

SECTION-C

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

- Q.3 Describe the functions of plasticisers and flame retardants in the compounding of rubber.
- Q.4 Describe the functions of heat stabilizers and antioxidants in the compounding process of rubber.
- Q.5 Describe the construction and working of mixer extruder.
- Q.6 Explain the construction and working of kneaders.
- Q.7 Describe in detail the compounding of power transmission belts and hoses.

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Roll No.

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5th Sem. / Rubber Tech.

Subject : Compounding and Formulation of Rubber

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 a) State the need of compounding.
- b) Name two techniques of compounding.
- c) With two examples, define extenders.
- d) With two examples, define slip additives.
- e) Define pigment with one example.
- f) State the function of anti-ozonants.
- g) State the function of bactericide additives.
- h) Name two mould release agents.
- i) Name one filler and state its function in compounding.
- j) State the concept of diluents in compounding.

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- k) State the function of UV stabilisers.
- l) Define mastication.
- m) State the function of curing agents in rubber processing.
- n) State the operating speed of banbury mixer.
- o) Define thermoset materials.
- p) Define paste.
- q) Define vulcanization.
- r) Explain the concept of formulation of rubber.

SECTION-B

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

- Q.2
- i) Explain property modification of rubber by any one additive.
 - ii) Compounding enhances processing of rubber. Justify
 - iii) Describe the function of lubricants in compounding of rubber.

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- iv) Explain the role of dyes and pigments in rubber.
- v) Name any two blowing agents and explain their function.
- vi) Explain the working of ribbon blender.
- vii) Draw neat sketch of banbury mixer.
- viii) Draw neat sketch of high speed mixer.
- ix) Describe the construction and working of two roll mill.
- x) Explain the working of batch mixer.
- xi) Explain the working of semi batch mixer with sand mill.
- xii) Explain the construction of dispensers.
- xiii) Explain the compounding of footwear.
- xiv) Explain the compounding of automobile tubes.
- xv) Explain compounding of rubber tyres.

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