

Engineering Questions by Topic

Ordinary Level

Question 1

Section B

Short Questions

35 Marks



1996 Question 1 Section B

- (i) Describe the function and operation of any one of the following:
 - (i) Three-two port valve;
 - (ii) Electric soldering iron;
 - (iii) Thread gauge.
- (j) Explain any two of the computing terms; software, CAD, VDU, hard disk.
- (k) Explain the function of a capacitor in an electrical circuit.
- (l) Explain any two of the terms: wire gauge, semi-conductor, compressor, reamer, AND gate.



1997 Question 1 Section B

Answer any three of the following:

- (i) Describe the function and operation of any one of the following:
 - (i) Plastics dip coating tank;
 - (ii) Morse taper sleeve;
 - (iii) Electrical solenoid.
- (j) Explain any two of the computing terms; CD-ROM, Plotter, INTERNET, Input Device.
- (k) Name the gears shown and give an application for their use.



- (l) Explain any two of the terms: Matrix board, Blind hole, Mottling, Torsion.
- (m) Name the gauge shown and explain its function.





1998 Question 1 Section B

Answer any three of the following:

- (i) Describe the function and operation of any one of the following:
(i) Electronic relay (ii) Feeler gauge (iii) Pneumatic shuttle valve.
- (j) Explain any two of the computing terms:
Modem, Plotter, Scanner, Inkjet Printer, Laptop.
- (k) Define **interference** as used in a system of limits and fits.
- (l) Explain any two of the terms:
Gap Gauge, Voltmeter, Extrusion, Diode.
- (m) Name the lathe attachment shown and give an application for its use.

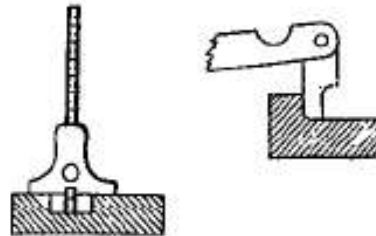




1999 Question 1 Section B

Answer any three of the following:

- (i) Describe the function and operation of any one of the following:
Multimeter; Strip Heater; Solar Panel.
- (j) Explain any two of the computing terms:
CPU, e-mail, Output Device, ROM.
- (k) Define *transition* as used in a system of limits and fits.
- (l) Explain any two of the terms: Brittleness; Magnetic Switch; Conductor; Compressor.
- (m) Name the two gauges shown:



2000 Question 1 Section B

Answer **any three** of the following:

(i) Describe the function and operation of **any one** of the following:

(i) Electric soldering iron; (ii) Plastics dip coating tank; (iii) Thermistor.

(j) Explain **any two** of the computing terms:

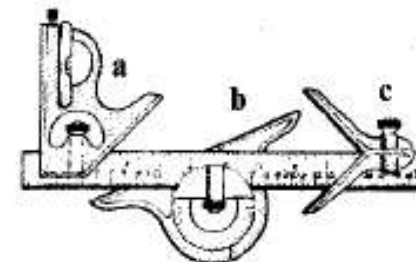
Browser, Icon, Graphics, Software, Off-Line.

(k) What is meant by the term Computer Numerical Control (CNC)?

(l) Explain **any two** of the terms:

Ductility, Insulator, Resistor, Pitch.

(m) Name the gauge shown and give an application for (a), (b), (c).





2001 Question 1 Section B

Answer any three of the following:

- (i) Describe the function and operation of any one of the following:
Bicycle dynamo; Electric soldering iron; Plotter.
- (j) Explain any two of the computing terms:
byte; downloading; icon; input device.
- (k) Define elasticity in relation to the properties of metals.
- (l) Explain any two of the terms:
Polymer; Insulator; Computer Numerical Control (CNC).
- (m) Name the mechanism shown and explain the type of motion it produces.

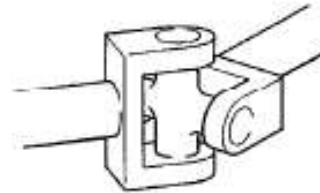




2002 Question 1 Section B

Answer **any three** of the following:

- (i) Describe the function and operation of **any one** of the following:
Multimeter; Scanner; Light Dependent Resistor (LDR).
- (j) Explain **any two** of the computer terms:
WWW, Computer Control, ROM, Desk Top Publishing.
- (k) Explain the function and operation of the device shown.



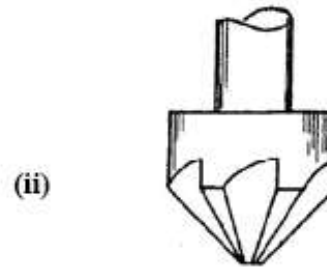
- (l) Name a manufacturing process where the terms *charging bell* and *tuyere* are used.
- (m) Give an example of the application of a rack and pinion mechanism.



2003 Question 1 Section B

Answer **any three** of the following:

- (i) Describe the function and operation of **any one** of the following:
Feeler gauge, Single acting pneumatic cylinder, Light Dependent Resistor (LDR).
- (j) Explain **any two** of the computing terms:
CD-ROM, Graphics Card, Software, Formatting.
- (k) Define ductility in relation to the properties of metals and give **one** example of a ductile metal.
- (l) Explain **any two** of the terms:
Knurling, Enamelling, Conductor, Reaming.
- (m) Name the two cutting tools shown:





2004 Question 1 Section B

Answer any three of the following:

- (i) Describe the function and operation of any one of the following:

Scanner; Reamer; Bevel gauge.

- (j) Explain any two of the computing terms:

Output device; Downloading; Computer Control; Firewall.

- (k) Define malleability in relation to the properties of metals and give one example of a malleable metal.

- (l) Explain any two of the terms:

Engraving; Stepper motor; Dip coating; Bimetal strip.

- (m) Name the two drive systems shown.



2005 Question 1 Section B

Answer any three of the following:

(i) Describe the function and operation of any one of the following:

Variable resistor, Strip Heater, Thermostat.

(j) Explain any two of the computing terms:

DVD, Desktop, Broadband, CPU.

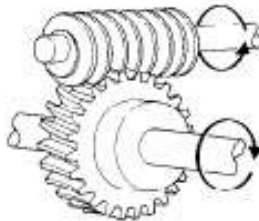
(k) Describe the main reasons for alloying and give one example of a metal alloy.

(l) Explain any two of the terms:

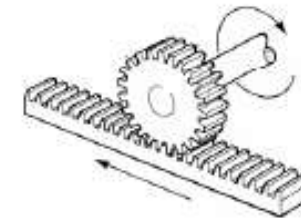
Self-locking nut, Light Dependent Resistor (LDR), Gearbox, Countersink drill.

(m) Name the two gear systems shown:

(i)



(ii)



2006 Question 1 Section B

Answer **any three** of the following:

- (i) Describe the function and operation of **any one** of the following:

Plastic dip coating tank, Morse taper sleeve, Vee blocks and clamp.

- (j) Explain **any two** of the computing terms:

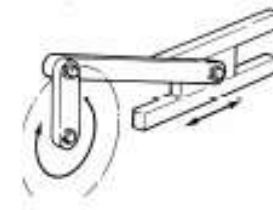
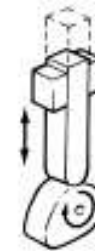
Virus, Computer network, Hard disk, USB port.

- (k) Describe the difference between a compressive force and a tensile force.

- (l) Explain **any two** of the terms:

Fuse, Surface plate, Voltmeter, Pop rivet.

- (m) Name **one** of the mechanisms shown.





2007 Question 1 Section B

Answer **any three** of the following:

- (i) Describe the function and operation of **any one** of the following:

Surface Plate, Tailstock, Strip Heater.

- (j) Explain **any two** of the computing terms:

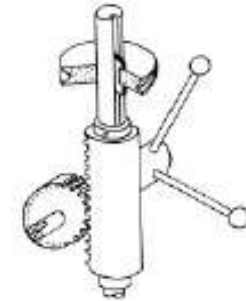
Software, Memory stick, CDRW, Computer simulation.

- (k) Define conductivity in relation to the properties of metals and give **one** example of a good conductor.

- (l) Explain **any two** of the terms:

Chuck guard, Engraving, Depth gauge, Hand vice.

- (m) Identify the mechanism shown and describe its operation.

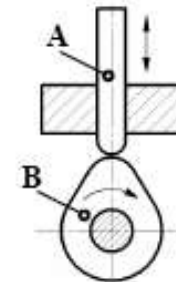




2008 Question 1 Section B

Answer **any three** of the following:

- (i) Describe the function and operation of **any one** of the following:
Four-jaw independent chuck, Ratchet and pawl mechanism, Feeler gauge.
- (j) Explain **any two** of the computing terms:
Network, Memory stick, Scanner, DVD.
- (k) Define tensile strength in relation to the properties of metals and give **one** application where a metal needs to be strong in tension.
- (l) Explain **any two** of the terms:
Pulley drive, Printed circuit board (PCB), Worm gear, Plug gauge.
- (m) Name the mechanism shown and identify **any one** of the parts labelled A and B.





2009 Question 1 Section B

Answer any three of the following:

- (i) Describe the function and operation of any one of the following:

Electric soldering iron, Rack and pinion, Plastic dip coating tank.

- (j) Explain any two of the computing terms:

Hardware, Browser, Virus, CPU.

- (k) Describe, with the aid of a diagram, the difference between a *compressive force* and a *tensile force*.

- (l) Explain any two of the terms:

Self-locking nut, Electrical insulator, Bevel gear, Cam and follower.

- (m) Name the drive system shown and give a suitable application.





2010 Question 1 Section B

Answer any three of the following:

- (i) Describe the main operating features of **any one** of the following:

Strip heater,

Vernier height gauge,

Cam and follower.

- (j) Explain **any two** of the computing terms:

Network,

DVD-R,

External hard drive,

Broadband.

- (k) Define *compressive strength* in relation to the properties of metals and give **one** application where a metal needs to be strong in compression.

- (l) Explain **any two** of the following:

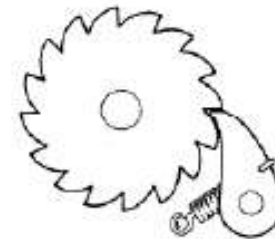
Worm and wheel drive,

Electrical fuse,

Morse taper sleeve,

Plastic dip coating.

- (m) Name the mechanism shown and explain how it operates.





2011 Question 1 Section B

Answer any three of the following:

- (i) Describe the main operating features of any one of the following:

Ratchet and pawl,

Micrometer,

Lathe tailstock.

- (j) Explain any two of the following in relation to computers:

Wireless connection,

USB key,

Graphics card,

Video conferencing.

- (k) Define *elasticity* in relation to the properties of metals and give one example of where the property of elasticity is required.

- (l) Explain any two of the following:

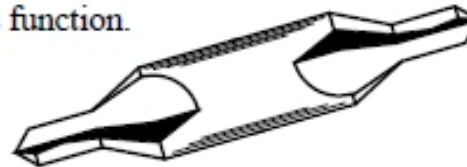
Engraving,

Printed circuit board (PCB),

Parting-off tool,

Lacquering.

- (m) Name the cutting tool shown and explain its function.





2012 Question 1 Section B

Answer **any three** of the following:

- (i) Describe the main operating features of **any one** of the following:

Four-jaw independent chuck, Plastic dip-coating tank, Sprocket and chain mechanism.

- (j) Explain **any two** of the following computer terms:

Webcam, Computer network, Search engine, Mobile application (app).

- (k) Define the term *tensile strength* in relation to the properties of materials and give **one** application where a material needs to be strong in tension.

- (l) Explain **any two** of the following:

Pulley drive system, Ratchet and pawl, Pop riveting, Enameling.

- (m) Name the cutting tool shown and explain its function.



2013 Question 1 Section B

Answer **any three** of the following:

- (i) Describe, with reference to the diagrams, the main operating features of **any one** of the following:



Strip heater



Worm and wheel mechanism



Box and pan folding machine.

- (j) Explain **any two** of the following:

Skype, VDU, Virus, Social networks.

- (k) Define the term *electrical conductivity* in relation to the properties of materials and name a material which is a good electrical conductor.

- (l) Explain **any two** of the following:

Variable resistor, Rack and pinion, Compressive force, Hand vice.

- (m) Identify the mechanism shown and suggest **one** suitable application for it.

