

xv) Define riveting.

No. of Printed Pages : 4

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### SECTION-C

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

Q.3 Design a statically loaded rubber tyre. Give its diagram, explaining various design parameters taken into consideration.

Q.4 Discuss:-

(a) Effect of environmental exposure on rubber design.

(b) Fillets and radius.

Q.5 Explain various welding operations used in rubber product designing

Q.6 Explain various steps for developing a rubber product.(in detail)

Q.7 Write short note on:-

(a) Shapes of rubber products.

(b) Assembly methods.

(40)

(4)

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**5th Sem. / Rubber Tech.**

**Subject : Rubber Product Design**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Define Tolerance.

b) Give four disadvantages of sharp corners.

c) What are pre-design factors?

d) Define shrinkage.

e) Define static loading?

f) What is feasibility study?

g) What is EDM texturing?

h) Name any four types of gates used in Rubber industry.

i) Define Sampling?

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- j) What should be the minimum draft angle need in rubber design?
- k) What is adhesion?
- l) Expand NBR.
- m) What is riveting?
- n) Name four welding methods used in rubber design.
- o) Name four mechanical properties.
- p) Name different types of threads used in rubbers.
- q) What is sprue?
- r) Name different shapes used in rubber design.

### SECTION-B

**Note:** Short answer type questions. Attempt any ten parts 10x4=40

- Q.2 i) Discuss any four mechanical properties used in rubber.

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- ii) Explain positioning of holes?
- iii) What is texturing? explain its advantages.
- iv) How will you select a material for particular application.
- v) Define product life cycle.
- vi) How cost economics effect the product design.
- vii) Define weld line and methods to remove weld line.
- viii) What is Gate side and location?
- ix) Define Ribs and bosses.
- x) Give various processing limitations of rubber design.
- xi) State important features of dynamically loaded park.
- xii) What is uniform wall thickness? Explain its importance.
- xiii) What are moulded inserts?
- xiv) Discuss solvent cementing.

(3)

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