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| **University of Kerala** | | |
| Discipline: Physics |  | Time: 1 Hour 30 Minutes (90 Mins.) |
| Course Code: **UK1MDCPHY103** |  | Total Marks: 42 |
| Course Title: **PHYSICS IN ARTS AND SPORTS** |  |  |
| Type of Course: **MDC** |  |  |
| Semester: 1 |  |  |
| Academic Level: 100-199 |  |  |
| Total Credit: 3, Theory: 3 Credit  (Applicable for 4 Credit Course with 1 Credit Practical Also) |  |  |

Part A. 6 Marks. Time: 6 Minutes. (Cognitive Level: Remember/Understand) Objective Type. 1 Mark Each. Answer All Questions

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 1. | Define unpolarized light | Remember | 1 |
| 2. | Explain Colour triangle | Remember | 2 |
| 3. | Explain Simple Harmonic Motion. | Understand | 1 |
| 4. | State Newtons Second law of motion | Understand | 1 |
| 5. | Explain the concept of velocity. | Understand | 1 |
| 6. | Illustrate Total Internal Reflection | Understand | 2 |

Part B. 8 Marks. Time: 24 Minutes. (Cognitive Level: Understand/Apply) Short Answer. 2 Marks Each. Answer All Questions

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome (CO)** |
| 7. | Explain the concept of Inertia with an example | Understand | 1 |
| 8. | Enumerate an example golden ration in nature | Understand | 1 |
| 9. | Differentiate saturation and brightness | Understand | 2 |
| 10. | What are Filippo Brunelleschi's achievements? | Understand | 2 |

Part C. 28 Marks. Time: 60 Minutes. (Cognitive Level: Apply/Analyse/Evaluate/Create)

Long Answer. 7 marks each. Answer all 4 Questions, choosing among options\* within each question.

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course Outcome (CO)** |
| 11. | A. Explain the reflection and refraction process in diamonds.  OR  B. How do sunglass’s function | Understand | 1 |
| 12. | A. How important is Rule of third in photography?  OR  B. Discuss the parameters affecting quality of photos. | Understand | 3 |
| 13. | A. Discuss the relation between the Fibonacci sequence and the Golden Ratio?  OR  B. Discuss Human Visual System with neat labeled diagram. | Understand | 2 |
| 14. | A. Explain subtractive primary colours. Why are they called subtractive?  OR  B. How does additive color mixing differ from subtractive color mixing? | Understand | 2 |