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**INSTITUTE OF AERONAUTICAL ENGINEERING**

**(Autonomous)**

Dundigal, Hyderabad -500 043

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| Schedule of Instructions Week wise | | | | |
| **Academeic Year** | **2017-2018** | | | |
| **Subject Name** | **PROBABILITY AND STATISTICS** | | | |
| **Branch & Section** | C**OMPUTER SCIENCE AND ENGINEERING & IC** | | | |
| **Weekno** | **Lecture Number** | **Topic to be Covered** | **Handout** | **PPT** |
| Week 1 | 01 | Unit-I introduction | --- | --- |
| Week 1 | 02 | Basic definitions | --- | --- |
| Week 1 | 03 | Random variables, discrete and continuous random variables | --- | --- |
| Week 1 | 04 | Probability distribution, probability mass function and probability density function | --- | --- |
| Week 1 | 05 | Mathematical expectation | --- | --- |
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| Schedule of Instructions Week wise | | | | |
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| Week 2 | 06 | Problems on probability mass function and probability density functions-1 | --- | --- |
| Week 2 | 07 | Problems on probability mass function and probability density functions-2 | --- | --- |
| Week 2 | 08 | Binomial distribution-1 | --- | --- |
| Week 2 | 09 | Binomial distribution-2 | --- | --- |
| Week 2 | 10 | Poisson distribution-1 | --- | --- |
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| Week 3 | 11 | Poisson distribution-2 | --- | --- |
| Week 3 | 12 | Normal distribution-1 | --- | --- |
| Week 3 | 13 | Normal distribution-2 | --- | --- |
| Week 3 | 14 | Normal distribution-3 | --- | --- |
| Week 3 | 15 | Question bank discussion of unit-I | --- | --- |

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| Week 4 | 16 | Unit-II joint probability distributions, joint probability mass, density function | --- | --- |
| Week 4 | 17 | Marginal probability mass, density functions | --- | --- |
| Week 4 | 18 | Coefficient of correlation-1 | --- | --- |
| Week 4 | 19 | Coefficient of correlation-2 | --- | --- |
| Week 4 | 20 | Rank correlation-1 | --- | --- |

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| Week 5 | 21 | Rank correlation-2 | --- | --- |
| Week 5 | 22 | Regression coefficient | --- | --- |
| Week 5 | 23 | The lines of regression-1 | --- | --- |
| Week 5 | 24 | The lines of regression-2 | --- | --- |
| Week 5 | 25 | Multiple correlation and regression | --- | --- |

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| Week 6 | 26 | Question bank discussion of unit-II | --- | --- |
| Week 6 | 27 | Unit-III Definitions of population, sampling , statistic, parameter | --- | --- |
| Week 6 | 28 | Types of sampling, expected values of sample mean and variance | --- | --- |
| Week 6 | 29 | Sampling distribution, standard error | --- | --- |
| Week 6 | 30 | Sampling distribution of means and sampling distribution of variance for with replacement | --- | --- |

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| **Weekno** | **Lecture Number** | **Topic to be Covered** | **Handout** | **PPT** |
| Week 7 | 31 | Sampling distribution of means and sampling distribution of variance for without replacement | --- | --- |
| Week 7 | 32 | Sampling distribution of means and sampling distribution of variance for without replacement | --- | --- |
| Week 7 | 33 | Revision | --- | --- |
| Week 7 | 34 | Revision | --- | --- |
| Week 7 | 35 | Revision | --- | --- |

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| Week 8 | 36 | Estimation: point estimation, interval estimations | --- | --- |
| Week 8 | 37 | Estimation: point estimation, interval estimations | --- | --- |
| Week 8 | 38 | Problems on estimation-2 | --- | --- |
| Week 8 | 39 | Testing of hypothesis: null hypothesis, alternate hypothesis | --- | --- |
| Week 8 | 40 | Type I and type II errors | --- | --- |

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| Week 9 | 41 | Unit-IV introduction of large sample tests | --- | --- |
| Week 9 | 42 | Test of hypothesis for single mean-1 | --- | --- |
| Week 9 | 43 | Test of hypothesis for single mean-2 | --- | --- |
| Week 9 | 44 | Test of hypothesis for difference of means-1 | --- | --- |
| Week 9 | 45 | Test of hypothesis for difference of means-2 | --- | --- |

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| Week 10 | 46 | Test of hypothesis for single proportion-1 | --- | --- |
| Week 10 | 47 | Test of hypothesis for single proportion-2 | --- | --- |
| Week 10 | 48 | Test of hypothesis for difference of proportions-1 | --- | --- |
| Week 10 | 49 | Test of hypothesis for difference of proportions-2 | --- | --- |
| Week 10 | 50 | Question bank discussion of Unit-IV | --- | --- |

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| Week 11 | 51 | Unit-V introduction of small sample tests | --- | --- |
| Week 11 | 52 | Student t-distribution, its properties-1 | --- | --- |
| Week 11 | 53 | Student t-distribution, its properties-2 | --- | --- |
| Week 11 | 54 | F-distribution, its properties-1 | --- | --- |
| Week 11 | 55 | F-distribution, its properties-2 | --- | --- |

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| Week 12 | 56 | Chi-square distribution and its properties-1 | --- | --- |
| Week 12 | 57 | Chi-square distribution and its properties-2 | --- | --- |
| Week 12 | 58 | Chi-square test of goodness of fit | --- | --- |
| Week 12 | 59 | Analysis of variance: one way classification-1 | --- | --- |
| Week 12 | 60 | One way classification-2 | --- | --- |

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| Week 13 | 61 | Two way classification-1 | --- | --- |
| Week 13 | 62 | Two way classification-2 | --- | --- |
| Week 13 | 63 | Two way classification-3 | --- | --- |
| Week 13 | 64 | Two way classification-3 | --- | --- |
| Week 13 | 65 | Question bank discussion of Unit-V | --- | --- |

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| Week 14 | 66 | Question bank discussion of Unit-V | --- | --- |
| Week 14 | 67 | Revision |  | --- |
| Week 14 | 68 | Revision | --- | --- |
| Week 14 | 69 | Revision | --- | --- |
| Week 14 | 70 | Revision | --- | --- |