FINAL

KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL
SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY

MARKING GUIDELINE

COMMON TEST

MARCH 2022

MARKS: 60

N.B. This marking guideline consists of 5 pages.

QUESTION 1

1.1

 1.1.1 high land temperatures ✓
    presence of tropical cyclone ✓
    presence of heat/thermal low ✓
    South Atlantic High and South Indian High have moved further
    south ✓
    (ANY ONE)

 1.1.2 gentle ✓

 1.1.3 South Atlantic high ✓ and Coastal low ✓

 1.1.4 cold front ✓

 1.1.5 15 knots ✓ (no units, no marks)   (6 x 1)(6)

1.2

 1.2.1 Wind speeds in excess of 230 km/h, uprooting trees,
    breaking windows, snapping power lines and causing extensive
    flooding✓   (1 x 1)(1)
    [Concept]

 1.2.2 Cyclone tracked for a long period of time in the warm waters/Sea
    surface temperature above 26,5 °C of the Indian Ocean that was
    ideal for promoting high rate of evaporation✓✓
    Friction over the large sea track was minimal/less friction over the
    ocean, assisting rising air (convection) ✓✓
    The water vapour content over the ocean is greater, containing
    latent heat and this formed the trigger for the full development
    of the cyclone ✓✓
    (ANY TWO)   (1 x 2)(2)

 1.2.3 Due to present wind shear and dry air ✓✓
    Due to friction over the land ✓✓   (1 x 2)(2)
    (ANY ONE)

 1.2.4 Information is received immediately and can be used to warn
    people ✓✓
    Information can be monitored and evacuation plans can be
    devised, especially for people in low in low lying areas. ✓✓
    Can take images of large inaccessible areas. ✓✓
    The intensity of the storm can be monitored ✓✓
    Information can be used to determine wind speed, temperature,
    wind direction ✓✓
    Can be used to predict the path ✓✓   (1 x 2)(2)
    (ANY ONE)
  NB Question 1.2.4 has been cancelled due to technical reasons.

                Please Turn Over

1.2.5 Stock up on canned food and water supplies ✓✓
       Organize a first aid kit ✓✓
       Have batteries for portable radios lamps and torches ✓✓
       Move cattle and other stock to higher ground ✓✓
       Place sandbags along rivers and coastal areas to reduce the impact
       of flooding ✓✓
       Put wooden shutters on windows and advise people to stay away from
       doors and windows✓✓
       Devise evacuation plans especially for people in low lying areas ✓✓
       There must be rescue teams to rescue in low lying areas ✓✓
       A good forecasting system to predict the path of the tropical
       cyclone and Issue warnings✓✓   (4 x 2)(8)

       (ANY FOUR)
       (Must include at least one on both precautionary and management)   **[15]**

1.3

       1.3.1 An area of higher temperatures in an urban area compared to
              lower temperatures in the suburban and rural surrounding ✓✓   (1 x 2)(2)
              [Concept]

       1.3.2 CBD ✓   (1 x 1)(1)

       1.3.3 Concrete in urban areas is able to store three times more heat
              than the same volume of soil or vegetation ✓✓
              Concrete absorbs heat slowly during the day and releases it
              slowly at night thus raising temperatures considerably ✓✓
              Cities contain a large number of tarred streets which absorbs
              heat, giving rise to high temperatures ✓✓
              Buildings are made up of glass and will reflect and deflect heat
              between buildings thus increasing temperature. ✓✓   (1 x 2)(2)
              (ANY ONE)

       1.3.4 Global warming/greenhouse effect/acid rain ✓   (1 x 1)(1)

       1.3.5 During the night the air is cooler ✓
              Cooler air heavier and denser thus more subsidence ✓
              Pollution dome pushed lower down ✓
              During the day the air is warmer ✓
              Warmer air lighter and less dense and rises ✓
              Pollution dome lifts higher up ✓   (1 x 1)(1)
              (ANY ONE)

       1.3.6 Taller chimneys/stacks to release pollutants✓✓
              Limit industrial activities at night time ✓✓
              Use cleaner fuels in engines ✓✓
              Legislation and fines to reduce pollution ✓✓
              Greenbelt development ✓✓   (1 x 2)(2)
              (ANY ONE)
                                                                            [9]

                                                         TOTAL: 28

QUESTION 2

2.1

    2.1.1 B – Watershed ✓

    2.1.2 E – Confluence ✓

    2.1.3 A – Water table ✓

    2.1.4 G – Catchment area ✓

    2.1.5 F – interfluve ✓

    2.1.6 C – ground water ✓   (6 x 1) **(6)**

2.2

    2.2.1 Surface pattern formed by a river and its tributaries ✓✓
            (CONCEPT)   (1 x 2)(2)

    2.2.2 The main streams are parallel to each other ✓✓
            Short tributaries join the main river at right angles/90⁰ ✓✓
            (ANY ONE)   (1 x 2)(2)

    2.2.3 Dendritic – tributaries join the main stream at acute angles✓✓
            (due to underlying rock structure is uniform/homogeneous resistant
            to erosion)✓✓
            Trellis – tributaries join the main stream at right angles✓✓
            (due to alternating layers of hard and soft rocks/layers are often
            inclined or folded)✓✓   (2 x 2)(4)

    2.2.4 In the dendritic pattern water is widely distributed in the drainage
            basin and water is accessible ✓✓
            Longer tributaries therefore water is more accessible ✓✓
            Occurs over flat/gentle land thus more suitable for farming ✓✓
            Larger floodplain with access to fertile soils ✓✓
            Underlying rock structure has uniform resistance to erosion ✓✓
            (ANY TWO)   (2 x 2)(4)
                                                      [12]

2.3

    2.3.1 Lower course ✓   (1 x 1)(1)

    2.3.2 Base level ✓   (1 x 1)(1)

    2.3.3 Width ✓
             Depth/height ✓
             Shape ✓   (2 x 1)(2)

             (ANY TWO)

    2.3.4 In the upper course vertical/downward erosion take place ✓✓
             In the lower course deposition/lateral erosion takes place ✓✓   (2 x 2)(4)

    2.3.5 In the upper course of the river the valley is narrow ✓✓
             Cost of construction of the dam wall will be cheaper ✓✓
             The rocky banks will make the structure stronger ✓✓
             The dam will be deeper because of the deep valley ✓✓
             Cooler temperatures of higher attitude, therefore less evaporation ✓✓
             Smaller water surface area reduces evaporation rates ✓✓
             A deeper dam will have an increased capacity ✓✓
             Less silt in the dam as there are fewer tributaries that enter
             the dam ✓✓
             Steepness of slope allows easy flow of the water into a dam ✓✓
             With less deposition/sediments in the upper course the dam
             capacity will be higher ✓✓   (2 x 2)(4)
             (ANY TWO)

                                                                      [12]

                                                       TOTAL: 30

                                                 GRAND TOTAL: 58

**NB: The learner mark must be divided by 58 and be multiplied by 60
e.g. (learner mark X 60)
58**