience enhances their analytical and problem-solving skills.
2. Independent Study Resources: We provided access to supplementary materials, such as advanced textbooks, research papers, and industry reports, to support independent learning and self-directed study.
3. Leadership Roles: Fast learners were offered leadership opportunities in group projects and peer tutoring, fostering their ability to mentor others while reinforcing their own knowledge.

To further support fast learners in Hydrology and Irrigation Engineering, we have actively encouraged participation in NPTEL (National Programme on Technology Enhanced Learning) and similar advanced online courses. The following actions were taken:

Course Recommendations: We provided a curated list of relevant NPTEL and other advanced online courses tailored to the interests and career goals of fast learners. This list includes courses on advanced hydrology models, irrigation technologies, and recent innovations in the field.

Integration with Curriculum: Encouraged learners to integrate knowledge gained from these courses into their current projects and assignments, reinforcing practical application and enhancing their understanding of complex topics.

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY

BENGALURU - 562157

DEPARTMENT OF CIVIL ENGINEERING

Name of the Faculty: Bhavya S

Batch: 2021

1. POs Correlation and PSOs Correlation

Sl. No.	NBA Course Code	VTU Course Code	Course Name	POs Correlation	PSOs Correlation
1	C301	21CV51	Hydrology and Water Resources Engineering	PO1, PO2,PO3	PSO1, PSO3

2. Course Outcomes (COs)

Course Name: Hydrology and Water Resources Engineering

Course Outcomes: At the end of the course, the student will be able to:

Semester: 5	Year of Study: 2023 – 2024
	After studying this course, students will be able to:
C301.1	Provide a background in the theory of hydrological processes and their measurement
C301.2	Estimate runoff and develop unit hydrographs.
C301.3	Find the water requirement and frequency of irrigation for various crops.
C301.4	Find the canal capacity and compute the reservoir capacity.
C301.5	Analyse floods and droughts. Emphasise on the importance of conservation of water and water bodies.

3. CO-PO matrices

Course Name: Hydrology and Water Resources Engineering

Semester: 5											Year of Study: 2023 – 2024	
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	P09	PO10	PO11	PO12
C301.1	2	2										
C301.2	2	2										
C301.3	2	2										
C301.4	2	2	1									
C301.5	2	2										
C301	2	2	1									

4. CO-PO mapping justification

Course Name: Hydrology and Water Resources Engineering

CO	EXPLANATION
C301.1	**Moderately mapped to PO1 & PO2** as the student will apply the knowledge of mathematics and engineering fundamentals to understand the concept of hydrology and also analyze its components.
C301.2	**Moderately mapped to PO1 & PO2** as the student will apply the knowledge of mathematics and engineering fundamentals to solve problems on hydrological cycle and also analyze the graphical data of rainfall through S curve analysis.
C301.3	**Moderately mapped to PO1 & PO2** as the student will be able to Summarize the water requirement of crops through different system of irrigation. And analyze the frequency of irrigation.
C301.4	**Moderately mapped to PO1, PO2 & Lightly mapped to PO3** as the student will able to analyze and design the canal and its alignment and also calculate the reservoir capacity using different methods.
C301.5	**Moderately mapped to PO1** as the student will apply the knowledge of engineering fundamentals to understand the importance of conservation of water and also analyze floods and droughts.

5. CO-PSO matrices

Course Name: Hydrology and Water Resources Engineering

Semester: 5			Year of Study: 2023 – 2024	
CO	PSO1	PSO2	PSO3	PSO4
C301.1	2		1	
C301.2	2		1	
C301.3	2		1	
C301.4	2		1	
C301.5	2		1	
C301	2		1	

6. CO-PSO mapping justification

Course Name: Hydrology and Water Resources Engineering

CO	EXPLANATION
C301.1	**Moderatly mapped to PSO1 & Lightly mapped to PSO3–** As the student will be able to identify the broad context of civil engineering problems and employ mathematics, science and computing techniques in understanding the concept of hydrology its components.
C301.2	**Moderatly mapped to PSO1 & Lightly mapped to PSO3** – As the student will be able to identify the broad context of civil engineering problems and employ mathematics, science in hydrological cycle and computing techniques on graphical data of rainfall through S curve analysis and also analyze the unit hydrograph using precipitation data.
C301.3	**Moderatly mapped to PSO1 & Lightly mapped to PSO3–** As the student will be able to identify the broad context of civil engineering problems and employ mathematics, science and computing techniques in Frequency of irrigation is required in the designing of water storage structures and systems of irrigation. Agriculture being the primary occupation of the nation, engineering knowledge regarding the water requirement of crops is also important.
C301.4	**Moderatly mapped to PSO1 & Lightly mapped to PSO3–** As the student will be able to identify the broad context of civil engineering problems and employ mathematics, science and computing techniques in Design of canals for supply of water for growing crops and for industries. Nowadays, reservoir planning knowledge is required for uniform distribution of water to all regions for different purposes
C301.5	**Moderatly mapped to PSO1 & Lightly mapped to PSO3-** As the student will be able to identify the broad context of civil engineering problems and employ science and analyze floods and drought. Emphasise on the importance of conservation of water and water bodies.

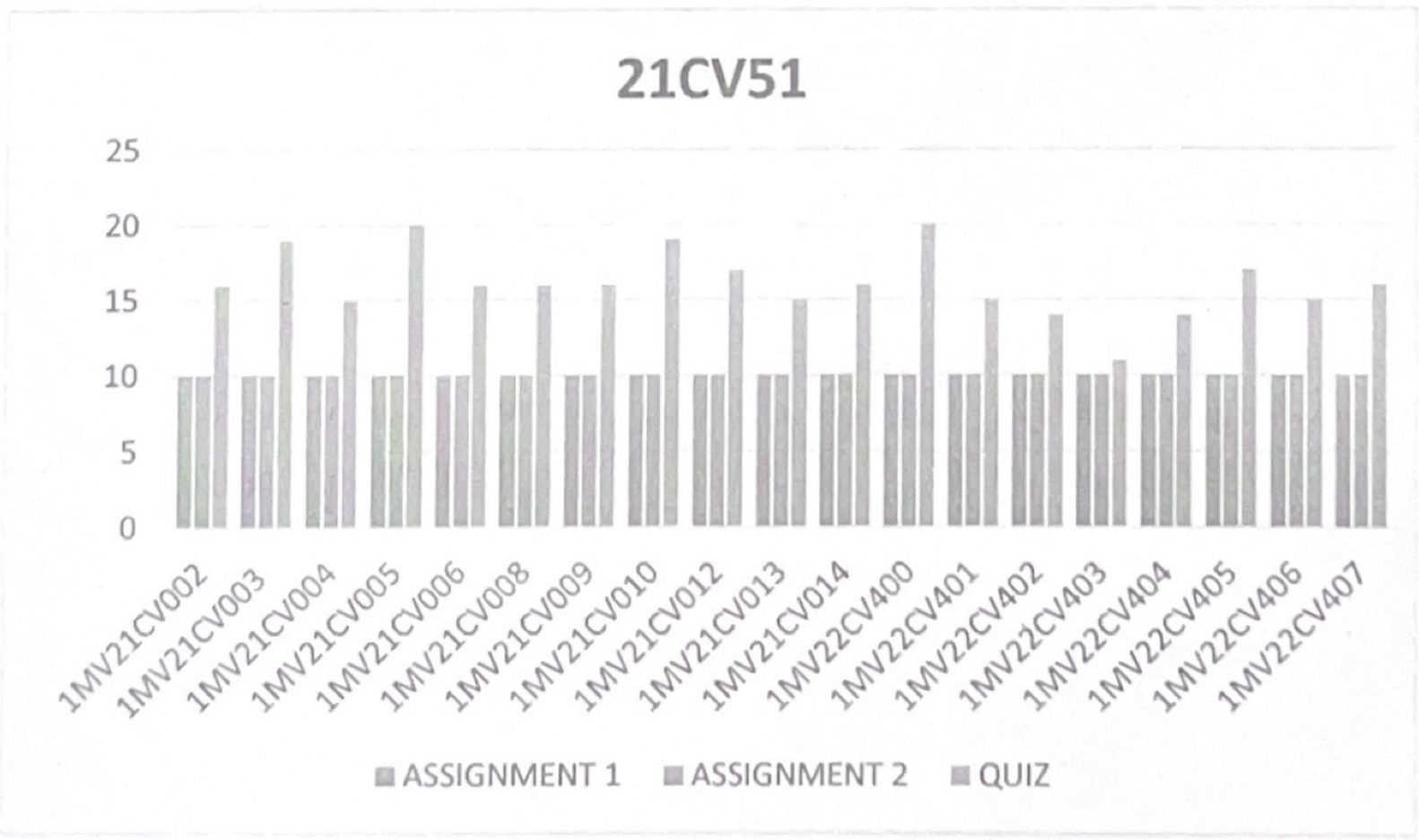
Bhavya.S

HOD
Dept. of Civil Engg.
MVIT, Bangalore-562 157

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING

SUBJECT NAME : HYDROLOGY AND WATER RESOURCES ENGINEERING (21CV51)

Sl. No.	USN	Students Name	Assignment	Assignment	Oral/Online Quizzes
			AS1	AS2	OR1
			10	10	20
1	1MV21CV002	GIRIDHAR C N HOMBALE	10	10	16
2	1MV21CV003	HANNA FATHIMA	10	10	19
3	1MV21CV004	MANJESH GOWDA S	10	10	15
4	1MV21CV005	N SAI AISHWARYA REDDY	10	10	20
5	1MV21CV006	NIKHIL GOWDA C	10	10	16
6	1MV21CV008	PUNITH GOWDA D L	10	10	16
7	1MV21CV009	RUCHITHA L	10	10	16
8	1MV21CV010	SAI VARUN N J	10	10	19
9	1MV21CV012	SINCHANA M B	10	10	17
10	1MV21CV013	SUNIKETH REDDY	10	10	15
11	1MV21CV014	C. LOHITH CHANDRA	10	10	16
12	1MV22CV400	CHANDAN Y K	10	10	20
13	1MV22CV401	CHANDRU R	10	10	15
14	1MV22CV402	GOWTHAM M	10	10	14
15	1MV22CV403	KEERTHI R	10	10	11
16	1MV22CV404	KSHIRALING KADAGANCHI	10	10	14
17	1MV22CV405	MONIKA V	10	10	17
18	1MV22CV406	RAMYADEEPTHI A	10	10	15
19	1MV22CV407	REDDAPPA N	10	10	16



SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE

DEPARTMENT OF CIVIL ENGINEERING

COURSE EXIT SURVEY

Subject Name	Hydrology and Water Recourses Engineering
University Code	21CV51
Course Code	C213
Faculty	Bhavya S
Year of Study	2023-24

COURSE OUTCOMES

	Course Outcomes
	After studying this course, students will be able to:
CO1	Provide a background in the theory of hydrological processes and their measurement
CO2	Estimate runoff and develop unit hydrographs.
CO3	Find the water requirement and frequency of irrigation for various crops.
CO4	Find the canal capacity and compute the reservoir capacity.
CO5	Analyse floods and droughts. Emphasise on the importance of conservation of water and water bodies.

Co's	3	2	1
	(80-100%)	(60-79%)	(40-59%)

Sl. No.	USN	Students Name	CO1	CO2	CO3	CO4	C05	Sign
1	1MV21CV001	BHUVAN GOWDA M N						
2	1MV21CV002	GIRIDHAR C N HOMBALE	3	3	3	3	3	
3	1MV21CV003	HANNA FATHIMA	3	3	3	3	3	
4	1MV21CV004	MANJESH GOWDA S	3	3	3	3	3	
5	1MV21CV005	N SAI AISHWARYA REDDY	3	3	3	3	3	
6	1MV21CV006	NIKHIL GOWDA C	3	3	3	3	3	
7	1MV21CV008	PUNITH GOWDA D L	3	3	3	3	3	

Sl. No.	USN	Students Name	CO1	CO2	CO3	CO4	C05	Sign
8	1MV21CV009	RUCHITHA L	3	3	3	3	3	Ruchitha.L
9	1MV21CV010	SAI VARUN N J	3	3	3	3	3	
10	1MV21CV012	SINCHANA M B	3	3	3	3	3	Sinchana.M.B.
11	1MV21CV013	SUNIKETH REDDY	3	3	3	3	3	
12	1MV21CV014	LOHTH CHANDRA	3	3	3	3	3	
13	1MV22CV400	CHANDAN Y K	3	3	3	3	3	
14	1MV22CV401	CHANDRU R	3	3	3	3	3	
15	1MV22CV402	GOWTHAM M	3	3	3	3	3	Gautham
16	1MV22CV403	KEERTHI R	3	3	3	3	3	keerthi.R.
17	1MV22CV404	KSHIRALING KADAGANCHI	3	3	3	3	3	kshiralingv
18	1MV22CV405	MONIKA V	3	3	3	3	3	Monikav
19	1MV22CV406	RAMYADEEPTHI A	3	3	3	3	3	RamyaDeepthiA
20	1MV22CV407	REDDAPPA N	3	3	3	3	3	

Course Coordinator

Module Coordinator

HOD, CIVIL

Name: Bhavya-S

Signature:

Faculty : Ms. BHAVYA S

Program : B.E. - CV

Filled By : 19

Subject : 21CV51 - Hydrology and Water Resource Engineering

Semester : 5

Division : CV - 5 th Sem - Nov_2023

Sr. No.	Question	Weight	Score Obtained	%	No. of students who have said				
					Excellent(5)	Very Good (4)	Good(3)	Fair(2)	Bad(1)
1	Planning of lectures and Presentation of subject matter in logical sequence	3	276	96.84	16	3	0	0	0
2	Presentation and Communication skills	3	279	97.89	17	2	0	0	0
3	Subject knowledge	3	279	97.89	17	2	0	0	0
4	Willingness to clarify doubts and provide guidance	3	276	96.84	16	3	0	0	0
5	Class Room Management	3	276	96.84	16	3	0	0	0
6	Use of Black board and other teaching aids	3	276	96.84	16	3	0	0	0
7	Preparedness for class	2	182	95.79	15	4	0	0	0
8	Fostering punctuality through his / her example	2	184	96.84	16	3	0	0	0
9	Confidence level of the teacher	2	186	97.89	17	2	0	0	0
10	Attire and mannerism	2	184	96.84	16	3	0	0	0
11	Overall assessment of the teacher	3	282	98.95	18	1	0	0	0
					Most of the times(5)	Rarely(3)	Never(1)		
12	Relates theory to applications of real world problems	1	95	100.00	19	0	0		
					Always(5)	Most of the time(3)	Rarely(1)		
13	Teaching in a way resulting in real learning / understanding and motivation	2	182	95.79	17	2	0		
					Impartial(5)	Justifiable(3)	Partial(1)		
14	Fairness in evaluation	1	91	95.79	17	2	0		
					Acceptable (5)	Slow(3)	Fast(1)		
15	Pace at which the subject is taught	2	190	100.00	19	0	0		

Overall Score		
Max. Possible points	Obtained	Percentage
3325	3238	97.38%

Head
Dept. of Civil Engg.
MVIT, Bangalore-562 157

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PRINCIPAL
SIR M. VISVESVARAYA INSTITUTE OF TECHNOLOGY
Krishnadevaravanagar, Hunasamaranahalli,
International Airport Road, BANGALORE-562 157

SIR M VISVESVARAYA INSTITUTE OF TECHNOLOGY, BANGALORE - 562 157

Department : CIVIL
Semester : V SEM (AFTER REVALUATION)

Examination : Jan-24
Batch : 2022 BATCH

SL. NO	SUBJECT CODE	NAME OF THE SUBJECT	REGULAR			REPEATERS			DIPLOMA			TOTAL PASS %			NAME OF THE STAFF
			APP	PASS	% OF PASS	APP	PASS	% OF PASS	APP	PASS	% OF PASS	APP	PASS	% OF PASS	
1	21CV51	HYDROLOGY & WATER RESOURCES ENGINEERING	11	11	100	0	0	0	8	8	100	19	19	100	Ms Bhavya S
2	21CV52	TRANSPORTATION ENGINEERING	11	11	100	0	0	0	8	7	88	19	18	95	Mr. Prasad K V R
3	21CV53	DESIGN OF RC STGRUCTURUAL ELEMENTS	11	9	82	0	0	0	8	8	100	19	17	89	Dr Pradeepa S
4	21CV54	GEOTECHNICAL ENGINEERING	11	10	91	0	0	0	8	6	75	19	16	84	Ms. Subhadra G D & Mr. Sri Ram Mustapure
5	21CVL55	GEOTECHNICAL ENGINERRING LAB	11	11	100	0	0	0	8	8	100	19	19	100	Ms. Subhadra G D & Mr. Sri Ram Mustapure
6	21RMI56	RESEARCH METHODOLOGY & INTELLECTUAL PROPERTY RIGHTS	11	11	100	0	0	0	8	8	100	19	19	100	Ms Anitha J
7	21CIV57	ENVIRONMENTAL STUDIES	11	11	100	0	0	0	8	8	100	19	19	100	Dr. Shivanna S
8	21CV583	GENDER SENSITIZATION	11	11	100	0	0	0	8	8	100	19	19	100	Ms Anitha J

RESULT ANALYSIS OF
V SEMESTER B.E. Civil Engg. (OVERALL)
JAN - 2024 EXAMINATIONS

	Reg	Rep	D.Q	Overall
Total Appeared	11	0	8	19
Total Pass	9	0	6	15
Total Fail	2	0	2	4
Percentage	82	0	75	79

	Reg	Rep	D.Q	Overall
Total	11	0	8	19
FCD	6	0	6	12
FC	3	0	0	3
SC	0	0	0	0

14/6/24
Head
Dept. of Civil Engg.
MVIT, Bangalore-562 157

Staff Name Bhavya S Subject Code 21CV51 (A) Subject Name Hydrology & Water Resources Engineering

Statistics	
Semester	5
Academic Year	2023-24
Class Strength	19
CIE Marks	50
Maximum Marks	50
Weightage	
Test %	45%
University %	45%
Survey %	10%

	CIE Attainment Level			University Attained				Survey		Attainment
Co's	Class Target	% Assign.	Level	Exam Target	% Attained	Level	% Attained	Level	
C213.1	80%	85.48%	3	50%	96.49%	3	90.00%	3	3.00
C213.2	80%	87.43%	3	50%	96.49%	3	90.00%	3	3.00
C213.3	80%	88.89%	3	50%	96.49%	3	90.00%	3	3.00
C213.4	80%	65.85%	1	50%	96.49%	3	90.00%	3	2.10
C213.5	80%	85.96%	3	50%	96.49%	3	90.00%	3	3.00

Scheme	21
Ratio	50:50
Course Type	
PCC/Other	

CONTRIBUTION TO PROGRAMME OUTCOMES (PO's) AND PROGRAM SPECFIC OUTCOMES (PSO's) for Intake Year 2021 for Academic Year 2023-24

CO's			Program Outcomes											Program Specific Outcome			
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
C213.1	Mapping		2	2											2		1	
	Attainment	3.00	2.00	2.00											2.00		1.00	
C213.2	Mapping		2	2											2		1	
	Attainment	3.00	2.00	2.00											2.00		1.00	
C213.3	Mapping		2	2											2		1	
	Attainment	3.00	2.00	2.00											2.00		1.00	
C213.4	Mapping		2	2	1										2		1	
	Attainment	2.10	1.40	1.40	0.70										1.40		0.70	
C213.5	Mapping		2	2											2		1	
	Attainment	3.00	2.00	2.00											2.00		1.00	
C213			1.88	1.88	0.70										1.88		0.94	