1.

“Orthographic Projections”

The straight lines which are drawn from various points on the contour of an object to meet a plane are called as _____

(A)

connecting lines

(B)

projectors

(C)

perpendicular lines

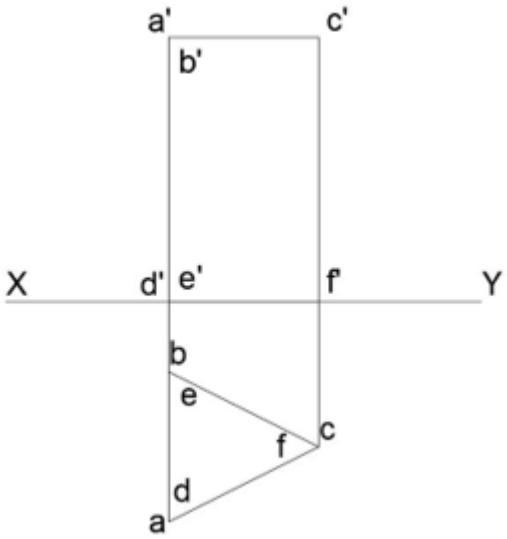
(D)

hidden lines.

**Ans: (B) projectors**

2.

Which of the following statements is true with respect to the following projection?




(A)

Cone with the base perpendicular to V.P and H.P

(B)

Pyramid with the base perpendicular to V.P

(C)

Triangular prism with the base parallel to H.P

(D)

Cone with base inclined to H.P

**Ans: (C) Triangular prism with the base parallel to H.P**

3.

The study of intersection of surfaces help in?

(A)

Building work

(B)

Sheet metal work

(C)

Surveyor work

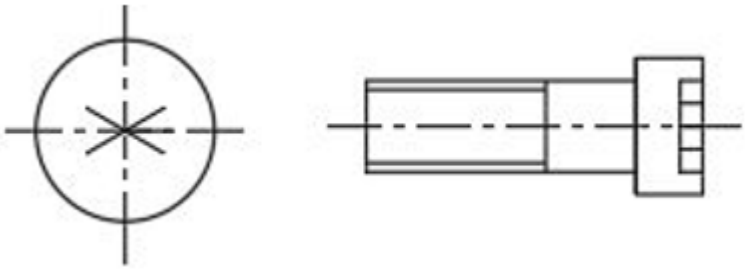
(D)

Architectural drawing

**Ans: (B) Sheet metal work**

4.

What does the following conventional representation represent?



(A)

Cylindrical screw cross slot

(B)

Hexagonal socket bolt

(C)

Cylinder screw pan head type slot

(D)

Countersunk headed screw slot

**ANS: (B) Hexagonal socket bolt**

5.

Developments of the lateral surface of a prism consist of the same number of _____ in contact as the number of the sides of base of the prism.

(A)

squares

(B)

rectangles

(C)

triangles

(D)

parallelograms

**ans: (B) rectangles**

6.

Which of the following attributes explain why pure metals are not frequently used in engineering applications?

(A)

Softness

(B)

Hardness

(C)

Brittleness

(D)

Luster

**Ans: (A) Softness**

7.

Which of the following alloying element can be used to deoxidize steels?

(A)

Phosphorous

(B)

Carbon

(C)

Cerium

(D)

Selenium

**ANS: (C) Cerium**

8.

Which of the following properties is not exhibited by aluminium?

(A)

Aluminium is a poor conductor of heat and electricity

(B)

Aluminium is light in weight

(C)

It readily dissolves in HCl

(D)

Aluminium is highly resistant to corrosion

**Ans: (A) Aluminium is a poor conductor of heat and electricity**

9.

Which of the following components are manufactured by the sheet metal forming process?

(A)

Engine blocks

(B)

Connecting rods

(C)

Electric wires

(D)

Car bodies

**Ans: (D) Car bodies**

10.

Which of the following material is not made by injection molding?

(A)

Nuts

(B)

Tubes

(C)

Car handles

(D)

Electrical fittings

**Ans: (B) Tubes**

11.

Non-Traditional machining can also be called as _____

(A)

Contact Machining

(B)

Non-contact machining

(C)

Partial contact machining

(D)

Half contact machining

**Ans: (B) Non-contact machining**

12.

In mechanical machining, material is removed by _____

(A)

Erosion

(B)

Corrosion

(C)

Abrasion

(D)

Vaporization

**Ans: (A) Erosion**

13.

Which of the following machine is superior to other machines as regards accuracy and better surface finish?

(A)

lathe

(B)

drill

(C)

shaper

(D)

milling

**Ans: (D) milling**

14.

Which of the following methods delivers the better rolling performance and higher strength of the manufactured bevel gear?

(A)

Face milling completing and hard finishing by grinding

(B)

Face hobbing and hard finishing by lapping

(C)

Face milling with five-cut and hard finishing by lapping

(D)

Face milling completing and hard finishing by lapping

**Ans: (A) Face milling completing and hard finishing by grinding**

15.

Which of the method is not a surface cleaning method?

(A)

Mechanical cleaning method

(B)

Electrical cleaning method

(C)

Abrasive cleaning method

(D)

Thermal cleaning method

**Ans: (B) Electrical cleaning method**

16.

What is thermodynamics?

(A)

study of the relationship between heat and other forms of energy

(B)

study of the conversion of chemical energy to other forms of energy

(C)

study of the relationship between mechanical energy to other forms of energy

(D)

study of the conversion of mechanical energy to other forms of energy

**Ans: (A) study of the relationship between heat and other forms of energy**

17.

What is the volume of 2.5 gm moles Nitrogen gas at STP? At 100 KPa pressure and 300 K temperature, 2 gm moles of the gas occupy 20 cubic meter volume.

(A)

11.23

(B)

22.46

(C)

33.69

(D)

44.92

**Ans: (D) 44.92**

18.

What is the chamber formed by the space above the grate and below boiler shell called, where combustion takes place?

(A)

Grate surface

(B)

Mounting

(C)

Furnace

(D)

Setting

**Ans: (C) Furnace**

19.

Rateau turbine is

(A)

Pressure compounded turbine

(B)

Simple reaction turbine

(C)

Pressure-velocity compounded turbine

(D)

Velocity compounded turbine

**Ans: (A) Pressure compounded turbine**

20.

Heat transfer takes place according to which of the following law?

(A)

Newton’s second law of motion

(B)

First law of thermodynamics

(C)

Newton’s law of cooling

(D)

Second law of thermodynamics

**Ans: (D) Second law of thermodynamics**

21.

If a person studies about a fluid which is at rest, what will you call his domain of study?

(A)

Fluid Dynamics

(B)

Fluid Mechanics

(C)

Fluid Statics

(D)

Fluid Kinematics

**Ans: (C) Fluid Statics**

22.

When is a fluid called turbulent?

(A)

High viscosity of fluid

(B)

Reynolds number is greater than 2000

(C)

Reynolds number is less than 2000

(D)

The density of the fluid is low

**Ans: (C) Reynolds number is less than 2000**

23.

Stagnation point is the point in fluid mechanics where the velocity of the fluid at that point is _____

(A)

unity

(B)

constant

(C)

infinite

(D)

zero

**Ans: (D) Zero**

24.

Which among the following is referred to as the temperature at a stagnation point in the flow of fluids in fluid mechanics and thermodynamics.

(A)

Absolute temperature

(B)

Maximum temperature

(C)

Stagnation temperature

(D)

Hydraulic temperature

**Ans: (C) Stagnation temperature**

25.

The pressure at any given point of a non-moving fluid is called the _____

(A)

Gauge Pressure

(B)

Atmospheric Pressure

(C)

Differential Pressure

(D)

Hydrostatic Pressure

**Ans: (D) Hydrostatic Pressure**

26.

Principle of fluid mechanics works on the utilization of_____

(A)

Velocity

(B)

Accelerating mass

(C)

Volume

(D)

Work

**Ans: (D) Work**

27.

The loss of head at entrance in a pipe is (where v = Velocity of liquid in the pipe)

(A)

$v^2/2g$

(B)

$0.5v^2/2g$

(C)

$0.375v^2/2g$

(D)

$0.75v^2/2g$

**Ans: (B) $0.5v^2/2g$**

28.

Buckets and blades used in a turbine are used to:

(A)

Alter the direction of water

(B)

Switch off the turbine

(C)

To regulate the wind speed

(D)

To regenerate the power

**Ans: (A) Alter the direction of water**

29.

Which of the following pump is classified based on the type of service?

(A)

Displacement pump

(B)

Centrifugal pump

(C)

Deep well pump

(D)

Electric driven pump

**Ans: (C) Deep well pump**

30.

The coriolis component of acceleration exists whenever a point moves along a path that has

(A)

linear displacement

(B)

rotational motion

(C)

gravitational acceleration

(D)

tangential acceleration

**Ans: (B) rotational motion**

31.

The cam follower extensively used in air-craft engines is

(A)

spherical faced follower

(B)

flat faced follower

(C)

roller follower

(D)

knife edge follower

**Ans: (C) roller follower**

32.

Two pulleys are connected by a belt. The sum of the diameter of two pulleys is 90 cm and while the one makes 50 rpm, the other makes 20 revolutions. What will be the diameter of the pulleys?

(A)

19.7cm, 70.3 cm

(B)

23.4 cm, 68.7 cm

(C)

25.7 cm, 64.3 cm

(D)

21.1 cm,63.2 cm

**Ans: (C) 25.7 cm, 64.3 cm**

33.

The maximum fluctuation of energy of flywheel is,

(A)

Difference between maximum and minimum kinetic energy during the cycle

(B)

Difference between maximum and mean kinetic energy during the cycle

(C)

Difference between mean and minimum kinetic energy during the cycle

(D)

Mean of maximum and minimum kinetic energy during the cycle

**Ans: (A) Difference between maximum and minimum kinetic energy during the cycle**

34.

The brake commonly used in motor cars is

(A)

shoe brake

(B)

band brake

(C)

band and block brake

(D)

internal expanding brake

**Ans: (D) internal expanding brake**

35.

If there are 7 clutch plates in a multi-plate clutch, what is the number of pair of contact surfaces?

(A)

5

(B)

4

(C)

6

(D)

8

**Ans: (C) 6**

36.

In frequency domain the measure of relative stability is:

(A)

Resonant peak

(B)

Phase margin

(C)

Resonant peak and phase margin

(D)

Maximum peak overshoot

**Ans: (C) Resonant peak and phase margin**

37.

The central portion of the wheel is called _____

(A)

Rim

(B)

Scale

(C)

Hub

(D)

Axle

**Ans: (C) Hub**

38.

What is the reason that disables the leading axle to take full advantage of the coning of wheels?

(A)

Rigidity of the frame

(B)

Unequal diameter of wheels

(C)

Sharp curves

(D)

More speed

**Ans: (A) Rigidity of the frame**

39.

Which of the following refers to the term C.O.P. of refrigeration?

(A)

Cooling for Performance

(B)

Coefficient of Performance

(C)

Capacity of Performance

(D)

Co-efficient of Plant

**Ans: (B) Coefficient of Performance**

40.

Which of the following is the most preferred S.I. engines fuel?

(A)

napthenes

(B)

olefins

(C)

aromatics

(D)

paraffins

**Ans: (C) aromatics**

41.

Which of the following does not relate to spark ignition engine?

(A)

Spark plug

(B)

Carburetor

(C)

Fuel injector

(D)

Ignition coil

**Ans: (C) Fuel injector**

42.

High air-fuel ratio is used in gas turbines

(A)

To increase the output

(B)

To increase the efficiency

(C)

To save fuel

(D)

To reduce the exit temperature

**Ans: (D) To reduce the exit temperature**

43.

In which case the air-fuel ratio is likely to be maximum?

(A)

Gas turbine

(B)

4-stroke petrol engine

(C)

4-stroke diesel engine

(D)

Multi cylinder engine

**Ans: (A) Gas turbine**

44.

On which of the following cycle the air conditioning systems are based in transport aviation?

(A)

Reversed Joule’s cycle

(B)

Otto cycle

(C)

Reversed Carnot cycle

(D)

Reversed Brayton cycle

**Ans: (D) Reversed Brayton cycle**

45.

What is the least count of dial indicators which can be calibrated using passmeter?

(A)

0.01 mm

(B)

0.03 mm

(C)

0.05 mm

(D)

0.07 mm

**Ans: (A) 0.01 mm**

46.

Maximum interference is the magnitude of the difference between _____ size of the hole and the _____ size of the shaft.

(A)

minimum, maximum

(B)

minimum, minimum

(C)

maximum, maximum

(D)

maximum, minimum

**Ans: (A) minimum, maximum**

47.

Which of the following is used to check change in ocular lines position due to column rotation in universal micrometer?

(A)

Dial indicator

(B)

Slip gauges

(C)

Control shaft

(D)

Universal microscope

**Ans: (C) Control shaft**

48.

Which type of test is done on the main spindle of a machine?

(A)

True running

(B)

Alignment

(C)

Levelling

(D)

Flatness

**Ans: (A) True running**

49.

In phase I application of x and R chart, the control limits obtained from the equations are treated as _____

(A)

Final limits

(B)

Trial limits

(C)

Warning limits

(D)

Pattern limits

**Ans: (B) Trial limits**

50.

Which term is having a closest meaning as Sampling Distributions?

(A)

Control charts

(B)

On site inspection

(C)

Whole lot inspection

(D)

Acceptance sampling

**Ans: (A) Control charts**

51.

A tolerance diagram is also called _____

(A)

Scatter diagram

(B)

Defect concentration diagram

(C)

Histogram

(D)

Tier chart

**Ans: (D) Tier chart**

52.

The natural variability of the process is measured by _____

(A)

Process mean

(B)

Sample standard deviation

(C)

Process standard deviation

(D)

Sample mean

**Ans: (C) Process standard deviation**

53.

What type of chart will be used to plot the number of defectives in the output of any process?

(A)

x bar chart

(B)

R chart

(C)

c chart

(D)

p chart

**Ans: (D) p chart**

54.

If all the processing equipment and machines are arranged according to the sequence of operations of a product the layout is known as

(A)

Product layout

(B)

Process layout

(C)

Fixed position layout

(D)

Combination layout

**Ans: (A) Product layout**

55.

The correct sequence of operations in production planning and control is

(A)

Routing-Scheduling-Dispatching-Follow up

(B)

Scheduling-Routing- Dispatching-Follow up

(C)

Dispatching-Routing-Scheduling- Follow up

(D)

Routing-Scheduling-Follow up-Dispatching

**Ans: (A) Routing-Scheduling-Dispatching-Follow up**

56.

The bill of material does not consists of

(A)

Part number

(B)

Specifications of part

(C)

Name of the part

(D)

Price of the part

**Ans: (D) Price of the part**

57.

Master schedule is prepared for

(A)

Single product continuous production

(B)

Multi product batch production

(C)

Assembly product continuous production

(D)

Single product batch production

**Ans: (C) Assembly product continuous production**

58.

Which of the following chart is drawn Machine vs time?

(A)

Man machine chart

(B)

The load chart

(C)

The progress chart

(D)

Curve chart

**Ans: (B) The load chart**

59.

The relation between mating parts is called _____

(A)

Connection

(B)

Fits

(C)

Joints

(D)

Link

**Ans: (B) Fits**

60.

Open channel flow takes place _____

(A)

In a pump

(B)

Within a cylindrical depth

(C)

On a free surface

(D)

In the pipe

**Ans: (C) On a free surface**