PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P			Total 100			Total
BT-16101	Ethical Hacking & Cyber Security	3	1	-	External (70)	Internal (30)	Min 40 (D Grade)	External Nil	Internal Nil	Nil

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 20	Assignment/Quiz/Attendance - Max. Marks: 10
Practical Internal Max Marks: Nil	Lab work & Sessional - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: Nil

Pre-Requisite	Student should have basic knowledge of computer.
Course Outcome	1. Identify and analyse the stages an ethical hacker requires to take in order to compromise a target system.
	2. To identify tool and techniques to carry out a penetration testing.

Unit	Contents (Theory)	Marks Weightage
I	**Introduction**: Understanding the importance of security, Concept of ethical hacking and essential terminologies threat, Attack, Vulnerabilities, Target of evaluation, Exploit, Phases involved in hacking, Foot printing**,** Introduction to foot printing, Understanding the information gathering methodology of the hackers, Tools used for the reconnaissance phase.	**14**
II	**System-Hacking**-Aspect of remote password-guessing role of-eavesdropping, Various methods of password cracking, Keystroke loggers, Understanding sniffers, Comprehending active and passive sniffing, ARP Spoofing and Redirection, DNS and IP Sniffing, HTTPS sniffing.	**14**
III	**Hacking Wireless Networks:** Introduction to 802.1I,Role of WE?, Cracking WEP keys, Sniffing traffic, Wireless DOS attacks, WLAN scanners, WLAN sniffers, Hacking tools, Securing wireless networks.	**14**
IV	**Introduction to Cybercrime:** Defining cybercrime, Understanding the importance of jurisdictional issues, Quantifying cybercrime, Differentiating crimes that use the net from crimes that depend on the net, Working toward a standard definition of cybercrime, Categorizing cybercrime, Developing categories of cybercrimes, Prioritizing cybercrime enforcement, Reasons for cybercrimes.	**14**
V	**Introduction to Cybercrime:** Defining cybercrime, Understanding the importance of jurisdictional issues, Quantifying cybercrime, Differentiating crimes that use the net from crimes that depend on the net, Working toward a standard definition of cybercrime, Categorizing cybercrime, Developing categories of cybercrimes, Prioritizing cybercrime enforcement, Reasons for cybercrimes.	**14**

Text Book/References Books/ Websites:

1. Aare; NetworkSecurity;Ethical Hacking Rajat; LuniverPress 30-Nor-2006.
2. Thomas Mathew ; Ethical !lacking; Publisher, 28-Nor-2003.

Suggested List of Laboratory Experiments :- Nil

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P	External (70)	Internal (30)	Total (100)	External Nil	Internal Nil	Total
BT-16102	Human Health & Nutrition Disorder	3	1	-	(70)	(30)	Min: 40 (D Grade)			Nil

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks : 30	Best of Two Mid Semester Test-Max Marks : 20	Assignment/Quiz/Attendance – Max. Marks : 10
Practical Internal Max Marks : Nil	Lab work & Sessional – Max Marks : Nil	Assignment / Quiz /Attendance – Max. Marks : Nil

Pre-Requisite	Nil
Course Outcome	1. To understand basic concepts in food and nutrition.
	2. To be able to know different types of nutrients.
	3. To know the basic food groups and methods of cooking.

Unit	Contents (Theory)	Marks Weightage
I	**Basic concepts in food and nutrition** • Basic terms used in study of food and nutrition • Understanding relationship between food nutrition and health • Functions of food-Physiological, Psychological and social.	**14**
II	**Nutrients:** • Functions, dietary sources and clinical manifestation of deficiency / excess of the following nutrients: • Carbohydrates, Lipids and Proteins • Fat soluble vitamins – A,D,E and K • Water soluble vitamins- thiamin, riboflavin, niacin, pyridoxine, Foliate, vitamin B12 and vitamin C • Minerals- calcium, iron and iodine	**14**
III	**Food Groups:** • Selection, nutritional contribution and changes during cooking of the following food group: ▪ Cereals ▪ Pulses ▪ Fruits and vegetables. ▪ Milk and milk products ▪ Eggs ▪ Meat, poultry and fish ▪ Fats and oils	**14**
IV	**Methods of cooking and preventing nutrient losses** • Dry, moist, frying and microwave cooking • Advantages disadvantages and the effect of various methods of cooking on nutrition's • Minimizing nutrient losses	**14**

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

V	**Nutritional Problems and programs** • Nutritional problems in India • National nutritional policy • National nutritional program in India.	**14**

Text Book/References Books/ Websites:

1. Swaminathan; M Hand book of foods and Nutrition, Fifth Ed : 1986 Bappco,
2. Srilakshmi B; Nutrition Science 2012;New Age international (P) LTD.
3. Mudambi, S R and Rajagopal; MV fundamentals of foods Nutrition and Diet Therapy; Fifth Ed: 2012
4. Potter N.M. Hotchkiss; Jh Food Sciences; Fifth ed.2006
5. Khanna K Gupta, S. Seth, R Mahana, R. Rekhi T. ;The AM an and Science of cooking
6. Suri.S and Malhotra; A food science nutrition & Food safety Pearson India Ltd. 2014.

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P			Total 100			Total
BT-16103	Human Resource Management	3	1	-	External (70)	Internal (30)	Min 40 (D Grade)	External Nil	Internal Nil	Nil

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 20	Assignment/Quiz/Attendance - Max. Marks: 10
Practical Internal Max Marks: Nil	Lab work & Sessional - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: Nil

Pre-Requisite	**Nil**
Course Outcome	The objective of the course is to equip students with various human resource management concepts and current practices in managing human resources in knowledge based environment.

Unit	Contents (Theory)	Marks Weightage
I	**Introduction to Human Resource Management**: Definition and concept, Features , Objectives, Functions, Scope and development of human resource management, Importance of human resource management, Human resource planning.	**14**
II	**Job Analysis and Design:** Job analysis, Job description, Job specification, Job design, Recruitment, Selection.	**14**
III	**Induction Programme:** Contents, Need for induction; **Training**: Concept and significance of training, Training needs, Training methods, Types of training.	**14**
IV	**Performance Appraisal:** Concept of performance appraisal, Purpose of performance appraisal, Process, Methods of performance appraisal, Major issues in performance appraisal.	**14**
V	**Industrial Relation & Trade Unions:** Employee welfare, Employees empowerment, Grievance procedure ,Collective bargaining, Settlement of disputes, Human resource accounting, Separation, Retirement schemes, Resignation, Suspension, Layoff.	**14**

Text Book/References Books/ Websites:

1. Gupta & Joshi; Human Resource Management; Kalyani Publication, 2nd Edition 2004.
2. Rao VSP; Human Resource Management; Excel Books, New Delhi2005.
3. Aswathappa, K.; Human Resource and Personnel Management'; Tata McGraw-Hill, 1997.
4. Gupta, P.K.; Human Resource Management; Dreamtech Press, 2011.
5. Mamoria C.B.; Personnel Management; Himalaya Pub. House.
6. Khanka S.S; Human Resource Management; S.Chand, New Delhi,2009.
7. Dessler Gary; Human Resource Management; PHI, New Delhi,10th Edition, 2005.
8. Bhattacharya D.K; Human Resource Management; Excel Books, New Delhi, 2006.
9. Subba Rao; Essentials of HRM & Industrial Relations; Text & Cases, Himalaya Pub. House,2011.
10. Gupta C.B.; Human Resource Management; Sultan Chand & Sons, New Delhi, 2004.

Suggested List of Laboratory Experiments :- Nil

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P			Total 100			Total
CET-1602	Theory of Structure-I	3	1	-	External (70)	Internal (30)	Min 40 (D Grade)	External Nil	Internal Nil	Nil

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 20	Assignment/Quiz/Attendance - Max. Marks: 10
Practical Internal Max Marks: Nil	Lab work & Sessional - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: Nil

Pre-Requisite	**Nil**
Course Outcome	1. Study of virtual work and energy principles.
	2. Analysis of different indeterminate structures.
	3. Detail analysis of indeterminate structures by slope deflection method and column analogy method.

Unit	Contents (Theory)	Marks Weightage
I	**Virtual Work and Energy Principles:** Principles of virtual work applied to deformable bodies, Strain energy and complementary energy, Energy theorems, Maxwell's reciprocal theorem, Analysis of pin-jointed frames for static loads.	**14**
II	**Indeterminate Structures-I:** Static and kinematics indeterminacy, Analysis of fixed and continuous beams by theorem of three moments, Effect of sinking and rotation of supports, Moment distribution method (without sway).	**14**
III	**Indeterminate Structures-II:** Analysis of beams and frames by slope deflection method.	**14**
IV	**Arches and Suspension Cables:** Three hinged arches of different shapes, Eddy's theorem, Suspension cable, Stiffening girders, Two hinged and fixed arches - rib shortening and temperature effects.	**14**
V	**Rolling Loads and Influence Lines:** Maximum SF and BM curves for various types of rolling loads, EUDL, Influence lines for determinate structures- beams.	**14**

Text Book/References Books/ Websites:

1 Ghali A & Neville M.; Structural Analysis ; A Unified Classical and Matrix Approach, Chapman and Hall, New York.
2 Wang C.K. ; Intermediate Structural Analysis, Mcgraw Hill, New York.
3 Kinney Streling J. ;Indeterminate Structural Analysis; Addison Wesley.
4 Reddy C.S.; Basic Structural Analysis; Tata Mcgraw Hill Publishing Company, New Delhi.
5 Norris C.H.; Wilbur J.B. And Utkys. Elementry Structural Analysis; Mcgraw Hill Intern.

Suggested List of Laboratory Experiments :- Nil

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P	External (70)	Internal (30)	Total 100	External (35)	Internal (15)	Total (50)
CET-1603	Design of RCC Structure-II	3	1	1			Min 40 (D Grade)			Min 20 (D Grade)

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 20	Assignment/Quiz/Attendance - Max. Marks: 10
Practical Internal Max Marks: 15	Lab work & Sessional - Max Marks: 10	Assignment/Quiz/Attendance - Max. Marks: 05

Pre-Requisite	**Nil**
Course Outcome	1. To give the knowledge of design of multistory buildings: sway and non sway buildings, shear walls.
	2. Design of earth retaining structures: cantilever and counter fort types retaining walls
	3. Design of different types of water tanks.

Unit	Contents (Theory)	Marks Weightage
I	**Design of Multistory Buildings:** Sway and non sway buildings, Shear walls and other bracing elements.	**14**
II	**Earth Retaining Structures:** Cantilever and counterfort types retaining walls.	**14**
III	**Water Tanks: Tanks on ground and underground tanks:** Square, Rectangular, Circular tanks, **Overhead tanks:** Square, Rectangular, Circular & Intz tanks.	**14**
IV	**Silos and Bunkers**: Design and analysis of Silos and Bunkers.	**14**
V	**T-Beam & Slab Bridges-**For highway loading (IRC loads), Pre-stressing concepts, Materials, Systems of pre stressing & losses introduction to working & limit state design.	**14**

Text Book/References Books/ Websites:

1 O.P. Jain; R.C.C. Vol. II ; Nem Chand & Brothers.
2 B.C. Punmia ; R.C.C. ; Laxmi Publication (P) Ltd.
3 D.J. Victor; Essentials of Bridge Engineering ; Oxford &IBH Publishing CO. Pvt Ltd.
4 Ponnuswamy ; Bridge Engineering ;TMH, New Delhi.
5 N.K. Raju ; Advanced R.C.C. Design; PHI Learing Private Ltd.

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Suggested List of Laboratory Experiments:

1. Design and drawing of shear wall
2. Design and sketch of counter fort retaining wall.
3. Design and sketch of cantilever wall.
4. Design and sketch of underground tank.
5. Design and sketch of Overhead tank.
6. Design and sketch of Intz tank.
7. Design and sketch of Silos.
8. Design and sketch of a Bunker.
9. Design and sketch of a T-Beam.
10. Design and sketch of a simply supported slab..

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P	External (70)	Internal (30)	Total 100	External (35)	Internal (15)	Total (50)
CET-1604	Environmental Engg.-I	3	1	1			Min 40 (D Grade)			Min 20 (D Grade)

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 20	Assignment/Quiz/Attendance - Max. Marks: 10
Practical Internal Max Marks: 15	Lab work & Sessional - Max Marks: 10	Assignment/Quiz/Attendance - Max. Marks: 05

Pre-Requisite	**Nil**
Course Outcome	1. Estimation of ground and surface water resources, demand & quantity of water, fire demand, water requirement for various uses.
	2. To know how to evaluate the impurities present in the water and their significance.
	3. Theory and design of water treatment plants and miscellaneous methods of treatment.

Unit	Contents (Theory)	Marks Weightage
I	**Estimation of Ground and Surface Water Resources:** Quality of water from different sources, Demand & quantity of water, Fire demand, Water requirement for various uses, Fluctuations in demand, Forecast of population.	**14**
II	**Impurities of Water and Their Significance:** Water-borne diseases, Physical, Chemical and bacteriological analysis of water, Water standards for different uses, Intake structure, Pipe materials, Pumps - operation & pumping stations.	**14**
III	**Water Treatment Methods**: Theory and design of sedimentation, Coagulation, Filtration, Disinfection, Aeration & water softening, Modern trends in sedimentation & filtration, Miscellaneous methods of treatment.	**14**
IV	**Distribution Systems:** Layout and hydraulics of different distribution systems, Pipe fittings, Valves and appurtenances, Analysis of distribution system, Hardy cross method, Leak detection, Maintenance of distribution systems, Service reservoir capacity and height of reservoir.	**14**
V	**Rural water supply schemes**: Financing and management of water supply project, Water pollution control act, Conservation & water carriage system, Sanitary appliance and their operation, Building drainage system of plumbing.	**14**

Text Book/References Books/ Websites:

1. B.C. Punmia ;Water Supply Engineering ; Laxmi Publications (P) Ltd. New Delhi.
2. G.S. Birdi ;Water Supply & Sanitary Engg. ; Laxmi Publications (P) Ltd. New Delhi.
3. Mark J.Hammer; Water & Waste Water Technology; Prentice - Hall Of India, New Delhi.
4. H.S. Peavy & D.R.Rowe; Environmental Engineering ; Mc Graw Hill Book Company, New Delhi.
5. G.M. Fair & J.C. Geyer; Water & Waste Water Technology; Scranton Publishing Company.
6. Relevant IS Codes.

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Suggested List of Laboratory Experiments:-

1. To study the various standards for water
2. Measurement of turbidity
3. To determine the coagulant dose required to treat the given turbid water sample
4. To determine the conc. Of chlorides in a given water samples
5. Determination of hardness of the given sample
6. Determination of residual chlorine by "Chloroscope"
7. Determination of alkalinity in a water samples
8. Determination of acidity in a water samples

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P	External	Internal	Total 100	External	Internal	Total (50)
CET-1605	Geotechnical Engg.- I	3	1	1	(70)	(30)	Min 40 (D Grade)	(35)	(15)	Min 20 (D Grade)

Duration of Theory (Externals): 3 Hours

Theory Internal- Max Marks: 30	Best of Two Mid Semester Test - Max Marks: 20	Assignment/Quiz/Attendance - Max. Marks: 10
Practical Internal Max Marks: 15	Lab work & Sessional - Max Marks: 10	Assignment/Quiz/Attendance - Max. Marks: 05

Course Outcome	1. To study about the basic definitions & index properties of soil. 2. To give the knowledge of soil water and its consolidation. 3. To give the knowledge of stress distribution in soils and shear strength of soils.

Unit	Contents (Theory)	Marks Weightage
I	**Basic Definitions & Index Properties:** Definition and scope of soil mechanics, Historical development, Formation of soils, Soil composition, Minerals, Influence of clay minerals on engineering behavior, Soil structure, Three phase system, Index properties and their determination, Consistency limits, Classification systems based on particle size and Consistency limits.	**14**
II	**Soil Water and Consolidation:** Soil water, Permeability determination of permeability in laboratory and in field, Seepage and seepage pressure, Flow nets, Uses of a flow net, effective, Neutral and total stresses, Compressibility and consolidation, Relationship between pressure and void ratio, Theory of one dimensional consolidation, Consolidation test, Fitting time curves, Normally and over consolidated clay, Determination of pre consolidation pressure, Settlement analysis, Calculation of total settlement.	**14**
III	**Stress Distribution in Soils and Shear Strength of Soils:** Stress distribution beneath loaded areas by boussinesq and wester-gard's analysis, New mark's influence chart, Contact pressure distribution, Mohr - coulomb's theory of shear failure of soils, Mohr's stress circle measurement of shear strength, shear box test, Triaxial compression test, Unconfined compression test, Value shear test, Measurement of pore pressure, Pore pressure parameters, Critical void ratio, Liquefaction.	**14**
IV	**Stability of Slopes:** Infinite and finite slopes, Types of slope failures, Rotational slips, Stability number, Effect of ground water, Selection of shear strength parameters in slope stability analysis, Analytical and graphical methods of stability analysis, Stability of earth dams.	**14**
V	**Lateral Earth Pressure:** Active, Passive and earth pressure at rest, Rankine, coulomb, Terzaghi and culmann's theories, Analytical and graphical methods of determination of earth pressures on cohesion-less and cohesive soils, Effect of surcharge, Water table and wall friction, Arching in soils, Reinforced earth retaining walls.	**14**

Text Book/References Books/ Websites:

1 Dr. K.R. Arora; Soil Mech. & Found. Engg ; Std. Publishers Delhi.

2 Dr. B.C.Punmia ; Soil Mech. & Found.; Laxmi Publications, Delhi.

3 Dr.L Aram Singh; Modern Geo-tech Engg ; Ibt Publishers, Delhi.

4 C. Venkatramaiah; Geo-tech Engg. ; New Age International Publishers, Delhi.

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Suggested List of Laboratory Experiments:

1 Determination of hygroscopic water content.
2 Particle - size analysis.
3 Determination of specific gravity of soil particles.
4 Determination of plastic limit.
5 Determination of liquid limit.
6 Determination of shrinkage limit.
7 Permeability tests.
8 Direct shear test.

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P			Total Nil			Total (50)
CET-1606	Theory of Structure Lab	-	-	1	External (Nil)	Internal (Nil)	Min Nil	External (35)	Internal (15)	Min 20 (D Grade)

Duration of Theory (Externals): Nil

Theory Internal- Max Marks: Nil	Best of Two Mid Semester Test - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: Nil
Practical Internal Max Marks: 15	Lab work & Sessional - Max Marks: 10	Assignment/Quiz/Attendance - Max. Marks: 05

Pre-Requisite	
Course Outcome	1. Introduction to group discussion, structure and dynamics; techniques of effective participation in group discussion
	2. To give the knowledge of necessity, how to prepare for interviews; language and style to be used in interview.

Text Book/References Books/ Websites: Nil

Suggested List of Laboratory Experiments: -

1 Experiment on a two hinged arch for horizontal thrust and influence line for horizontal thrust.
2 Experiment and analysis of three bar pin jointed truss.
3 Experimental and analytical study of deflection and unsymmetrical bending of a cantilever beam.
4 Begg defometer –verification of Muller Breslau principal.
5 Experimental and analytical study of an elastically coupled beam.

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P	External	Internal	Total	External	Internal	Total (50)
BT-1607	Research Methodology	-	-	1	(Nil)	(Nil)	Nil	(Nil)	(50)	Min: 20 (D Grade)

Duration of Theory (Externals): Nil

Theory Internal- Max Marks: Nil	Best of Two Mid Semester Test - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: Nil
Practical Internal Max Marks: 50	Lab work & Sessional - Max Marks: Nil	Assignment/Quiz/Attendance - Max. Marks: 50

Pre-Requisite	**Nil**
Course Outcome	1. To study about different types of research, its motivation and objectives.
	2. To give the knowledge of basic principles need for research design and features of good design.
	3. To give the knowledge of writing and reporting of the thesis of given research report.

Unit	Contents (Theory)	Marks Weightage
I	**Research Methodology:** Meaning, Objective & its types, Research approaches , Significance of research, Research methods vs. methodology, Research process, Criteria of good research, Meaning of research problem, Sources of research problem, Errors in selecting a research problem, Scope and objectives of research problem, Effective literature studies approaches, Plagiarism, Research ethics, Problems encountered by researchers in India.	50
II	**Concept and Importance in Research:** Features of a good research design, Exploratory research design, Concept types and uses, Descriptive research designs, Concept, Types and uses, Experimental design, Concept of independent & dependent variables, Interpretation , Meaning & technique, Precaution in interpretation , Significance of report writing; layout of the research report, Types of reports, Precautions for writing research reports, Effective technical writing, Role of computer software in report writing.	
III	**Data Collection:** Collection of primary data, Observation method, Interview method, Collection of data through questionnaires, Collection of data through schedules, Difference between questionnaires and schedules, Collection of secondary data.	
IV	**Hypothesis:** Null hypothesis & alternative hypothesis, Basic concepts concerning testing of hypotheses, Procedure for hypothesis testing, Flow diagram for hypothesis testing, Qualities of a good hypothesis.	
V	**Nature of Intellectual Property:** Patents, Designs, Trade and copyright, Process of patenting and development, Technological research, Innovation, Patenting; Development, International scenario, International cooperation on intellectual property, Procedure for grants of patents, Patenting under PCT, patent rights**,** scope, licensing and transfer of technology, Patent information and databases, Geographical indications, New developments in IPR, Administration of patent system, IPR of biological systems.	

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Text Book/References Books/ Websites:

1. C . R. Kothari; Research Methodology; New Age Publication.
2. Wayne Goddard and Stuart Melville; Research Methodology;An Introduction.
3. Ranjit Kumar; Research Methodology; A Step by Step Guide for beginners.
4. Robert P. Merges, Peter S. Menell; Mark A. Lemley; Intellectual Property in New Technological Age.
5. T. Ramappa; Intellectual Property Rights Under WTO ; S. Chand; 2008.

Suggested List of Laboratory Experiments :- (Expandable): Nil

PEOPLE'S UNIVERSITY, BHOPAL

(Applicable for Admitted from Academic Session 2019-20 onwards)

Programme: **Bachelor of Technology** **Semester –VI**

Subject Code	Subject Title	Credit			Theory			Practical		
		L	T	P			Total			Total (50)
BT-1608	GD/Seminar	-	-	1	External (Nil	Internal (Nil)	(Nil)	External (Nil)	Internal (50)	Min: 20 (D Grade)

Duration of Theory (Externals): Nil

Theory Internal- Max Marks: Nil	Best of Two Mid Semester Test – Max Marks: Nil	Assignment/Quiz/Attendance Max. Marks: Nil
Practical Internal Max Marks: 50	Lab work & Sessional – Max Marks: Nil	Assignment / Quiz/Attendance Max. Marks: 50

Pre-Requisite	**Nil**
Course Outcome	1. Develop confidence and students should able to share their views publically.
	2. Understand and critique scientific presentations.

Unit	Contents (Theory)	Marks Weightage
I	Objective of GD and seminar is to improve the mass communication and convincing/ understanding skills of students and it is to give student an opportunity to exercise their rights to express themselves. Effective power point presentation of scientific research of concern discipline where students will prepare, Practice, Present short scientific seminars, Receive feedback from each other that will help us give even better presentations in the future, This effort will help them to communicate their ideas more clearly. Evaluation will be done by assigned faculty based on group discussion and power point presentation.	**50**

Text Book/References Books/ Websites: Nil

Suggested List of Laboratory Experiments :- (Expandable):

Students should prepare and submit hard and soft copy of their report to assigned faculty before end semester examination.