

MODEL QUESTIONS
MAHATMA GANDHI UNIVERSITY
POLYMER ENGINEERING
VIII SEMESTER B.TECH DEGREE EXAMINATION
PO 010 802: Rubber Products- Design & Testing (PO)

Time :3 hrs

Maximum Marks : 100

Part A

Answer all the questions
Each questions carries 3 marks

1. What is the significance of neutral angle in hose design
2. What are the important dynamic properties of rubber
3. Distinguish static and dynamic seals
4. Explain working principles of TGA
5. What are the special design adopted for giving rubber to metal bonding.

(5X 3= 15)

Part B

Answer all the questions
Each questions carries 5 marks

6. Discuss the various type of bridge bearing.
7. What are the important requirements for a rubber mounting.
8. What are the construction difference between a conveyor belt and V-belt.
9. Differentiate between material damping and structural damping.
10. Explain Chromatographic technique for analysis of a rubber compound.

(5 X 5 = 25)

Part C

Answer all the questions

Each questions carries 12 marks

11. a. Compare important design features to be considered while making a compound with NR, CR and EPDM

OR

- b. Explain important rubber product design features.

12. a. Discuss the different types of flexible coupling.

OR

- b. Write short notes on (i) Critical damping , (ii) Torsional Vibrations , (iii) Forced Vibrations (iv) Transmissibility.

13. a. Explain in detail the manufacture of a rubber hose.

OR

- b. Explain the important parameters to be considered for designing a static seal.

14. a. Write a formulation for heat resistant conveyor belting. Justify your selection
Explain the manufacture of V-belt

OR

- b. Explain the manufacture of cables.

15. a. Explain important spectroscopic methods used for the analysis of rubber
Vulcanizates

OR

- b. Explain different thermal analysis used for the evaluation of rubber vulcanizates.

(5 X 12 = 60)