

Q. P. Code: 22850

Duration: 3 hours

Max. Marks: 80



- N.B. (1) Question No. **ONE** is compulsory.
(2) Attempt any **THREE** Questions from remaining **FIVE** questions.
(3) Support your answer with sketch wherever necessary.
(4) All questions carry equal marks.
- Q.1. Explain in brief :- 20
(a) Friction saw and abrasive cutting off machines.
(b) Steady and follower rest.
(c) Radial drilling machine.
(d) Superfinishing processes.
- Q2. (a) Explain different types of hobbing techniques and enlist advantages & disadvantages of hobbing process over other generating processes. 10
(b) Explain the construction and working of a centerless grinder. 10
- Q3. (a) Describe various operations that can be performed on a shaper. 10
(b) Elaborate with a neat sketch the procedure to cut screw threads on a lathe. 10
- Q4. (a) Differentiate between a shaper and a planer. 10
(b) Explain the principle of broaching and describe various types of broaching machines. 10
- Q5. (a) Calculate the machining time for drilling 4 holes of 16 mm diameter each, on a flange from the following data. Flange thickness = 30 mm, cutting speed = 22 m/min, feed = 0.2 mm/rev. 05
(b) Explain various methods of turning a taper on a lathe. 10
(c) A hollow workpiece of 100 mm outside diameter and 200 mm length is held on a mandrel between centers and turned all over in 4 passes. If the approach length = 15 mm, over-travel = 10 mm, Average feed = 0.2 mm/rev., and cutting speed = 120 m/min., calculate the machining time. 05
- Q6. (a) Enlist various advantages, limitations and applications of broaching. 10
(b) Enlist and describe various types of work and tool holding devices used on lathe. 10