Chapter 1: Introduction	
1. Which of the following involves reduction in volume of the work?	
Metal cutting processes	Metal forming processes
Metal joining processes	None of the above
2. Which of the following is used in metal cutting process?	
Lathe	Shaper
Grinding	All of above
3. The type of finished surface depends on	
Machining technique	Cutting tool
Skilled operator	All the above
4. Machining techniques are used for	
Metal cutting processes	Metal forming processes
Metal joining processes	None of the above
5. The thickness of metal layer removed is called depth of cut.	
T	F
6. The unit of cutting speed is	
M	M/min
Km	Km/hr
7. The cutting speed depends upon	
Work	Tool
Type of finish	All the above
8. The distance moved by the tool into the workpiece for each revolution of work is known as	
Feed	Cutting speed
Tool life	None of above
9. In which operation, the tool moves into the workpiece?	
Facing	Turning
Drilling	Grinding
10. In which operation, the tool moves only along the surface of workpiece?	
Facing	Drilling
Boring	Taping
11. In which of the operation, single point cutting tool is used?	
Lathe work	Shaping
Slotting	All of above
12. In which of the operation, multi point tool is used?	
Milling	Lathe work
Shaping	Slotting
13. The machine tool may be automats with single or with multispindle.	
T	F
14. For a mechanical engineer, to know about machine tool is not so important and can be avoided.	
T	F
15. The CNC machines are	
Outdated	Productive and Flexible

Non flexible	Only general purpose
16. The design, operation and maintenance of each type of machines are dealt by	
Manufacturing engineering	Theory of machines
Thermal engineering	Strength of Material
17. The different machines are having different designs giving variety of job and tool movements.	
T	F
18. Which of the following needs the study of Manufacturing Engineering?	
To understand design, operations and maintenance	To decide the best alternative machine tool
To conduct research and development program for developing best and more efficient machine tools	All the above
19. To bring about economy and safety in manufacturing organizations we need to adopt	
Computer integrated manufacturing	Flexible manufacturing system
Automatic guided vehicles for material handling and robotics	All the above
20. Every product requires the use of metal cutting tools, either for manufacturing of products or producing interchangeable parts.	
T	F
21. Which of the following involves manufacturing engineering?	
Machinery and instruments for raw material processing	Transportation systems and material handling devices
Machinery and hand tools for manufacturing, assembling and packaging	All the above
22. Manufacturing engineering also involves in chemical plant equipment and cement industries	
T	F
23. Which of the following production involves study of manufacturing engineering?	
Fasteners	Transportation vehicles
Cargo vessels and air crafts	All the above
24. Dies for stamping, forming, cutting, piercing and embossing also involves Manufacturing engineering.	
T	F
25. Manufacturing engineering is not involved in production of electrical machines such as motors, generators and alternators	
T	F
26. The metal machining can be done by using which of the following techniques?	
Mechanical cutting using metal cutting tools	Electrochemical machining
Chemical milling	All of above
27. Which of the following machines are involved in manufacturing of products?	
Electron bean machining	Laser beam machining
Plasma arc machining	All of above

28. Suitable training program based on manufacturing engineering for developing skill and knowledge for shop floor duties are to be imparted.	
T	F
29. Manufacturing engineering can lead to	
Construct high precision machine tools	Producing inter changeable parts using precise machine tools
Machinery for mass production which in turn leads to high wages to employees	All the above
30. The industry having developed manufacturing engineering can survive in the market by supplying	
Low quality products at low cost	Low quality products at high cost
High quality products at low cost	High quality products at high cost
31. Manufacturing engineering does not play any role in increasing per capita income of any nation	
T	F
32. The machine for cutting and shaping metals by means of cutting tools are known as	
Machine tool	Hand tool
Press tools	None of above
33. A machine tool changes the shape of material by	
Pressing the job	Removing the material in form of chips
Heating the job	None of above
34. The distance which the tool travels along the material in one minute is defined as	
Cutting speed	Depth of cut
Feed	None of above
35. The distance through which the tool advances into the machine during one revolution is defined as	
Cutting speed	Depth of cut
Feed	None of above
36. The volume of metal removed in unit time is defined as	
Metal removal rate	Metal deposition rate
Metal cutting rate	None of above
37. The time required to remove specified quantity of material from the workpiece can be calculated from	
Feed	Depth of cut
Metal removal rate	None of above
38. To reduce the machining cost the metal should be removed by	
Cutting rapidly	Cutting slowly
Cutting with hands	Not at all cutting
39. The cutting tool should be	
Made of proper material	Properly sharpened
Held rigidly	All the above
40. To keep the wastage to its minimum limit one must	
Prevent damage to the tool only	Prevent damage to the workpiece only
Prevent damage to tool and workpiece both	Not preventing the damage
41. The metal removal rate is related to	
Volume of metal removed in unit time	Area of metal removed in unit time

Length of metal removed in unit time	None of above.
42. The volume of metal removed in unit time is measured in _____ unit.	
Cm/min	Cm^2/min
Cm^3/min	None of above
43. As per IS the rough surface finish is denoted by the symbol	
∇	Δ
α	θ
44. The symbol used for fine machining is	
∇ ∇	∇
∇ ∇ ∇	None of above
45. The shop floor supervisor himself does the machining of metals	
T	F
46. What are the quality required for a shop floor supervisor?	
Democratic leadership	Result consciousness
Correct judgement	All the above
47. A supervisor is a link between the management and the workers.	
T	F
48. The supervisor does not need to	
Instruct and train the worker	Know how to supervise and control the workers.
Machining the workpiece by himself	Know the labor psychology
49. A supervisor must have the following skills	
Education	Maturity
Group spirit	All the above
50. A supervisor should be open minded and flexible.	
T	F

Chapter 2: Grinding and super finishing processes	
1. Grain number of grinding wheel is ___ to grain size.	
a) Directly proportional	b) Inversely proportional
c) Does not depend	d) None of the mentioned
2. The grinding operation is	
Shaping operation	Forming operation
Surface finishing operation	Dressing operation
3. The material removal rate in grinding operation is small due to	
Only a small portion of abrasive are involved in cutting	Positive rake angle
Zero rake angle	Material removal rate does not depend on the rake angle

4. The material removal rate of the grinding process in comparison to the material removal rate in facing on a lathe is	
Small	Large
Same	Cannot say
5. Grinding ratio generally lies between	
0.5 - 10	100 - 200
1000 - 2000	30 - 40
6. The grinding wheel speed (surface speed in m/min) usually varies from	
500 – 1000	1000 – 15000
1500 – 2000	2000 – 2500
7. The work or surface speed for cylindrical grinding varies from	
5 – 10 m/min	10 – 20 m/min
20 – 30 m/min	40 – 60 m/min
8. In grinding of irregular, curved, tapered, convex and concave surfaces, the grinder used is	
Cylindrical grinder	Internal grinder
Surface grinder	Tool and cutter grinder
9. Surface grinding is done to produce	
Tapered surface	Flat surface
Internal cylindrical holes	None of these
10. The method of grinding used to produce a straight or tapered surface on a work piece is	
Internal cylindrical grinding	Form grinding
External cylindrical grinding	Non cylindrical grinding
11. In centerless grinding, the surface speed of regulating wheel is	
5 - 15 m/min	15 - 35 m/min
15 - 60 m/min	90 - 120 m/min
12. In centralized grinders, the regulating wheel is inclined at	
0 - 8 degree	9 - 15 degree
16 - 20 degree	21 - 25 degree
13. In centerless grinding, workplace center will be	
Above the line joining the two-wheel centers	Below the line joining the two-wheel centers
On the line joining the two-wheel centers	At the intersection of the line joining the two-wheel centers with the workplace plane
14. Which of the following parameters influence the axial feed rate in centerless grinding?	
Regulating wheel diameter	Speed of the regulating wheel
Angle between the axes of grinding and regulating wheels	All the above
15. The method of centerless grinding used to produce taper is	
In feed grinding	Through feed grinding
End feed grinding	Any one of these
16. In centreless grinders, the maximum angular adjustment of the regulating wheel is	
5 deg	10 deg
15 deg	20 deg
17. The snag grinding is done to remove a considerable amount of metal without regard to the accuracy of the finished surface	
T	F

18. Trimming the surface left by sprues and risers on castings is the example of snag grinding	
T	F
19. Removing flash on forgings is the example of snag grinding	
T	F
20. The grinding of long, slender shafts or bars is usually done by	
In feed grinding	Through feed grinding
End feed grinding	Any one of these
21. The in-feed grinding is used to	
Produce tapers	Grind shoulders and formed surfaces
Grind long, slender shafts or bars	None of these
22. The method of grinding used to produce internal cylindrical holes and tapers is	
Internal cylindrical grinding	Form grinding
External cylindrical grinding	Surface grinding
23. An open structure of a grinding wheel is used for	
Soft materials	Tough materials
Ductile materials	All of these
24. Which of the following grinding wheel would be more economical for grinding of hard workpiece?	
Open structure grinding wheel	Dense structure wheel
Both of above	None of above
25. Which of the following grinding wheel would be more economical for grinding of soft workpiece?	
Open structure grinding wheel	Dense structure wheel
Both of above	None of above
26. Which of the following grinding machine will give a better result for rough machining?	
a) Fine grain	b) Very fine grain
c) Coarse grain	d) None of the mentioned
27. Which of the following grinding machine will give a better result for finish machining operation?	
a) Fine grain	b) Medium grain
c) Coarse grain	d) None of the mentioned
28. Which of the following symbol's range of alphabet represent soft grain in grinding wheel?	
a) A – H	b) I – P
c) Q – T	d) T – Z
29. Which of the following symbol's range of alphabet represent medium hardness grain in grinding wheel?	
a) A – H	b) I – P

c) Q – T	d) T – Z
30. Which of the following represents the correct symbol of vertified bond in a specification of grinding wheel?	
V	R
B	S
31. Which of the following represents the correct symbol of rubber bond in a specification of grinding wheel?	
V	R
B	S
32. Which of the following represents the correct symbol of Silicate bond in a specification of grinding wheel?	
V	R
B	S
33. A dense structure of a grinding wheel is used for	
Hard materials	Brittle materials
Finishing cuts	All of these
34. Which of the following represents the correct symbol of resin bond in a specification of grinding wheel?	
V	R
B	S
35. In order to grind soft material a coarse-grained wheel is used.	
T	F
36. The hardness of a grinding wheel is specified by	
Brinell hardness number	Rockwell hardness number
Vickers pyramid number	Letter of alphabet
37. The size of the abrasive grain required in a grinding wheel depends upon the hardness of the material to be grinded.	
T	F
38. The grade of grinding wheel depends upon	
The hardness of the material being grinded	Speed of wheel and work
Condition of grinding machine	All of these
39. The structure of grinding wheel depends upon	
The hardness of the material being grinded	Nature of the grinding operation
Finish required	All of these
40. Soft material cannot be economically grinded due to	
High temperature involved	Frequent wheel clogging
Rapid wheel wear	Low work piece stiffness
41. Glazing in grinding wheel takes place when the wheel is too hard or wheel revolves at a very high speed.	
T	f
42. Glazing in grinding wheel can be decreased by using a softer wheel or by decreasing the wheel speed.	
T	F

43. Removing dull grains in order to make grinding wheel sharp is known as	
Loading	Dressing
Unloading	None of above
44. In grinding wheel the cutting edge takes a glass like appearance (glazing) due to	
Wear of bond	Cracks on grinding wheel
Wear of abrasive grains	None of above
45. Operation done to make the periphery of grinding wheel concentric with its axis to recover its lost shape is known as	
Trueing	Loading
Unloading	None of above
46. Grinding wheel should be tested for balance	
Only once when manufactured	Only at the end of grinding operation
Very occasionally	Never be tested
47. Crack in grinding wheel is developed due to low speed of the wheel	
T	F
48. Honing and Lapping are not the surface finishing processes.	
T	F
49. The abrasive recommended for grinding materials of low tensile strength is	
Silicon carbide	Aluminum oxide
Sandstone	Diamond
50. The silicon carbide is chiefly used for grinding low tensile strength materials.	
T	F

Chapter 3: Gear manufacturing and finishing processes	
1. Thickness of tooth measured along the pitch circle is known as	
a) Tooth thickness	b) Backlash
c) Face width	d) Top land
2. Difference between space width and the thickness of tooth along the pitch circle is known as	
a) Tooth thickness	b) Backlash
c) Face width	d) Top land
3. Length of tooth parallel to gear axis is known as	
a) Tooth thickness	b) Backlash
c) Face width	d) Top land
4. Top surface of tooth is known as	
a) Tooth thickness	b) Backlash

c) Face width	d) Top land
5. Bottom surface of the tooth between two adjacent fillets is known as	
a) Flank	b) Face
c) Bottom Land	d) None of the above
6. Surface of tooth between pitch circle and top land is known as	
a) Flank	b) Face
c) Bottom Land	d) Fillet
7. Tooth surface between pitch circle and the bottom land including fillet is known as	
a) Flank	b) Face
c) Top Land	d) Backlash
8. Curved portion of the tooth flank at the root circle is known as	
a) Fillet	b) Face
c) Top Land	d) Bottom land
9. Force exerted by driving tooth on the driven tooth along the line of pitch point to the point of contact of two teeth is known as	
a) Line of Action	b) Path of contact
c) Arc of contact	d) Angle of action
10. Angle between the pressure line and the common tangent to the pitch circle is known as	
a) Pressure angle	b) Path of contact angle
c) Arc of contact angle	d) Angle of action
11. Backlash of gear is given by	
a) Space width – Tooth Thickness*2	b) Space width / Tooth Thickness
c) Space width – Tooth Thickness	d) Space width * Tooth Thickness
12. Ratio of speed of the follower to the speed of driving gear is known as	
a) Gear ratio	b) Module
c) Velocity ratio	d) None of the mentioned
13. The ratio of diameter of follower to the diameter of driving gear is known as	
a) Gear ratio	b) Module
c) Velocity ratio	d) None of the mentioned

14. Velocity ratio is the inverse of gear ratio	
T	F
15. Angle subtended by circular pitch at the centre of pitch circle is known as	
a) Pitch angle	b) Addendum angle
c) Module angle	d) None of the mentioned
16. Which of the following is not a standard pressure angle in degree?	
a) 20	b) 25
c) 14.5	d) 19
17. Distance between the points of contact of two mating teeth from the beginning of engagement to the end of engagement is known as	
a) Arc of contact	b) Path of contact
c) Path of approach	d) Path of recess
18. Path of contact from the beginning of engagement to the pitch point is known as	
a) Arc of contact	b) Path of contact
c) Path of approach	d) Path of recess
19. Portion of path of contact from the pitch point to end of engagement is known as	
a) Arc of contact	b) Path of contact
c) Path of approach	d) Path of recess
20. Circumferential distance between points from the beginning to the end of engagement of two mating gear on pitch circle is known as	
a) Arc of contact	b) Path of contact
c) Path of approach	d) Path of recess
21. Portion of arc of contact from the beginning of the engagement to the pitch point is known as	
a) Contact ratio	b) Angle of friction
c) Arc of recess	d) Arc of approach
22. Portion of arc of contact from the pitch point to the end of engagement is known as	
a) Contact ratio	b) Angle of friction
c) Arc of recess	d) Arc of approach
23. Angle subtended by arc of contact at the centre of pitch circle is known as	
a) Contact ratio	b) Angle of action

c) Arc of recess	d) Arc of approach
24. Number of teeth in contact is given by	
a) Contact ratio	b) Angle of action
c) Arc of recess	d) Arc of approach
25. Contact ratio is given by	
a) Angle of action/pitch angle	b) Angle of action*pitch angle
c)Angle of action-pitch angle	d) Angle of action +pitch angle
26. Which of the following is a standard pressure angle in degree?	
20	21
13.5	19
27. The path of contact between the points of contact of two mating teeth from the beginning of engagement to the end of engagement is known also as contact length.	
T	F
28. Imaginary friction cylinders which by pure rolling together transmit the same motion as pair of gears is known as	
a) Pitch cylinders	b) Pitch diameter
c) Pitch circle	d) Pitch point
29. Circle which corresponds to section of equivalents pitch cylinder by a plane normal to wheel axis is known as	
a) Pitch cylinders	b) Pitch diameter
c) Pitch circle	d) Pitch point
30. Diameter of pitch cylinder is known as	
a) Pitch cylinders	b) Pitch diameter
c) Pitch circle	d) Pitch point
31. Two different pitch circles generally meet at	
a) Pitch cylinders	b) Pitch diameter
c) Pitch circle	d) Pitch point
32. Line passing through center of rotation of two meeting gear is known as	
a) Pitch	b) Rack
c) Pinion	d) Line of centre
33. Driving gear of two mating gear which is generally small is known as	
a) Pitch	b) Rack

c) Pinion	d) Line of centre
34. Gear wheel of infinite diameter can be considered as Rack	
T	F
35. Part of pitch circle of rack which is a straight line is also known as	
a) Pitch line	b) Rack
c) Pinion	d) pitch circle
36. Ratio of circumference of pitch circle to number of teeth is known as	
a) Circular pitch	b) Diametral pitch
c) Rack	d) Pitch line
37. Distance measured along the circumference of pitch circle from a point on tooth to the corresponding point on adjacent tooth is known as	
a) Circular pitch	b) Diametral pitch
c) Rack	d) Pitch line
38. Number of teeth divided by length of pitch circle diameter is known as	
a) Circular pitch	b) Diametral pitch
c) Rack	d) Pitch line
39. Ratio of pitch diameter in mm to the number of teeth is known as	
a) Circular pitch	b) Diametral pitch
c) Module	d) Pitch line
40. Module of two mating gears can be of any value.	
T	F
41. Ratio of number of teeth on gear to the number of teeth on pinion is known as	
a) Circular pitch	b) Diametral pitch
c) Gear ratio	d) Pitch line
42. Ratio of angular velocity of the follower to the angular velocity of driving gear is known as	
a) Circular pitch	b) Diametral pitch
c) Velocity ratio	d) Pitch line
43. What is the effect of improper alignment of each tooth?	
a) Tooth thickness increases	b) Face width decreases

c) Load will not be distributed evenly	d) Pitch of teeth reduced
44. When the teeth of gear are not concentric, the velocity will fluctuate.	
T	F
45. Which of the following element is not determined by analytical inspection?	
a) Profile	b) Noise level
c) Spacing	d) Pitch
46. By analytical inspection method all the individual elements of the gear teeth are checked.	
T	F
47. Which of the following is not determined by the functional type of inspection?	
Lead	Noise level
Variation in action	Vibration
48. Rolling test is generally performed on Parkson gear tester	
T	F
49. Another name for Wobble _____	
a) Radial run-out	b) Eccentricity
c) Composite error	d) Axial run-out
50. Eccentricity is _____ the radial runout, measured along perpendicular to the rotation axis.	
Half	Double
Three times	Four times