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| **DIT UNIVERSITY, DEHRADUN**   |  |  | | --- | --- | | **B.TECH (CSE)** | **: END TERM EXAMINATION, ODD SEM 2023-24 (SEM V)** | | | | | | | | | | | | | |
| **Roll No.** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Subject Name: Product Development and Design** | | | | | | | | | | | | |

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| **Time: 3 Hours** | **Total Marks: 100** |
| **Note: All questions are compulsory. No student is allowed to leave the examination hall before the completion of the exam.**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   |  |  |  | | --- | --- | --- | | **Q.1)** | **Attempt all Parts :** | | |  | (a) | Describe clearly the characteristics of a successful product development? | |  | (b) | List a set of metrics corresponding to the need of an high end Laptop? | |  | (c) | Explain Intellectual property rights and its contents? | |  | (d) | Describe the term product specifications, giving suitable example? | |  |  | **[4 x 5= 20]** | |  | | | | **Q.2)** | **Attempt all Parts :** | | |  | (a) | State the difference between the product vision statement and the product mission statement? | |  | (b) | Explain all the steps and role of Industrial Design in product development? | |  | (c) | Describe all the basic steps of a Concept selection? | |  | (d) | Describe all the basic steps of a Concept Testing? |  | |  |  | **[4 x 5= 20]** | |  | | | | **Q.3)** | **Attempt any two parts :** | | |  | (a) | Define the term concept generation and define its relevance in the product development process. | |  | (b) | What is product life-cycle? Explain in detail the various phases of product life-cycle with the help of a sketch. | |  | (c) | With the help of a diagram describe the composition of the product development team for an advanced electrical appliance? | |  |  | **[2 x 10= 20]** | |  | | | | **Q.4)** | **Attempt any two parts :** | | |  | (a) | Define a Patent and state the different steps required for pursuing a Patent? | |  | (b) | Describe the three methods commonly used for gathering raw data from customers? | |  | (c) | Explain the process of concepts combination table with help of an example how can it be useful to select an overall potential solution of a sub problem? | |  |  | **[2 x 10= 20]** | |  | | | | **Q.5)** | **Attempt all parts :** | | |  | (a) | Perform concept screening for the four pencil holder concepts shown below | |  | (b) | Describe in detail the generic product development process? | |  |  |  | |  |  | **[2 x 10= 20]** | | -----END OF PAPER ---- | | | | |