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| **Universityof Kerala** | | |
| Discipline:Electronics |  | Time:1Hour30Minutes(90Mins.) |
| CourseCode: UK1DSCELE100 |  | TotalMarks:42 |
| CourseTitle:Electronics in Modern Technology |  |  |
| TypeofCourse:DSC |  |  |
| Semester:1 |  |  |
| AcademicLevel: 100-199 |  |  |
| TotalCredit:3,Theory:3 Credit  (Applicablefor4CreditCoursewith1CreditPracticalAlso) |  |  |

PartA.6 Marks.Time:6 Minutes

ObjectiveType.1MarkEach.AnswerAllQuestions

(Cognitive Level: Remember/Understand)

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome(CO)** |
| 1. | List any two active components | Remember | 3 |
| 2. | Define RMS value of sine wave | Remember | 4 |
| 3. | Summarize the function of capacitor | Understand | 2 |
| 4. | Discuss the application of electronics in medical field | Understand | 1 |
| 5. | Describe the working principle of transformer | Understand | 2 |
| 6. | Summarize the difference between light emitting diode (LED) and photodiode | Understand | 3 |

Part B.8Marks.Time:24 Minutes

ShortAnswer.2MarksEach.AnswerAllQuestions (Cognitive Level: Understand/Apply)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course Outcome(CO)** |
| 7. | Explain the difference between static and dynamic resistance of diode | Understand | 3 |
| 8. | Describe the importance of Internet of Things (IoT) in everyday life | Understand | 1 |
| 9. | Demonstrate how to calculate total capacitance in a series circuit | Apply | 2 |
| 10. | Apply the concept of phase difference to determine phase shift between two wave forms | Apply | 4 |

PartC. 28Marks.Time:60Minutes

LongAnswer.7markseach.Answerall4Questions,choosingamongoptionswithineach question.

(CognitiveLevel:Apply/Analyse)

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome(CO)** |
| 11. | (a1) Demonstrate how to calculate the total resistance in series and parallel combinations.  (a2) Calculate the value of total resistance of three resistors 5KΩ,10KΩ,30KΩ when connected in series and parallel.  OR  (b1)Perform how the value of resistance is calculated using color coding method.  (b2)Calculate the value of resistance   1. Red,Violet,Orange,Gold 2. Green,Blue,Red,Silver, | Apply | 2 |
| 12. | (a)Demonstrate the impact of electronics in different fields.  OR  (b)Identify the role of Artificial Intelligence(AI) and Robotics in different fields | Apply | 1 |
| 13. | (a)Demonstrate forward and reverse characteristics of PN junction diode  OR  (b) Illustrate the VI characteristics of Zener diode | Apply | 3 |
| 14. | (a)Demonstrate how to calculate instantaneous value, Peak value RMS value, Average value, Time period of sine wave  OR  (b) An alternating voltage is given by v=230sin314t. Determine frequency, time period, peak value, RMS value, Average value | Apply | 4 |

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| **Cognitive Level** | **Marks** | **Percentage** |
| Remember | 2 | 4.8 |
| Understand | 8 | 19.0 |
| Apply | 32 | 76.2 |
| Analyze |  |  |
| Evaluate |  |  |
| Create |  |  |
| **TOTAL** | **42** | **100** |

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| **Course Outcomes** | **Marks** | **Percentage** |
| 1 | 10 | 23.8 |
| 2 | 11 | 26.2 |
| 3 | 11 | 26.2 |
| 4 | 10 | 23.8 |
|  |  |  |
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| **TOTAL** | **42** | **100** |