



SAMRAT ASHOK TECHNOLOGICAL INSTITUTE
(Engineering College), VIDISHA M.P.
(An Autonomous Institute Affiliated to RGPV Bhopal)
Program: Electronics and Communication Engineering
Department : Electronics Engineering

Subject Category	HEC	Subject Code	Subject Name				Probability and Statistical Approaches				
Maximum Marks Allotted							Contact Hours			Total Credits	
Theory				Practical			Total Marks	L	T	P	Grade
End Sem	Mid-Sem	Assignment	Quiz	End Sem	Lab-Work	Quiz					
	20	20	10	-	-	-	50				
Name of Faculty Mentor	Prof.MunnaLalJatav										
Holistic Education Course Title	Probability and Statistical Approaches										
Objectives of Course	<ol style="list-style-type: none"> 1. To identify a random variable that describes randomness or an uncertainty in certain realistic situation. 2. To learn important probability distributions like: 3. To build the linear relationship between two variables and also to predict how a dependent variable changes based on adjustments to an independent variable. 4. To interpret the types of sampling, sampling distribution of means and variance, Estimations of statistical parameters. 5. To give comprehensive knowledge of probability theory to make inferences about a population from large and small samples. 										
	Contents										Hrs
	Basic Probability: Experiment, definition of probability, conditional probability, independent events, Bayes' rule, Bernoulli trials, Random variables, discrete random variable, probability mass function, continuous random variable, probability density function, cumulative distribution function, properties of cumulative distribution function.										7
	Some special Probability Distributions: Binomial distribution, Poisson distribution, Normal, Exponential and Gamma densities, Evaluation of statistical parameters for these distributions										7
	Basic Statistics: Measure of central tendency: Moments, Expectation, dispersion, skewness, kurtosis, Linear Correlation, correlation coefficient, rank correlation coefficient, Regression, Bounds on probability, Chebyshev's Inequality										6

20/12/21

	Applied Statistics: Formation of Hypothesis, Test of significance: Large sample test for single proportion, Difference of proportions, Single mean, Difference of means, and Difference of standard deviations. Test of significance for Small samples: t- Test for single mean, difference of means, t-test for correlation coefficients	6
	Curve fitting by the numerical method: Curve fitting by of method of least squares, fitting of straight lines, second degree parabola and more general curves	4
Contact hours	30 hrs	30
Outcomes of Course	CO1: Understand the terminologies of basic probability, random variables and their probability functions CO2: Observe and analyze the behavior of various discrete and continuous probability distributions CO3: Understand the central tendency, correlation and correlation coefficient and also regression CO4: Apply the statistics for testing the significance of the given large and small sample data by using t- test, F- test and Chi-square test CO5: Understand the fitting of various curves by method of least square	

Text Books-

1. Peyton Z. Peebles, Jr. Probability, Random Variables and Random Signal Principles, 4th Edition-2002, McGraw Hill Education
2. P. Ramesh Babu, Probability Theory and Random Processes, 2015, McGraw Hill Education.



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Subject Category	HEC	Subject Code		Subject Name	Intellectual and Cognitive Abilities						
Maximum Marks Allotted											
Theory				Practical			Total Marks	Contact Hours			Total Credits
End Sem	Mid-Sem	Assignment	Quiz	End Sem	Lab-Work	Quiz		L	T	P	
	20	20	10				50				Grade

Name of Holistic courses: Intellectual and Cognitive Abilities

Course content: Course objectives to orient the think skills include the ability to intellectually simpler with the ability to solve a problem.

Module 1: Analogy, Classification, Series Completion, Coding-Decoding, Blood Relations, Puzzle Test, Alphabet Test.

Module 2: Arithmetical Reasoning, Inserting the missing character, Decision Making, Assertion and Reason, Situation Reaction Test, Verification of Truth.

Module 3: Logical Reasoning with statement and conclusions.

Module 4: Statement with Arguments, Assumptions, Courses of Action, Conclusions

Module 5: Inductive Reasoning: Series, Analogy, Classification, Analytical Reasoning, Mirror and Water images, spotting out the embedded images, Completion

of Incomplete Pattern, Grouping of Identical Figures

1. Outcomes:

Upon successful completion of this course, students should able to

CO1: Ability to memorize and understand the concept of inductive and deductive abilities.

CO2: Analyze the Problems logically and approach the problems in a specific way.

CO3: Able to possess creative thinking ability, evaluation and quick decision skills.

2. Evaluation Rubrics:

3. CO-PO-PSO Mapping:

CO/ PO	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO1 0	PO1 1	PO1 2	PSO1	PSO2	PSO3
CO1	3	2	-	1	-							3	3	-	-
CO2	3	3	-	3	-							2	2	2	
CO3	2	2	-	2	-							2	2	2	
Avg.	2.66	2.33		2								2.33	2.33	2	

4. Evaluation Rubrics

5. Name of faculty member who will engage the course: Dr. Sweety Jain

Handwritten signatures and dates:
 16.12.22
 20.12.22
 Dr. Sweety Jain

6. Mobile number of faculty:7697732877
7. E-Mail ID of Faculty:sweetyjain.ec@satiengg.in
TEXT BOOKS:
1. R. S. Aggarwal, "A Modern Approach to Verbal & Non-Verbal Reasoning", Revised Edition, S. CHAND Publications, 2018.
2. R. S. Aggarwal, "Quantitative Aptitude for Competitive Examinations", S. CHAND Publications Revised Edition, 2017.
3. ARIHANT, "A New Approach to Verbal & Non-Verbal Reasoning", Arihant Publication- Revised Edition, 2021.
REFERENCE BOOKS:
1. Trishna Knowledge Systems, "Quantitative Aptitude for Competitive Examinations", Pearson Publication, 2013.
2.
Reference books:
1. A Modern Approach To Verbal & Non Verbal Reasoning By R S Agarwal
2. Analytical and Logical reasoning By Sijwali B S
3. Quantitative aptitude for Competitive examination By R S Agarwal
4. Analytical and Logical reasoning for CAT and other management entrance test By Sijwali B S
5. Quantitative Aptitude by Competitive Examinations by Abhijit Guha 4 th edition
6. https://prepinsta.com/
7. https://www.indiabix.com/
8. https://www.javatpoint.com/

A collection of handwritten signatures and initials in blue ink, including a large signature that appears to be 'Sijwali B S' and several other smaller initials and signatures.