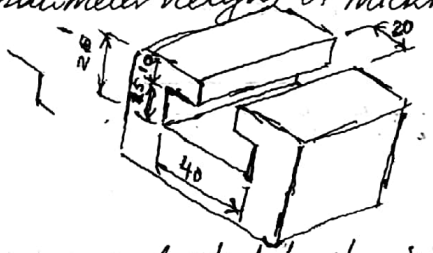
Assignment

# Machining Processes MET 05209

1. Name three general designs of cutters used on milling machines.
2. Explain to cut a T-Slot on milling machine. The width of slot is 20 millimeter ~~x 25~~ millimeter depth and T-slot width is ~~30~~ millimeter x 15 millimeter height or thickness




3. Draw a neat sketch showing the six steps to be followed in cutting or milling six sides flat and square to each other.
4. Calculate (R.P.M) revolutions per minute for the following details: A combination center drill ϕ 3 mm HS.S., material to be centered mild steel C.S. 15 meters per minute?
5. Describe by means of sketching (i) Conventional milling (ii) Climb milling
6. Name several operations which can be performed on milling machines.
7. Name at list six types of milling machines.
8. What are common methods used ~~fo~~ in indexing?
9. What types of cutter ~~will you use~~ ~~and~~ or milling machine will you use for the following operations?
   (i) For cutting gear teeth
   (ii) For " curved surfaces
   (iii) For 60° V-Slotes
   (iv) For key-way cutting on a shaft
10. Give ~~E~~explanation the following:-
    (i) Pentograph or engraving machine job
    (ii) Dividing head
11. Describe mechanical indexing head.
12. Make labelled sketches of the following operations:-
    (i) Slab milling cut
    (ii) Straddle milling cut
    (iii) Gang milling

13. What type of cutter will you select for cutting the following materials according to teeth pitch?

| Materials | Cutter teeth pitch |
|---|---|
| Light metals | Small pitch |
| Soft metals | Medium pitch |
| Hard metals | Big pitch |

14. i) Calculate for indexing 18 gear teeth.

Indexing plate: 17, 19, 22, 26, 27, 30, 32, 36

ii) Calculate for indexing internal gear in degrees having 13 number of teeth by using a rotary table.

15. Name five classifications of milling machines.

16. Name eight classifications of grinding and abrassives machines.

17. What features does a universal milling machine have that a plain milling does not have?

18. When a grinding wheel becomes glazed or not running true you need to dress the wheel. What tool would you use for dressing up the wheel to run true?

19. Name five bonding materials.

20. What are natural abrassives and manufactured abrassives?

21. Write four safety concerning grinding wheels.

22. Describe rake angle on milling cutter as compared to rake angle on single-point lathe tools.