Q.32 Discuss calendar gauge control devices.

Q.33 Explain function of breaker plate and screen pack.

Q.34 Give four troubleshoots of calendaring process.

Q.35 Explain cold and hot feed for extruder.

SECTION-D

Note : Long Answer type question. Attempt any two questions. (2x10=20)

Q.36 Explain construction and working principles of single screw extruder with label diagram.

Q.37 Discuss construction and types of calendaring process.

Q.38 Write short note on:

a) Die land and die swell

b) Methods for determining the processability of rubber mix.

b)

Roll No.....

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Subject : Rubber Processing Techniques-1

Time : 3 Hrs. **M.M. : 100**

SECTION-A

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

Q.1 Hardness is measured in _____

a) MPa b) N/mm

c) Poise d) Shore A

Q.2 When rubber is subjected to a load, it deforms.

a) True b) False

c) Can be true or false d) None of these

Q.3 How much sulfur must be added to rubber for vulcanization?

a) 1-5% b) 7-20%

c) 25-35 % d) > 40%

Q.4 Which of these is not an in operation of calendaring?

a) Sheeting b) Fractioning

c) Skim coating d) Buffing

Q.5 Which of the following resistances is provided by the presence of chlorine in CR molecules?

a) Resistance to flex cracking

b) Ozone resistance

c) Flame resistance

d) resistance to oxidative aging

Q.6 Equipment used for preparing dispersion____

a) Ball mill b) Attrition mill

c) Ultrasonic mill d) All of these

Q.7 ____ is the reason of elasticity of rubber.

a) Helix b) Octahedral

c) Trigonal planer d) Pentagonal

Q.8 Calendar rolls are usually made up of_____

a) Alloy steel b) Carbon steel

c) Chilled cast iron d) Grey cast iron

Q.9 Mooney viscometer is generally used for _____

a) Determining viscosity of rubber

b) To study scorch behavior of rubber

c) To determine state of cure

d) All of these

Q.10 High temperature and shorter curing time is required for _____

a) Thick moulded component

b) Thin mulded component

c) Commonly for all rubber component

d) None of these

SECTION-B

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

Q.11 Give two applications of dipping process.

Q.12 _____ die used in wire and cable coating.

Q.13 Expand FIFO.

Q.14 L/D ratio stands for _____.

Q.15 Name two trouble-shooting of calendaring process.

Q.16 Name two method used in textile coating.

Q.17 Give limitations of calendaring process.

Q.18 _____ also serves as filter for the melt.

Q.19 Name two ancillary equipment of extruder.

Q.20 Name two products made by extrusion process.

SECTION-C

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

Q.21 Compare continuous vulcanisation by RF with LCM process.

Q.22 Give lay-out of ancillary equipment for standard extrusion process.

Q.23 Discuss storage life of rubber materials.

Q.24 Explain Scorch time and its importance.

Q.25 Discuss rotocure and fluidised bed method.

Q.26 Explain roll floating and roll binding.

Q.27 Discuss Mooney Viscometer and its importance.

Q.28 Describe Pin barrel and vacuum.

Q.29 Explain construction and working of Cross head extruder.

Q.30 Explain skim coatings and sheeting.

Q.31 Explain basic principle of extrusion process.