

KATHMANDU UNIVERSITY
End Semester Examination
January/February 2024

Marks Scored:

Level : B.E.

Year : III

26 JAN 2024

Course : MEEG 315

Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date :

SECTION "A"

[20Q. × 1 = 20 marks]

Choose and mark [X] the most appropriate option from each set of choices.

1. What is the initial stage in the design process where designers identify a gap or an opportunity for a new product?
 Definition of the problem Relations between functional requirements
 Information flow Recognition of needs
2. What is the key aspect that establishes a connection between functional requirements and the physical form of a product in machine design?
 Material Selection Product geometry
 Manufacturing methods Cost considerations
3. Why is obtaining feedback from both the manufacturer and user important in the early stages of product development?
 To streamline the design process
 To increase manufacturing costs
 To enhance collaboration between manufacturer and user
 To identify design improvements and user preferences
4. What is the primary objective of the detailed design and analysis stage?
 To conduct feasibility studies
 To refine and optimize the product design
 To gather user feedback
 To finalize distribution plans
5. What is a key characteristic of creative problem solving?
 Avoidance of brainstorming sessions
 Strict devotion to existing methods
 Limited exploration of alternatives
 Innovation thinking and unconventional approaches
6. How can brainstorming be beneficial in the initial stages of problem definition in mechanical engineering design?
 By generating a variety of problem-related ideas.
 By limiting collaboration.
 By avoiding the exploration of constraints.
 By narrowing down potential solutions.
7. Which factor does **NOT** significantly affect the fatigue strength of a material?
 Material ductility Temperature
 Static loading Surface finish
8. How does the presence of a higher endurance limit affect the fatigue life of a material?
 Increase the fatigue life Can't be determined
 Reduces the fatigue life Has no impact on fatigue life

