

RGPV(DiplomaWing)Bhopal				SEMESTERTEACHINGLEARNING&ASSESSMENTPLAN											FORMAT-6		
NAMEOF PROGRAMME		THREEYEARS DIPLOMA				SCHEME		OBE		IMPLEMENTINGYEAR				2020-21			
BRANCHCODE		NAMEOF BRANCH				AGRICULTURE ENGG / AGRICULTURAL ENGG						SEMESTER		SIXTH			
S. No	COURSEDETAILS						T-LPLAN		ASSESSMENTPLAN								Grand Total of Marks
	COURSE CODE	COURSE NAME	CREDITS	PAPER CODE	No. of COs	No. of LOs	Total T-L Hrs.	T-L Hrs. /Week	Internal Assessment		ExternalAssessment(UniversityExam)						
									No. of LOs	Total Marks	TheoryPaper			PracticalExam*			
No. of LOs	Total Marks	No. of LOs	Total Marks	Duration in Hrs	No. of LOs	Total Marks	Duration in Hrs										
1	601	SOIL AND WATER CONSERVATION ENGINEERING	6	7319	06	8	105	07	02	20+30	05	70	03:00	01	30	03:00	150
2	602	POST HARVESTING MANAGEMENT & PROCESSING	6	7320	06	11	120	07	03	20+30	07	70	03:00	01	30	03:00	150
3	603	AGRICULTURE STRUCTURES	6	7321	06	09	90	09	02	20+30	06	70	03:00	01	30	03:00	150
4	604	PROJECT	2		04	04	70	09	03	50			03:00	01	150	03:00	200
5	605	PROFESSIONAL DEVELOPMENT-VI	02		04	04	60	04	04	75							75
TOTAL																	725
No. of Theory Papers													03	No. of Practical Exams			04

*Exam for LOs (Psycho+ Affect.)#(C+P) =cognitive+ Psychomotor

RGPV (DIPLOMA WING) BHOPAL		OBE CURRICULUM FOR THE COURSE		FORMAT-3	Sheet No. 1/3
Branch	Agricultural Engineering			Semester	6th
Course Code	601/7319	Course Name			Soil & water conservation Engineering
Course Outcome 1	Describe soil erosion, water erosion and gullies			Teach Hrs	Marks
Learning Outcome 1	Explain geological and accelerated erosion and effects of erosion			8	10
Contents	Soil erosion - Introduction, causes and types - geological and accelerated erosion, agents, factors affecting and effects of erosion.				
Method of Assessment	External : End semester Examination-Pen Paper Test				
Learning Outcome 2	Explain mechanics and forms like splash, sheet, rill, etc. and development stages of gullies.			7	10
Contents	Water erosion - Mechanics and forms - splash, sheet, rill, gully, ravine and stream bank erosion. Gullies - Classification, stages of development.				
Method of Assessment	Internal: Mid Semester Exam I - Pen paper test/Assignment				

Course Outcome 2	Explain soil loss estimation, rainfall erosivity and soil erodibility.				
Learning Outcome 1	Understand USLE and modified USLE, erosivity estimation by KE>25 and EI30 methods and practice factors			15	20
Contents	Soil loss estimation – Universal soil loss equation (USLE) and modified USLE. Rainfall erosivity - estimation by KE>25 and EI30 methods. Soil erodibility - topography, crop management and conservation practice factors.				
Method of Assessment	External : End semester Examination-Pen Paper Test				
Course Outcome 3	Describe soil and water erosion measurement by different measures				
Learning Outcome 1	Understand agronomical measures - contour farming, tillage and mulching			8	10

Contents	Measurement of soil erosion - Runoff plots, soil samplers. Water erosion control measures - agronomical measures - contour farming, strip cropping, conservation tillage and mulching.		
Method of Assessment	External : End semester Examination-Pen Paper Test		
Learning Outcome 2	Understand bunds and terraces and contour stonewall and trenching	7	10
Contents	Engineering measures—Bunds and terraces. Bunds - contour and graded bunds - design. Terraces - level and graded broad base terraces, bench terraces - planning, design and layout procedure, contour stonewall and trenching.		
Method of Assessment	External : End semester Examination-Pen Paper Test		

Course Outcome 4	Describe principles of gully control and grassed waterways and design		
Learning Outcome 1	Understand the principles of gully control and its structures and drains	15	20
Contents	Gully and ravine reclamation - principles of gully control - vegetative measures, temporary structures and diversion drains. Grassed waterways and design.		
Method of Assessment	Internal: Mid Semester Exam I - Pen paper test/Assignment		

Course Outcome 5	Explain wind erosion, control mechanisms and land capability classification		
Learning Outcome 1	Understand mechanics, soil estimation and control measures of wind erosion and silt monitoring and storage loss in tanks	15	20
Contents	Wind erosion- Factors affecting, mechanics, soil loss estimation and control measures - vegetative, mechanical measures, wind breaks and shelter belts and stabilization of sand dunes. Land capability classification. Rate of sedimentation, silt monitoring and storage loss in tanks.		
Method of Assessment	External : End semester Examination-Pen Paper Test		

Course Outcome 6	Describe the Soil and Water conservation processes including agronomical and engineering measures.		
Learning Outcome 1	Understand agronomical and engineering measures and design counter bounds, terraces, waterways, etc.	6	

Contents	<ul style="list-style-type: none"> • Study of different types and forms of water erosion. • Exercises on computation of rainfall erosivity index. • Exercises on soil loss estimation/measuring techniques. • Estimation of sediment rate using Coshocton wheel sampler and multi-slot devisor. • Determination of sediment concentration through oven dry method. • Design and layout of contour bunds. • Design and layout of graded bunds. • Design and layout of broad base terraces. • Design and layout of bench terraces. • Design of vegetative waterways. • Exercises on rate of sedimentation and storage loss in tanks. • Computation of soil loss by wind erosion. • Design of shelterbelts and wind breaks for wind erosion control. • Visit to soil erosion sites and watershed project areas for studying erosion control and water conservation measures.
Method of Assessment	Internal viva voce/ Practical files and assignment

Suggested Learning Resources:-

S.No.	Title	Author	Publisher
1	Manual of Soil and Water Conservation Practices	Gurmel, C. Venkataraman, G. Sastry and B.P. Joshi	Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
2.	Soil and Water Conservation and Watershed Management	Mahnot, S.C.	International Books and Periodicals Supply Service, New Delhi
3	Introduction to Soil and Water Conservation Engineering	Mal, B.C.	Kalyani Publishers
4	Principles of Agricultural Engineering	Michael, A.M. and T.P. Ojha	Jain Brothers, New Delhi
5	Land and Water Management Engineering	Murthy, V.V.N.	Kalyani Publishers, New Delhi
6	Soil Conservation	Norman Hudson	Cornell University Press, Ithaca, New York, USA
7.	Soil and Water Conservation Engineering	Frevert, R.K., G.O. Schwab, T.W. Edminster and K.K. Barnes	Standard Publisher Distributors, New Delhi