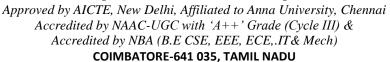


SNS College of Technology

[An Autonomous Institution]





Department of Aerospace Engineering

19AST202 AIRCRAFT PRODUCTION TECHNOLOGY

UNIT II METAL FORMING & MACHINING PROCESSES

1 Briefly explain the classification of machining processes. 2 Explain the working principle of a lathe machine. 3 Explain the working mechanism of a shaper machine. 4 What is the purpose of chuck in a lathe machine? 5 Differentiate between Four Jaw Chuck and Three Jaw Chuck? 6 Which type of tool is used in a milling machine? 7 List the operations performed on a lathe machine. 8 How is tapper turning done on a lathe machine? 9 Explain the mechanism of a milling operation. 10 List the various milling operations. 11 What do you understand by machining? Why it is done? 12 Draw a labelled diagram of a lathe machine with neat sketches. 13 Describe the working principle of a lathe machine. List various operations performed on lathe. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		
Sexplain the working mechanism of a shaper machine. What is the purpose of chuck in a lathe machine? Differentiate between Four Jaw Chuck and Three Jaw Chuck? Which type of tool is used in a milling machine? List the operations performed on a lathe machine. How is tapper turning done on a lathe machine? Explain the mechanism of a milling operation. List the various milling operations. What do you understand by machining? Why it is done? Describe the working principle of a lathe machine with neat sketches. Draw a labelled diagram of a lathe machine. List various operations performed on lathe. List the various operations which may be performed on a lathe machine. How is taper turning done on a lathe machine? Explain in detail. Explain various parts of lathe machine with their applications. Describe at least three methods of taper turning on a centre lathe. Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off Parting off Parting off Parting off Parting off Parting off What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Daw a labelled diagram of a drill machine. List various operations performed on it.		Briefly explain the classification of machining processes.
4 What is the purpose of chuck in a lathe machine? 5 Differentiate between Four Jaw Chuck and Three Jaw Chuck? 6 Which type of tool is used in a milling machine? 7 List the operations performed on a lathe machine. 8 How is tapper turning done on a lathe machine? 9 Explain the mechanism of a milling operation. 10 List the various milling operations. 11 What do you understand by machining? Why it is done? 12 What do you understand by machining? Why it is done? 13 Describe the working principle of a lathe machine. List various operations performed on lathe. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	2	Explain the working principle of a lathe machine.
Differentiate between Four Jaw Chuck and Three Jaw Chuck?	3	Explain the working mechanism of a shaper machine.
6 Which type of tool is used in a milling machine? 7 List the operations performed on a lathe machine. 8 How is tapper turning done on a lathe machine? 9 Explain the mechanism of a milling operation. 10 List the various milling operations. 12 What do you understand by machining? Why it is done? 13 Describe the working principle of a lathe machine with neat sketches. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	4	What is the purpose of chuck in a lathe machine?
The state of the s	5	Differentiate between Four Jaw Chuck and Three Jaw Chuck?
8 How is tapper turning done on a lathe machine? 9 Explain the mechanism of a milling operation. 10 List the various milling operations. 11 What do you understand by machining? Why it is done? 12 Describe the working principle of a lathe machine with neat sketches. 13 Describe the working principle of a lathe machine. List various operations performed on lathe. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	6	Which type of tool is used in a milling machine?
9 Explain the mechanism of a milling operation. 10 List the various milling operations. 11 What do you understand by machining? Why it is done? 12 Describe the working principle of a lathe machine with neat sketches. 13 Describe the working principle of a lathe machine. List various operations performed on lathe. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	7	List the operations performed on a lathe machine.
9 Explain the mechanism of a milling operation. 10 List the various milling operations. 11 What do you understand by machining? Why it is done? 12 Describe the working principle of a lathe machine with neat sketches. 13 Describe the working principle of a lathe machine. List various operations performed on lathe. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	8	How is tapper turning done on a lathe machine?
10 List the various milling operations. 12 What do you understand by machining? Why it is done? 13 Describe the working principle of a lathe machine with neat sketches. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	9	
13 Describe the working principle of a lathe machine with neat sketches. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	10	
13 Describe the working principle of a lathe machine with neat sketches. 14 Draw a labelled diagram of a lathe machine. List various operations performed on lathe. 15 List the various operations which may be performed on a lathe machine. 16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	12	What do you understand by machining? Why it is done?
performed on lathe. List the various operations which may be performed on a lathe machine. How is taper turning done on a lathe machine? Explain in detail. Explain various parts of lathe machine with their applications. Describe at least three methods of taper turning on a centre lathe. Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it.	13	Describe the working principle of a lathe machine with neat sketches.
performed on lathe. List the various operations which may be performed on a lathe machine. How is taper turning done on a lathe machine? Explain in detail. Explain various parts of lathe machine with their applications. Describe at least three methods of taper turning on a centre lathe. Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it.	14	Draw a labelled diagram of a lathe machine. List various operations
16 How is taper turning done on a lathe machine? Explain in detail. 17 Explain various parts of lathe machine with their applications. 18 Describe at least three methods of taper turning on a centre lathe. 19 Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		=
How is taper turning done on a lathe machine? Explain in detail.	15	List the various operations which may be performed on a lathe machine.
Describe at least three methods of taper turning on a centre lathe. Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it.	16	
Describe at least three methods of taper turning on a centre lathe. Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it.	17	Explain various parts of lathe machine with their applications.
Describe the following operation on a lathe machine: (i) Boring (ii) Drilling (iii) Knurling (iv) Parting off Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it.	18	
(i) Boring (ii) Drilling (iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	19	
(iii) Knurling (iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		(i) Boring
(iv) Parting off 20 Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		(ii) Drilling
Briefly explain the use of the following parts of a lathe machine: (i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		(iii) Knurling
(i) Head stock (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		
 (ii) Lead screw (iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.	20	Briefly explain the use of the following parts of a lathe machine:
(iii) Tailstock (iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		(i) Head stock
(iv) Carriage (v) Compound slide in lathe 21 What is the difference between a shaper and a planer? List five differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		(ii) Lead screw
 (v) Compound slide in lathe What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it. 		(iii) Tailstock
 What is the difference between a shaper and a planer? List five differences. With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it. 		1 , ,
differences. 22 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		
 With the help of neat sketch, describe the working principle of a drilling machine. Also describe drilling operation. Draw a labelled diagram of a drill machine. List various operations performed on it. 	21	What is the difference between a shaper and a planer? List five
machine. Also describe drilling operation. 23 Draw a labelled diagram of a drill machine. List various operations performed on it.		differences.
Draw a labelled diagram of a drill machine. List various operations performed on it.	22	
performed on it.		* .
	23	-
25		performed on it.
	25	

	Draw a labelled diagram of a universal milling machine. List various
	operations performed on milling.
26	What do you understand by a milling machine? For what purpose is
	milling done?
27	Differentiate between down milling and up milling. What are the various work holding
	devices used in milling? Explain their applications and advantages.
28	What do you understand by a grinding machine? For what purpose is grinding done?
	What are the main differences between a shaper and a planer? What kind of driving
	mechanisms are used in a shaper? Discuss any one in brief with the help of a neat
	sketch.
29	Explain the various drilling operations using suitable diagrams.
30	With the help of neat sketches differentiate between surface grinding and cylindrical
	grinding.
	What is the working principle of grinding machines? Discuss the classification of
	grinding wheels.