SECTION A:

1. a) **A combined bar and line graph showing the temperature and rainfall of station A**

Temperatures in °C

Rainfall in mm

Months of the year

Rainfall scale: 1 unit represents 10 mm
Temperature scale: 1 unit represents 5 °C
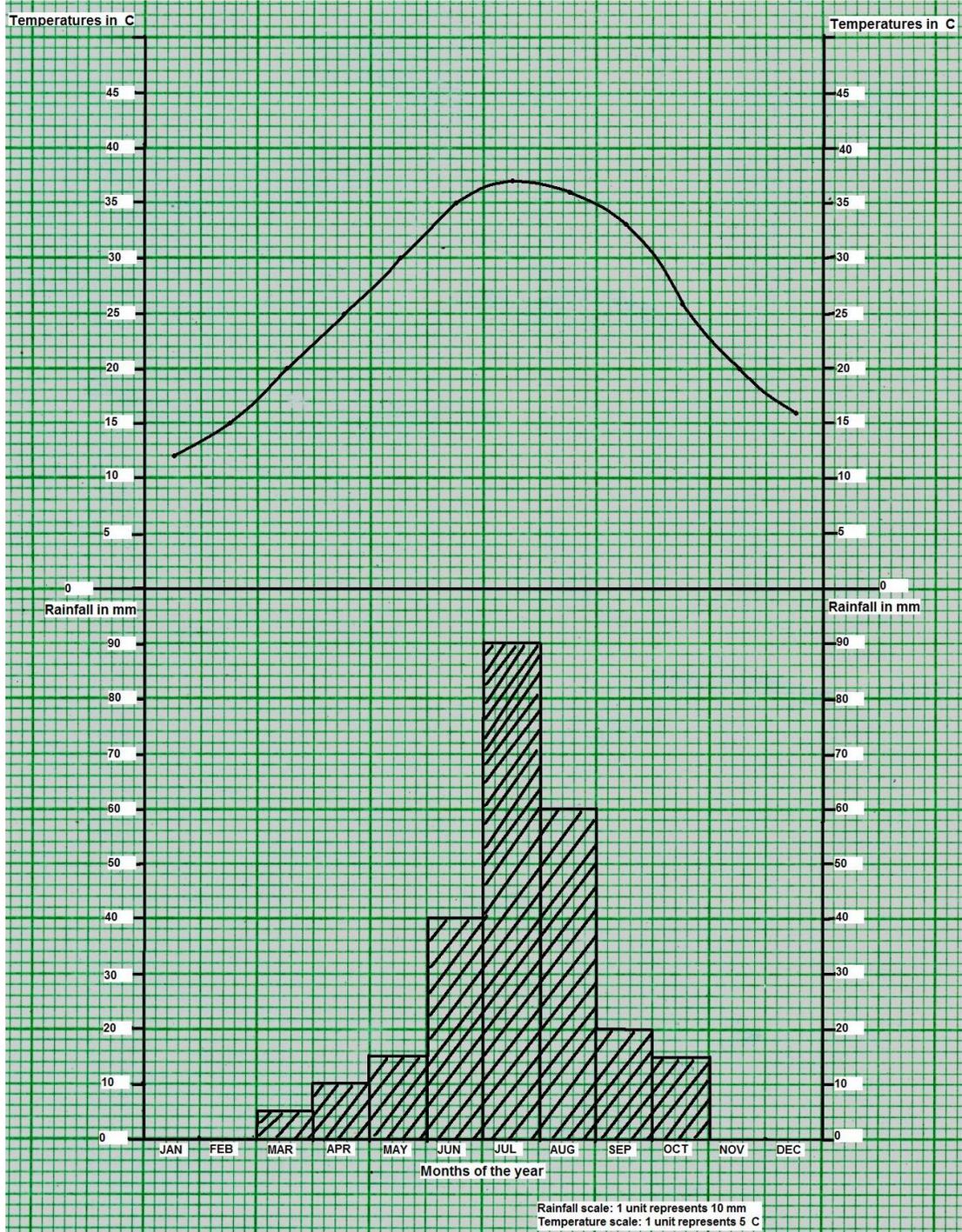
Mark allocation:
- Title: *1 mark*
- Temperature axis/ scale: *1 mark*
- Rainfall axis/scale *1 mark*
- Horizontal axis *1 mark*
- Accuracy of line graph: *2 marks*
- Accuracy of bar graph: *2 marks*

(b)

(i) **Annual range of temperature**
Highest temp. – Lowest Temp.
37 – 12 = 25 ^{0}C   *Method = (1 mark)*
= 25 ^{0}C   *Answer = (1 mark)*

(ii) **Mean annual temperature**
$\frac{12 + 15 + 20 + 25 + 30 + 35 + 37 + 36 + 33 + 26 + 20 + 16}{12}$ =   *(1 mark)*

= 25.4 ^{0}C   *Answer = (1 mark)*

(iii) **Mean annual rainfall**
$\frac{5 + 10 + 15 + 40 + 90 + 60 + 20 + 15}{1}$ =   *Method = (1 mark)*

= 255 mm   *Method = (1 mark)*

c) (i) **Characteristics of the climate of station A.**
- Low rainfall of 255 mm is received
- Temperatures greatly vary with seasons i.e. from 12 ^{0}C – 37 ^{0}C
- High annual range of temperature i.e. 25 ^{0}C
- High mean annual temperature of 25.4 ^{0}C
- It is very hot from May to September
- Rainfall is seasonal
- Rainfall is received during the hot season
- There is one peak of rainfall/single maximum/uni-modal or mono-modal rainfall
- November to February is completely dry.
          Any 5 x 1 = (5 marks)

(ii) **Type of climate experienced in station A.**
- Desert/Dry/Arid/Semi-arid climate   *(1 mark)*

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d) i) **Economic activities that can be carried out around station A.**
- Pastoralism
- Tourism
- Irrigation agriculture
- Cultivation of drought resistant crops

Any 3 x 1 = (3 marks)

ii) **Why rainfall is measured in terms of length (mm) and not in terms of volume (ml or mm³)**

It is because what is measured is the depth that rain water infiltrates in an area of 1 m² with soil of average texture. *(2 marks)*

TT = 25 marks

SECTION B: North America

2. (a) **Site map of New York Metropolitan area showing physical and human features**
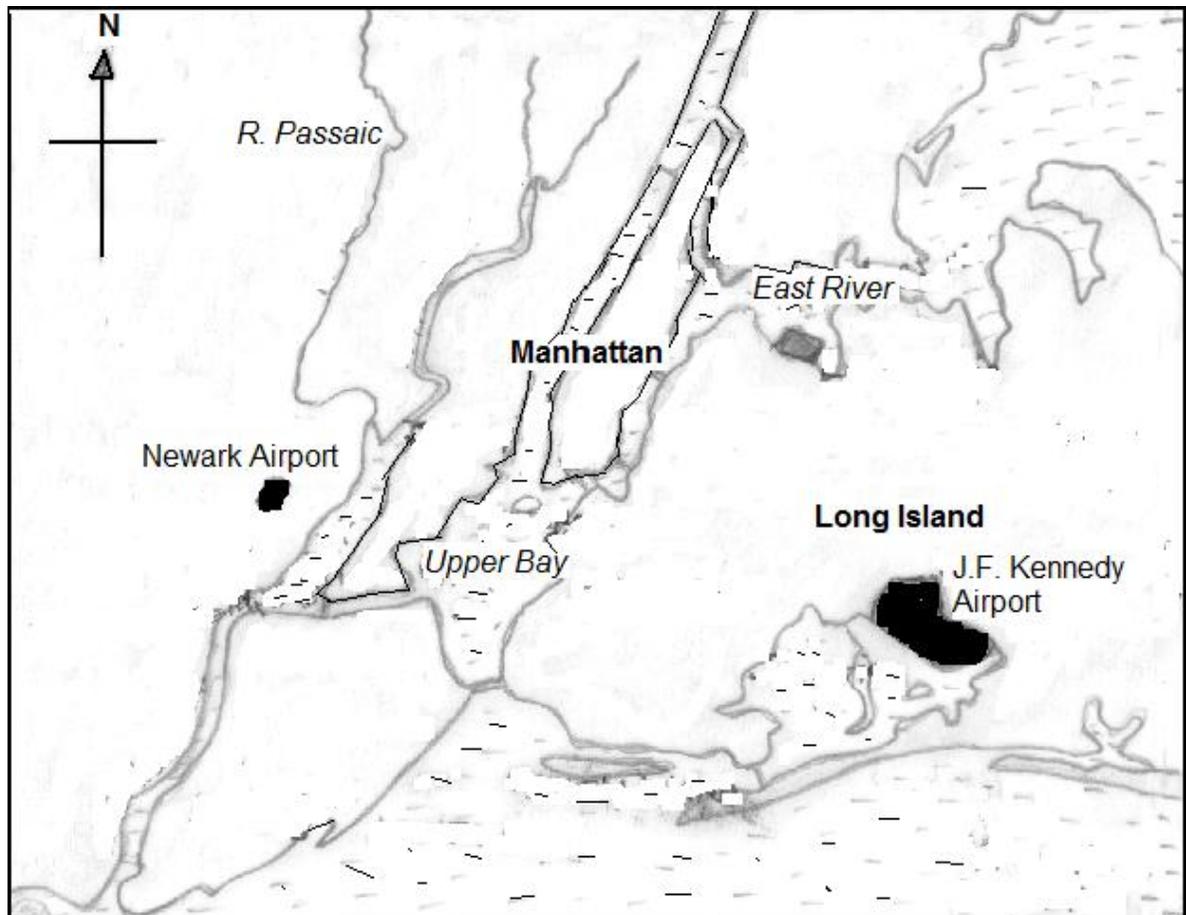
Mark allocation:
- Title: *(1 mark)*
- Features: *1 mark @ = (7 marks)*

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(b) **Boroughs of New York City**
- Manhattan
- Bronx
- Queens
- Brooklyn
- Staten Island

1 mark @ = (5 marks)

(c) **Functions of New York City**
It is a major:
- Transport and communication centre
- Administrative centre. It has the Headquarters of the United Nations Organisation (UNO)
- Recreational and tourist centre
- Industrial area
- Business and commercial centre
- Educational centre
- medical/ health centre
- religious and cultural centre
- research centre
- residential centre – sky scrapers, suburbs and slums

Any 5 x 1 = (5 marks)

(d) (i) **Problems common to New York City and Kampala city**.
- Pollution of the environment by industries and vehicles
- Traffic congestion or jam especially during rush hours
- Growth of slums due to accommodation problems
- High crime rate i.e. robbery, murder, assault, rape, drug trafficking and addiction etc.
- Indiscipline and moral degeneration e.g. prostitution, drug addiction, strip dancing etc.
- Unemployment due to limited job opportunities and increased population
- Overcrowding and strain of public utilities or social services
- Threat of terrorism

Any 5 x1 = (5 marks)

(ii) **Problems faced in Kampala City but not in New York City**.
- Floods during heavy rains
- Street children and beggars
- Power shortage i.e. there is a lot of power load shedding

- Corruption and mismanagement in public offices or funds
- Poor/degenerated/dilapidated infrastructure e.g. potholes, poor drainage, narrow roads etc.

Any 2 x 1 = (2 marks)

TT = 25 marks

3. (a) **Definitions:**

(i) **Hinterland:** This is an area served by a port. *(2 marks)*

(ii) **Dock:** Is an enclosed area of water at a port where ships can be anchored be loaded, offloaded or repaired. *(2 marks)*

(iii) **Harbour**: Is a sheltered stretch of water at a coastal area where ships can shelter and obtain protection from storms or tidal waves and currents. *(2 marks)*

(iv) **Containerisation**: Refers to the use of large standardized metallic boxes for packing cargo/goods to be transported when sealed. *(2 marks)*

(b) **Conditions that have favoured New York port as a natural harbour:**

- **Deep waters**: For example the channel on the Eastern side of Hudson River is about 14 metres deep.
- **Sheltered waters/ bays**: This protects the ships from waves or storms e.g. the Upper bay, Lower bay and the Hudson River. These waters have been sheltered from the Atlantic mainly by the Long Island.
- **Low tidal range**: A tidal range is the difference in the height or level of waters at the low and high tides. The tidal range in New York is less than 2 metres and this enables the stability of the ships all the time.
- **Ice free conditions**: The waters of New York do not freeze in winter and this enables navigation throughout the year.
- **Clear entrance**: The entrance to the harbours is free from obstacles like rock shoals.
- **Hard rocks**: There are hard rocks for the construction of quays and dock yards on a firm foundation.

Any 5 x 1 = (5 marks)

(c)
  (i) **Advantages of containerisation at the port of New York.**
- Easy loading and unloading of cargo. This is due to the use of use of equipment like cranes.
- Cargo is protected against bad weather.
- There is protection of the goods against damage by insects or pests.
- The cargo is protected against contamination by Pollutants.
- Cargo is protected against loss through theft or carelessness.
- It tends to be time saving i.e. less time is spent on loading and unloading as well as clearing of the goods.
- The load capacity of vessels is increased i.e. more goods can be carried with containers.

Any 4 x 1 = (4 marks)

  (ii) **Disadvantages of using containers at New York Port**.
- It results into the unemployment of stevedores or longshore men.
- It is unsuitable for the transportation of small volume or quantities of freight (cargo).
- It is quite expensive to acquire containers and to install container handling equipment or facilities like cranes.
- Some containers tend to be rigid in application. They are meant only for a specific type of cargo.
- It has resulted into overcrowding at the port.

Any 4 x 1 = (4 marks)

 d) **Effects of industrialization on the environment of New York Metropolitan area.**
- It has led to the reclamation of the marshlands and hence environmental degradation.
- Destruction of the natural vegetation in the process of creating land for industrial use.
- Industrial air and water pollution.
- Noise has been generated by the industries i.e. noise/sonic pollution.
- The environment has become more and more artificial with industrial expansion.

Any 4 x 1 = (4 marks)

 TT=25 marks

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