

Post Name : 03I-Millwright Maintenance Mechanic

Exam Code : MASSXAIL

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Question No. 1

The included angle for buttress threads is-

- A) 60°
- B) 55°
- C) 45°
- D) 29°

Answer Key: C

Question No. 2

When screw threads are to be used in a situation where power is being transmitted in one direction only, then the screw threads suitable for this will be-

- A) Square threads
- B) ACME threads
- C) Knuckle threads
- D) Buttress threads

Answer Key: D

Question No. 3

When carbon in the cast iron is principally in the form of graphite, the cast iron will be of-

- A) Grey colour
- B) White colour
- C) Yellow colour
- D) Brown colour

Answer Key: A

Question No. 4

Which of the following is also known as muff coupling?

- A) Sleeve coupling
- B) Compression coupling
- C) Clamp coupling
- D) Flange coupling

Answer Key: A

Question No. 5

Ductility is the property of a material due to which it can be drawn into-

- A) Wires
- B) Sheets
- C) Hollow pipes
- D) Plates

Answer Key: A

Question No. 6

Which of the following is an example of permanent fasteners?

- A) Bolts
- B) Keys
- C) Rivets
- D) Cotters

Answer Key: C

Question No. 7

The included angle for the British Standard Whitworth (BSW) thread is-

- A) 29°
- B) 47.5°
- C) 55°
- D) 60°

Answer Key: C

Question No. 8

The property which enables a metal to be drawn out into wires without rupture is known as-

- A) Malleability
- B) Creep
- C) Ductility
- D) Hardness

Answer Key: C

Question No. 9

In which of the following are consumable electrodes used?

- A) Plasma arc welding
- B) Carbon arc welding
- C) TIG welding
- D) MIG welding

Answer Key: D

Question No. 10

Which of the following defects is classified under the category of internal welding defects?

- A) Spatter
- B) Slag inclusion
- C) Undercut
- D) Overlap

Answer Key: B

Question No. 11

_____ can be defined as the resistance to indentation or scratch.

- A) Malleability
- B) Ductility
- C) Elasticity
- D) Hardness

Answer Key: D

Question No. 12

_____ is a cylindrical rod having a head at one end and a nut fitted to other end.

- A) Bolt
- B) Nail
- C) Stud
- D) Set screw

Answer Key: A

Question No. 13

Terneplate is an alloy of-

- A) Nickel and chromium
- B) Copper and zinc

C) Lead and tin

D) Iron and manganese

Answer Key: C

Question No. 14

Find the mechanical advantage of a pulley system if it has an efficiency of 60%. The load lifts by 3 m when the rope is pulled by 12 m.

A) 3.6

B) 1.2

C) 4.8

D) 2.4

Answer Key: D

Question No. 15

The type of power transmission drive used when the power required to be transmitted between the two shafts which are placed at a large distance is-

A) Belt drive

B) Chain drive

C) Gear drive

D) None of the options

Answer Key: A

Question No. 16

Common solder is composed of-

A) Tin and Lead

B) Zinc and tin

C) Silicon and Brass

D) Lead and zinc

Answer Key: A

Question No. 17

_____ is the radial distance of a gear tooth from the pitch circle to the bottom of the gear tooth.

A) Bore

B) Dedendum

C) Hub

D) Addendum

Answer Key: B

Question No. 18

A/an _____ is used to measure the specific gravity of a lubricant.

A) Hydrometer

B) Viscometer

C) Anemometer

D) Pyrometer

Answer Key: A

Question No. 19

If material recovers its original dimensions, when the load is removed, it is known as-

A) Brittle

B) Elastic

C) Plastic

D) Annealed

Answer Key: B

Question No. 20

The graduations of a bevel protractor are marked from-

- A) 0 to 90 degrees
- B) 0 to 45 degrees
- C) 0 to 180 degrees
- D) 0 to 360 degrees

Answer Key: C

Question No. 21

Which of the following is an example of detachable fastening?

- A) Rivet
- B) Soldering joint
- C) Welding joint
- D) Cotter joint

Answer Key: D

Question No. 22

A screw thread specified by M 20 X 2.5 as per BIS thread system means-

- A) Metric thread of 20 mm nominal diameter and 2.5 mm pitch
- B) Metric thread of 20 mm root diameter and 2.5 mm pitch having coarse tolerance
- C) Metric thread of fine class having 17.5 mm root diameter and 2.5 mm pitch
- D) Metric thread of 17 mm shank diameter and 2.5 mm thread depth

Answer Key: A

Question No. 23

Which of the following keys is/are used to transmit power through frictional resistance?

- A) Sunk key
- B) Saddle key
- C) Both saddle and sunk key
- D) Woodruff key

Answer Key: B

Question No. 24

The jaw plates of a bench vice are made of-

- A) High carbon steel
- B) Copper
- C) Aluminium
- D) Bronze

Answer Key: A

Question No. 25

Zero error in micrometer means-

- A) There is negligible gap between the spindle and the anvil
- B) Micrometer is true
- C) Zero mark on the thimble is not visible
- D) Zero on thimble and datum line on sleeve do not coincide when measuring faces are in contact

Answer Key: D

Question No. 26

The purpose of tempering a hardened steel component is to-

- A) Reduce its brittleness
- B) Reduce its hardness

C) Increase its toughness

D) All of the options

Answer Key: D

Question No. 27

During turning operation, the job is measured when it is-

A) In fast motion

B) Stopped

C) About to stop

D) In slow motion

Answer Key: B

Question No. 28

Chamfering is NOT meant to-

A) Remove sharp edges

B) Permit for easy assembly of mating components

C) Reduce the weight of the component

D) Provide better appearance

Answer Key: C

Question No. 29

Which of the following types of lathes is also known as the engine lathe?

A) Tool room lathe

B) Centre lathe

C) Turret lathe

D) Capstan lathe

Answer Key: B

Question No. 30

The included angle in ACME threads is-

A) 29°

B) 47.5°

C) 55°

D) 50°

Answer Key: A

Question No. 31

What defect is caused by gas entrapment in arc welding process?

A) Crack

B) Porosity

C) Lack of fusion

D) Slag inclusion

Answer Key: B

Question No. 32

The measured size of the dimension of a finished part is called the-

A) Actual size

B) Deviation

C) Allowed size

D) None of the options

Answer Key: A

Question No. 33

Which of the following processes is used for hardening the surface of tool steel?

- A) Tempering
- C) Induction hardening

- B) Quenching
- D) Hardening

Answer Key: C

Question No. 34

The property of a material which enables it to retain the deformation permanently, is called-

- A) Brittleness
- C) Malleability
- B) Ductility
- D) Plasticity

Answer Key: D

Question No. 35

Which of the following is the case-hardening process?

- A) Flame hardening
- C) Liquid carburizing
- B) Induction hardening
- D) All of the options

Answer Key: D

Question No. 36

_____ is defined as the process of rapid cooling of the metal to adjust the mechanical properties of its original state from an elevated temperature by contact with liquids, gases or solids.

- A) Tempering
- C) Quenching
- B) Hardening
- D) Normalizing

Answer Key: A

Question No. 37

Which of the following is a copper-free alloy?

- A) Brass
- C) Invar
- B) Phosphor bronze
- D) Muntz metal

Answer Key: C

Question No. 38

A screw is said to be an overhauling screw, if its efficiency is-

- A) Less than 50%
- C) Equal to 50%
- B) More than 50%
- D) None of the options

Answer Key: B

Question No. 39

The included angle for the V-belt is usually-

- A) 20°–25°
- C) 41°–60°
- B) 30°–40°
- D) 65°–80°

Answer Key: B

Question No. 40

Which of the following is an anti-friction bearing ?

- A) Sleeve bearing
- B) Ball and roller bearing
- C) Bushing bearing
- D) None of the options

Answer Key: B

Question No. 41

Which of the following threads has the smallest included angle?

- A) Acme thread
- B) B.S.W thread
- C) Buttress thread
- D) Unified thread

Answer Key: A

Question No. 42

A _____ is the vertical part of a slotter machine that contains all the drive mechanisms for the ram and feed.

- A) Base
- B) Saddle
- C) Column
- D) Cross-slide

Answer Key: C

Question No. 43

The main alloying elements of high speed steel in order of increasing proportion are-

- A) Vanadium, chromium, tungsten
- B) Tungsten, titanium, vanadium
- C) Chromium, titanium, vanadium
- D) Tungsten, chromium, titanium

Answer Key: A

Question No. 44

Brass contains-

- A) 70% copper and 30% zinc
- B) 90% copper and 10% tin
- C) 85 - 92% copper and rest tin with little lead and nickel
- D) 70 - 75% copper and rest tin

Answer Key: A

Question No. 45

A cold chisel is made of-

- A) Mild steel
- B) Cast iron
- C) Aluminium
- D) High carbon steel

Answer Key: D

Question No. 46

White metal may contain-

- A) Manganese and copper
- B) Copper, tin and rest zinc
- C) Tin or lead
- D) Silver or chromium

Answer Key: C

Question No. 47

Bronze is an alloy of-

- A) Copper and zinc
- B) Copper and tin
- C) Copper, tin and zinc
- D) None of the options

Answer Key: B

Question No. 48

A flange coupling is used to connect two shafts-

- A) Which are perfectly aligned
- B) Which are not in exact alignment
- C) Have lateral misalignment
- D) Whose axes intersect at a small angle

Answer Key: A

Question No. 49

Steel containing up to 0.8 to 1.5% carbon is known as-

- A) Mild steel
- B) Dead mild steel
- C) Medium carbon steel
- D) High carbon steel

Answer Key: D

Question No. 50

The difference between the maximum and minimum limits of size is called-

- A) Upper deviation
- B) Lower deviation
- C) Tolerance
- D) Actual size

Answer Key: C

Question No. 51

Which of the following gas mixtures is used generally for cutting?

- A) Oxygen – hydrogen
- B) Hydrogen – acetylene
- C) Oxygen – acetylene
- D) Acetylene – argon

Answer Key: C

Question No. 52

Which of the following is a safety device in welding?

- A) Apron
- B) Welding torch
- C) Electrode
- D) Cylinder

Answer Key: A

Question No. 53

In a riveted joint, the distance between the centres of adjacent rivets in the same row is called-

- A) Gauge distance
- B) Lap distance

C) Pitch

D) Edge distance

Answer Key: C

Question No. 54

Which of the following is an artificial abrasive?

A) Emery

B) Solid quartz

C) Corundum

D) Silicon carbide

Answer Key: D

Question No. 55

Vulcanization is the process of heating-

A) Sulphur with rubber

B) Acetic acid with rubber

C) Plasticizers with rubber

D) Zinc phosphate with steel

Answer Key: A

Question No. 56

The clapper box of a shaper is used to-

A) Lift the tool during the cutting stroke

B) Lift the tool during the return stroke

C) Lift the tool in the middle of the stroke

D) Prevent overhanging of the tool

Answer Key: B

Question No. 57

Non ferrous metal does NOT contain _____ as base.

A) Iron

B) Aluminium

C) Zinc

D) Copper

Answer Key: A

Question No. 58

A 2X flame is a flame in which the-

A) Acetylene feather is twice as long as the inner cone

B) Inner cone is twice as long as the acetylene feather

C) Inner cone is twice as long as the blue envelope

D) Blue envelope is twice as long as the inner cone

Answer Key: A

Question No. 59

Which of the following materials has the highest melting point?

A) Iron

B) Silver

C) Copper

D) Tungsten

Answer Key: D

Question No. 60

The amount of heat generated in resistance welding is measured in-

A) Joules

B) Calories

C) Watt

D) Pascal

Answer Key: A

Question No. 61

The malleability is the property of a material by virtue of which a material-

- A) Can be drawn into wires with the application of a tensile force
B) Retains the deformation produced under load permanently
C) Regains its shape and size after the removal of external forces
D) Can be rolled or hammered into thin sheets

Answer Key: D

Question No. 62

Which property of material is the main reason that chips break during machining?

- A) Brittleness
B) Ductility
C) Malleability
D) Plasticity

Answer Key: A

Question No. 63

_____ is the quantity that describes a fluid's resistance to flow.

- A) Viscosity
B) Flash point
C) Fire point
D) Pour point

Answer Key: A

Question No. 64

Which of the following is the operation of producing a tapered enlargement at the opening of a hole so as to provide a seat for a flat head screw?

- A) Boring
B) Reaming
C) Counterboring
D) Countersinking

Answer Key: D

Question No. 65

Which of the following is a major constituent of corundum?

- A) Carbon
B) Diamond
C) SiO₂
D) Al₂O₃

Answer Key: D

Question No. 66

Ball bearings are generally made of-

- A) Cast iron
B) Malleable cast iron
C) Copper
D) Chrome steel

Answer Key: D

Question No. 67

The operation of closing down the edges of the plates and heads of the rivets to form a metal-to-metal joint is-

- A) Caulking
- B) Beading
- C) Braising
- D) Burring

Answer Key: A

Question No. 68

A sunk key requires a keyway in the-

- A) Hub only
- B) Shaft only
- C) Both the hub and shaft
- D) Neither the hub nor shaft

Answer Key: C

Question No. 69

A nut is to be made for a screw of M10 × 1.5. What should be the size of the drilled hole?

- A) 8.5 mm
- B) 9.0 mm
- C) 9.5 mm
- D) 10.0 mm

Answer Key: A

Question No. 70

An open side or one side housing planing machine is used for-

- A) Spherical jobs
- B) Wider jobs
- C) Small and many jobs at a time
- D) Small jobs only

Answer Key: B

Question No. 71

Which of the following is characterized as a heavy metal?

- A) Lead
- B) Aluminium
- C) Magnesium
- D) Titanium

Answer Key: A

Question No. 72

Grease can be used to-

- A) Prevent corrosion
- B) Reduce friction and wear
- C) Repel moisture
- D) All of the options

Answer Key: D

Question No. 73

The external surface of the part made of mild steel can be hardened by-

- A) Tempering
- B) Normalizing

C) Case hardening

D) Hardening

Answer Key: C

Question No. 74

Which of the following is NOT an alloy?

A) Steel

B) Brass

C) Bronze

D) Titanium

Answer Key: D

Question No. 75

Which of the following tools is used in milling?

A) Single-point cutting tool

B) Multi-point rotary cutters

C) Abrasive wheel

D) Polishing sand

Answer Key: B