Q.18 Write the design consideration of sheet metal parts. (CO4)

Q.19 What are the effects of designing with high strength low toughness material? (CO3)

Q.20 What are the effects of manufacturing process on designing for corrosive environment? (CO4)

Q.21 Explain the retrieval and generative process planning systems? (CO4)

Q.22 Define depreciation. Explain, how to calculate depreciation? (CO5)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain fatigue, creep and fracture with neat diagrams. Also give comparison between them. (CO1)

Q.24 What is forged component? Explain the design considerations for forged components. Also write the basic features of a forged die.

Q.25 What is the objective of cost estimation of a product? Explain the elements contributing to cost estimation of product.

6th Sem./Branch : Automation & Robotics

Subject : Product Design and Process Planning

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Which of the following is not the stage of new product development? (CO1)

a) Idea generation b) Positioning

c) Test marketing d) Business Analysis

Q.2 The ultimate objective of the product is (CO4)

a) To provide a new look

b) Utilizing existing man power

c) To monopolize the market

d) All of the above

Q.3 The ability of the material to resist fracture due to high impact loads is.:

a) Strength b) Toughness

c) Stiffness d) None of the above

Q.4 Which of the following factors affect the mechanical properties of a material under applied loads?

a) Grain size

b) Shape of material

c) Content of alloys

d) Imperfection and defects

Q.5 CAPP is called_____

a) Computer Aided Product Processing

b) Computer Alternate Product Processing

c) Computer Aided Process Planning

d) Computer Alternate Processing Planning

Q.6 Which of the following is not the input of process planning?

a) Production type data

b) Raw material data

c) Facilities data

d) Part program data

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SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define product life cycle. (CO1)

Q.8 Define the de-rating factor. (CO2)

Q.9 Define asthetics. (CO2)

Q.10 Polymer is a type of engineering material. (T/F) (CO3)

Q.11 What is operation planning sheet? (CO5)

Q.12 What is part coding? (CO5)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 What are the steps involved in product launching?(CO1)

Q.14 Explain, the use of modeling and simulation in design. (CO1)

Q.15 Write short note on energy consideration in design. (CO2)

Q.16 Give a classification of engineering materials.(CO3)

Q.17 Write short note on designing for simple axial loading. (CO3)

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