With a sketch explain the operation of taper turning by swiveling the compound rest in an

With sketches explain (i) cylindrical grinding (ii) surface grinding

Differentiate between

(i) Facing and knurling (ii) Drilling and boring

With neat sketches differentiate between upmilling and down millig Draw the neat sketch of a radial drilling machine and label the parts

Differentiate between lapping and honing

Derive an expression to find the length of the belt in terms of the radii and center distance between the pulleys for an open belt system Unit - V

5 velocity ratio is to be exactly 9:2. If the pitch of the gears is 57 mm, find the number of Two parallel shafts are to be connected by a gear drive. They are 1 meter apart and their eeth in each of the two wheels and the distance between the shafts.

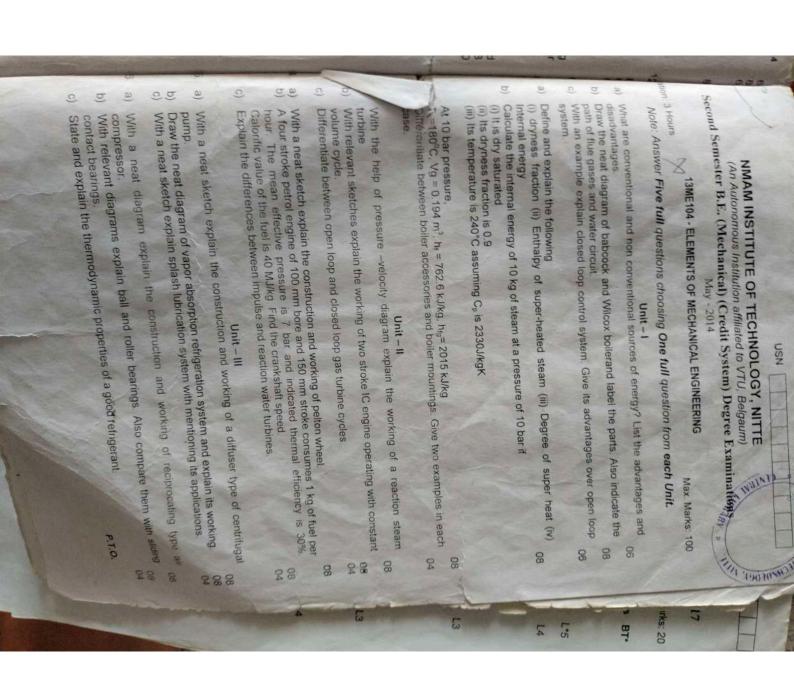
Name the three types of oxy acetylene flames. Explain the application of each one of them

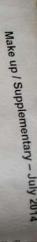
A driven pulley of 400 mm diameter of a belt drive runs at 400 rpm. The angle of lap is 165° and the coefficient of friction between the belt material and pulley is 0.25. Find the power transmitted if the initial tension is not to exceed 10 kN.

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How the gears can be classified? With relevant sketches explain spur, bevel and worm

Distinguish between soldering and brazing





10 9 <u>5</u> <u>a</u> <u>5</u> a 000 A compound gear train consists of 4 gears, A, B, C and D, and they have 20, 30, 40 and 60 teeth respectively. A is keyed to the driving shaft, and D is keyed to the driven shaft, B and C are compound gears, B meshes with A, and C meshes with D. If A rotates at 180 rpm, find the rpm of D. Sketch the arrangement by simple circles.

Differentiate between welding and brazing. A shaft running at 100 rpm is to drive a parallel shaft at 150 rpm. The pulley on the driving shaft is 35cm in diameter. Find the diameter of the driven pulley. Calculate the linear Draw block diagram of an engine lathe and label its parts.

Explain with sketch the following drilling machine operations: Explain wick lubricator with sketch.

Describe with sketch working of Ball and Roller bearing.

Define: i) COP: ii) Refrigeration effect: iii) TOR: velocity of the belt and also the velocity ratio.

Explain arc welding process with a neat sketch. Explain cylindrical grinding with sketch.
Explain plain milling and angular milling operations. Describe with sketch column and knee type milling machine. Counter Boring Reaming Counter Sinking Boring Unit - IV Unit - V

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## Describe with sketch working of Ball and Roller bearing. Define: () COP (i) Refrigeration effect (iii) TOR Explain wick lubricator with sketch.

Unit - IV

Explain with sketch the following drilling machine operations Draw block diagram of an engine lathe and label its parts.

D 2

Counter Sinking Counter Boring

Reaming Boring

Describe with sketch column and knee type milling machine.

Explain plain milling and angular milling operations. Explain cylindrical grinding with sketch. Unit - V

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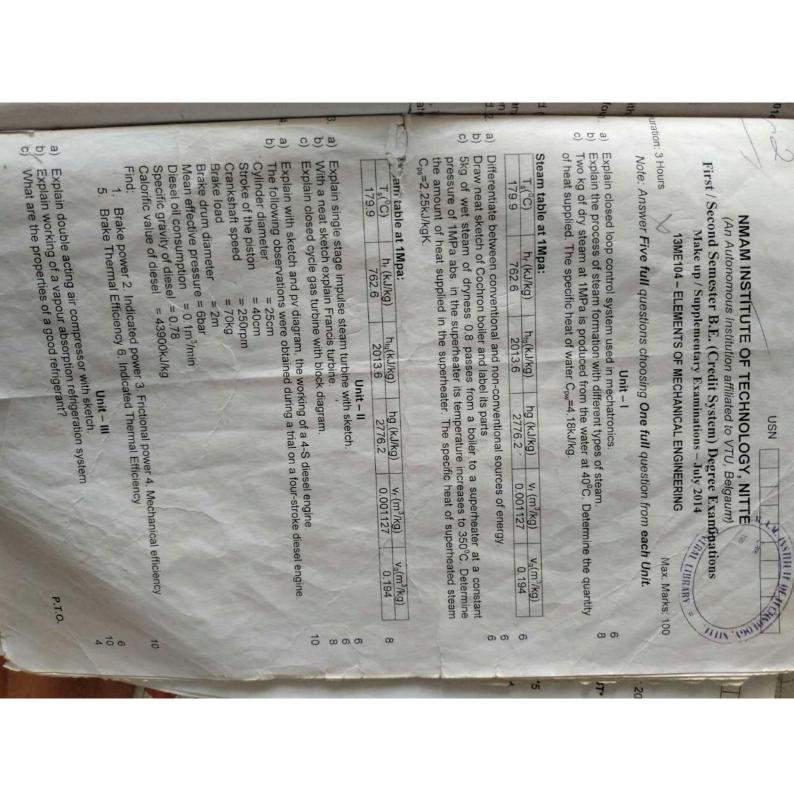
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A shaft running at 100 rpm is to drive a parallel shaft at 150 rpm. The pulley on the driving shaft is 35cm in diameter. Find the diameter of the driven pulley. Calculate the linear velocity of the belt and also the velocity ratio.

Explain arc welding process with a neat sketch.

10 0 A compound gear train consists of 4 gears, A, B, C and D, and they have 20, 30, 40 and 60 teeth respectively. A is keyed to the driving shaft, and D is keyed to the driven shaft, B rpm, find the rpm of D. Sketch the arrangement by simple circles. and C are compound gears, B meshes with A, and C meshes with D. If A rotates at 180 Explain simple and compound gear train with neat sketch.

Differentiate between welding and brazing



10. 5 a 5 8 5 a 000 Sketch and explain the Vapor Compression Refrigerator Sketch and explain splash lubricator Sketch and explain splash lubricator With a next sketch A simple train of wheels consists of successively engaging three wheels having 40, 50 With reference to an open belt drive system, deduce an expression for the belt length diameter at 250 rpm. If the coefficient of friction in the drive is 0.12 and the initial tension Spur gears (ii) Helical gears (iii) Bevel gears. In an open belt drive, a motor pulley of diameter 0.5 m drives another pulley of the salarive is 0.12 and the initial tension. With reference to the gear drives, state the conditions when the following are employed Point out the working principle of surface grinding with a sketch and mention any Name the different milling processes and justify with description any three operations the different milling processes and justify with description any three operations the different milling processes and justify with description any three operations to the different milling processes and justify with description any three operations to the different milling processes and justify with description any three operations to the different milling processes and justify with description any three operations to the different milling processes and justify with description and three operations to the different milling processes and justify with description and three operations to the different milling processes and justify with description and the different milling processes and justify with description and the different milling processes and justify with description and the different milling processes and justify with description and the different milling processes and justify with description and the different milling processes and justify with description and the different milling processes and justify with description and the different milling processes and description and the description and What is module and circular pitch with reference to gears? Enumerate the differences between brazing and soldering commonly used abrasives along with their applications. Mention the types of drilling machines and demonstrate the following drilling operations With a neat sketch explain the working of centrifugal pump limited to 10 kN, compute the tensions in the belt drive and hence the power transmittee Unit - IV Unit - V SEE - December puration 000

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at 210 rpm, compute the speed of the driven wheel. Enumerate the various areas of applicability of welding.

teeth respectively. Determine its velocity ratio. If the driving wheel having 40 teeth rotal

