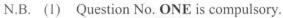
EM VIII / CHOICE BASED / MANUFACTURING ENGG - I / PROD / MAY 2018 / 22.05.2018

Q. P. Code: 22850

Duration: 3 hours

Max. Marks: 80



- (2) Attempt any THREE Questions from remaining FIVE questions.
- (3) Support your answer with sketch wherever necessary.
- (4) All questions carry equal marks.



- (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 & 10 disadvantages of hobbing process over other generating processes.
 - (b) Explain the construction and working of a centerless grinder.
- Q3. (a) Describe various operations that can be performed on a shaper.
- (b) Elaborate with a neat sketch the procedure to cut screw threads on a lathe.
- Q4. (a) Differentiate between a shaper and a planer.
 - (b) Explain the principle of broaching and describe various types of broaching 10 machines.
- Q5. (a) Calculate the machining time for drilling 4 holes of 16 mm diameter each, on a 05 flange from the following data. Flange thickness = 30 mm, cutting speed = 22 m/min, feed = 0.2 mm/rev.
 - (b) Explain various methods of turning a taper on a lathe.
 - (c) A hollow workpiece of 100 mm outside diameter and 200 mm length is held on a 05 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.
- Q6. (a) Enlist various advantages, limitations and applications of broaching.
 - (b) Enlist and describe various types of work and tool holding devices used on lathe. 10



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