



RRB ALP 2024 CBT 2

Assistant Loco Pilot · CEN 01/2024 · CBT 2 · Millwright Maintenance Mechanic Trade · Part B
(Millwright Maintenance Mechanic) · Question Paper

English

All 2 Shifts (Sets) · Part B (Millwright Maintenance Mechanic) Section · Official Answer Key

About this Compilation

This booklet contains all 2 shift papers of the RRB ALP 2024 CBT 2 (Millwright Maintenance Mechanic) examination in English (Part B (Millwright Maintenance Mechanic) section only), with the correct option marked as per the official answer key.

✓ Correct option (highlighted green)

How to use

- Use the **Index** page to jump directly to any set (clickable).
- Questions appear section by section in the order of the paper, numbered 1 onward.
- Diagram and wide-table questions appear at full width at the end of their section.
- The correct answer is highlighted in green with a tick.

More from QMaths

Check your marks, normalized score and zone-wise rank free at rank.qmaths.in. Master English vocabulary with the **Blackbook** app.



Toppers' Choice, Blackbook of English Vocabulary, Now available in App format : DOWNLOAD NOW

Index — All Sets (click to open)

Set 1

02 May 2025
9:30 AM - 12:00 PM

Set 2

06 May 2025
2:30 PM - 5:00 PM

Part B (Millwright Maintenance Mechanic)

75 Questions • Answer Key

Q1 Part B (Millwright Maintenance Mechanic)

What is the purpose of a pipe vise in pipe cutting?

- A. To measure the pipe diameter
- B. To hold the pipe securely in place ✓
- C. To increase cutting force
- D. To bend the pipe before cutting

Q2 Part B (Millwright Maintenance Mechanic)

Which type of flux is generally recommended for soldering ferrous metals?

- A. Rosin-based flux
- B. Water-insoluble flux
- C. Acid-based flux ✓
- D. No flux is needed

Q3 Part B (Millwright Maintenance Mechanic)

A/An _____ is provided to keep the micrometer fixed so that the reading can be done easily and without any difficulty.

- A. sleeve or barrel
- B. thimble
- C. lock nut ✓
- D. anvil

Q4 Part B (Millwright Maintenance Mechanic)

The terms ____ and ____ refer to the greatest and smallest variance, respectively, specified on a fundamental size or nominal measurement.

- A. jig; fixture
- B. low limit; high limit
- C. limit; fit
- D. high limit; low limit ✓

Q5 Part B (Millwright Maintenance Mechanic)

Parallel milling is primarily used for machining:

- A. flat surfaces ✓
- B. internal threads
- C. cylindrical workpieces
- D. gear teeth

Q6 Part B (Millwright Maintenance Mechanic)

What is the advantage of giving heat treatment to a material?

- A. To decrease the melting point of the material
- B. To increase the weight of the material
- C. To change it from one element to another element
- D. To make surgical knives of sharp edges ✓

Q7 Part B (Millwright Maintenance Mechanic)

In drawing down thicker sections, which tool is commonly used to localise deformation?

- A. Fuller ✓
- B. Chisel
- C. Swage block
- D. Anvil horn

Q8 Part B (Millwright Maintenance Mechanic)

What is the purpose of an emergency evacuation plan?

- A. To ensure safe and orderly evacuation during emergencies ✓
- B. To avoid safety drills
- C. To increase productivity
- D. To allow workers to leave early

Q9 Part B (Millwright Maintenance Mechanic)

What should you do to ensure your personal safety at work?

- A. Wear personal protective equipment. ✓
- B. Work in a hurry without checking equipment.
- C. Ignore warning signs and instructions.
- D. Take risks to finish tasks quickly.



Q10 Part B (Millwright Maintenance Mechanic)

A circular hole of radius 3 cm is cut from a rectangular sheet of dimensions 12 cm × 10 cm. Find the remaining area.

(Take $\pi = 3.14$)

- A. 100 cm²
- B. 91.74 cm² ✓
- C. 95.86 cm²
- D. 75.74 cm²

Q11 Part B (Millwright Maintenance Mechanic)

In a lead-acid battery, what is the chemical composition of the material used for the positive plate during discharge?

- A. Sulphuric acid (H₂SO₄)
- B. Lead (Pb)
- C. Lead dioxide (PbO₂) ✓
- D. Lead sulfate (PbSO₄)

Q12 Part B (Millwright Maintenance Mechanic)

Which of the following is commonly used to hold a workpiece in surface grinding?

- A. Mandrel
- B. Tailstock
- C. 3-jaw chuck
- D. Magnetic chuck ✓

Q13 Part B (Millwright Maintenance Mechanic)

Which of the following organisations is responsible for enforcing workplace safety regulations in India?

- A. World Health Organization (WHO)
- B. Food and Drug Administration (FDA)
- C. Directorate General of Factory Advice Service and Labour Institutes (DGFASLI) ✓
- D. Environmental Protection Agency (EPA)

Q14 Part B (Millwright Maintenance Mechanic)

According to BIS SP 46-2003, which of the following applications is correctly represented by a chain-thin line in engineering drawings?

- A. Center lines ✓
- B. Hidden edges
- C. Dimension lines
- D. Visible edges

Q15 Part B (Millwright Maintenance Mechanic)

The key difference between a marking gauge and a mortise gauge is:

- A. method of adjustment
- B. material of construction
- C. number of scribing pins ✓
- D. size of the tool

Q16 Part B (Millwright Maintenance Mechanic)

Which of the following advantages of chain drive over belt drive is INCORRECT?

- A. It may be used for both long as well as short distances.
- B. It gives a high transmission efficiency.
- C. The production cost of chains is relatively high. ✓
- D. It gives less load on the shafts.

Q17 Part B (Millwright Maintenance Mechanic)

Which of the following tools is NOT under the requirement to complete the Step Turning Process?

- A. Snipping tool
- B. Parting Tool
- C. Vernier Caliper ✓
- D. Turning tool

Q18 Part B (Millwright Maintenance Mechanic)

Which of the following types of pliers is used to shape loops in wires and to form curves in light metal strips?

- A. Flat nose pliers
- B. Round nose pliers ✓
- C. Slip-joint pliers
- D. End cutting pliers

Q19 Part B (Millwright Maintenance Mechanic)

What is the primary reason behind acetylene being preferred over propane for welding?

- A. Acetylene has a lower risk of explosion.
- B. Acetylene produces a higher flame temperature. ✓
- C. Acetylene does not require oxygen for combustion.
- D. Acetylene is cheaper than propane.



Q20 Part B (Millwright Maintenance Mechanic)

If the basic size of the diameter of a shaft is 75 mm and variation limit of ± 0.02 mm is given, then its tolerance in mm is:

A. -0.02

B. -0.04

C. +0.04

D. +0.02

Q21 Part B (Millwright Maintenance Mechanic)

Which tool is commonly used to apply uniform twisting force during forging operations?

A. Chisel

B. Hammer

C. Swage block

D. Twisting wrench

Q22 Part B (Millwright Maintenance Mechanic)

What is a key advantage of using MOSFETs in electronic circuits compared to other types of transistors?

A. High frequency response

B. High input impedance and low power consumption

C. Ability to handle higher voltages and currents than BJTs

D. Ability to amplify both AC and DC signals

Q23 Part B (Millwright Maintenance Mechanic)

For what purpose are pins and clips used in engineering drawings?

A. To transfer dimensions and dividing lines into a number of equal parts

B. To draw horizontal lines, parallel lines and to guide/hold the set squares

C. To fasten the drawing sheet on to the drawing board firmly so that it does not shake

D. To support the drawing paper/tracing paper for making drawings

Q24 Part B (Millwright Maintenance Mechanic)

A drawing instrument box is used to carry all _____ instruments.

A. drawing

B. screening

C. drilling

D. casting

Q25 Part B (Millwright Maintenance Mechanic)

Which of the following parts of a file is the part fitted to the tang for holding the file?

A. Tip or Point

B. Handle

C. Edge

D. Tang

Q26 Part B (Millwright Maintenance Mechanic)

Which of the following hand-operated drilling machines is used for drilling small diameter holes up to 6 mm?

A. Electric hand drill

B. Ratchet drilling machine

C. Breast drilling machine

D. Bevel gear type drilling machine

Q27 Part B (Millwright Maintenance Mechanic)

Which tool is used to check high and low spots on a scraped surface?

A. Micrometer

B. Straight edge

C. Feeler gauge

D. Dial gauge

Q28 Part B (Millwright Maintenance Mechanic)

Which of the following vices consists of a handle and a small collet chuck at one end?

A. Hand vice

B. Pin vice

C. Pipe vice

D. Toolmaker's vice

Q29 Part B (Millwright Maintenance Mechanic)

The process of _____ involves using a cutting tool called a tap to sever internal threads in a hole.

A. facing

B. chamfering

C. tapping

D. knurling



Q30 Part B (Millwright Maintenance Mechanic)

What is the difference between a bevel gauge and a bevel protractor?

- A. There is no difference; both tools are the same.
- B. A bevel protractor is used for depth measurement, while a bevel gauge is used for height measurement.
- C. A bevel gauge is fixed, while a bevel protractor is adjustable.
- D. A bevel gauge is adjustable, while a bevel protractor provides precise angular measurements. ✓

Q31 Part B (Millwright Maintenance Mechanic)

What is the primary reason for electrical injuries when a person comes in contact with electrical equipment?

- A. Electrical equipment is not properly grounded.
- B. Current flows through the body causing harm. ✓
- C. Devices are used for too long.
- D. Electrical devices are too powerful.

Q32 Part B (Millwright Maintenance Mechanic)

The term _____ refers to the limit of variation allowed on either side of the correct dimension to provide the job property of interchangeability (in mass production of part).

- A. tolerance ✓
- B. low limit
- C. fit
- D. high limit

Q33 Part B (Millwright Maintenance Mechanic)

Why is the scraping process preferred over grinding in precision fitting?

- A. Scraping is done using CNC machines.
- B. Scraping produces an oil-retaining surface. ✓
- C. Scraping is faster than grinding.
- D. Scraping is less labour-intensive than grinding.

Q34 Part B (Millwright Maintenance Mechanic)

Which of the following is an important safety measure during a power failure?

- A. Using candles for lighting
- B. Continuing to use equipment without verifying power status
- C. Ensuring all machines and electrical equipment are turned off ✓
- D. Ignoring alarm systems

Q35 Part B (Millwright Maintenance Mechanic)

When two pulleys are more than 8 metres apart, then which of the following belt drives is used for power transmission?

- A. Circular belt ✓
- B. Flat belt
- C. V-belt
- D. Light drive

Q36 Part B (Millwright Maintenance Mechanic)

What is single-riveted lap joint?

- A. Joint made with two row of rivets
- B. Joint made with three row of rivets
- C. Joint made with only one row of rivets ✓
- D. Joint made with four row of rivets

Q37 Part B (Millwright Maintenance Mechanic)

The unit for specific gravity is _____.

- A. m/s^2
- B. g/cm^3
- C. kg/m^3
- D. no unit (dimensionless) ✓

Q38 Part B (Millwright Maintenance Mechanic)

The type of workpieces that can be successfully held in a 4-jaw chuck, and might be difficult to hold in a 3-jaw chuck, are:

- A. only round workpieces
- B. only hexagonal workpieces
- C. only small diameter workpieces
- D. irregular or eccentric workpieces ✓

Q39 Part B (Millwright Maintenance Mechanic)

Which characteristic of cellulosic electrodes makes them unsuitable for high-strength steels?

- A. They produce high levels of hydrogen in the weld. ✓
- B. They operate only on a low-voltage DC supply.
- C. They have a very thin coating, causing rapid wear.
- D. They create excessive slag, leading to contamination.



Q40 Part B (Millwright Maintenance Mechanic)

The purpose of providing a side relief angle of 1° to 2° on a grooving tool is to:

- A. reduce the cutting force
- B. increase the cutting speed
- C. prevent rubbing against the sides of the groove ✓
- D. improve the surface finish

Q41 Part B (Millwright Maintenance Mechanic)

Arrange the following steps in the correct order to draw an equilateral triangle with each side of 35 mm.

1. Join CA and CB.
2. Draw a line and mark AB 35 mm as the side of the triangle.
3. With radius AB and center A and B, draw arcs cutting at C.
4. ABC is the required triangle.

- A. 2, 3, 1, 4 ✓
- B. 1, 2, 4, 3
- C. 2, 1, 3, 4
- D. 3, 2, 1, 4

Q42 Part B (Millwright Maintenance Mechanic)

An electronic digital caliper displays the measurement on a _____.

- A. liquid crystal display screen ✓
- B. dial gauge
- C. Vernier scale
- D. mechanical counter

Q43 Part B (Millwright Maintenance Mechanic)

In a forward Vernier scale, the size of one Vernier scale division is:

- A. equal to 1 main scale division
- B. 1 mm
- C. larger than 1 main scale division
- D. smaller than 1 main scale division ✓

Q44 Part B (Millwright Maintenance Mechanic)

What is the unit of specifying slip gauges?

- A. Millimetres ✓
- B. Kilograms
- C. Kilometres
- D. Newtons

Q45 Part B (Millwright Maintenance Mechanic)

In Lathe Machine operation, the act of making plain ends of a job in their actual length is called _____.

- A. knurling
- B. chamfering
- C. facing ✓
- D. step turning

Q46 Part B (Millwright Maintenance Mechanic)

Why is it necessary to store low-hydrogen electrodes (e.g. E7018) in an oven?

- A. To maintain electrode conductivity
- B. To increase arc voltage
- C. To prevent moisture absorption ✓
- D. To improve slag formation

Q47 Part B (Millwright Maintenance Mechanic)

When using a multimeter to measure current, which of the following is correct?

- A. The multimeter is connected directly to the power source.
- B. The multimeter is connected in series with the load. ✓
- C. The multimeter is connected only across resistive components.
- D. The multimeter is connected in parallel with the load.

Q48 Part B (Millwright Maintenance Mechanic)

If the current flowing through a conductor is 5 A and the resistance of the conductor is 10 ohms, what will be the voltage across the conductor, according to Ohm's Law?

- A. 15 V
- B. 50 V ✓
- C. 5 V
- D. 10 V

Q49 Part B (Millwright Maintenance Mechanic)

Which hardness test uses a diamond pyramid-shaped indenter?

- A. Brinell
- B. Vickers ✓
- C. Shore
- D. Rockwell



Q50 Part B (Millwright Maintenance Mechanic)

What type of surfaces can a telescopic gauge measure?

- A. Only deep holes
- B. Both circular and irregular bores
- C. Only circular bores
- D. Only external cylindrical surfaces

Q51 Part B (Millwright Maintenance Mechanic)

Which of the following is NOT a recommended maintenance practice for a shaping machine?

- A. Tightening loose bolts
- B. Regular lubrication
- C. Ignoring minor vibrations
- D. Cleaning the machine after use

Q52 Part B (Millwright Maintenance Mechanic)

Match the following terminologies in riveted joint with their corresponding meanings.

Column I Column II

Pitch (A) distance between centres of adjoining rivets in the same row (P)

Margin (B) distance between an edge of the plate and the nearest rivet-hole (Q)

Lap joint (C) plates to be connected overlap each other (R)

Row pitch (D) distance between the rows of rivets (S)

- A. A-S, B-R, C-Q, D-P
- B. A-P, B-R, C-Q, D-S
- C. A-S, B-Q, C-R, D-P
- D. A-S, B-P, C-Q, D-R

Q53 Part B (Millwright Maintenance Mechanic)

Which type of flame is suitable for cutting steel in oxy-fuel cutting?

- A. Neutral flame
- B. Oxidising flame
- C. Diffused flame
- D. Carburising flame

Q54 Part B (Millwright Maintenance Mechanic)

In general, a softer material will produce an indentation that is:

- A. larger and deeper
- B. smaller and shallower
- C. identical in all cases
- D. unpredictable

Q55 Part B (Millwright Maintenance Mechanic)

Why is it important for every person to follow safety procedures in the workplace?

- A. To increase overall production efficiency
- B. To minimise risks and avoid accidents
- C. To reduce operational costs significantly
- D. To limit the need for frequent supervision

Q56 Part B (Millwright Maintenance Mechanic)

In thread cutting, 'BSW' stands for _____.

- A. British Standard Whitworth
- B. British Standard Weight
- C. Bharath Standard Whitworth
- D. British Stationary Whitworth

Q57 Part B (Millwright Maintenance Mechanic)

When scraping a flat surface, what pattern is usually followed?

- A. Cross-hatch pattern
- B. Straight-line pattern
- C. Random pattern
- D. Circular pattern

Q58 Part B (Millwright Maintenance Mechanic)

A circuit consists of three resistors; 15 ohms, 10 ohms, and 20 ohms. The 15-ohm resistor is in series with the parallel combination of the 10-ohm and 20-ohm resistors. If a 24 V battery is applied across the circuit, what is the total current flowing through the circuit?

- A. 3.1 A
- B. 0.1 A
- C. 1.1 A
- D. 2.1 A



Q59 Part B (Millwright Maintenance Mechanic)

For holding cylindrical workpieces in a shaper machine, which device is used?

- A. Dividing head
- B. Machine vise
- C. Magnetic chuck
- D. V-block with clamps



Q60 Part B (Millwright Maintenance Mechanic)

Non-functional dimensions are _____.

- A. not essential for the function of the space or component
- B. essential for the function of the space or component
- C. derived from the values of the related features of a drawing
- D. directly derived from the values given on a drawing



Q61 Part B (Millwright Maintenance Mechanic)

Gaskets, seals and spacers are made using:

- A. centre punch
- B. hollow punch
- C. pin punch
- D. prick punch



Q62 Part B (Millwright Maintenance Mechanic)

When the size of the shaft or male part of a job is more than hole or female part, the difference between the two will be known as _____.

- A. positive allowance
- B. either positive or negative allowance
- C. neither positive nor negative allowance
- D. negative allowance



Q63 Part B (Millwright Maintenance Mechanic)

If a quenched hand tool shows cracks after cooling, what is the most likely reason?

- A. Internal stresses developed due to rapid cooling.
- B. The tempering process was repeated too many times.
- C. The quenching medium used to cool was too cold.
- D. The tool was cooled too slowly after quenching.



Q64 Part B (Millwright Maintenance Mechanic)

Which of the following types of thread is usually found on the machine spindle?

- A. Square thread
- B. Buttress thread
- C. Unified standard thread
- D. Knuckle thread



Q65 Part B (Millwright Maintenance Mechanic)

Toughness is the ability of a material to:

- A. resist elastic deformation
- B. resist scratches and indentation
- C. undergo plastic deformation without failure
- D. absorb energy before fracture



Q66 Part B (Millwright Maintenance Mechanic)

When selecting a sheet size for an original drawing, what should be the primary consideration?

- A. The standard size of the drawing office.
- B. The clarity and resolution required.
- C. The orientation of the drawing (horizontal or vertical).
- D. The size of the reproduction.



Q67 Part B (Millwright Maintenance Mechanic)

Which of the following is a key characteristic of a low-pressure blowpipe/torch in welding?

- A. It requires an external pump to supply acetylene gas.
- B. It directly mixes acetylene and oxygen in equal proportions.
- C. It operates only with high-pressure acetylene cylinders.
- D. It uses high-pressure oxygen to create a vacuum for acetylene suction.



Q68 Part B (Millwright Maintenance Mechanic)

When measuring the resistance of a resistor using an ohmmeter, what does a reading of zero resistance indicate?

- A. The resistor is functioning normally.
- B. The resistor is open-circuited.
- C. The resistor is short-circuited.
- D. The ohmmeter is malfunctioning.



Q69 Part B (Millwright Maintenance Mechanic)

In a velocity-time graph, the negative slope represents _____.

A. retardation



B. displacement

C. acceleration

D. distance

Q70 Part B (Millwright Maintenance Mechanic)

Which of the following files is used for filing narrow grooves and angles above 10°?

A. Knife-edge file



B. Half round file

C. Square file

D. Triangular file

Q71 Part B (Millwright Maintenance Mechanic)

Threading is an operation of cutting _____ on the external cylindrical surface of the job.

A. rectangular grooves

B. helical grooves



C. circular grooves

D. v-shaped grooves

Q72 Part B (Millwright Maintenance Mechanic)

$$\left(\frac{3}{8}\right) + \left(\frac{5}{12}\right)$$

A. $\frac{17}{24}$

B. $\frac{19}{24}$

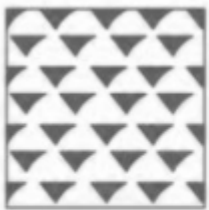


C. $\frac{8}{20}$

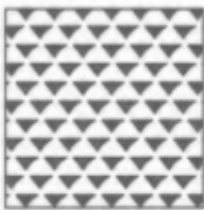
D. $\frac{7}{12}$

Q73 Part B (Millwright Maintenance Mechanic)

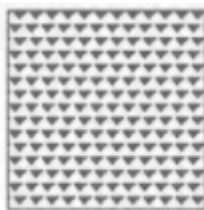
Identify the rough file grade from the figures given below.



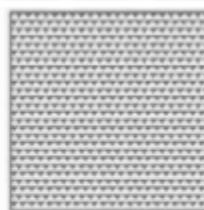
(a)



(b)



(c)



(d)

A. (b)

B. (d)

C. (c)

D. (a)



Q74 Part B (Millwright Maintenance Mechanic)

$\cos \theta$

A. $\frac{3}{5}$

B. $\frac{4}{5}$

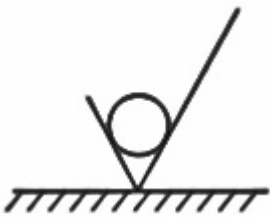
C. $\frac{5}{4}$

D. $\frac{3}{4}$



Q75 Part B (Millwright Maintenance Mechanic)

What does the given surface finish symbol represent?



A. Machining must be performed to remove material.

B. Special machining characteristics must be specified.

C. Material removal is not allowed on this surface.

D. The surface should be finished using grinding only.



Part B (Millwright Maintenance Mechanic)

75 Questions • Answer Key

Q1 Part B (Millwright Maintenance Mechanic)

A material with high toughness must have:

- A. low strength and low ductility
- B. high strength and high ductility ✓
- C. high strength and low ductility
- D. high ductility and low strength

Q2 Part B (Millwright Maintenance Mechanic)

A file that is flat on one side and curved on the other side is known as a ____ file.

- A. half-round ✓
- B. triangular
- C. rectangular
- D. square

Q3 Part B (Millwright Maintenance Mechanic)

Which of the following statements about slip gauges is true?

- A. Slip gauges do not require calibration.
- B. Slip gauges are used only for rough measurements.
- C. Slip gauges are flexible and can bend easily.
- D. Slip gauges are used for setting measuring instruments. ✓

Q4 Part B (Millwright Maintenance Mechanic)

Which of the following soldering methods is most commonly used for joining non-ferrous metals in plumbing applications?

- A. Hard soldering
- B. Soft soldering ✓
- C. Silver soldering
- D. Laser soldering

Q5 Part B (Millwright Maintenance Mechanic)

The SI unit of temperature is/are ____.

- A. both kelvin and celsius
- B. celsius
- C. kelvin ✓
- D. fahrenheit

Q6 Part B (Millwright Maintenance Mechanic)

What is the minimum age for employment in factories or mines or other hazardous employment, according to Article 24 of the Indian Constitution?

- A. 14 years ✓
- B. 12 years
- C. 16 years
- D. 18 years

Q7 Part B (Millwright Maintenance Mechanic)

In internal cylindrical grinding, why is a small grinding wheel used?

- A. To fit inside small bores ✓
- B. To reduce material removal
- C. To increase vibration
- D. To produce a rough surface

Q8 Part B (Millwright Maintenance Mechanic)

In a logic circuit, two inputs A and B are applied to an AND gate, and the output of the AND gate is connected to the input of a NOT gate. If the inputs A and B are both at logic 0, what will be the output of the entire circuit?

- A. Undefined
- B. 0
- C. 1 ✓
- D. 2

Q9 Part B (Millwright Maintenance Mechanic)

Which of the following information is necessary to construct a rectangle?

- A. Length of two adjacent sides ✓
- B. Length of one side and the area of the rectangle
- C. Only the length of one side
- D. Only the length of the diagonal



Q10 Part B (Millwright Maintenance Mechanic)

Which of the following statements is INCORRECT about end standard?

- A. It measures the distance between two parallel flat surfaces.
- B. Faces are subject to wear.
- C. It is slower but more accurate.
- D. It is used to measure the distance between two engraved lines. ✓

Q11 Part B (Millwright Maintenance Mechanic)

Which part of the shaping tool is sharpened during grinding?

- A. Cutting edge ✓
- B. Worktable
- C. Tool handle
- D. Machine bed

Q12 Part B (Millwright Maintenance Mechanic)

The wave set of hacksaw teeth set has a pitch of _____.

- A. 2.0 mm
- B. 0.5 mm
- C. 0.8 mm ✓
- D. 1.0 mm

Q13 Part B (Millwright Maintenance Mechanic)

Tapering of a small part of a job at its edge or corner is known as _____.

- A. knurling
- B. chamfering ✓
- C. step turning
- D. facing

Q14 Part B (Millwright Maintenance Mechanic)

How can burrs be removed after cutting a pipe?

- A. By hitting the pipe with a hammer
- B. By applying oil to the cut section
- C. By heating the pipe end to melt it
- D. By using a file or deburring tool ✓

Q15 Part B (Millwright Maintenance Mechanic)

As we know from the graduation of micrometer, if we give one full round to thimble, its spindle moves $\frac{1}{2}$ mm forward or backward. Therefore, one part of the thimble is its _____.

- A. Pitch
- B. Least count ✓
- C. MSR
- D. Lead

Q16 Part B (Millwright Maintenance Mechanic)

Which of the following metals has the lowest melting point?

- A. Mercury ✓
- B. Iron
- C. Lead
- D. Gold

Q17 Part B (Millwright Maintenance Mechanic)

Which type of line is used to represent hidden edges or surfaces in a technical drawing, as per BIS SP 46-2003?

- A. Continuous thin line
- B. Continuous thick line
- C. Dashed thin line ✓
- D. Chain thin line

Q18 Part B (Millwright Maintenance Mechanic)

Find the lateral surface area of a cube with side length 5 cm.

- A. 125 cm²
- B. 150 cm²
- C. 200 cm²
- D. 100 cm² ✓

Q19 Part B (Millwright Maintenance Mechanic)

Fine-toothed blades are better suited for:

- A. infrequent use
- B. cutting metals ✓
- C. experts due to their durability and flexibility
- D. cutting wood and plastic



Q20 Part B (Millwright Maintenance Mechanic)

Which factor affects the precision of a hole made using a hollow punch?

- A. The type of hammer used
- B. The colour of the leather
- C. The sharpness of the punch
- D. The temperature of the punch

Q21 Part B (Millwright Maintenance Mechanic)

_____ must be ascribed for the sake of convenience and is the size of a part in relation to which all limits of variation are determined.

- A. Actual size
- B. Nominal size
- C. Basic size or zero size
- D. Basic size alone

Q22 Part B (Millwright Maintenance Mechanic)

Which of the following defects can occur during the bending of hot bars in forging?

- A. Laps and folds
- B. Recrystallisation
- C. Cold shuts
- D. Surface hardening

Q23 Part B (Millwright Maintenance Mechanic)

Why is 'soaking time' important in the heating process for forging?

- A. To cool the metal faster after the forging operation
- B. To reduce grain size of the internal structure
- C. To prevent oxidation of the workpiece surface
- D. To ensure uniform heating throughout the section

Q24 Part B (Millwright Maintenance Mechanic)

What factor determines the depth of cut in power scraping?

- A. The type of lubricant used
- B. Blade speed and angle
- C. The weight of the machine
- D. The shape of the workpiece

Q25 Part B (Millwright Maintenance Mechanic)

Which of the following calipers are used for marking lines, parallel to inside and outside edges and for locating the centre of round bars?

- A. Spring joint calipers
- B. Leg and point calipers
- C. Simple calipers
- D. Firm joint calipers

Q26 Part B (Millwright Maintenance Mechanic)

If a welding machine's cooling fan stops working, which of the following should NOT be done?

- A. Inspect for any debris obstructing the fan blades
- B. Check the power supply to the fan
- C. Measure the fan motor voltage and replace it if faulty
- D. Lubricate the fan motor and restart the machine

Q27 Part B (Millwright Maintenance Mechanic)

Which type of milling machine is best suited for angular milling?

- A. Fly cutter
- B. Angle milling cutter
- C. Plain milling cutter
- D. Face mill

Q28 Part B (Millwright Maintenance Mechanic)

Convert 8.5% into a decimal.

- A. 0.85
- B. 8.5
- C. 0.085
- D. 85

Q29 Part B (Millwright Maintenance Mechanic)

Which type of scraper is most suitable for scraping dovetail slideways?

- A. Three-cornered scraper
- B. Half-round scraper
- C. Hook scraper
- D. Flat scraper



Q30 Part B (Millwright Maintenance Mechanic)

Which of the following 'V' blocks will have one 'V' groove and two grooves (slots) on either side for clamping in two positions?

- A. Double level single groove 'V' block
- B. Matched pair 'V' block
- C. Single level double groove 'V' block ✓
- D. Single level single groove 'V' block

Q31 Part B (Millwright Maintenance Mechanic)

_____ is a type of turning where a workpiece is turned into a sequence of steps with varying diameters.

- A. Knurling
- B. Step turning ✓
- C. Chamfering
- D. Facing

Q32 Part B (Millwright Maintenance Mechanic)

A 100-mm prick punch with a 7-mm diameter body could have a 2.5-mm diameter point ground to an angle of _____.

- A. 90°
- B. 30° ✓
- C. 120°
- D. 45°

Q33 Part B (Millwright Maintenance Mechanic)

Which property is the most important for materials used in automobile crash zones?

- A. High hardness
- B. High stiffness
- C. High brittleness
- D. High toughness ✓

Q34 Part B (Millwright Maintenance Mechanic)

Which of the following correctly differentiates a cutting blowpipe/torch from a welding blowpipe/torch?

- A. A cutting blowpipe has 3 control valves, while a welding blowpipe has 1.
- B. A cutting blowpipe has 2 control valves and 1 lever, while a welding blowpipe has 2 control valves. ✓
- C. A cutting blowpipe has 2 levers, while a welding blowpipe has 1 lever.
- D. A cutting blowpipe has 1 control valve, while a welding blowpipe has 2 control valves.

Q35 Part B (Millwright Maintenance Mechanic)

Which of the following is NOT a part of the micrometer?

- A. Spindle
- B. Anvil
- C. Jam ✓
- D. Frame

Q36 Part B (Millwright Maintenance Mechanic)

In gear cutting, backlash refers to:

- A. the gap between indexing plate holes
- B. the play between mating gear teeth ✓
- C. the clearance between cutter and workpiece
- D. the difference in speed between cutter and workpiece

Q37 Part B (Millwright Maintenance Mechanic)

When used for fits between shaft and hole, _____ is specified or both shaft and hole.

- A. the shaft size is more than the hole size
- B. the same basic size ✓
- C. the hole size is more than the shaft size
- D. different size

Q38 Part B (Millwright Maintenance Mechanic)

What is the unit of measurement used for thread pitch in the metric system?

- A. Newtons
- B. Degrees
- C. Threads per inch (TPI)
- D. Millimetres (mm) ✓

Q39 Part B (Millwright Maintenance Mechanic)

Who is authorised to conduct road tests on workshop vehicles?

- A. Only trained and certified personnel ✓
- B. Visitors to the workshop
- C. Any employee
- D. The company accountant



Q40 Part B (Millwright Maintenance Mechanic)

When creating 10 mm single-stroke capital letters in vertical style, what does the 10 mm distance between horizontal parallel lines represent?

- A. Letter width
- B. Letter height** ✓
- C. Stroke thickness
- D. Interline spacing

Q41 Part B (Millwright Maintenance Mechanic)

Wrong setting of machine, wrong use of a tool, defect in measuring tools, defective metal, and carelessness of the mechanic have no effect in the utility of the part. This is an advantage of ____.

- A. deviation
- B. tolerance
- C. limit
- D. interchangeability** ✓

Q42 Part B (Millwright Maintenance Mechanic)

During a lathe operation, the influence of machining allowance on the total depth of cut taken is that:

- A. it directly determines the feed rate corresponding to the speed
- B. it has no influence on the depth of cut
- C. it directly determines the depth of cut in each pass
- D. it sets the total material to be removed, which is then divided into multiple cuts** ✓

Q43 Part B (Millwright Maintenance Mechanic)

Match the following types of lines with their correct descriptions according to their orientation and characteristics.

Description	Type of Line
A. A line that is neither parallel to a horizontal plane nor perpendicular to it.	1. Horizontal line
B. A line that is perpendicular to horizontal lines.	2. Vertical line
C. A line that changes its direction continuously.	3. Inclined line
D. A line that is parallel to a horizontal plane.	4. Curved line

- A. A - 1, B - 2, C - 3, D - 4
- B. A - 2, B - 3, C - 4, D - 1
- C. A - 3, B - 2, C - 4, D - 1** ✓
- D. A - 2, B - 1, C - 4, D - 3

Q44 Part B (Millwright Maintenance Mechanic)

Which of the following is the primary reason why copper is widely used as a conductor in electrical wiring?

- A. Copper has low resistance and high conductivity.** ✓
- B. Copper has a low melting point.
- C. Copper is abundant and inexpensive.
- D. Copper has high resistance to electricity.

Q45 Part B (Millwright Maintenance Mechanic)

Which of the following colours is commonly used for caution signs?

- A. Blue
- B. Yellow** ✓
- C. Red
- D. Green



Q46 Part B (Millwright Maintenance Mechanic)

_____ are the greatest option for experts due to their durability and flexibility.

- A. Coarse-toothed blades
- B. Bi-metal blades** ✓
- C. Fine-toothed blades
- D. High-carbon steel blades

Q47 Part B (Millwright Maintenance Mechanic)

For your safety at work, which of the following should be ensured?

1. All the required protective clothing and equipment are used.
2. Training and instruction necessary for performing tasks safely have been received.

- A. Only statement 1
- B. Neither statement 1 nor 2
- C. Only statement 2
- D. Both statements 1 and 2** ✓

Q48 Part B (Millwright Maintenance Mechanic)

Why is a Vernier height gauge preferred over a simple steel rule for height measurement?

- A. It does not require a surface plate.
- B. It provides more precise measurements.** ✓
- C. It is comparatively more portable.
- D. It is cheaper than steel rule.

Q49 Part B (Millwright Maintenance Mechanic)

Which factor(s) influence(s) the uniformity of twisting in forging?

- A. Types of tongs used in forging operations
- B. Hardness of the anvil
- C. Bar cross-section and heating temperature** ✓
- D. Frequency of cooling cycles

Q50 Part B (Millwright Maintenance Mechanic)

A voltmeter with a resistance of 10,000 ohms is connected across a circuit that has a voltage of 50 V. What is the current flowing through the voltmeter?

- A. 2 mA
- B. 1 mA
- C. 5 mA** ✓
- D. 4 mA

Q51 Part B (Millwright Maintenance Mechanic)

Which of the following statements is NOT correct for using scribers?

- A. Scribe points are very sharp, so they are to be handled very carefully.
- B. While scribing lines, the scribe is used like a pencil.
- C. Do not put the scribe in your pocket.
- D. Place a cork on the point when in use to prevent accidents.** ✓

Q52 Part B (Millwright Maintenance Mechanic)

Which of the following statements about title block is/are true?

Statement 1: The title block is situated in the bottom right-hand corner of the drawing sheet.
Statement 2: The contents of the title block are standardised and cannot be modified to suit individual company needs.

- A. Both statements are false
- B. Statement 1 is false, but statement 2 is true
- C. Statement 1 is true, but statement 2 is false** ✓
- D. Both statements are true

Q53 Part B (Millwright Maintenance Mechanic)

In a series circuit, three resistors of 10 ohms, 20 ohms, and R ohms are connected in series with a 12 V battery. What is the value of resistance R if current flowing in the circuit is 0.2 A?

- A. 10 ohms
- B. 20 ohms
- C. 30 ohms** ✓
- D. 40 ohms

Q54 Part B (Millwright Maintenance Mechanic)

Which of the following types of chisels is used for separating metals after chain drilling?

- A. Cross-cut chisel
- B. Flat chisel
- C. Web chisel** ✓
- D. Diamond point chisel



Q55 Part B (Millwright Maintenance Mechanic)

If the length of a resistor is doubled, what happens to its resistance, assuming all other factors remain constant?

A. The resistance is doubled. ✓

B. The resistance remains the same.

C. The resistance is halved.

D. The resistance quadruples.

Q56 Part B (Millwright Maintenance Mechanic)

The type of feed primarily used for grooving operations on a lathe is ____ feed.

A. cross ✓

B. angular

C. rotary

D. longitudinal

Q57 Part B (Millwright Maintenance Mechanic)

On what basis is a joint said to be double-riveted lap joint or triple riveted lap joint?

A. Based on number of rows of rivets in joint ✓

B. Based on strength of joint

C. Based on type of joint

D. Based on number of columns of rivets in joint

Q58 Part B (Millwright Maintenance Mechanic)

In oxy-acetylene welding, what happens if the oxygen pressure is too high compared to acetylene?

A. The flame temperature decreases.

B. The flame becomes carburising.

C. The weld joint becomes brittle due to excess carbon.

D. The flame becomes oxidising. ✓

Q59 Part B (Millwright Maintenance Mechanic)

What is the typical temperature range of a mercury-based clinical thermometer?

A. 0°C to 100°C

B. 35°C to 42°C ✓

C. 0°C to 50°C

D. -10°C to 110°C

Q60 Part B (Millwright Maintenance Mechanic)

In an ISO system of Limits and Fits (ISO:286-1:1998), the tolerance size is designated as:

A. basic value followed by a letter

B. basic value followed by a number

C. basic value alone

D. basic value followed by symbol composed of a letter and number ✓

Q61 Part B (Millwright Maintenance Mechanic)

During the turning operation on lathe, if D is the initial diameter and d is the final diameter of the work piece, the depth of cut, t, is calculated by ____.

A. $t = D - d$

B. $t = (D - d) / 2$ ✓

C. $t = (D + d) / 2$

D. $t = D / d$

Q62 Part B (Millwright Maintenance Mechanic)

What is the purpose of a ground clamp in welding?

A. To clean the welding surface

B. To hold the workpiece in place

C. To complete the electrical circuit ✓

D. To cool down the electrode

Q63 Part B (Millwright Maintenance Mechanic)

Which of the following terms in the 5S concept refers to making a habit of maintaining the established procedures?

A. Shine

B. Set

C. Sort

D. Sustain ✓

Q64 Part B (Millwright Maintenance Mechanic)

If the basic size of the diameter of a shaft is 80 mm and the variation limit of ± 0.07 mm is given, then its high limit and low limit are ____ and ____.

A. 79.93, 80.07

B. 80.07, 79.93 ✓

C. 80.00, 79.93

D. 79.00, 80.07



Q65 Part B (Millwright Maintenance Mechanic)

When passing stationary vehicles, keep a watch on _____ who may come out suddenly from the front of the stationary vehicle. While overtaking, it should be done on the _____ side. Always keep a good _____ between your vehicle and others.

A. cyclists; left; interval

B. vehicles; right; gap

C. drivers; left; space

D. pedestrians; right; distance



Q66 Part B (Millwright Maintenance Mechanic)

As we know from the graduation of micrometer, if we give one full round to thimble, its spindle moves $\frac{1}{2}$ mm forward or backward. A buck part can be divided into 0 to 50 parts. The least count of the micrometer is ____ mm.

A. 0.05

B. 0.10

C. 0.01



D. 0.50

Q67 Part B (Millwright Maintenance Mechanic)

Which of the following best describes the application of Atomic Hydrogen Welding (AHW)?

A. It generates a lower temperature arc than other arc welding processes.

B. It is commonly used over modern welding methods due to its efficiency.

C. It is used for all ferrous and non-ferrous metals with a high-temperature arc.



D. It is mainly preferred for low-temperature welding of soft metals.

Q68 Part B (Millwright Maintenance Mechanic)

What is the SI unit of 'volume'?

A. Litres

B. Cubic centimetre

C. Cubic metre



D. Millilitres

Q69 Part B (Millwright Maintenance Mechanic)

Select the correct representation as Tolerance size for a hole from the given options.

A. 50H8- c7

B. 50 H8/g7

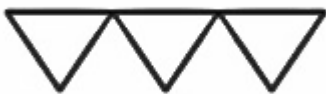
C. 50H8



D. 50g7

Q70 Part B (Millwright Maintenance Mechanic)

Observe the given roughness grade symbol and identify the corresponding roughness grade number whose corresponding roughness value is $0.2 \mu\text{m}$.



A. N1

B. N3

C. N4



D. N2



Q71 Part B (Millwright Maintenance Mechanic)

Identify the below tool used on the Lathe.



A. Threading tool



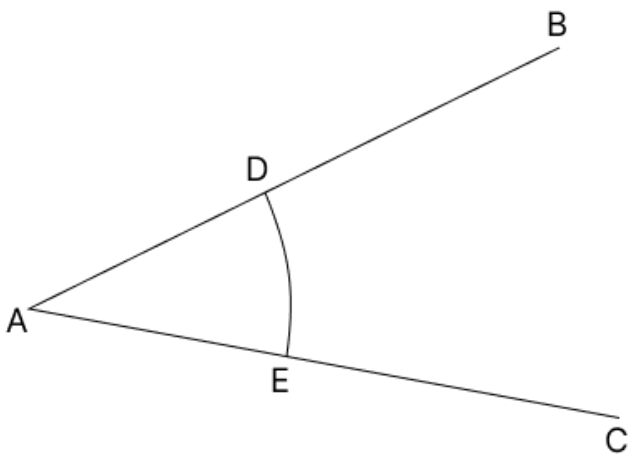
B. Knurling tool

C. Parting tool

D. Boring tool

Q72 Part B (Millwright Maintenance Mechanic)

In the process of bisecting angle BAC in the given figure, why do we draw arcs from points D and E?



A. To find midpoint AB

B. To mark equal lengths

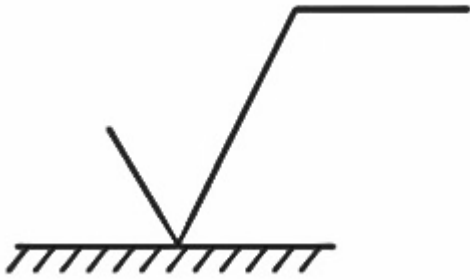
C. To intersect line AC

D. To intersect above A



Q73 Part B (Millwright Maintenance Mechanic)

What does the surface finish symbol shown in the given figure represent?



- A. A specific surface texture requirement is indicated. ✓
- B. The surface must be left in its cast or forged state.
- C. The surface should be coated without material removal.
- D. No machining is required on this surface.

Q74 Part B (Millwright Maintenance Mechanic)

Match the following.

(A)	Threading tool	(P)	
(B)	Profile tool	(Q)	
(C)	Facing tool	(R)	
(D)	Knurling tool	(S)	

- A. A - S, B - R, C - Q, D - P ✓
- B. A - P, B - R, C - Q, D - S
- C. A - S, B - Q, C - R, D - P
- D. A - S, B - R, C - P, D - Q

Q75 Part B (Millwright Maintenance Mechanic)

In a Full Lap joint, diagonal pitch is given by _____, where p_d - diagonal pitch, p - pitch, d - diameter of rivets

- A. $p_d = \frac{(2p + d)}{3}$ ✓
- B. $p_d = \frac{(2p + 6d)}{4}$
- C. $p_d = \frac{(2p \times d)}{3}$
- D. $p_d = \frac{(2p - d)}{3}$

