Name: _____   Date: _____

THIRD TERM E-LEARNING NOTE

SUBJECT: BASIC TECHNOLOGY   **CLASS: JSS2**

SCHEME OF WORK

WEEK	TOPICS
1.	Revision of Last Term's work
2.	Belt and Chain drives
3.	Belt and Chain drives (Contd.)
4.	Gears
5.	Gears (Contd.)
6.	Hydraulics and Pneumatic Machines
7.	Building Construction I: Site Preparation
8.	Building Construction II: Setting Out
9.	Building Services: Taps and Water supply
10.	Practical Projects

REFERENCE MATERIALS
- MELROSE, Basic Science and Technology Book 2
- NERDC, Basic Technology for JSS, Book 2

WEEK ONE
TOPIC: Revision of Last Term's Work
1. A plane figure bounded by four equal sides is called ___ (a) square (b) rectangle (c) trapezium(d) kite
2. Opposite sides of a parallelogram are ___ (a) diagonal (b) parallel (c) vertex (d) straight
3. ___ is a plane figure enclosed by three straight lines(a) Triangle (b) Quadrilateral (c) Pentagon   (d) Heptagon
4. An octagon is a polygon with ___ sides ___ (a) 5   (b) 6 (c) 7(d) 8
5. The sum of angles in a quadrilateral is ___(a) 90   (b) 180   (b) 270 (d) 360
6. What is the center rule formula used to construct a polygon? (a) $360 - N$ (b) $360 \times N$ (c)$360/2$(d) $360 + N$
7. A regular polygon has ___ of its sides and angles equal (a) five (b) all   (c) three   (d) four
8. The opposite angles in a parallelogram are ___ (a) equal (b) unequal (c) positive (d)negative
9. Plane figures are identified by the number of ___ enclosing them(a) points   (b) sides (c)values(d) circle
10. A line that joins two opposing corners of a quadrilateral is called ___(a) plane (b)diagonal(c) angle   (d) vertex
11. Each angle in a regular pentagon is ___   (a) 60   (b) 72   (c) 82   (d) 92
12. A machine that is used to resaw or prepare timber into suitable sizes for articles of joinery and furniture is known as (a) Circular sawing machine (b) Surface planing machine (c) Milling machine (d) Thicknessing machine
13. A machine that is used exclusively for planing wood to a specific thickness after surface planing operation is called ___ (a) Circular sawing machine (b) Surface planing machine (c) Milling machine (d) Thicknessing
14. A wood working machine, which can also be used as machine tools, used for performing various operations such as boring, sanding and mortising is known as (a) Drill press (b) Surface planing machine (c) Milling machine (d) Thicknessing
15. Which of the following is not a type of scale drawing? (a) Reduced (b) Enlarged (c) Extended   (d) Full

16. A quadrilateral with only two parallel sides is called ___ (a) square (b) rectangle (c) trapezium (d)kite
17. Which of the following is used to rotates the work and transmits movement to saddle of a lathe? (a) the bed (b) the headstock (c) the saddle cross slide (d) main spindle
18. The following are work holding methods except (a) catch and carrier (b) face plate (c) saddle (d) chuck
19. Which of the following provides a plane surface for mounting and moving accessories at a constant level on a lathe machine? (a) the bed (b) the headstock (c) the saddle cross slide (d) main spindle
20. Which of the following permits movement of tool at angle other than right angle? (e.g. for conical work) (a) the compound slide (b) the head stock (c) the slide cross slide (d) main spindle
21. The space occupied by a plane figure is called ___ (a) diagonal (b) area (c) volume (d) theorem
22. The lubricant commonly used in transmission system is (a) diesel(b) gear oil (c) grease (d) hydraulic
23. Constant lubrication of a machine is to prevent (a) corrosion (b) exhaustion (c) high speed (d) sulphation
24. Which of the following will not reduce friction? (a) lubrication (b) use of rollers (c) use of pulleys (d) drying
25. Which of the following is not a practical application of friction? (a) belt drive (b) cable drive (c) chain drive (d) clutches
26. MRO stands for (a) Machine, relevance and operations (b) Maintenance, repair and operations (c) Maintenance, relevance and organization (d) Machine, repair and organization
27. Which of the following is not a part of lathe machine? (a) head stock (b) main spindle (d) steadies (d) shaper
28. Which of the following triangles has none of its side equal   A. Equilateral   B. Scalene C. Isosceles   D. Right-angled
29. The rougher the surfaces in contact, the …….. the frictional force (a) greater (b) lesser (b) partial (d) equal
30. Maintenance of metal work machines should include (a) periodic servicing (b) drying (c) manufacturing (d) bending

WEEK TWO
TOPIC: BELT AND CHAIN DRIVES
CONTENT
- Definition
- Types
- Uses

BELT DRIVES
A belt is a looped strip of flexible material used to mechanically link two or more rotating shafts. A belt drive offers smooth transmission of power between shafts at a considerable distance.Belt drives are used as the source of motion to efficiently transmit power or to track relative movement. When the belt is used for speed reduction, the smaller sheave is mounted on the highspeed shaft, like the shaft of an electric motor. The larger sheave is then put on the driven machine.

Belt drives

TYPES OF BELT DRIVES
The types of belt drives are diverse. The list of its kinds include the flat belts, synchronous timing belts, cog belts, vee-belts, round belts, multi-groove belts, ribbed belts, film belts, metal belts, endless round belts and speciality belts. Some of them are explained below:

1. **The Flat belt:** The simplest type is often made from leather or rubber-coated fabric. The sheave surface is also flat and smooth, limiting the driving force by the pure fiction between the belt and the sheave.
2. **Synchronous Belts, or Timing belts:** These ride onsprockets that have mating..