

Post Name : 03F-Machinist

Exam Code : MASSXAAC

Exam Date : 21-06-2024

Exam Time : 11:15AM

Question No. 1

The weight of a sledge hammer varies from _____ for heavy work.

- | | |
|--------------|---------------|
| A) 4 to 6 kg | B) 1 to 2 kg |
| C) 2 to 3 kg | D) 8 to 10 kg |

Answer Key: D

Question No. 2

In a planing machine, the length of the bed is generally longer than _____ time(s) the length of the table.

- | | |
|--------|---------|
| A) 0.5 | B) 0.75 |
| C) 1 | D) 2 |

Answer Key: D

Question No. 3

The reverse of ductility is-

- | | |
|-----------------|------------------------|
| A) Malleability | B) Elasticity |
| C) Brittleness | D) None of the options |

Answer Key: C

Question No. 4

The cutting speed ratio between the forward and return strokes in a shaper is-

- | | |
|----------|----------|
| A) 2 : 1 | B) 3 : 1 |
| C) 5 : 3 | D) 3 : 2 |

Answer Key: D

Question No. 5

Why are chip breakers used?

- | | |
|---|---------------------------------|
| A) To sharpen the tool | B) To remove chips from the bed |
| C) To break the chips into short segments | D) To minimize heat generation |

Answer Key: C

Question No. 6

Which of the following materials is the hardest cutting tool material next to diamond?

- | | |
|------------------------|--------------------|
| A) Alumina | B) Silicon Nitride |
| C) Cubic Boron Nitride | D) Ceramics |

Answer Key: C

Question No. 7

Which diameter of screw thread is known as the effective diameter?

- A) Minor diameter
- B) Major diameter
- C) Inner diameter
- D) Pitch diameter

Answer Key: D

Question No. 8

The radial distance between the pitch circle and the root circle is the-

- A) Addendum
- B) Dedendum
- C) Pitch
- D) Crest

Answer Key: B

Question No. 9

A die is a tool used for-

- A) Cutting external threads on cylindrical parts
- B) Producing circular holes on a workpiece
- C) Holding and supporting the tools
- D) Laying out larger circles

Answer Key: A

Question No. 10

Which of the following is NOT a part of the centre lathe?

- A) Saddle
- B) Feed rod
- C) Arbor
- D) Lead screw

Answer Key: C

Question No. 11

For a single start thread, the lead is _____ the pitch.

- A) Equal to
- B) Twice
- C) Four times
- D) One third of

Answer Key: A

Question No. 12

The process of bevelling the end of a hole is called-

- A) Counterboring
- B) Countersinking
- C) Spot facing
- D) Reaming

Answer Key: B

Question No. 13

The smallest diameter of screw thread is-

- A) Pitch
- B) Lead
- C) Core diameter
- D) Nominal diameter

Answer Key: C

Question No. 14

_____ milling is the operation of producing a flat vertical surface on both sides of a workpiece by using two side-milling cutters mounted on the same arbor.

- A) Straddle
- B) Saw
- C) Form
- D) Profile

Answer Key: A

Question No. 15

Which of the following has no unit?

- A) Surface tension
- B) Bulk modulus
- C) Strain
- D) Stress

Answer Key: C

Question No. 16

The _____ is the base or foundation of the lathe.

- A) Bed
- B) Headstock
- C) Tailstock
- D) Carriage

Answer Key: A

Question No. 17

The helical angle of the drill determines the _____.

- A) Cutting angle
- B) Web angle
- C) Rake angle
- D) Lip angle

Answer Key: C

Question No. 18

The lip clearance angle of a twist drill is generally between-

- A) 3° and 5°
- B) 8° and 12°
- C) 15° and 20°
- D) 20° and 25°

Answer Key: B

Question No. 19

The cutting speed of shapers is always expressed in _____.

- A) Revolution/minute
- B) Millimetre
- C) Meter/minute
- D) Number of stroke/minute

Answer Key: C

Question No. 20

High-speed steel tools are used at-

- A) The same speed as carbon-steel tools
- C) Higher speed than carbon-steel tools

- B) Lower speed than carbon-steel tools
- D) The same speed as carbide tools

Answer Key: C

Question No. 21

Plain turning is the operation of reducing the _____ of the job throughout its length.

- A) Diameter
- C) Angle
- B) Diagonal
- D) Temperature

Answer Key: A

Question No. 22

Fuse wire is made up of an alloy of-

- A) Iron and platinum
- C) Copper and iron
- B) Tin and lead
- D) None of the options

Answer Key: B

Question No. 23

Which of the following is a machining process that brings the raw material to the required cylindrical or conical shape using a single-point cutting tool?

- A) Grooving
- C) Turning
- B) Shaping
- D) Slotting

Answer Key: C

Question No. 24

Glazing in the grinding wheel takes place when the wheel-

- A) Is broken or damaged
- C) Revolves at a normal speed
- B) Is too soft or revolves at a very low speed
- D) Is too hard or revolves at a very high speed

Answer Key: D

Question No. 25

The ratio of change in length to the original length is known as-

- A) Strain
- C) Resilience
- B) Stress
- D) Elasticity

Answer Key: A

Question No. 26

The Direct Indexing method in milling is also known as the-

- A) Rapid indexing method
- C) Angular indexing method
- B) Complex indexing method
- D) Compound indexing method

Answer Key: A

Question No. 27

Spring washers are used under nuts to prevent-

- A) Fastener from loosening due to vibration
- B) Damage to the work
- C) Damage to the tool
- D) Damage to the thread

Answer Key: A

Question No. 28

A unit of power is called-

- A) Pascal
- B) Newton
- C) Joule
- D) Watt

Answer Key: D

Question No. 29

The rapid indexing plate on a dividing head of a milling machine has-

- A) 16 holes
- B) 24 holes
- C) 42 holes
- D) 12 holes

Answer Key: B

Question No. 30

In which type of milling machines can the table be swiveled and set at any angle?

- A) Plain knee and column type
- B) Universal machine
- C) Vertical machine
- D) Drum type machine

Answer Key: B

Question No. 31

The percentage of carbon in grey cast iron castings usually varies between-

- A) 0.5% and 1%
- B) 1% and 2%
- C) 2% and 4%
- D) 9% and 12%

Answer Key: C

Question No. 32

The arbor of a milling machine is to hold which of the following?

- A) Cutting tool
- B) Job
- C) Index head
- D) Spindle rotation

Answer Key: A

Question No. 33

In horizontal continuous broaching machine, the work is held in fixture which are mounted on-

- A) Endless chain
- B) Revolving table
- C) Stationery table
- D) Reciprocating table

Answer Key: A

Question No. 34

For a double-start thread, lead is equal to _____ the pitch.

- A) Twice
- B) Thrice
- C) Four times
- D) Half

Answer Key: A

Question No. 35

One millimetre is equivalent to _____ micrometre.

- A) 0.001
- B) 100
- C) 10
- D) 1000

Answer Key: D

Question No. 36

The V-block is made up of-

- A) Dead mild steel or Copper
- B) Brass or Aluminium
- C) Cast iron or hardened steel
- D) Titanium or tungsten

Answer Key: C

Question No. 37

In angular division, one degree is equivalent to-

- A) 60 minutes
- B) 60 seconds
- C) 30 minutes
- D) 30 seconds

Answer Key: A

Question No. 38

Which of the following tools is composed of stock and blade?

- A) Try square
- B) Scriber
- C) Divider
- D) Plier

Answer Key: A

Question No. 39

A file card is used for-

- A) Cleaning the workpiece
- B) Cleaning the file
- C) Sharpening the file teeth
- D) Cleaning the machine

Answer Key: B

Question No. 40

A grinding wheel marked with 'C' is made with the abrasive-

- A) Aluminium oxide
- B) Silicon carbide

C) Diamond

D) None of the options

Answer Key: B

Question No. 41

The part of the universal surface gauge which helps to draw a parallel line along the edge is the-

A) Rocker arm

B) Snug

C) Fine adjustment screw

D) Guide pins

Answer Key: D

Question No. 42

Taps are made of-

A) Mild steel

B) Copper

C) High speed steel

D) Cast iron

Answer Key: C

Question No. 43

The formula to find out number of double strokes(N) in shaper is-

(where, L = Length of the ram stroke, in mm,

m = return stroke time/cutting stroke time, v = cutting speed of the machine)

A) $(L(1 + m))/1000$

B) $(\pi Dm)/1000$

C) $(v \times 1000)/(\pi Dm)$

D) $(v \times 1000)/L(1 + m)$

Answer Key: D

Question No. 44

Work held between centres gets driven through a-

A) Three-jaw chuck

B) Driving plate alone

C) Revolving centre

D) Dog carrier and catch plate

Answer Key: D

Question No. 45

The gap bed lathe is used to accommodate-

A) Smaller diameter jobs

B) Thick flat jobs

C) Larger diameter jobs

D) Thin flat jobs

Answer Key: C

Question No. 46

An end clearance angle is given to the boring tool in order to-

A) Prevent the heel of the tool bit from rubbing

B) Give strength to the tool

C) Avoid chattering of the tool

D) Give good surface finish for the hole

Answer Key: A

Question No. 47

For smaller lengths of taper in mass production where the accuracy is NOT the criterion, the method of taper turning used is-

- A) The offsetting tailstock method
- B) The swivelling compound slide method
- C) Form tool plunging method
- D) A combination of both lathe cross-slide and compound slide movements

Answer Key: C

Question No. 48

In the Vernier scale of a Vernier bevel protractor, 23 degrees are measured. The protractor is divided into _____ parts to get a least count of 5'.

- A) 24
- B) 22
- C) 12
- D) 22.5

Answer Key: C

Question No. 49

The turning operation which increases the diameter of the workpiece is-

- A) Parallel turning with single point tool
- B) Taper turning with single point tool
- C) Knurling with knurling tool
- D) Thread cutting with 'V' tool

Answer Key: C

Question No. 50

In lathe, facing operation is used to reduce the-

- A) Inner diameter of the component
- B) Taper of the component
- C) Outer diameter of the component
- D) Length of the component

Answer Key: D

Question No. 51

What is the included angle of metric ACME thread?

- A) 29°
- B) 25°
- C) 55°
- D) 19°

Answer Key: A

Question No. 52

For marking purposes, a Vernier height gauge must be used on the-

- A) Bed of a machine tool
- B) Surface plate
- C) Square block
- D) Any flat surface

Answer Key: B

Question No. 53

Metals without iron are called as-

- A) Alloy steel
- B) Ferrous metals

C) Non-ferrous metals

D) Stainless steels

Answer Key: C

Question No. 54

Which of the following represents the fine grain structure in grinding wheel?

A) 10

B) 30

C) 220

D) 80

Answer Key: D

Question No. 55

Which of the following represents the open structure in grinding wheel?

A) 2

B) 5

C) 7

D) 11

Answer Key: D

Question No. 56

The broaching operation in which the work is moved continuously against a stationary tool is called-

A) Pull broaching

B) Push broaching

C) Surface broaching

D) Continuous broaching

Answer Key: D

Question No. 57

The process of machining a flat surface which is at right angles to the axis of the rotating cutter is called-

A) Up-milling

B) Down-milling

C) Face-milling

D) End-milling

Answer Key: C

Question No. 58

Which of the following instruments is used for checking the flatness?

A) Slip gauge

B) Bevel gauge

C) Try-square

D) Vernier height gauge

Answer Key: C

Question No. 59

In CNC, the code "G04" is used for-

A) Absolute co-ordinate system

B) Dwell

C) Spindle stop

D) Linear interpolation

Answer Key: B

Question No. 60

A single-point cutting tool is used in-

- A) Lathes
- C) Grinding

- B) Milling
- D) Drilling

Answer Key: A

Question No. 61

The external layer of metal is hardened in which of the following processes?

- A) Case hardening
- C) Normalizing
- B) Annealing
- D) Tempering

Answer Key: A

Question No. 62

_____ is used as a mechanical comparator.

- A) Dial test indicator
- C) Vernier caliper
- B) Micrometer
- D) Gauge blocks

Answer Key: A

Question No. 63

The second tap is also known as the-

- A) Taper tap
- C) Bottoming tap
- B) Intermediate tap
- D) Top tap

Answer Key: B

Question No. 64

The knuckle thread is the modified form of the-

- A) Trapezoidal thread
- C) Square thread
- B) Vee thread
- D) Saw-tooth thread

Answer Key: C

Question No. 65

Bronze primarily contains-

- A) Zinc
- C) Tin
- B) Copper
- D) Aluminium

Answer Key: B

Question No. 66

Which of the following operations can be performed on a lathe?

- A) Spinning
- C) Coining
- B) Drawing
- D) Swaging

Answer Key: A

Question No. 67

The function of a washer is to-

- A) Fill up the axial gap
- B) Provide the bearing area
- C) Reduce heat production
- D) Absorb shocks and vibrations

Answer Key: B

Question No. 68

The grooves provided on the entire length of the body of a twist drill are called-

- A) Lips
- B) Margins
- C) Flutes
- D) Webs

Answer Key: C

Question No. 69

The _____ acts as the housing for the operating mechanism in a shaper.

- A) Base
- B) Column
- C) Cross-rail
- D) Table

Answer Key: B

Question No. 70

Which of the following operations has the lowest cutting speed?

- A) Honing
- B) Milling
- C) Grinding
- D) Turning

Answer Key: A

Question No. 71

If a grinding wheel is specified as C-54-M-6-V, then what does 'C' denote?

- A) Type of abrasive
- B) Grade
- C) Bond
- D) Structure

Answer Key: A

Question No. 72

In the case of a shaper equipped with whitworth mechanism-

- A) The cutting stroke is faster than return stroke
- B) The return stroke is faster than the cutting stroke
- C) Both the cutting stroke and the return stroke take the same time
- D) None of the options

Answer Key: B

Question No. 73

The size of a shaper is specified by its maximum-

- A) Longitudinal travel of the table
- B) Height between the table and ram
- C) Crosswise travel of the table
- D) Length of the stroke

Answer Key: D

Question No. 74

The main function of the carriage is to move the tool-

- A) At an angle to the lathe axis
- B) At a right angle to lathe axis
- C) Parallel to the spindle axis
- D) Parallel to the cross-slide

Answer Key: C

Question No. 75

The purpose of rough milling is-

- A) To remove small amounts of material at high speed
- B) To remove excess material in the shortest possible time
- C) To remove small amounts of material at low speed
- D) To get better surface finish

Answer Key: B