PHB

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Course Name	**: D. Pharm**
Year	**: First Year**
Subject Name	**: Pharmaceutics**
Topic Name	**: SIZE REDUCTION**

Ch – 4

SIZE REDUCTION

MULTIPLE CHIOCE QUESTION

1. Which principle of size reduction involves the reduction of particle size by applying compressive forces?

A) Fragmentation

B) Comminution

C) Attrition

D) Disintegration

Answer: B) Comminution

2. Which of the following size reduction principles involves the breaking of large particles into smaller ones through the application of shearing forces?

A) Attrition

B) Impact

C) Compression

D) Disintegration

Answer: A) Attrition

3. In size reduction by impact, which of the following factors influences the degree of impact force?

A) Density of the material

B) Particle size

C) Velocity of the impacting object

D) Temperature of the material

Answer: C) Velocity of the impacting object

4. Which size reduction principle involves the application of mechanical forces to break solid materials into smaller pieces?

A) Agglomeration

B) Attrition

C) Comminution

D) Amalgamation

Answer: C) Comminution

5. What type of size reduction occurs when particles collide with each other and break apart due to internal stresses?

A) Impact

B) Compression

C) Attrition

D) Fragmentation

Answer: D) Fragmentation

6. Which of the following size reduction methods involves the reduction of particle size by applying a crushing force?

A) Attrition

B) Agglomeration

C) Compression

D) Disintegration

Answer: C) Compression

7. Which principle of size reduction involves the gradual wearing down of particles due to frictional forces?

A) Attrition

B) Agglomeration

C) Disintegration

D) Fragmentation

Answer: A) Attrition

8. In size reduction by attrition, which of the following factors affects the rate of particle reduction?

A) Temperature

B) Particle shape

C) Moisture content

D) All of the above

Answer: D) All of the above

9. Which size reduction principle involves the application of high-speed rotating blades to cut or shear particles?

A) Impact

B) Attrition

C) Cutting

D) Compression

Answer: C) Cutting

10. What type of size reduction occurs when particles are forced to collide with a stationary surface, resulting in particle breakage?

A) Compression

B) Attrition

C) Impact

D) Fragmentation

Answer: C) Impact

11. Which type of mill is commonly used for size reduction in pharmaceutical applications and operates by impact and attrition?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: B) Hammer mill

12. Which size reduction mill operates by applying high-speed rotating blades to cut or shear particles?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: D) Colloid mill

13. Which mill is suitable for reducing the size of particles to submicron or nanometer range by using high-velocity jets of fluid to impact particles?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: C) Jet mill

14. Which size reduction mill consists of a cylindrical drum containing grinding media such as balls and is used for fine grinding of materials?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: A) Ball mill

15. What type of mill is primarily used for milling hard, brittle materials and operates on the principle of shearing and compression?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: B) Hammer mill

16. In which size reduction mill does the reduction of particle size occur due to the high-velocity impact of particles against stationary or rotating surfaces?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: C) Jet mill

17. Which type of mill is commonly used for reducing the size of particles in the production of emulsions and suspensions?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: D) Colloid mill

18. Which size reduction mill is suitable for reducing the particle size of heat-sensitive materials without causing excessive heat generation?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: C) Jet mill

19. What is the primary mechanism of size reduction in a colloid mill?

A) Impact

B) Attrition

C) Shearing

D) Compression

Answer: C) Shearing

20. Which type of mill is most suitable for achieving uniform particle size reduction and dispersion in colloidal systems?

A) Ball mill

B) Hammer mill

C) Jet mill

D) Colloid mill

Answer: D) Colloid mill

21. Which type of mill is primarily used for size reduction by applying high pressure between two rollers?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: A) Roller mill

22. What is the primary mechanism of size reduction in a roller mill?

A) Impact

B) Attrition

C) Compression

D) Shearing

Answer: C) Compression

23. Which type of mill is commonly used for reducing the particle size of solid materials by cutting or shearing?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: B) Cutter mill

24. In which type of mill does the reduction of particle size occur by the high-speed rotation of blades or knives?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: B) Cutter mill

25. Which size reduction mill operates by applying high pressure to the feed material and is suitable for reducing the size of brittle materials?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: C) Compression mill

26. What type of mill is primarily used for reducing the size of particles by applying high-velocity fluid jets to impact particles?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: D) Fluid energy mill

27. Which type of mill is suitable for reducing the particle size of heat-sensitive materials without causing excessive heat generation?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: D) Fluid energy mill

28. What is the primary mechanism of size reduction in a fluid energy mill?

A) Impact

B) Attrition

C) Compression

D) Shearing

Answer: A) Impact

29. Which type of mill is commonly used for reducing the size of particles by compressing the feed material between two rollers?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: A) Roller mill

30. In which size reduction mill does the reduction of particle size occur due to the collision of particles with high-velocity fluid streams?

A) Roller mill

B) Cutter mill

C) Compression mill

D) Fluid energy mill

Answer: D) Fluid energy mill