

**GOVERNMENT POLYTECHNIC COLLEGE, KOTA (R)**  
**SYLLABUS BREAK-UP (SESSION 2015-16)**

SUBJECT CODE : **IE208**

SUBJECT NAME : **CONTROL SYSTEM C**

FACULTY NAME : **DEEP CHAND SHARMA**

DESIGNATION :

S.No.	TOPIC	PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON COVERING IN DUE
1	Realization of potentiometer as an error detector	1	Aug.2015		
2	Realization of a synchro pair as an error detector	1	Aug.2015		
3	To draw the torque speed characterization of a D.C. servo motor	2	Sep.2015		
4	Measurement of speed with techogenerator	1	Sep.2015		
5	Study of amplidyne	1	Sep.2015		
6	Realization of magnetic amplifier	2	Oct.2015		
7	Speed control of stepper motor.	1	Oct.2015		
8	Study of butterfly valves	1	Oct.2015		
9	Control of flow by pneumatic control valve	1	Nov.2015		
10	Control of level by solenoid valve	1	Nov.2015		
11	To draw the characteristic of pneumatic control valve	2	Nov.2015		
12	To calibrate a control valve	2	Dec.2015		
13	To draw the characteristic of pneumatic valve positioner	2	Jan.2016		
14	To make automatic Y-Δ starter circuit for induction motor	2	Jan.2016		
15	To realize interlocking connection for motor	2	Feb.2016		
16	To make sequencing connection for motor	2	Feb.2016		
17	To make a control circuit using various switches	2	Mar.2016		
18	Revision	4	Mar.2016		
19	TOTAL	30			



**GOVERNMENT POLYTECHNIC COLLEGE  
SYLLABUS**

SUBJECT CODE :

**IE208**

SUBJ

FACULTY NAME :

**Deep Chand Sharma**

S.No.	TOPIC	LECTURE CLASSES REQUIRED TO COVER TOPIC
1	1. Error Sensing Devices : 1.1 Potentiometer as an error detector	2
2	1.2 Synchro as an error detector	2
3	2. Servo Amplifiers : 2.1 Rotating amplifier 2.1.1 Principle of operation	3
4	2.1.2 Construction and load characteristics of amplidyne 2.1.3 Transfer function of an amplidyne 2.1.4 Applications of amplidyne 2.1.4.1 Paper mill control using amplidyne and others	3
5	2.2 Magnetic amplifier 2.2.1 Basic principle of operation 2.2.2 Series and parallel connection 2.2.3 Load line analysis 2.2.4 Amplifier with feed back	3
6	2.3 Electronic Amplifiers 2.3.1 Introduction 2.3.2 D.C. Amplifier 2.3.3 A.C. Amplifier	4
7	3. Servo Motors : <b>3.1 D.C. Servomotor</b> 3.1.1 Construction and working of D.C. servomotor 3.1.2 Circuit diagram and working of field controlled D.C. servomotor 3.1.3 Circuit diagram and transfer function of armature controlled D.C. motor 3.1.4 Torque speed characteristics of D.C. servomotor 3.1.5 Applications of D.C. servo motors	5
8	3.2 A.C. Servomotor 3.2.1 Schematic diagram and working of two-phase servo motor 3.2.2 Types of rotor 3.2.3 Torque speed characteristics of A.C. servo motor 3.2.4 Applications of A.C. servo motor	4
	3.3 Construction and working of shaded pole induction motor	1
9	4. Stepper Motor : 4.1 Construction 4.2 Working principle 4.3 Speed and static torque angle characteristics of stepper motor 4.4 Application of stepper motor	4
10	5. Techogenerators : 5.1 Principle and working of A.C. and D.C. techogenerators 5.2 Position and speed control with feed back through	3

11	6. Final Control Elements : 6.1 Air operated valve 6.1.1 Construction 6.1.2 Characteristics 6.1.3 Sizing and selection 6.1.4 Materials and services 6.1.5 Different types of plugs and their applications	3
12	6.2 Actuators	2
13	6.3 Valve positioners	1
14	6.4 Power cylinders	1
15	6.5 Special control valves Small flow valves 6.5.2 Saunders patent valve 6.5.3 Butterfly valves 6.5.4 Solenoid valve 6.5.5 Motorized valve 6.5.6 Dampers	6.5.1 4
16	6.6 Installation of above valve	1
17	7. Contactor Control Elements and Circuits : 7.1 Basic construction of contactor 7.2 Push buttons 7.3 Thermal protection relay 7.4 Time delay relay 7.5 Inter locking and sequencing circuits 7.6 Applications	4
18	8. Switches : 8.1 Pressure switches 8.2 Temperature switches 8.3 Flow switches 8.4 Level switches 8.5 Limit switches	4
	9. Revision	4
31	TOTAL	58

SE, KOTA (RAJ.)

**BREAK-UP (SESSION 2015-16)**

SUBJECT NAME : **CONTROL SYSTEM COMPONENTS**

DESIGNATION : **LECTURER (INSTRUMENTATION)**

<b>MONTHS IN WHICH THE TOPIC WILL BE COVERED</b>	<b>ACTUAL DATE OF COVERING OF THE TOPIC</b>	<b>REASON FOR NOT COVERING THE TOPIC IN DUE TIME</b>	<b>E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC</b>
Aug.2015			
Aug.2015			
Sep.2015			
Sep.2015			
Oct.2015			
Oct.2015			
Nov.2015			
Nov.2015			
Dec.2015			
Dec.2015			
Jan.2016			

Jan.2016			
Jan.2016			
Feb.2016			
Feb.2016			
Feb.2016			
Feb.2016			
Feb.2016			
Mar.2016			
Mar.2016			
Mar.2016			
Apr.2016			

# GOVERNMENT POLYTECHNIC COLLEGE, K

## SYLLABUS BREAK-UP (SESSION

SUBJECT CODE : **IE305**

SUBJECT NAME : **POWER AN**

FACULTY NAME : **DEEP CHAND SHARMA**

DESI

S.No.	TOPIC	LECTURE CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC
1	1 Introduction: 1.1 Principle, Construction and characteristics of SCR, TRIAC, DIAC, UJT, PUT, Power MOSFET, LASCR, solar cell	3	Aug.2015	
2	1.2 Ratings of SCR	1	Aug.2015	
3	1.3 "Turn on" and "Turn off" mechanism of SCR	2	Sep.2015	
4	1.4 Series and parallel connections of SCR	2	Sep.2015	
5	1.5 Snubber circuits	1	Sep.2015	
6	1.6 UJT as a relaxation oscillator	1	Sep.2015	
7	2 Power Control and Rectifiers: 2.1 Phase control circuit of SCR	1	Sep.2015	
8	2.1.1 Simple R-C circuit	1	Sep.2015	
9	2.1.2 Transformer circuit	1	Oct.2015	
10	2.1.3 UJT circuit	1	Oct.2015	
11	2.1.4 Ramp and Pedestal circuit	1	Oct.2015	
12	2.2 Different methods of turning off SCRs	1	Oct.2015	
13	2.3 SCR Half Wave rectifier (single phase)	1	Oct.2015	
14	2.3.1 SCR with resistive load	1	Oct.2015	
15	2.3.2 SCR with inductive load (with and without free wheeling diode)	1	Oct.2015	
16	2.4 TRIAC as a power control circuit	1	Oct.2015	
17	2.5 Three phase HW and FW rectifier using PN junction diode	1	Nov.2015	
18	2.5.1 Calculation of RMS value	1	Nov.2015	
19	2.5.2 Average value	1	Nov.2015	
20	3 Inverters, Choppers and Cyclo-converters: 3.1 Basic principle of inverters	1	Nov.2015	
21	3.2 Series and parallel inverter circuits using SCR (Single phase)	1	Nov.2015	
22	3.3 Basic idea of PWM inverter	1	Nov.2015	
23	3.4 <b>Choppers</b> Principle of operation	3.4.1 1	Nov.2015	
24	3.4.2 Chopper control techniques	1	Nov.2015	
25	3.4.3 Voltage step down chopper	1	Dec.2015	
26	3.4.4 Voltage step up chopper	1	Dec.2015	
27	3.5 <b>Cycloconverters</b> 3.5.1 Principle of operation	1	Dec.2015	

28	3.5.2 Single phase/single phase cycloconverters (mid point & bridge configuration)	1	Dec.2015	
29	4 AC Stabilizer and Power Supply : 4.1 Resonant stabilizer	1	Jan.2016	
30	4.2 Electro mechanical stabilizer (using relay and servo motor)	1	Jan.2016	
31	4.3 Electronic stabilizer	1	Jan.2016	
32	4.4 Block diagram of UPS (OFF line and ON line)	1	Jan.2016	
33	4.5 Switched mode power supply (SMPS) 4.5.1 Block diagram and basic principle	1	Jan.2016	
34	4.5.2 Types of SMPS	1	Jan.2016	
35	4.5.3 Merits and demerits of SMPS	1	Jan.2016	
36	5 A.C., D.C. Motors & control: 5.1 Principle, construction , operation & applications of A.C. & D.C. motors	2	Feb.2016	
37	5.2 Concept of motor speed control (for D.C. motor only)	1	Feb.2016	
38	5.3 Speed torque relation for motor (for D.C. motor only)	1	Feb.2016	
39	5.4 Armature voltage control method (using SCR) (for D.C. motor only)	1	Feb.2016	
40	5.5 Speed control method (using techo-generator) (for D.C. motor only)	1	Feb.2016	
41	5.6 Brief idea of speed control of stepper motor	1	Feb.2016	
42	6 Heating, Welding and their Application : 6.1 Principle and application of induction heating	1	Feb.2016	
43	6.2 Principle and application of dielectric heating	1	Mar.2016	
44	6.3 Principle of resistance welding	1	Mar.2016	
45	6.4 Type of resistance welding	2	Mar.2016	
46	6.5 Sequential timing circuit	1	Mar.2016	
	Revision	8	Apr.2016	
47	TOTAL	60		







# GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

## SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **IE309**

SUBJECT NAME : **INSTRUMENTATION WORKSHOP**

FACULTY NAME : **DEEP CHAND SHARMA**

DESIGNATION : **LECTURER**

S.No.	TOPIC	LECTURE CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	
1	Calibration of Temperature	1	Aug.2015			
2	Calibration of Pressure Gauge	1	Aug.2015			
3	Calibration of P.D.P.T.	1	Sep.2015			
4	Calibration of Electronic D.P.T.	1	Sep.2015			
5	Connection of a Pneumatic Primary Instrument to a Secondary Instrument with the help of Ferial	1	Sep.2015			
6	Making of Simple Contactor Control Circuit Using the Following: 1 Simple relay 2 T.D.R.	2	Sep.2015			
7	Making of Simple Contactor Control Circuit for Sequencing of Motors	1	Oct.2015			
8	Making of Simple Contactor Control Circuit for Inter locking connections for Motors	1	Oct.2015			
9	Making of Simple Contactor Control Circuit for Inter locking connections for various parameters.	2	Oct.2015			
10	Study of Calibration Tools and Instruments: 1. Pneumatic calibrator	1	Nov.2015			
11	2. Electronic calibrator	1	Nov.2015			
12	3. Dead Weight tester	1	Nov.2015			
13	4. Constant temperature bath	1	Dec.2015			
14	Preparation of Following Drawing Sheets: 1. Symbols of electrical components	1	Dec.2015			
15	2 Symbols of electronic components	1	Jan.2016			
16	3 Symbols of pneumatic fittings	1	Jan.2016			
17	4 Symbol of process components	1	Jan.2016			
18	5 Symbol of control components	1	Jan.2016			
19	6 Color coding of pipes and service lines and their identification	1	Feb.2016			

20	Design of Various Control Loops for Different Parameters and their Material and cost estimation: 1 Cascade 2 Feed forward 3 Ratio 4 Three elements	2	Feb.2016			
21	Design of Instruments Air System for four individual users and for Control Room Air Supply using : 1 Air compressor 2 Filter and Regulator 3 Fittings and Piping 4 Pressure gauge	1	Feb.2016			
22	Revision	6	Mar.2016			
23	TOTAL	30				

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**(INSTRUMENTATION)**

E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC


**GOVERNMENT POLYTECHNIC COLLEGE, KO**

**SYLLABUS BREAK-UP (SESSION**

SUBJECT CODE : **IE310**

SUBJECT NAME : **MANAGEM**

FACULTY NAME : **DEEP CHAND SHARMA**

DESI

S.No.	TOPIC	LECTURE CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC
	1. Principles of Management : 1.1 Management, administration and organisation, difference between them.	1	Aug.2015	
	1.2 Scientific management : Meaning, characteristics, object and advantage : Taylor's scientific management- Fayol's principles of management, functions of management	1	Aug.2015	
	1.3 Types of ownership, sole trading, partnership, joint stock, co-operative and public enterprise	1	Aug.2015	
	1.4 Types of organisation, different types and their charts.	1	Aug.2015	
	1.5 Importance of human relation professional ethics	1	Aug.2015	
	1.6 Need for leadership, leadership qualities 1.7 Motivation	1	Sep.2015	
	2. Human Resources Development : 2.1 Introduction, object and functions of human resource development department	1	Sep.2015	
	2.2 Recruitment, sources and methods of selection, need for effective training, method of training, duties of supervisor / Foremen, Role of HRD in industries.	1	Sep.2015	
	3. Wages and Incentives : 3.1 Definition and requirements of a good wage system methods of wage payment	1	Sep.2015	
	3.2 Wage incentives - type of incentive, difference in wage incentive and bonus. incentive to supervisor.	1	Sep.2015	
	4. Material Management : 4.1 Purchasing Functions and duties of purchase department organisation of purchase department, methods of purchasing, purchase order contracts, legality of contracts types of contracts i.e. piece work contract, lumpsum contract, item rate contract, percentage contract, merits and limitation of each contract system, departmental execution of works, rate contract - D.G.S & D and C.S.P.O. tender, necessity, types of tenders, tendering procedure, earnest money and security money	1	Sep.2015	

	4.2 Store and store keeping : Functions and duties of store department, location and layout of store, bin cards, store ledger, receipt and issue procedure of materials, physical verification of stores, disposal method of unserviceable articles and protection of stores.	1	Sep.2015	
	4.3 Sales : function and duties of sales department sales promotion advertisement service after sales.	1	Sep.2015	
	5. Financial Management : 5.1 Function and duties of finance department	1	Oct.2015	
	5.2 Brief idea of journal, ledger, trial balance, trading account, profit and loss account, balance sheet.	1	Oct.2015	
	5.3 Cheques (crossed and bearer ), draft, promissory note, letter of credit, brief idea of cost accounting.	1	Oct.2015	
	5.4 Numerical problems.	1	Oct.2015	
	6. Marketing Management : 6.1 Concept of Marketing	1	Oct.2015	
	6.2 Problems of Marketing	1	Oct.2015	
	6.3 Pricing policy	1	Oct.2015	
	6.4 Distribution channels and methods of marketing	1	Oct.2015	
	7. Entrepreneurship : 7.1 Entrepreneurship and Entrepreneur	1	Oct.2015	
	7.6 Type of industries- Production, Job based & Service	1	Nov.2015	
	8. Entrepreneurial Development : 8.1	1	Nov.2015	
	8.2 Site selection	1	Nov.2015	
	8.3 Plant layout	1	Nov.2015	
	8.4 Institutional support needed	1	Nov.2015	
	8.5 Pre-market survey	1	Nov.2015	
	9. Entrepreneurship Support System:	1	Dec.2015	
	9.2 Function of NSIC, SISI, NISIET, NRDC, SSIC, SIDO,	1	Dec.2015	
	9.3 Role of state finance corporation, state electricity	1	Dec.2015	
	10. Setting up SSI : 10.1 Registration of SSI 10.2 Allotment of land by RIICO 10.3 Preparation of project report 10.4 Structure of organisation 10.5 Building construction 10.6 Establishment of machines	2	Dec.2015	
	11. Tax System and Insurance : 11.1 Idea of income tax, sales tax, excise duty and custom	1	Jan.2016	
	11.2 Industrial and fire insurance, procedure for industrial	1	Jan.2016	
	12. Financial Sources for SSI : 12.1	1	Jan.2016	
	12.2 Various types of loans	1	Jan.2016	
	12.3 Subsidies	1	Jan.2016	
	13. Labour Legislation and Pollution Control	1	Jan.2016	
	13.2 Workmen's compensation act 1923	1	Jan.2016	
	13.3 Apprentices act 1961	1	Feb.2016	
	13.4 Water pollution contract act 1974 and 1981	1	Feb.2016	
	13.5 Air pollution contract act 1981	1	Feb.2016	



	13.6 Environmental protection act 1986	1	Feb.2016	
	13.7 Forest (animal conservation act 1972)	1	Feb.2016	
	13.8 Pollution control provisions in motor vehicle act.	1	Feb.2016	
	14. Project Report : 14.1	1	Feb.2016	
	14.2 Format of project report	1	Feb.2016	
	14.3 Preparation of project report for some SSI items	1	Mar.2016	
	15. ISO : 9000 Series of Quality System : 15.1	1	Mar.2016	
	15.2 Various models for quality assurance in ISO : 9000	1	Mar.2016	
	15.3 Various elements of ISO : 9001 model (20 points)	1	Mar.2016	
	15.4 Benefits by becoming an ISO : 9000 company	1	Mar.2016	
	15.5 Introduction to total quality management (TQM)	1	Mar.2016	
	Revision	6	Apr.2016	
31	TOTAL	60		







**GOVERNMENT POLYTECHNIC COLLEGE,****SYLLABUS BREAK-UP**

SUBJECT CODE :

**IE305**

SUBJECT NAME :

FACULTY NAME :

**DEEP CHAND SHARMA**

S.No.	TOPIC	PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED
1	To plot V-I characteristics of SCR	6	Sep.2015
2	To plot V-I characteristics of TRIAC	6	Sep.2015
3	To plot V-I characteristics of UJT	6	Oct.2015
4	To plot V-I characteristics of DIAC	6	Nov.2015
5	Observe the various waveforms of UJT relaxation oscillator	6	Dec.2015
6	Study of half wave rectifier using SCR with resistive load and inductive load.	4	Dec.2015
7	Application of TRIAC as light dimmer/fan regulator	4	Jan.2016
8	Study of phase inverter circuit using transistor	2	Jan.2016
9	Study of inverter circuit using SCR	2	Feb.2016
10	Study of electronic-mechanical stabilizer	2	Feb.2016
11	Study of electronic A.C. stabilizer	2	Feb.2016
12	Study of UPS	2	Feb.2016
13	Study of SMPS	2	Mar.2016
14	Study of speed control of D.C. motor	2	Mar.2016
15	Study of resistance welding	2	Mar.2016
16	Assembling and testing of manual stabilizer with auto cut facility	2	Mar.2016
17	Revision	4	Apr.2016
18	TOTAL	60	



# GOVERNMENT POLYTECHNIC COLLEGE, K

## SYLLABUS BREAK-UP (SESSION

SUBJECT CODE : **IE309**

SUBJECT NAME : **INSTRUME**

FACULTY NAME : **DEEP CHAND SHARMA**

DESI

S.No.	TOPIC	PRACTICAL CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC
1	Calibration of Temperature Indicators	2	Aug.2015	
2	Calibration of Pressure Gauge	2	Aug.2015	
3	Calibration of P.D.P.T.	2	Sep.2015	
4	Calibration of Electronic D.P.T.	2	Sep.2015	
5	Connection of a Pneumatic Primary Instrument to a Secondary Instrument with the help of Ferual Fittings.	2	Sep.2015	
6	Making of Simple Contactor Control Circuit Using the Following: 1 Simple relay 2 T.D.R.	4	Oct.2015	
7	Making of Simple Contactor Control Circuit for Sequencing of Motors	4	Oct.2015	
8	Making of Simple Contactor Control Circuit for Inter locking connections for Motors	4	Nov.2015	
9	Making of Simple Contactor Control Circuit for Inter locking connections for various parameters.	4	Nov.2015	
10	Study of Calibration Tools and Instruments: 1. Pneumatic calibrator	2	Dec.2015	
11	2. Electronic calibrator	2	Dec.2015	
12	3. Dead Weight tester	2	Jan.2016	
13	4. Constant temperature bath	2	Jan.2016	
14	Preparation of Following Drawing Sheets: 1. Symbols of electrical components	2	Jan.2016	
15	2 Symbols of electronic components	2	Jan.2016	
16	3 Symbols of pneumatic fittings	2	Feb.2016	
17	4 Symbol of process components	2	Feb.2016	
18	5 Symbol of control components	2	Feb.2016	
19	6 Color coding of pipes and service lines and their identification	2	Feb.2016	

20	Design of Various Control Loops for Different Parameters and their Material and cost estimation: 1 Cascade 2 Feed forward 3 Ratio 4 Three elements	4	Mar.2016	
21	Design of Instruments Air System for four individual users and for Control Room Air Supply using : 1 Air compressor 2 Filter and Regulator 3 Fittings and Piping 4 Pressure gauge	4	Mar.2016	
	Revision	6	Apr.2016	
31	TOTAL	60		






**GOVERNMENT POLYTECHNIC COLLEGE, KO**

**SYLLABUS BREAK-UP (SESSION**

SUBJECT CODE : **IE310**

SUBJECT NAME : **MANAGEM**

FACULTY NAME : **DEEP CHAND SHARMA**

DESI

S.No.	TOPIC	Tutorial CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC
1	1. Principles of Management : 1.1 Management, administration and organisation, difference between them.	2	Aug.2015	
2	1.2 Scientific management : Meaning, characteristics, object and advantage : Taylor's scientific management- Fayol's principles of management, functions of management			
3	1.3 Types of ownership, sole trading, partnership, joint stock, co-operative and public enterprise			
4	1.4 Types of organisation, different types and their charts.			
5	1.5 Importance of human relation professional ethics			
6	1.6 Need for leadership, leadership qualities			
7	1.7 Motivation			
8	2. Human Resources Development : 2.1 Introduction, object and functions of human resource development department	2	Sep.2015	
9	2.2 Recruitment, sources and methods of selection, need for effective training, method of training, duties of supervisor / Foremen, Role of HRD in industries.			
10	3. Wages and Incentives : 3.1 Definition and requirements of a good wage system	2	Sep.2015	
11	3.2 Wage incentives - type of incentive, difference in wage incentive and bonus. incentive to supervisor.			
12	4. Material Management : 4.1 Purchasing Functions and duties of purchase department organisation of purchase department, methods of purchasing, purchase order contracts, legality of contracts types of contracts i.e. piece work contract, lumpsum contract, item rate contract, percentage contract, merits and limitation of each contract system, departmental execution of works, rate contract - D.G.S & D and C.S.P.O. tender, necessity, types of tenders, tendering procedure, earnest money and security money	2	Oct.2015	

13	4.2 Store and store keeping : Functions and duties of store department, location and layout of store, bin cards, store ledger, receipt and issue procedure of materials, physical verification of stores, disposal method of unserviceable articles and protection of stores.			
14	4.3 Sales : function and duties of sales department sales promotion advertisement service after sales.			
15	5. Financial Management : 5.1 Function and duties of finance department		Oct.2015	
16	5.2 Brief idea of journal, ledger, trial balance, trading account, profit and loss account, balance sheet.	2		
17	5.3 Cheques (crossed and bearer ), draft, promissory note, letter of credit, brief idea of cost accounting.			
18	5.4 Numerical problems.			
19	6. Marketing Management : 6.1 Concept of Marketing		Nov.2015	
20	6.2 Problems of Marketing	2		
21	6.3 Pricing policy			
22	6.4 Distribution channels and methods of marketing			
23	7. Entrepreneurship : 7.1 Entrepreneurship and Entrepreneur		Nov.2015	
24	7.2 Need of Employment and Opportunities.			
25	7.3 Essential Characteristics of a good Entrepreneur	2		
26	7.4 Industrial Policy.			
27	7.5 Classification of industries- Tiny, small scale ,			
28	7.6 Type of industries- Production, Job based & Service			
29	8. Entrepreneurial Development : 8.1 Product identification/ selection		Dec.2015	
30	8.2 Site selection	2		
31	8.3 Plant layout			
32	8.4 Institutional support needed			
33	8.5 Pre-market survey			
34	9. Entrepreneurship Support System: 9.1 Role of District Industries Centre in setting up industry		Dec.2015	
35	9.2 Function of NSIC, SISI, NISIET, NRDC, SSIC, SIDO, NMTC, KVIC, RSMML.	2		
36	9.3 Role of state finance corporation, state electricity corporations, pollution control board, BIS, I.S.O. etc.			
37	10. Setting up SSI : 10.1 Registration of SSI		Jan.2016	
38	10.2 Allotment of land by RIICO			
39	10.3 Preparation of project report	2		
40	10.4 Structure of organisation			
41	10.5 Building construction			
42	10.6 Establishment of machines			

43	11. Tax System and Insurance : 11.1 Idea of income tax, sales tax, excise duty and custom	2	Jan.2016	
44	11.2 Industrial and fire insurance, procedure for industrial			
45	12. Financial Sources for SSI : 12.1 Various institutions providing loans for industries	2	Jan.2016	
46	12.2 Various types of loans			
47	12.3 Subsidies			
48	13. Labour Legislation and Pollution Control Acts: 13.1 Industrial acts : factory act 1948	2	Feb.2016	
49	13.2 Workmen's compensation act 1923			
50	13.3 Apprentices act 1961			
51	13.4 Water pollution contract act 1974 and 1981			
52	13.5 Air pollution contract act 1981			
53	13.6 Environmental protection act 1986			
54	13.7 Forest (animal conservation act 1972)			
55	13.8 Pollution control provisions in motor vehicle act.			
56	14. Project Report : 14.1 Procedure of preparing a project report	2	Feb.2016	
57	14.2 Format of project report			
58	14.3 Preparation of project report for some SSI items			
59	15. ISO : 9000 Series of Quality System : 15.1 Definition of few important terms related to ISO quality system	2	Mar.2016	
60	15.2 Various models for quality assurance in ISO : 9000			
61	15.3 Various elements of ISO : 9001 model (20 points)			
62	15.4 Benefits by becoming an ISO : 9000 company			
63	15.5 Introduction to total quality management (TQM)			
64	TOTAL	30		

ITA (RAJ.)

2015-16)

ENT & ENTREPRENEURSHIP

IGNITION : LECTURER (INSTRUMENTATION)

REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC



