

RGPV(DiplomaWing)Bhopal				SEMESTERTEACHINGLEARNING&ASSESSMENTPLAN											FORMAT-6				
NAMEOF PROGRAMME		THREEYEARS DIPLOMA			SCHEME		OBE		IMPLEMENTING YEAR				2020-21						
BRANCHCODE		NAMEOF BRANCH			AGRICULTURE ENGG / AGRICULTURAL ENGG						SEMESTER		FIFTH						
S. No	COURSEDETAILS						T-LPLAN		ASSESSMENTPLAN										
	COURSE CODE	COURSE NAME	CREDITS	PAPER CODE	N o. of CO s	No. of LOs	Total T-L Hrs.	T-L Hrs. /Week	Internal Assessment		ExternalAssessment(UniversityExam)						Grand Total of Marks		
									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	501	IRRIGATION ENGINEERING	4	6908	08	16	90	06	04	30	12	70	03:00				100		
2	502	FARM MACHINERY	4+2	7316	05	11	105	07	01	30+20	07	70	03:00	01	30	03:00	150		
3	503	AGRICULTURE PRODUCTION TECHNOLOGY-II	4+2	7317	04	06	85	07	01	30+20	04	70	03:00	01	30	03:00	150		
4	504	PROJECT MANAGEMENT	4+2	7318	08	08	125	09	02	30+20	05	70	03:00	01	30	03:00	150		
5	505	PROFESSIONAL DEVELOPMENT-V	02		04	06	60	04	06	75							75		
<b>TOTAL</b>																	625		
												<b>No.ofTheoryPapers</b>		<b>04</b>		<b>No.ofPracticalExams</b>		<b>03</b>	

\*ExamforLOs(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		5 <sup>th</sup>	
Course Code		501/6908		Course Name		IRRIGATION ENGINEERING	
<b>Course Outcome 1</b>		Explain irrigation engineering and its methods and principal of hydrology.		Teach Hrs		Marks	
<b>Learning Outcome 1</b>		Describe irrigation engineering, project purpose and methods of irrigation		6		10	
<b>Contents</b>		Definition – Irrigation and irrigation engineering, advantages of irrigation, ill effects of over irrigation, and types of irrigation project purpose wise and administrative wise, Methods of irrigation. Analyze data for irrigation project, supervision of reservoir and canal structure, weir and barrages, lift irrigation scheme, its suitability, advantages and limitations Capacity of reservoir.					
<b>Method of Assessment</b>		External : End semester Examination-Pen Paper Test					
<b>Learning Outcome 2</b>		Understand the principle of hydrology and canal concept		6		06	
<b>Contents</b>		Principle of Hydrology Relation between water and crop Rainfall, Crops, Dams Weir, Barrages, Area Capacity curve Capacity Canal Concept of runoff duty delta and base period					
<b>Method of Assessment</b>		Internal: Mid Semester Exam I - Pen paper test/Assignment					

<b>Course Outcome 2</b>		Explain hydrological cycle and define rain fall and run off					
<b>Learning Outcome 1</b>		Understand the definition of rain fall, average rain fall and its calculations		6		06	
<b>Contents</b>		Hydrological cycle, Definition of rainfall , rain gauge and rain gauge station , types of rain gauges ( names only) average annual rain fall and its calculation , definition of run off, factor affecting run off, calculation of run off by run off coefficient, English formula , Stranges and Binnie’s tables and curves. Maximum flood discharge and methods of calculation. Unit hydrograph Yield and Dependable yield and methods calculation.					
<b>Method of Assessment</b>		External : End semester Examination-Pen Paper Test					
<b>Learning Outcome 2</b>		Understand the definition of run off and its calculations using different methods		6		06	
<b>Contents</b>		Definition of run off, factor affecting run off, calculation of run off by run off coefficient, English formula , Stranges and Binnie’s tables and curves. Maximum flood discharge and methods of calculation. Unit hydrograph Yield and Dependable yield and methods calculation.					

<b>Method of Assessment</b>	Internal: Mid Semester Exam I - Pen paper test/Assignment		
<b>Course Outcome 3</b>	Describe crops and cropping seasons in Madhya Pradesh and its related definitions		
<b>Learning Outcome 1</b>	Explain crop period, base period and duty delta with their relations	6	06
<b>Contents</b>	Cropping seasons and crop in Madhya Pradesh. Definition – Crop period base period Duty Delta , factors affecting Duty , relation between Duty Delta and base period		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Explain assessment of irrigation water	6	06
<b>Contents</b>	Definition – CCA , GCA, IA, intensity of irrigation time factor capacity factor. Crop rotation. Problems on water requirement and capacity of canal. Assessment of irrigation water		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 4</b>	Describe complete process of investigation and reservoir planning		
<b>Learning Outcome 1</b>	Understand and analyze data collected for irrigation project.	6	06
<b>Contents</b>	Survey for irrigation project data collected for irrigation project. Area capacity curve, silting of reservoir, rate of silting, factors affecting silting,		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Explain methods to control levels in reservoir	6	06
<b>Contents</b>	Methods to control levels and respective storage in reservoir. Fixing control levels		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 5</b>	Describe types of dams, methods of dam constructions and spliways		
<b>Learning Outcome 1</b>	Explain Earthen dams and Gravity dams with respect to various factors like seepage and construction	6	06

<b>Contents</b>	Types of dams – Earthen dams and Gravity dams ( masonry and concrete) Comparison of earthen and gravity dams with respect to foundation, seepage, construction and maintenance Earthen Dams – Components and their function , typical cross section seepage through embankment and foundation seepage control through embankment and foundation .		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Explain failure and remedial measures of earthen dam and detailed profile of gravity dams and also define the spillways and its types	6	06
<b>Contents</b>	Methods of constructions, types of failure of earthen dams and remedial measures. Gravity Dams Theoretical and practical profile, typical cross section, drainage gallery, joint in gravity dam, high dam and low dam Spillways- Definition, function, location and components. Emergency and services, ogee spillway and bar type spillway, discharge over spillway. Spillway with and without gates		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 6</b>	Describe small irrigation structure, bandhara, percolation tanks and lift irrigation		
<b>Learning Outcome 1</b>	Explain Bandhara irrigation layout and importance of percolation tanks	5	06
<b>Contents</b>	Advantages and disadvantages of Bandhara irrigation layout and component parts, solid and open Bandhara. Percolation Tanks – necessity and importance, selection of site.		
<b>Method of Assessment</b>	Internal : Pen Paper Test/ assignments		
<b>Learning Outcome 2</b>	Explain lift irrigation scheme with its design specifications and small structures like stop dam	5	06
<b>Contents</b>	Layout of lift irrigation scheme. Irrigation department standard design and specification. Small irrigation structures, like Stop dam, stop dam cum cause way, ring bund , small ponds		
<b>Method of Assessment</b>	Internal: Mid Semester Exam I - Pen paper test/Assignment		
<b>Course Outcome 7</b>	Describe diversion head works.		
<b>Learning Outcome 1</b>	Understand weirs and the layout of diversion head works wits and their functions	5	06
<b>Contents</b>	Weirs – components parts, unction and types, layout of diversion head works wits its components and their function, canal head regular, silt excluders and silt ejectors.		

<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Describe barrages with standard design specifications	5	06
<b>Contents</b>	Barrages – components and their function. Difference between weir and barrage irrigation department standard design and specifications.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 8</b>	Describe classification and design of canals ;and C.D. works		
<b>Learning Outcome 1</b>	Explain canal design	5	06
<b>Contents</b>	Classification of canals according to alignment and position in the canal network. Design of most economical canal section.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Explain purpose, types and advantages of canal lining and various C.D. works	5	06
<b>Contents</b>	Canal lining – Definition, purpose, types of canal lining advantages of canal lining properties of good canal lining material. CD. works- different C.D. works, canal falls, escapes, cross regulators and canal outlets		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

### Suggested Learning Resources:-

S.No.	Title	Author	Publisher
1	Irrigation and water power Engineering	B.C. Punmia	Laxmi Publication, Delhi.
2.	Introductory Irrigation Engineering	B.C. Punmia	Laxmi Publication, Delhi.
3	Fundamental principle of Irrigation Engineering	V.B. Priyani	Charotar Book Stall

4	Fundamental principles of Irrigation Engineering	Bharat Singh	Nem Chand & Bros.,India
5	Irrigation Engineering. & Hydraulic structures	S.K. Garg	Khanna publisher, New Delhi.
6	Principles of Irrigation. Engineering	S.K. Verma	
7.	Irrigation Engineering	Birdie.	Dhanpat Rai Publishing Company Private Limited-New Delhi

<b>RGPV (DIPLOMA WING) BHOPAL</b>		<b>OBE CURRICULUM FOR THE COURSE</b>		<b>FORMAT-3</b>	<b>Sheet No. 1/3</b>
<b>Branch</b>	<b>Agricultural Engineering</b>			<b>Semester</b>	<b>5<sup>th</sup></b>
<b>Course Code</b>	<b>502/7316</b>	<b>Course Name</b>		<b>FARM MACHINERY</b>	
<b>Course Outcome 1</b>	Describe classification and principles of farm machines			<b>Teach Hrs</b>	<b>Marks</b>
<b>Learning Outcome 1</b>	Explain principal of operation and selection of machines			10	20
<b>Contents</b>	Objectives of farm mechanization. Classification of farm machines. Materials of construction & heat treatment. Principles of operation and selection of machines used for production of crops. Field capacities & economics				
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test				
<b>Learning Outcome 2</b>	Calculations of field capacity and field efficiency			10	
<b>Contents</b>	<ol style="list-style-type: none"> <li>1. Introduction to various farm machines, visit to implements shed and research hall</li> <li>2. Field capacity and field efficiency measurement for at least two machines/implements</li> </ol>				
<b>Method of Assessment</b>	Internal viva voce/ Practical files and assignment				

<b>Course Outcome 2</b>	Explain various tillage tools and earth moving equipments				
<b>Learning Outcome 1</b>	Understand the design and draft measurement of tillage tools.			10	10
<b>Contents</b>	Tillage; primary and secondary tillage equipment. Forces acting on tillage tools and their designs. Hitching systems and controls. Draft measurement of tillage equipment ,				
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test				
<b>Learning Outcome 2</b>	Understand working principles of moving equipment like Trencher			10	10
<b>Contents</b>	Earth moving equipment – their construction & working principles viz., Bulldozer, Trencher, Elevators etc.				
<b>Method of Assessment</b>	Internal: Mid Semester Exam I - Pen paper test/Assignment				

<b>Course Outcome 3</b>	Describe different farm equipments		
<b>Learning Outcome 1</b>	Understand the calibration and adjustments of sowing, planting & transplanting equipments	10	10
<b>Contents</b>	Sowing, planting & transplanting equipment - their calibration and adjustments.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Describe fertilizer application equipments	10	10
<b>Contents</b>	Fertilizer application equipment including farm yard manure applicator.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 4</b>	Describe weed control, Inter-culture and plant protection equipments		
<b>Learning Outcome 1</b>	Explain weeders, earting and interculture equipment, sprayers and their calibration	10	20
<b>Contents</b>	Weed control, Inter-culture and Plant protection equipment – weeders (manual, animal and power operated weeders) earthing and interculture equipment, sprayers and dusters, their calibration, selection, constructional features of different components and adjustments.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Understand calibration , draft and fuel consumption of different equipments; and study of sprayers, dusters, etc.	10	
<b>Contents</b>	<ol style="list-style-type: none"> <li>1. Calibration of seed drills</li> <li>2. Draft&amp; fuel consumption measurement for different implements</li> <li>3. Study of sprayers, dusters, measurement of nozzle discharge, field capacity etc.</li> </ol>		
<b>Method of Assessment</b>	Internal viva voce/ Practical files and assignment		

<b>Course Outcome 5</b>	Describe Principles & types of cutting mechanisms		
<b>Learning Outcome 1</b>	Explain construction and adjustments of shear and impact-type cutting mechanisms and different harvesting machinery.	10	10



<b>Contents</b>	Principles & types of cutting mechanisms. Construction & adjustments of shear & impact-type cutting mechanisms. Crop harvesting machinery: mowers, windrowers, reapers, reaper binders, combine harvesters and forage harvesters. Forage chopping & handling equipment.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Explain Maize harvesting and shelling equipment, Root crop harvesting equipment, etc.	10	10
<b>Contents</b>	Specialized harvesting equipment such as Maize harvesting & shelling equipment, Root crop harvesting equipment-potato, groundnut etc., Cotton picking & Sugarcane harvesting equipment.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 3</b>	Explain and identify the different types of implements and their use.	5	
<b>Contents</b>	1. Visit to Agricultural implements manufacturing industry to identify the different types of implements and their use.		
<b>Method of Assessment</b>	External : Industry visit.		

### Suggested Learning Resources:-

S.No.	Title	Author	Publisher
1	Principles of Farm machinery	Kepner R.A., Bainer R & Berger EL	AVI Publ. Co
2.	Principles of Agricultural Engineering	Michael A M and Ojha, T.P.	Jain Brothers, New Delhi
3	Farm Machines and Equipments	C P Nakra	Dhanpat Rai Publishing Company Private Limited-New Delhi
4	Machinery – An approach. Standard Publishers and Distributors	Jain S C, Philip Grace	Standard Publishers and Distributors

5	Agricultural Engineering (Through Worked out examples),	RadheyLal and A.C.Dutta	SarojPrakakshan, Allahabad
6	Elements of Agricultural Engineering	Sahay J.	Irshad Ali, Kitab Mahal, Sarojini Naidu Marg, Allahabad
7.	Elements of Farm Machinery	Srivastav AC	Saroj Prakashan, Allahabad

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<b>Branch</b>	<b>Agricultural Engineering</b>			<b>Semester</b>	<b>5<sup>th</sup></b>
<b>Course Code</b>	<b>503/7317</b>	<b>Course Name</b>			<b>AGRICULTURE PRODUCTION TECHNOLOGY -II</b>
<b>Course Outcome 1</b>	Explain the concept of different cropping methods			<b>Teach Hrs</b>	<b>Marks</b>
<b>Learning Outcome 1</b>	Understand the concept of mono-cropping double-dropping, etc. and cropping intensity			15	25
<b>Contents</b>	Concept of Mono-cropping, Double cropping, Multiple cropping, Sequential cropping, Intercropping, Mixed cropping, Alley cropping, Relay cropping, Cropping intensity, Land equivalent ratio.				
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test				

<b>Course Outcome 2</b>	Describe environmental Issues and their Impact on Agriculture, and monitoring indices				
<b>Learning Outcome 1</b>	Explain issues like global climate change and emission of green house gases with their impact.			15	15
<b>Contents</b>	Environmental Issues and their Impact on Agriculture: Global climate change, emission of green house gases from Indian agriculture,				
<b>Method of Assessment</b>	Internal: Mid Semester Exam I - Pen paper test/Assignment				
<b>Learning Outcome 2</b>	Explain different monitoring indices like Air quality index, Environmental performance index, etc.			10	10
<b>Contents</b>	Different indices for environmental monitoring such as- Air quality index (AQI), Biocide residue index (BRI), Ecological footprint, Environmental sustainability index (ESI), Environmental performance index (EPI), Environmental vulnerability index (EVI), Global warming potential (GWP), <i>P</i> index, <i>T</i> value ( Soil loss tolerance), Soil quality indicator (SQI), Soil sustainability index (SSI), Soil threat index (STI), Sustainable yield index (SYI), Water quality index (WQI) etc.				
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test				
<b>Course Outcome 3</b>	Describe the concept of organic farming with its objectives.				
<b>Learning Outcome 1</b>	Understand the concept of organic farming, crops for organic farming and niche areas			15	25

<b>Contents</b>	Concept of organic farming, its objectives and promotion, certification and inspection regime, niche areas and crops for organic farming, myth and concerns.
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test

<b>Course Outcome 4</b>	Describe agronomic package of practices for cultivation of oil seed and fodder crops to improve food production		
<b>Learning Outcome 1</b>	Explain cultivation of major pulses oil seed and fodder crops their climatic requirement, land preparation, fertilizer and water requirement, etc.	15	25
<b>Contents</b>	Agronomic package of practices for cultivation of major pulses oil seed and fodder crops, highlighting Scientific name, family, origin, climatic requirement, sowing time, land preparation, seed rate, sowing methods, Important varieties, fertilizer requirement, water requirement, inter-culture operations, plant protection measures, harvesting etc.		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		
<b>Learning Outcome 2</b>	Understand the package of practices for the production of important pulse, oil seed and fodder crops and different types of cropping	15	
<b>Contents</b>	<ol style="list-style-type: none"> <li>1. Identification of major pulse, oil seed and fodder crops and their phenotypic differences</li> <li>2. Identification of major weeds of these crops,</li> <li>3. Composting techniques,</li> <li>4. Measurement protocols of green house gases,</li> <li>5. Visits to farms engaged in organic farming</li> </ol>		
<b>Method of Assessment</b>	Internal viva voce/ Practical files and assignment		

### Suggested Learning Resources:-

S.No	Title	Author	Edition
1	Handbook of Agriculture	Anonymus	ICAR New Delhi
2	Principles of Plant Nutrition	Konrad Mengel and Ernest A. Kirkby	Springer Science Business Media
3	Textbook of Field Crop Production	Rajendra Prasad	Directorate of Knowledge Management in Agriculture, Indian Council of Agricultural Research
4	Introduction to Agronomy & Principles of Crop Production	S.R.Reddy	Kalyani Publishers
5	Principles of Agronomy	T.Y.Reddy and G.H.S.Reddy	Kalyani Publishers

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<b>Branch</b>	<b>Agricultural Engineering</b>		<b>Semester</b>	<b>5<sup>th</sup></b>	
<b>Course Code</b>	<b>504/7318</b>	<b>Course Name</b>		<b>PROJECT MANAGEMENT</b>	
<b>Course Outcome 1</b>	Describe basic concepts of Entrepreneurship			<b>Teach Hrs</b>	<b>Marks</b>
<b>Learning Outcome 1</b>	Understand the definition of Entrepreneur, Entrepreneurship and the classification of entrepreneurs			15	10
<b>Contents</b>	<b>INTRODUCTION TO ENTERPRENEURSHIP</b> <ul style="list-style-type: none"> <li>• Definition of Entrepreneur / Intrapreneur</li> <li>• Difference between Entrepreneurship / Intrapreneurship</li> <li>• Need for Entrepreneurship</li> <li>• qualities of successful entrepreneur</li> <li>• Myths about Entrepreneurship</li> <li>• Classification of entrepreneurs on the basis of different criteria</li> <li>• Reasons for the failure of entrepreneurs</li> </ul>				
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test				

<b>Course Outcome 2</b>	Describe concepts and classification of industries and business organizations.				
<b>Learning Outcome 1</b>	Understand concept of industry and classification like, tiny, large, rural and cottage and also forms of business organizations like public ltd, pvt. ltd., etc.			15	15
<b>Contents</b>	<b>INDUSTRIES AND BUSINESS ORGANIZATIONS</b> <ul style="list-style-type: none"> <li>• Concept of Industry or Enterprise</li> <li>• Classification of Industries <ul style="list-style-type: none"> <li>(a) On the basis of capital investment <ul style="list-style-type: none"> <li>- Tiny (Micro) Industry</li> <li>- Small Scale</li> <li>- Medium Scale</li> <li>- Large Scale</li> </ul> </li> <li>(b) Others <ul style="list-style-type: none"> <li>- Rural Industry</li> <li>- Cottage Industry</li> </ul> </li> <li>(c) Forms of Business Organization <ul style="list-style-type: none"> <li>- Proprietorship</li> <li>- Board &amp; Co-operative</li> <li>- Partnership</li> <li>- Public Ltd.</li> <li>- Private Ltd.</li> <li>- IT Sector</li> </ul> </li> </ul> </li> </ul>				

	<ul style="list-style-type: none"> <li>- Government Co-operative / Undertakings</li> <li>(d) Tiny small scale Industry <ul style="list-style-type: none"> <li>- Definition</li> <li>- Its significance in National Development.</li> <li>- Govt. policies for SSI promotions</li> </ul> </li> </ul> Sector / Product for SSI.		
<b>Method of Assessment</b>	Internal: Mid Semester Exam I - Pen paper test/Assignment		
<b>Course Outcome 3</b>	Describe Institutional assistance		
<b>Learning Outcome 1</b>	Understand what is Institutional assistance, its types, infrastructure, marketing and quality control	15	15
<b>Contents</b>	<p>INSTITUTIONAL ASSISTANCE</p> <p>(a) Types of Institutional assistance</p> <ul style="list-style-type: none"> <li>- Infra - structural assistance</li> <li>- Technical Assistance</li> <li>- Financial assistance</li> <li>- Marketing Assistance</li> </ul> <p>(b) Information / guidance &amp; Training</p> <ul style="list-style-type: none"> <li>- SISI</li> <li>- MPCON</li> <li>- CED- MA</li> <li>- ASK</li> <li>- CSIR</li> <li>- NRDC</li> </ul> <p>(c) Infrastructure</p> <ul style="list-style-type: none"> <li>- D/C</li> <li>- AVN/AKVN</li> </ul> <p>(e) Finance</p> <ul style="list-style-type: none"> <li>- SIDBI</li> <li>- NABARD</li> <li>- KVIB MPFC</li> <li>- MPWDC NSIC</li> </ul> <p>M.P.A.V.V.N.</p> <p>(d) Marketing</p> <ul style="list-style-type: none"> <li>- MP- AGRO</li> <li>- NSIC</li> <li>- PM.LUN</li> <li>- EXPORT COPPORATION</li> <li>- KVIP</li> <li>- MPHSVN</li> <li>- MPLDC</li> </ul> <p>(e) Quality Control</p> <ul style="list-style-type: none"> <li>- BIS</li> <li>- FPO</li> <li>- MPLUN</li> <li>- F.D.A.</li> </ul> <p>AG. MKT. Board</p>		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 4</b>	Describe concession, incentives and facilities available		
<b>Learning Outcome 1</b>	Understand facilities available, subsidies, incentive available for an entrepreneur.	15	15

<b>Contents</b>	INCENTIVES / CONCESSION / FACILITIES AVAILABLE <ul style="list-style-type: none"> <li>• Seed money</li> <li>• Incentive / subsidies</li> </ul> Others ( Phones, Lands etc)
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test

<b>Course Outcome 5</b>	Describe complete planning of an industrial unit		
<b>Learning Outcome 1</b>	Understand different stages, like pre-planning stage, implementation and post implementation stage required to set up an industrial unit.	15	15
<b>Contents</b>	<b>PLANNING OF AN INDUSTRIAL UNIT (SSI)</b> <ul style="list-style-type: none"> <li>• Pre- Planning Stage <ul style="list-style-type: none"> <li>- Scanning the environment</li> <li>- Market survey</li> <li>- Seeking information</li> <li>- product / project selection</li> </ul> </li> <li>• Implementation Stage <ul style="list-style-type: none"> <li>- PPR Preparation</li> <li>- DIC registration</li> <li>- Arrangement of Land</li> <li>- Arrangement of Power</li> <li>- Obtaining NOC / Licenses from various departments</li> <li>- DPR Preparation</li> <li>- Seeking financial assistance</li> <li>- Commercial Production</li> </ul> </li> <li>• Post Implementation stage <ul style="list-style-type: none"> <li>- Permanent registration from D.I.C.</li> <li>- Availing Subsidies</li> <li>- Diversification / Modification</li> <li>- Setting up of marketing channel / Distribution.</li> </ul> </li> </ul>		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 6</b>	Explain the concept of achievement motivation		
<b>Learning Outcome 1</b>	Understand concept, significance and development of achievement motivation	15	15
<b>Contents</b>	<b>ACHIEVEMENT MOTIVATION</b> <ul style="list-style-type: none"> <li>• Historical perspective</li> <li>• Concept of achievement motivation</li> <li>• Significance of achievement motivation</li> <li>• Development of achievement motivation</li> </ul>		

<b>Method of Assessment</b>	Internal : Pen Paper Test/ assignments		
<b>Course Outcome 7</b>	Describe financial management of an industry unit.		
<b>Learning Outcome 1</b>	Understand ratio analysis, analysis tools and financial accounting	15	15
<b>Contents</b>	FINANCIAL MANAGEMENT OF AN INDUSTRIAL UNIT (SSI) <ul style="list-style-type: none"> <li>• Tools of financial analysis</li> <li>• Ratio analysis</li> <li>• Fund Flow / Cash flow analysis</li> <li>• Working capital and concepts</li> <li>• Financial accounting</li> </ul>		
<b>Method of Assessment</b>	External : End semester Examination-Pen Paper Test		

<b>Course Outcome 8</b>	Describe the preparation case study of successful entrepreneurs and preparation of project report for the industry/Business.		
<b>Learning Outcome 1</b>	Understand chart preparation, collection of details of govt. schemes, various formats, market survey, case study preparation and preparation of project report.	20	
<b>Contents</b>	<ol style="list-style-type: none"> <li>1. To prepare chart to showing various factors affecting entrepreneurship.</li> <li>2. To collect details related to various schemes run by the Govt. for Self-Employment and Entrepreneurship.</li> <li>3. To identify and select a project and conduct Market-Survey thereof.</li> <li>4. To collect various formats used in industries &amp; departments/institutions working in the field of entrepreneurship.</li> <li>5. Visit few small scale industries situated in city, nearby industrial area.</li> <li>6. Discuss the problems related to SSI (Small Scale Industries) with an entrepreneur.</li> <li>7. Collect information about market rates quality and quantity of goods for their choice.</li> <li>8. Develop logical and analytical approach to purchase the raw material / finished goods.</li> <li>9. To prepare case study of successful entrepreneurs.</li> <li>10. Preparation of Project report for the industry/ Business they are willing to start.</li> </ol>		
<b>Method of Assessment</b>	Project work / Assignment		





<b>RGPV (DIPLOMA WING) BHOPAL</b>		<b>OBE CURRICULUM FOR THE COURSE</b>		<b>FORMAT- 3</b>		<b>Sheet No. 1/3</b>	
<b>Branch</b>	<b>AGRICULTURAL ENGINEERING</b>			<b>Semester</b>		<b>V</b>	
<b>Course Code</b>	505	<b>Course Name</b>	<b>PROFESSIONAL DEVELOPMENT-V</b>				
<b>Course Outcome 1</b>	<b>Student will be able to learn and relate the knowledge he/she got from theory subjects and the actual field/industry</b>					<b>Teach Hrs</b>	<b>Marks</b>
<b>Learning Outcome 1</b>	Student understand how the concepts he/she studied in different subjects are implemented in the field					20	20
<b>Contents</b>	<p><b>Structured industrial visits shall be arranged.</b>  Following are the suggested type of Industries/ Fields –  (Any two visits)</p> <ul style="list-style-type: none"> <li>a) Irrigation project for observing components of dam and canal.</li> <li>b) Concrete mixing &amp; batching plant</li> <li>c) Visit to Agricultural implements manufacturing industry</li> <li>d) Visit to farms engaged in organic farming</li> <li>e) Visit to soil erosion sites and watershed project areas</li> </ul>						
<b>Method of Assessment</b>	<b>Report of the industrial visit should be submitted by the individual student</b>						
<b>Course Outcome 2</b>	<b>Student will be able to collect data and write a report on the topic</b>						
<b>Learning Outcome 1</b>	Understand how to collect data and how to write a report on a particular topic					20	20
<b>Contents</b>	<p><b>Data collection and writing a report on the topic</b></p> <ul style="list-style-type: none"> <li>a) To collect details related to various schemes run by the Govt. for Self-Employment and Entrepreneurship</li> <li>b) To collect various formats used in farm industries.</li> </ul>						

	c) Collecting current market rates for all the grains and cereals and compare them with previous years.		
<b>Method of Assessment</b>	<b>Report should be submitted by the individual student</b>		
<b>Course Outcome 3</b>	<b>Student will be able to be a part of a team and a leadership quality will improve</b>	Teac h Hrs	Marks
<b>Learning Outcome 1</b>	Understand how to be a good team member and how to listen to listen the others views and express oneself in group	10	20
<b>Contents</b>	<p>The students should discuss in group of six to eight students and write a brief report on the same as a part of term work. The topic of group discussions may be selected by the faculty members. Some of the suggested topics are-</p> <ul style="list-style-type: none"> <li>a) National agriculture scenario</li> <li>b) Agriculture Industry in India: Growth and Opportunities , etc.</li> </ul>		
<b>Method of Assessment</b>	Assessment through student activity		
<b>Course Outcome 4</b>	<b>Student will be able to improve his/her presentation skills</b>	Teac h Hrs	Marks
<b>Learning Outcome 1</b>	Understand how to prepare a ppt and present in front of a group of people	10	15
<b>Contents</b>	<p>Seminar :</p> <p>Seminar topic shall be related to the subjects of fourth/fifth semester. Each student shall submit a report of at least 05 pages and deliver a seminar A power point presentation preferred to caliber student skill. (Presentation time – 7-10 minutes)</p>		
<b>Method of Assessment</b>	Assessment through student activity		