Q.29 Explain importance of Polymer blending.
Q.30 Discuss plastic laminates with examples.
Q.31 Explain concept of miscibility and compatibility of polymer blends.
Q.32 Discuss properties and advantages of NR/SBR blend.
Q.33 Explain properties and applications of Glass filled reinforced epoxies.
Q.34 Discuss spray up technique for fibre reinforced composites.
Q.35 Explain Filament winding technique.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain Hand Lay-up technique for FRP with diagram.
Q.37 Explain:
a) Properties, composition and advantages of glass fibers.
b) Properties and applications of Nano composites
Q.38 Discuss:
a) Properties and applications of Glass reinforced polyesters.
b) Processing of particulate reinforced composites

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126945/116945

4th Sem / Branch : Rubber Technology
Subject:- Ploymer Composites

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Which of the following lamination method doesn't require an adhesive for lamination?
a) Dry bonding lamination
b) Solvent-less lamination
c) Extrusion Lamination
d) Wet bonding Lamination
Q.2 Which of the following materials is the outermost lamination layer in Tetra packs?
a) Polyester b) Polypropylene
c) Polyethylene d) Polystyrene
Q.3 When fibers are used as a dispersed phase for the reinforcement of matrices, the resultant composites are known as_____
a) Glass-fibre reinforced
b) Carbon-fibre reinforced
c) Wood-fibre reinforced
d) Unidirectional-fibre reinforced
Q.4 Composites can be classified based on_____
a) Matrix type
b) Reinforcement type
c) Matrix & Reinforcement type
d) None of them

Q.5 Which of the following may alter the mechanical properties of reinforced composites?
a) Constituent Properties
b) Fibre length
c) Fibre orientation
d) All of the mentioned

Q.6 In the spray lay-up method, the function of a spray gun is to spray pressurized resin, catalyst and reinforcement in the form of chopped fibers
a) True b) False
c) May be true or not d) None of these

Q.7 _____is an open mould process
a) Reaction injection moulding
b) Hand Lay-up
c) Transfer moulding
d) Injection moulding

Q.8 In resin transfer moulding process, the uniformity of resin flow can be enhanced by using_____
a) Air b) Vacuum
c) Both A & B d) None of the above

Q.9 Manufacturing of components having continuous lengths and the constant cross-sectional shape is done by_____process.
a) Roving b) Pultrusion
c) Curing d) Pulling

Q.10 Which of the following may alter the mechanical properties of reinforced composites?
a) Constituents properties
b) Fiber Length
c) Fiber orientation
d) All of these

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Parachutes and ropes for rock climbing are made from_____.

Q.12 Give an example of natural fiber.

Q.13 Carbon-fibre reinforced composites are commonly used in _____applications.

Q.14 The composite constituents of both matrix and reinforcements are softer. (T/F)

Q.15 Give two advantages of composites.

Q.16 Define aspect ratio

Q.17 Name two different types of synthetic fibers used in FRP composites.

Q.18 Give two advantages of NR/PBR blend.

Q.19 Give two examples of plastic paper laminates.

Q.20 Name two particulates used in Particulate reinforced plastics.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Give five advantages of composite materials.

Q.22 Explain laminates and their uses.

Q.23 Give classifications of Composites.

Q.24 Explain properties and applications of calcium carbonates.

Q.25 Give properties and composition of carbon fibers.

Q.26 Discuss types of natural fibers.

Q.27 Explain properties and applications of fly-ash

Q.28 Explain properties and applications of PVC/NBR blend.