C.1.1.Single Sentence Definition

Steps for single sentence definition are as mentioned in Table 3.1.

Table 3.1 Single sentence definition.

Step I		Step II		Step III
thing to be defined	=	what is it /group to which the thing belongs/	+	specific details that separate it from other things in its group
Technology	is	the application(the study and use) of scientific knowledge	to	practical purpose.
Laboratory	is	a place	to	conduct experiments
Transformer	is	an electrical equipment	to	change (to step up or step down)the voltage of current.
Calculator	is	an electronic device	for	making arithmetical operations
Mortar	is	the mixture	of	cement, sand, bluemetal and water in the right proportion used for construction.

Following are a few examples for single sentence definition:

Dynamo: Dynamo is an instrument for generating electricity by transforming mechanical energy into electrical energy.

Icon: Icon is a small symbol on a computer screen representing a programme that a user may choose.

Airbag: Airbag is a safety device which will cause an air filled pillow to prevent one from hitting the dashboard.

Scanner: Scanner is a device which analyses an image and then captures and processes it so that it can be saved to a file on a computer.

Road roller: Road roller is a machine with heavy, wide smooth rollers used in road making to make the surface smooth.

Shock absorber: Shock absorber is an oil filled device used to control the movement of the springs in the suspension system.

Turbine: Turbine is an engine or motor in which the pressure of liquid or a gas turns a wheel, usually to produce energy.

Radar: Radar is a system for finding out the position and movement of solid objects, especially aircraft and ships, when they can not be seen, by sending out short radio waves which the objects reflect.

C.1.1 For Practice

Define the following terms in a sentence each.

Engineering

science

ballast

rheostat

cloning

word processor

seismograph

gobar gas

plant

compiler

machine code

Chamfer

kerf

C.2 Extended Definition

Sometimes definitions might be much longer than one sentence, in which case one is still trying to answer "what is it?" but will be using most other patterns to help answer it; and can be defined by describing, classifying, comparing, etc.

Laser Technology: Laser technology is a kind of modern technology using sophisticated equipments, involving high cost, designed and operated by highly skilled professionals used in various areas particularly in the medical

field to diagnose, operate and provide laser treatment to complicated and serious diseases.

Appropriate Technology: Appropriate technology is a kind of technology that is used within the resources available. It is otherwise called as low cost technology. For example, Gobar gas is produced using the local resource cow dung that is easily available. In practice, this technology uses the simplest form of technology to achieve the intended purpose in a suitable location (Fig. 3.3).

Fig. 3.3 Wind mill, an appropriate Technology

Nanotechnology: Nanotechnology is the study of the control of matter on an atomic and molecular scale. Generally nanotechnology deals with structures of the size 100 nanometers or smaller, and involves developing materials or devices within that size. Nanotechnology is very diverse, ranging from novel extensions of conventional device physics, to completely new approaches based upon molecular self-assembly, to developing new materials with dimensions on the nanoscale, even to speculation on whether we can directly control matter on the atomic scale.

Nanotechnology has the potential to create many new materials and devices with wide-ranging applications, such as in medicine, electronics, and energy production.

1. **Abacus** — frame with beads sliding back and forth on wires for doing arithmetic sums
2. **Accelerator** — a device for increasing speed, especially the pedal in a vehicle that controls the speed of the engine.
3. **Access time** — the time taken to obtain information stored in a computer.
4. **Accumulator** — a temporary storage device used in a microprocessor.
5. **Acid** — any of the class of substances containing hydrogen that can be replaced by a metal to form a salt. Acids are usually sour and can often destroy things they touch.
6. **Address bus** — a set of wires used to transmit the address.
7. **Aerodrome** — a small airport used mainly by private aircraft. (Refers to the physical facilities for the air base).
8. **Aerodynamics** — the science dealing with the forces acting on solid bodies, e.g. Aircraft or bullets moving through air.
9. **Aeronautics** — the scientific study or practice of constructing and flying aircraft.
10. **Air brake** — a brake, e.g. For a bus or train worked by air pressure (operated by the compressed air on a piston).
11. **Aircondition** — a system that cools and dries the air in a room or building. (A method of filtering air and regulating its humidity and temperature in a room or building)
12. **Airconditioner** — an air-conditioning machine that cools and dries the air in a room or building
13. **Aircraft** — any machine or structure that can fly in the air and carry goods or passengers
14. **Airport** — a large area where aircraft land and take off, usually with facilities for passengers and goods, and customs.
15. **Air pump** — a machine for removing or compressing air. (a device for pumping air into or out of something)
16. **Algorithm** — a set of rules or procedures that must be followed in solving a particular problem.
17. **Alloy** — a metal formed by a mixture of metals or of metal and another substance. eg. Brass is an alloy of copper and zinc.
18. **Ammeter** — it is an instrument to measure current.
19. **Amplifier** — a device for amplifying or increasing something, especially sounds or radio signals.
20. **Analog channel** — a communication plate used for transmitting and receiving continuously varying electrical signals.
21. **Angle** — the amount of distance between the directions of two lines or surfaces where they meet; a line, direction of movement, etc., considered in relation to the ground.

22. Anode	the positive terminal of a device.
23. Anvil	an iron block on which a blacksmith puts hot pieces of metal before hammering them into shape.
24. Antennae	an arrangement of wires, metal rods used in sending and receiving electromagnetic signals.
25. Assembly language	a low level programming language in which mnemonics are used to code operations and alphanumeric symbols for address.
26. Asynchronous communication	communication between units operating independently.
27. Atmosphere	the mixture of gases that surround the earth.
28. Audio cassette tape	a device to hear the recorded voice of a person, an instrument.
29. Auditorium	the part of a theatre, concert hall, etc., in which the audience sits.
30. Autorickshaw	a covered motor vehicle with three wheels, a driver's seat in front and a seat for passengers at the back.
31. Ballpen hammer	it is a tool consisting of a metal head and handle used for pounding.
32. Barometer	an instrument for measuring air pressure, used especially for forecasting the weather.
33. Batch operating system	a system programme facilitating execution of a series of user programmes without any manual intervention.
34. Bearing	a device that allows part of a machine to turn smoothly.
35. Biogas plant	the machinery, equipment, etc., for manufacturing gas from animal waste and used for commercial purposes or in homes.
36. Bit	a binary digit which is either 0 or 1; the most basic unit of information in a computer.
37. Boiler	a metal container in which water is heated, e.g., to produce steam in an engine.
38. Brake	a device for slowing or stopping a car, bicycle, train, etc.
39. Bridge	a structure of wood, iron, concrete, etc., built to provide a way across a river, road, railway, etc.
40. Bus	a set of wires carrying a group of bits in parallel and has an associated control scheme.
41. Byte	a group of eight bits used to represent characters.
42. Bulb	the glass part of an electric lamp that gives light.
43. Cache memory	a small high speed memory used to temporarily store portion of a programme for the main memory.
44. Calculator	a small electronic device for performing calculations with numbers.
45. Camera	an apparatus for taking photographs, moving pictures or television pictures.
46. Camcorder	a camera which records moving pictures and sound.
47. Capacitor	it is an energy storing device.
48. Carburettor	an apparatus in a petrol engine, especially in a motor vehicle, Petrol and air are mixed together in a carburettor to make the explosive gas which provides power.
49. Cassette	a case that contains a magnetic tape for use in a tape recorder.
50. Catalyst	a substance that makes a chemical reaction happen faster without changing itself.

51. **Cathode** — the negative terminal of a device.
52. **Chip** — a small piece of silicon in a computer, with electronic circuits for stor information or performing complicated logical operations.
53. **Circle** — a round space enclosed by a curved line, every point on the line being same distance from the centre.
54. **Circuit** — an apparatus through which an electric current flows.
55. **Code** — a system of words, letters, symbols, etc., that represent others, used secret messages or for presenting or recording information briefly.
56. **Compass** — a device for finding direction, with a needle that always points to the north.
57. **Compiler** — a system programme to translate a high level language programme machine language.
58. **Computer** — an electronic device for storing and analysing information fed into it calculating, or for controlling machinery automatically.
59. **Computer graphics** — concerned with picture generation, manipulation and display by a comp
60. **Computer programme** — a computer programme is a set of instructions which tells a computer to do.
61. **Computer virus** — a hidden code within a computer program intended to cause errors a destroy stored information.
62. **Concrete** — building material made by mixing cement with sand, small stones and water.
63. **Control unit** — it controls the operations of all the units of a computer.
64. **Cooker** — an appliance for cooking, consisting of an oven, a heating furnace a often also a grill. Most cookers use gas or electricity for producing
65. **Coolant** — a liquid that is used for cooling an engine, a nuclear reactor, etc.
66. **CPU** — Central Processing Unit. It is the heart of the computer that executes the instructions given to it.
67. **Cylinder** — the hollow part inside which the piston moves in an engine.
68. **Dam** — a barrier made of concrete, earth, etc., built across a river to hold back water and form a reservoir to prevent flooding, etc.
69. **Disk** — a circular plate on which data can be recorded in a form that can be used a computer.
70. **Distillation** — it is a process of separating more volatile substance from less volatile heating the mixture.
71. **Domestic pump** — A machine for forcing water from a well through a pipe.
72. **Dual purpose bicycle** — It is a bicycle serving two purposes. It can be used both as a vehicle transportation and as a prime mover.
73. **Earth** — a wire that provides a connection with the ground and completes an electrical circuit.
74. **An electric fuse** — (in an electrical circuit) a short piece of wire that melts and breaks the circuit if the current goes above a safe level.
75. **Electronics** — the branch of science and technology that deals with the behaviour electric currents in electronic equipment.
76. **Expedition** — an organised journey or voyage for a particular purpose especially scie research, exploration or war.
77. **Factory** — a building or group of buildings where goods are manufactured or assembled.

189. **Word Processor** — a computer that records typed words, diagrams etc., and displays them o a screen, where they can be corrected or changed and then automatically printed.

190. **Workshop** — a room or building in which machines etc., are made or repaired.

191. **Wrench** — a kind of spanner that can be adjusted to grip and turn nuts of different sizes.

IMPORTANT DEFINITIONS

1. **A dual purpose bicycle**

   A two-wheeler which is pedaled using muscular power and which can be used as a vehicle as well as a power source to operate pumps and lathes.

2. **A Handicap**

   (i) A thing that makes progress difficult, a disadvantage.

   (ii) A serious, usually permanent, physical or mental condition that affects one's ability to walk, see, speak, etc.

3. **A Robot** (also **Automaton**)

   A machine that can perform the actions of a person and which operates automatically or is controlled by a computer.

4. **Appropriate technology** (May 2002, April/May 2005)

   This is a kind of low cost technology of the intermediate type. The accent here is on the appropriateness of the technology used in relation to the cultural and geographical circumstances of people. It arises from the local needs and uses local resources, both human and material. Its benefits go to the local community. It is linked to the concept of social justice. Pedal powered rice-threshers and Gobar gas plants are very good examples of appropriate technology.

   Appropriate technology is that technology which is affordable within the resources available, is culturally acceptable and is environmentally harmless.

5. **Artificial Intelligence** (May/June 2005)

   It is the study of how to make computer do intelligent things that we think and make decisions.

6. **Blue tooth technology** (May/June 2005)

   Blue tooth technology allows electronic equipment to communicate by using radio,so that, a computer and printer can work together without having a wire connecting them.

7. **Communication cord** (May 2002)

   A cord that passes along the length of a train inside the coaches, which the passengers can pull to stop the train in case of emergency.

8. **Communication satellite**

   It is a satellite that transmits to a place or places on Earth, telephone messages or radio and television signals received from another part of the earth.

9. **Computer**

   An electronic device for storing and analysing information fed into it, for calculating or for controlling machinery automatically.

10. **Hardware (Computing)**

    The mechanical and electronic parts of a computer.

25. **Photocopier**

A machine used for making photocopies.

26. **Safety belt** (also **Seat belt**)

A belt attached to a seat in an aircraft, a car, etc., worn by a passenger to avoid being [illegible] occurs.

27. **Safety match**

A match that will only catch fire when rubbed against a special surface, e.g. the side of the box [illegible]

28. **Safety net**

(i) A net placed underneath acrobats, etc. to catch them if they should fall.

(ii) An arrangement that helps to prevent disaster if something goes wrong.

29. **Safety pin**

A pin with the point bent back towards the head and covered by a guard when closed.

(May 200

30. **Safety valve**

(i) A device that releases steam or pressure in a machine when it becomes too high.

(ii) A harmless way or releasing feelings of anger, annoyance, etc.

31. **Satellite**

(i) An electronic device that is sent into space and moves around a planet.

(ii) A natural body in space that moves around a larger body, especially a planet.

32. **Semi-Conductor**

A semi-conductoris a substance such as silicon, that allows some electric currents to pass through it, and is used in electronic equipment.

(May 2002, Apr./May 2005)

33. **Simple technology or Traditional technology**

This type of technology is primarily based on human labour. It involves the use of very few tools which are of the simplest variety. They cost next to nothing and are easy to operate. The use of a hoe for cultivation or weeding by a farmer is an example of simple technology.

34. **Software (Computing)**

The data, programmes, etc. used to operate a computer.

35. **Windmill**

(i) A mill that works due to the action of wind on long projecting arms (sails) that turn on a central shaft.

(ii) A similar tall thin structure used to convert the power of the wind to electricity.

Do it Yourself