

- Q.25 Discuss nano-composites.
 - Q.26 Explain role and importance of coupling agents.
 - Q.27 Discuss polymer-concretes and their applications.
 - Q.28 Explain effect of fiber reinforcement and their layout techniques in FRP.
 - Q.29 Discuss plastic materials used in food packaging.
 - Q.30 Discuss the role of plastics in Bio-medical application by giving suitable example.
 - Q.31 Explain principle of composite reinforcement.
 - Q.32 State various applications of PPS.
 - Q.33 Give properties and applications of PPO materials.
 - Q.34 Discuss various applications of POM material.
 - Q.35 State four advantages of polymer blending?

SECTION-D

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

- Q.36 Explain preparation, properties and applications of carbon fibers.

Q.37 Explain polymer blends and alloy and also explain various types of polymer blends by giving suitable example.

Q.38 Discuss:

 - Conducting polymers
 - Properties and applications of LCP.

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**4th Sem / Plastic Engineering
Subject:- Plastic Materials & Properties - II /
Engg. & SP. Polymers**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Density of PPS is _____.

a) 0.92 g/cc b) 2.8 g/cc

c) 1.67 g/cc d) 2.0 g/cc

Q.2 "Teflon" is the trade name of which polymer?

a) PPO b) PEEK

c) PSO d) PTFE

Q.3 Which polymer is used aircraft application?

a) PEEK b) PS

c) PE d) PA

Q.4 PSO stands for _____.

a) Plastic standard object

b) Poly sulphones

c) Poly sulphur oxide

d) None of the above

Q.5 Silanes & Titanates are the example of _____.

- a) Reinforcing fillers b) coupling agents
- c) resin substance d) none of the above

Q.6 Which of the following specialty plastic is transparent?

- a) PEEK b) PSO
- c) PEI d) PAI

Q.7 What is the full form of PEEK?

- a) Poly Ether Ether Ketone
- b) Poly ether ether ketone
- c) Poly ethyl ether ketone
- d) Polyester ethyl ether ketone

Q.8 Which material is used for non-stick coating of utensils?

- a) PS b) PES
- c) PTFE d) PEEK

Q.9 Which of the following is an example of interpenetrating network (IPN)?

- a) PVC-Nitrile Rubber b) PP-EPDM
- c) PVC-ABS d) none of the above

Q.10 Which of the following is an example of filler used in FRP industry?

- a) Mica dust b) Calcium carbonate
- c) Talc d) All of them

SECTION-B

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

Q.11 Expand LCP.

Q.12 Name two specialty polymers.

Q.13 Which polymeric material is used in hemo-dialysis membranes?

Q.14 Name four fibers used in FRP's

Q.15 Give two food packaging application of Plastics.

Q.16 Name two conducting polymers.

Q.17 Give two advantages of polymer concrete.

Q.18 Name two resins or binders used in FRP industry.

Q.19 Polysulphones generally shows _____ UV resistance than PC.

Q.20 Give two applications of POM.

SECTION-C

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

Q.21 Give properties and applications of PEEK material.

Q.22 Discuss poly-arylates materials.

Q.23 Discuss properties and advantages of ABS-PVS blends.

Q.24 Discuss various types of glass-fibers used in FRP industry.