

COMPETENCE BASED CURRICULUM JUNIOR SCHOOL GRADE 8 FORMATIVE ASSESSMENT PRE-TECHNICAL STUDIES

2 HOURS

MARKING SCHEME



1. Clearly define a computer

- A computer is an electronic device that operates (works) under the control of programs stored in its own memory unit
- An electronic device that accepts data, as input and transforms it under the influence of a set of special instructions called programs, to produce the desired output (referred to as information)

2. Give one reason why a computer is referred to as an electronic device

- It uses electrical signals to process data
- It is made up of electronic components and uses electric energy to operate

3. Explain the following terms as used in computer science

(i) Data

A collection of raw facts, figures or instructions that do not have much meaning to the user

(ii) Program

A computer program is a set of related instructions which specify how data is to be processed

A set of instructions used to guide a computer through a process

(iii) Data processing

It is the process of collecting all terms of data together & converting them into information

(iv) Information

Data which has been refined summarized & manipulated in the way you want it, or into a more meaningful form for decision- making

4. Identify the following computer components



Mouse



Keyboard



Monitor

5. Identify the following components contained in a computer case



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6. What are the functions of the motherboard

- a) The motherboard acts as the central backbone of a computer on which other modular parts are installed such as the CPU, RAM and hard disks.
- b) The motherboard also acts as the platform on which various expansion slots are available to install other devices / interfaces.
- c) The motherboard is also responsible to distribute power to the various components of the computer.
- d) They are also used in the coordination of the various devices in the computer and maintain an interface among them.

7. Name three buses of computer system

- a) Address bus
- b) Data bus
- c) Control bus

8. State any three functions of a computer

- a. Accepting data
- b. Processing the data
- c. Producing information

9. Explain the following input/ output terms as used in computer systems. Give an example for each

(a) Read - To transfer data from an input device to the computer, e.g. the computer reads data from a disk, a keyboard, etc

- To move or copy data from backing storage to the main Storage

(b) Write - To transfer information from the computer to an output Device e.g. the computer writes output on a printer or onto a disk.

- To move or copy data from the main storage to a backing storage

10.State four different parts that make up a computer (2 mks)

- a. System unit
- b. Monitor
- c. Keyboard
- d. Mouse
- e. Printer
- f. Modem
- g. Scanner
- h. Speakers
- i. Graph plotters

11. (a) Explain the term system Unit

This is the casing that houses the internal components of the computer such as the CPU and storage devices

(b) List four devices located under the cover of the system unit

- a. Central processing Unit (CPU)
- b. Motherboard
- c. Power supply unit
- d. Main memory
- e. Hard disk
- f. Disk drives
- g. Battery
- h. Buses
- i. Input/ output ports
- j. Video card

k. Expansion slots

(c) Give two differences between tower – style and desktop system units

- a. Tower style system unit is designed to stand alone or to be placed on the floor, desktop units lie on the desk with the monitor placed on top
- b. Tower style units have more space for expansion than the typical desktop units

12. Computers have evolved through a number of generations. List any 4 characteristics of the first generation of computers.

- a. Large in physical size
- b. Relied on thermionic valves (vacuum tubes) to process and store data
- c. Consumed a lot of power
- d. Produced a lot of heat
- e. The computers constantly broke down due to the excessive heat generated; hence were short- lived, and were not very reliable
- f. Their internal memory capacity/ size was low
- g. Processing speed was very slow
- h. Very costly
- i. Used magnetic drum memory

13. Briefly explain the classification of computer according to historical development (generations)

i. First generation computers

- a. Used vacuum tubes in their memory
- b. Large in physical size
- c. consumed a lot of power
- d. Produced a lot of heat
- e. The computers constantly broke down due to the excessive heat generated; hence were short- lived and were not very reliable
- f. Their internal memory capacity/ size was low
- g. Slow in processing data
- h. Very costly
- i. Used magnetic drum memories
- j. Cards were used to enter data into the computers

ii. Second generation computers

- a. Used transistors in their memory
- b. They consumed less power & produced less heat than the first generation computers
- c. They were relatively faster than the 1st generation computers
- d. Used magnetic core memories
- e. Were less costly than first generation computers
- f. RAM memory capacity was 32 KB

iii. Third Generation computers

- a. Used integrated circuits in their memory
- b. They were faster than second generation computers
- c. RAM memory capacity was 2 GB

- d. Slightly smaller in size than 1st & 2nd generation computers
- e. They used a wide range of peripheral devices
- f. Could support remote communication facilities/ more than one user at the same time
- g. Magnetic disks were introduced for storage purposes

iv. Fourth generation computers

- a) Used large scale integrated (LSI) circuits & very large scale integrated (VLSI) circuits in their memory
- b) They were small & very fast
- c) Had storage (memory) capacity
- d) Magnetic disks, bubble memories & optical disks were used for storage
- e) The first operating system was introduced

v. Fifth generation computers

- a. Are the modern computers
- b. Are designed/ constructed using parallel architectures, 3 –D circuit design & superconducting materials
- c. Are very powerful, with very high processing speeds
- d. The computers can perform multiprocessing
- e. Have virtually unlimited (very high) memory sizes
- f. Can support complex programs
- g. Use advanced hard disks and optical disks for storage, e.g. DVDs
- h. Use of zip disks
- i. Use of multi user operating systems & advanced application programs

14.State four factors used to classify computers

- a. Physical size & processing power
- b. Power
- c. Functionality (mode/ method of operation)
- d. Type of processor (CPU)

15.State the differences between desktop computers and laptop computers

- a. Desktop is designed to be used when placed on a desk in an office environment.
- b. A laptop can be used comfortably when placed on the User's lap
- c. A laptop is small & portable; desktop computers are not portable

16. (a) Explain the emerging trends in microcomputer technology in relation to size

- PCs are becoming small and portable, e.g. personal Digital Assistant (PDA).

(b) Give two reasons why smaller computers like Laptops tend to be more expensive than Desktop computers

- a. The technology of producing smaller devices is expensive
- b. They are convenient because they are portable
- c. They have advanced power management capabilities (they consume less power since a laptop can operate on rechargeable batteries)

17. Which category of computers would you place an N- series Nokia phone

- Microcomputer/ palmtop

18. Give three reasons why a mobile phone is regarded to be a computer

- a. It is electronic * uses electric energy to operate
- b. It has a display unit (screen)
- c. It has a keypad
- d. It has a memory for storage
- e. It is programmable

19. Which devices can be used when setting up personal goals easily.

- ✓ A desktop computer.
- ✓ Laptop.
- ✓ Diary booklet.
- ✓ Tablets or iPad.
- ✓ Smartphone.
- ✓ An exercise book.

20. State three differences between talent and ability.

TALENT	ABILITY
It is a gift from God.	It is acquired and developed.
It is possessed by few people.	Many people can possess it through learning.
It requires recognition.	It requires development.
It requires guidance and coaching.	It requires training.

21. What are the Differences between Needs and Wants?

NEEDS	WANTS
They are limited (food, shelter and clothing)	They are unlimited. (they are very many)
They are a necessity i.e. one cannot do without them.	Luxury i.e. one can do without them.
They may remain constant over time.	They may change with time.

22. Define the following terms

Scarcity

A situation where the economic resources are insufficient to satisfy needs and wants.

It means the demand for goods and services is more (greater) than the available goods and services. Economic resources are limited.

Resources are scarce because the quantities available are less than the quantities we require to satisfy our wants which are limitless.

Opportunity cost.

This is the value lost when choosing one item instead of the other.

Choice.

it is the act of deciding on which need or want to be satisfied first.

Scale of preference.

This is a list of goods and services (for example, shoes, socks, books, haircut etc.) prepared for purchase in order of priority.

23. Explain the Categories of Business Activities.

Extraction- Business activities that involves obtaining natural resources from the earth such as lumbering.

Processing- Business activity that involves changing raw material into goods in their finished form such as cars.

Manufacturing- Conversion of raw materials into useful products such as converting iron into steel.

Construction- business activities that involves establishment of structures such as buildings, roads etc.

Trade- Business activities that involves buying and selling of goods to the final consumer such as fruits.

Provision of services- Business activities that involves human acts which can be mental or physical such as entertaining and driving.

24. Outline four Types of large-scale retail outlets

- ✓ Supermarkets-a large-scale self-service store that mainly deals with household appliances and groceries.
- ✓ Chain stores-it is a large-scale selling outlet operated by one business organization and spread nationwide.
- ✓ Departmental stores-many single shops that are divided into many special sections or departments. Each department sells specific goods and services under different management.
- ✓ Hypermarkets-a large shopping centre consisting of many businesses under one management.
- ✓ Mail order stores- this type of retail outlets, goods and services are ordered through telephone, post office or emails. The goods are normally delivered by

courier.

25. State the Importance of Studying Business studies in schools

- ✓ Studying business studies in school helps learners to acquire and develop skills required in business such as recording skills and wise buying as well as attitude necessary.
- ✓ It also helps help in developing careers for those interested in exploring the business field in future.
- ✓ It also helps one to know how business and the environment interdepend on each other for survival and one exists because of the other.
- ✓ It can help one to choose career later in life.
- ✓ It assists the learner or member of the society to acquire knowledge and awareness of business terminologies which are necessary when discussing business issues such as profit and loss.
- ✓ It assists individuals in appreciating the role of business in society /in provision of goods and services.
- ✓ It equips the members of society with knowledge and skills necessary to start and run a business comfortably.
- ✓ It makes members of the society to appreciate the need for good business management practices.
- ✓ It assists individuals to acquire self-discipline and positive attitude towards work. Equips individuals with abilities to promote co-operation in society through trade.
- ✓ It enables the individual to understand the role of government in business activities.
- ✓ It equips individuals with abilities to understand the role of communication and information technology in modern business management.
- ✓ It helps individuals to develop positive attitudes towards the environment.
- ✓ It equips a person with knowledge and skills required to evaluate business performance.
- ✓ It helps individuals to develop various intellectual abilities such as inquiry, critical thinking, analysis, interpretation, rational judgment, innovation and creativity.

- ✓ It creates a firm foundation for further education and training in business and other related fields.
- ✓ It enables one to understand and appreciate the basic economic issues that affect the society such as increase in prices of goods and services.

26. State the meaning of the Components of Business

	Component of Business	Meaning.
1	Economics	It is the study of how human beings try to satisfy endless wants using the available scarce resources.
2	Commerce	It is study of trade and aids to trade. Trade is exchange of goods and services with the aim of making profit while aids of trade are activities that support trade such as warehousing, insurance, transport, banking, advertising etc.
	Components of Business studies	
3	Accounting	It is the study of recording business activities which are used for decision making.
4	Entrepreneurship	It is the study of the process of setting up and running a business with the aim of making profit.
5	Financial literacy	It is the knowledge and skills in the use of money.

27. What are the uses of Money?

- ✓ Money serves as a medium of exchange and people use money to pay for goods and services.
- ✓ Money serves as a store of value. You do not need to spend it immediately because it will still hold its value the next day or year.
- ✓ Money serves as a unit of account, which means that it is used to measure and record financial transactions or buying and selling of goods and services.
- ✓ Money serves as a means of transfer of immobile properties. One can sell or buy immovable properties such as land by use of money.

28. What are the security features of Kenyan denominations below?



<ul style="list-style-type: none"> ✓ Feel the word KENYA. ✓ Feel the value (50). ✓ Feel 1 bar 	<ul style="list-style-type: none"> ✓ The watermark of a perfect lion's head, the text CBK and the value of the note(50). ✓ The security thread appears as a continuous line. 	<ul style="list-style-type: none"> ✓ The security thread changes colour from red to green. ✓ The 200, 500 and 1000 notes have additional rainbow colours on the thread. ✓ The golden band on the note shows the value of the bank note 50
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29. Distinguish the following goods

a. Free goods and economic goods.

Free goods are goods that are naturally provided like sunshine, rain, oceans.

Economic goods are commodities which have money value that can be used to satisfy human needs and wants.

b. Producer goods and consumer goods.

Producer goods are used in producing other goods. They include machines, equipment and tools.

Consumer goods are final products that are bought and used by consumers. They include microwaves, fridges, t-shirts and candles.

c. Perishable goods and durable goods.

Perishable goods are goods that go bad easily unless stored using very special facilities.

These goods include meat, milk and vegetable

d. Durable goods are goods that are used for along period of time for example radio, furniture or building among others.

e. Public goods and private goods.

Public goods are goods that are enjoyable by all citizens like roads, airports, rivers, public hospitals, public parks, railway or churches.

Private goods are goods that are owned by individuals such as personal cars, private

schools, private land among others.

30. Distinguish between goods and services.

GOODS	SERVICES
Goods are tangible	Services are intangible.
Goods can be separated from the seller.	Services cannot be separated from the service provider.
Goods can be stored for future use.	Services cannot be stored for future use.
Goods have a significant time gap between production and consumption.	Services are purchased and consumed together.
Goods can be seen.	In order to provide services, you need physical tools.
Goods can be spoiled over time.	Services are rendered directly by one person to another and they expire.
Goods can be standardized.	Quality of services can be standardized.
Goods can be transported from one place to another.	Services cannot be transported from one place to another.

31. What is

Resources are all the materials available in our environment which are accessible, economically feasible and culturally sustainable and help us to satisfy our needs and wants.

Economic resources are the resources used for carrying out economic activities.

32. There are four factors of production namely:

- e. Land.
- f. Capital.
- g. Labour.
- h. Entrepreneurship

33. State the Importance of paying taxes in Kenya.

- ✓ Taxes are the primary source of revenue for the government.
- ✓ Taxes are collected from people so as to have ways of improving the social lives of people in the country.
- ✓ Taxes makes it easy for the government to distribute resources that are lacking to the rural and poor areas of the country.
- ✓ Tax money is spent to improve and maintain public infrastructure, including the roads and fund public services, such as schools, emergency services, and welfare programs.
- ✓ Taxation helps in development of human capital and education. Money from taxes is used in funding, furnishing and maintaining the public education system.
- ✓ Taxes help to geo the economy which in turn has great effect on the country's economy

by raising the standards of living and increasing job creation.

- ✓ The money received from taxation also pays public servants such as police officers and members of National assembly.
- ✓ Government uses taxes collected to fund contribute to the health sector. Tax fund health services such as social healthcare, medical research and social security.
- ✓ The government imposes high levies on these products like alcohol and tobacco to discourage people from buying or selling them.
- ✓ Government uses money collected from taxes to fund sectors that are crucial for the wellbeing of their citizens such as security, scientific research and environmental protection.
- ✓ The government can provide taxes money back into the economy inform of loans and other funding forms.

34. Name the Financial documents used in buying and selling in business.

- j. Receipts.
- k. Invoice.
- l. Payment vouchers.
- m. Credit notes.
- n. Debit notes.

35. Name the Methods of payment:

- ✓ Cash.
- ✓ Cheques.
- ✓ Banker's cheques or bank draft.
- ✓ Mobile money.
- ✓ Electronic fund transfer (EFT).
- ✓ Standing orders.
- ✓ Debit card and credit card

36. What are some of the most significant consequences of fire?

- a) Property Damage
- b) Business Interruption
- c) Injuries And Fatalities
- d) Emotional Trauma
- e) Litigation
- f) Loss Of Productivity
- g) Increased Insurance Premiums
- h) Damage To Brand Reputation
- i) Occupational Health And Safety Issues
- j) Financial Loss
- k) Regulatory Fines And Penalties

37. Identify good management practice when dealing with electricity

- Ensure the power supply is regularly tested by a competent person and taken out of service if unsafe.
- Keep isolators and other electrical systems clear at all times and clearly identify them with signs.
- Ensure anyone working with electricity is trained and competent. The level required will depend on the task, e.g. maintenance of electrical equipment will require a higher level of training and competence.
- Use portable electrical equipment safely, e.g. not misusing it, using it for its intended purpose and storing it properly after use.
- Fully pull out electrical extension reels when in use to prevent overheating.
- When defrosting raw foods, keep them away from other foods to prevent cross-contamination.
- Complete a pre-use check of electrical equipment to ensure it is safe.
- Switch off and unplug electrical equipment during maintenance, cleaning, repairing or adjusting.
- Switch off all non-essential electrical equipment at the end of the working day. Not only is this safer, but it also saves energy.

38. State what not to do with electricity to ensure safety

- Do not overload sockets, as this can cause overheating and fire.
- Do not force a plug into a socket if it does not fit.
- Do not route electrical cables where they could be damaged or where someone could trip. Use cable protectors if they cannot be re-routed.
- Do not use electrical equipment with wet hands or near water.
- Do not keep liquids by electrical equipment, e.g. open drinks next to computers.
- Do not plug multiple extension leads together (daisy-chaining).
- Do not pull electrical equipment out of a socket by its lead. Always grip the plug.

39. Identify the following tools used when working

Safety shoes

Helmet

Fire extinguisher

40. Examples of Hazards to personal safety.

- a) Sharp edged tools and objects that can easily cut or poke someone.
- b) Disarranged rooms where one can easily tumble and fall.
- c) Naked electric wires that can easily cause electric shock.
- d) Poorly lit rooms where one can easily know oneself against objects.
- e) Poorly stored items on the shelves where they can easily fall off and hit someone.
- f) Working without protective gear where one can easily be hurt or injured.
- g) Rooms with wet slippery floors where one can easily slip and fall.

41. What are Some of the ways used to handle tools and equipment safely while performing tasks in the locality?

- a.) Wearing personal protective equipment like safety goggles, helmet and others.
- b.) Picking the right tool for the task at hand.

- c.) Avoid throwing or tossing a tool in the direction of or directly to a co-worker.
- d.) Never put sharp tools in the pocket.
- e.) Keeping safe distance from each other when working with tool. This gives enough space to safely operate without coming into contact with co-workers.
- f.) Picking up all hand tools after the job. Idle tools lying around the workplace can lead to tripping.
- g.) Unplugging and disconnecting electric power tools when not in use, when making adjustments such as replacing blades and bits or loading fasteners.
- h.) Sharpening cutting tools before and after use.

42. What are Some of the common types of injuries that occurs in the locality ?

- a) A burn is an injury caused by a flame.
- b) A scald is an injury caused by hot liquid or steam.
- c) A cut is a tear or opening in the skin by a sharp object.
- d) Fracture is a partial or complete break of a bone.
- e) Sprains
- f) Pricks
- g) Bruises

43. What are the Causes of injuries in the locality?

- a) Cuts which are caused by sharp objects or tools and equipment like knives. Also can be caused by sharp furniture corners or rough edges.
- b) Burns which are caused by fire or hot objects or touching open flames.
- c) Scalds which are caused by hot liquids or steam.
- d) A fracture which is caused by twisting of an arm or leg resulting from during falls or slips.