

- Q.28 State four troubleshooting and their remedies for extruder operation.
- Q.29 Explain Roll floating and roll binding process.
- Q.30 Discuss Fluidised bed process for continuous vulcanisation.
- Q.31 Explain LCM process and its industrial importance
- Q.32 Explain role of viscosity in rubber processing
- Q.33 Explain any four defects and remedies in calendering process
- Q.34 Discuss function of ancillary equipments in calendering process
- Q.35 Explain spreading and dipping process.

#### SECTION-D

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

- Q.36 Explain calendering process by giving diagram of various types of calendar rolls.
- Q.37 Discuss:
- Hot and cold feed of rubber extruders
  - Mooney viscometer
- Q.38 Discuss :
- Ancillary equipments for extrusion operations.
  - Continuous vulcanization process.

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#### 4th Sem / Rubber Technology Subject:- Rubber Processing Techniques - I

Time : 3Hrs. M.M. : 100

#### SECTION-A

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

- Q.1 Which is the unit to measure the products of extruder output?
- Kg/hours
  - M/hours
  - Km/hours
  - Mass/hours
- Q.2 Which type of machine process produce continuous and long length products?
- Extrusion process
  - Injection moulding
  - Blow moulding
  - Compression moulding
- Q.3 What is the function of breaker plate in extrusion?
- Breaking the screen blocking
  - Breaking the consistency
  - Converting spiral flow to laminar flow
  - Breaking the polymer chain
- Q.4 What defect will be corrected when the wall thickness is increased in compression moulding process ?

- a) Burn mark              b) Weld line  
 c) Shrinkage              d) Flow mark
- Q.5 Which of the following is not a type of calendar?  
 a) I type              b) L type  
 c) Z type              d) M type
- Q.6 Calendering and extrusion are similar processes.  
 a) True              b) False  
 c) May or may not be    d) None of these
- Q.7 Mastication of rubber is the process of \_\_\_\_\_  
 a) Cutting the bales in smaller pieces  
 b) Sheeting out the rubber  
 c) Reducing the viscosity of the rubber  
 d) Extruding the rubber through a die
- Q.8 Mooney viscometer is the most effective test for predicting the behaviour of rubber compounds during  
 a) Casting  
 b) Reaction injection moulding  
 c) Compression moulding  
 d) Injection moulding
- Q.9 For an extrusion process, in \_\_\_\_\_ section, melt is homogenised and sufficient pressure is built up to pump it through die.  
 a) Compression              b) metering  
 c) Expansion              d) feed
- Q.10 In the vulcanisation process, the raw rubber is heated with \_\_\_\_\_  
 a) Oxygen              b) Sulphur  
 c) Carbon              d) Calcium

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**SECTION-B**

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Give two applications of dipping process.
- Q.12 Name two ancillary equipments used in extrusion
- Q.13 Mooney viscometer is used to measure the viscosity of \_\_\_\_\_ compound.
- Q.14 Which type of die is used in pipe extrusion?
- Q.15 Name two applications of calendering.
- Q.16 Expand FIFO.
- Q.17 Name two methods for textile coatings.
- Q.18 Name two defects of calendering process.
- Q.19 Name two defects of extrusion process.
- Q.20 Name two equipments used in rubber mixing.

**SECTION-C**

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Write short note on storage life of rubbers.
- Q.22 Explain working of Rapid Plastimeter
- Q.23 Explain any one method for determining the processability of rubber mix.
- Q.24 Define Die swell and its importance.
- Q.25 Give difference between ram type and screw type extruders.
- Q.26 Discuss types of calendering rolls.
- Q.27 Draw diagrams of Cross head extruder head.

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