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.

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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 ^{0}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.

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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

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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/90^0 ✓✓
(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]

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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

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

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