

SECTION-C

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

Q.3 Explain four particulate material.

- a) Silica b) Mica
- c) Metallic powder d) CaCO_3

Q.4 Describe preparation, properties and applications of fly ash reinforced epoxy material.

Q.5 Give properties and composition of

- a) C-black fibres b) Acrylic fibre

Q.6 Write short note on

- a) Rigid & flexible laminates
- b) Hand lay up technique

Q.7 Explain :

- a) NR/SBR blend
- b) Nano composites

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4th Sem. / Rubber Tech.

Subject : Polymer Composites

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

Q.1 a) Name four different types of c-black.

b) Expand PRP.

c) Give structure of PVC?

d) What are laminates?

e) State two advantages of plastic wood laminates.

f) Give two properties of jute fibre.

g) What is PAN?

h) What is mono cellulox?

i) Give advantages of using metallic powder in composites.

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- j) List two properties of Mica dusts.
- k) State sources of fly ash.
- l) What is E-glass fibre?
- m) Name two man made fibres.
- n) What is clay?
- o) List two advantages of NR/SBR blend.
- p) Principle of hand lay up technique.
- q) List two applications of plastic metal laminates.
- r) What are compatibilisers?

SECTION-B

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

- Q.2
- i) Give principle of composite reinforcements.
 - ii) State properties and advantages of fibre reinforced plastics over laminates.
 - iii) What are reinforcements? Explain.
 - iv) Discuss processing of PRC.

- v) Discuss composition & advantages of glass fibres.
- vi) State properties & applications of glass reinforced poly urethane.
- vii) Discuss interpenetrating polymer blend with example.
- viii) Give properties and advantage of Boron fibre.
- ix) Compare properties of carbon & nylon fibers.
- x) Discuss preparation of fly ash reinforced epoxy.
- xi) Explain plastic wood laminates.
- xii) State four applications of plastic paper laminates.
- xiii) Explain blending of NBR/PVC.
- xiv) Discuss the concept of miscibility.
- xv) Explain vaccum bag molding technique.

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