education

Department:
Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P1

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MEMORANDUM

MARKS: 300

This question paper consists of 12 pages.

QUESTION 1

1.1.1 False (2)
1.1.2 True (2)
1.1.3 False (2)
1.1.4 False (2)
1.1.5 True (2) (5 x 2) (10)

1.2.1 B (2)
1.2.2 A (2)
1.2.3 D (2)
1.2.4 B (2)
1.2.5 C (2) (5 x 2) (10)

1.3.1 (a) Rotation of the Earth (2) (1 x 2) (2)
(b) Strengthens/get stronger (2) (1 x 2) (2)
(c) Air moves from HP to LP (2)
Coriolis force results in air being deflected to left in S hemisphere and right in N hemisphere (2) (2 x 2) (4)

1.3.2 (a) A – westerlies (2)
B – tropical easterlies/trade wind belt (2) (2 x 2) (4)
(b) A – westerlies (2) (1 x 2) (2)
(c) West to east/eastwards (2) (1 x 2) (2)

1.3.3 (a) D (2) (1 x 2) (2)
(b) Extremely warm air at equator / high temperature (2)
Warm air rises rapidly to great altitudes / heights (2)
Large scale condensation results in thunderstorms (2)
[Any TWO] (2 x 2) (4)

1.4.1 (a) Presence of cold and warm fronts (2) (1 x 2) (2)
(b) Q (2) (1 x 2) (2)
(c) Furthest east (2) (1 x 2)= (2)

1.4.2 (a) Cold front is passing over (2)
Cold air mass (sector) follows cold front (2)
Cold air forces warm air ahead of it to rise (2)
Rising air condenses resulting in cloud formation and rain (2) (4 x 2) (8)
(b) Clouds (2) (1 x 2) (2)
(c) Possible flooding and people should evacuate (2)
Snowfall and very cold conditions and people must find shelter (2)
Stock up on food/medical supplies (2)
Purchase lamps/candles in case power is cut (2)
Put sandbags down to prevent water coming in (2)
[Any ONE] (1 x 2) (2)

1.5.1 (a) Graph showing run-off for specific place over specific period of time (2)
[Concept] (1 x 2) (2)
(b) 03:00 – 03:30 (2) (1 x 2) (2)
(c) 06:30 – 07:00 (2) (1 x 2) (2)
(d) 3½ – 4 hours (2) (1 x 2) (2)
(e) First rainfall infiltrates the soil and does not contribute to run-off (2)
Rainfall first forms sheet flow before it reaches a stream (2)
Take time for water in tributaries to reach main stream (2) (2 x 2) (4)

1.5.2 (a) Natural vegetation removed / deforestation / overgrazing (2)
Large surface areas left bare / clear (2)
Surface areas covered with concrete (2)
Construction of dams (2)
Rivers run dry due to overuse of water (2)
River channels changed when meanders are cut out (2)
Rivers lined with concrete / cement (2)
Furrows dug for irrigation (2)
[Any TWO – Accept other] (2 x 2)= (4)
(b) Lag time – shortened (2)
Flood peak – higher (2)
Drainage density – increase OR decrease (2)
[Any ONE] (1 x 2) (2)
(c) Shorter lag time: Less infiltration (2) and water reaches stream quicker (2)
Higher flood peak: More water reaches stream (2) and level rises (2)
Lower density: Less water available due to overuse (2) and streams dry up (2)
Higher density: More water on surface (2) and more streams are formed (2)
[Any TWO. Refer to answer above] (2 x 2) (4)
(d) Control flooding (2)
Decrease soil erosion (2)
Maintain groundwater levels (2)
Important source of fresh water (2)
Preserve aquatic / river ecosystems (2)
[Any THREE. Accept other logical explanations] (3 x 2) (6)

1.6.1 Dome (2) H – Tor (2) (2 x 2) (4)

1.6.2 Batholith/Laccolith (2) (1 x 2) (2)

1.6.3 Batholith exposed to Earth's surface (2)
Weathering along cracks (2)
Weathered material removed through erosion (2)
Rounded core stones remain behind (2)
[Any THREE] (3 x 2) (6)
[100]

QUESTION 2

2.1.1 summer (2)
2.1.2 coastal low (2)
2.1.3 15 °C (2)
2.1.4 southwest (2)
2.1.5 drizzle (2) (5 x 2) (10)

2.2.1 first order stream (2)
2.2.2 confluence (2)
2.2.3 meander (2)
2.2.4 river mouth (2)
2.2.5 watershed (2) (5 x 2) (10)

2.3.1 Band of low pressure over land stretching from NW to SE along which line thunderstorms occur (2)
[Concept] (1 x 2) (2)

2.3.2 Cold, dry air moves over the country from SW (2)
Warm, moist air moves over the country from NE (2)
Cold, dry air meets warm, moist air over interior (2)
Warm moist air forced to rise rapidly and very high (2)
Large scale cooling and condensation results in thunderstorms (2)
[Any THREE] (3 x 2) (6)

2.3.3 Moisture front/Trough line (2) (1 x 2) (2)

2.3.4 Eastern (2) (1 x 2) (2)

2.3.5 Large scale soil erosion (2)
Damage to crops (2)
Damage to livestock (2)
Lightning sets veld on fire (2)
Huge economic losses (2)
[Any TWO] (2 x 2) (4)

2.4.1 A general increase in the average temperature of the atmosphere (2)
[Concept] (1 x 2) (2)

2.4.2 Industrialisation (2)
Higher pollution levels (2)
More greenhouse gases emitted into the atmosphere (2)
Greenhouse gases absorb more heat (2)
Greenhouse gases decreases terrestrial radiation (2)
Heat trapped in the atmosphere and temperatures rise (2)
[Any THREE] (3 x 2) (6)

2.4.3 Droughts (2)
Heat waves (2)
Floods (2)
[Any TWO] (2 x 2) (4)

2.4.4 Subsistence farmers are dependent on water sources (2)
No back up food resources (2)
Malnutrition / famine increases as productivity drops (2)
More diseases but lack of health facilities (2)
Levels of poverty will increase (2)
Land deteriorates in drier conditions (2)
Landlessness (2)
Poor economy cannot sustain large number of unemployed people (2)
Do not have capital to absorb losses (2)
[Any TWO. Accept other] (2 x 2) (4)

2.4.5 No (2) Large quantities of greenhouse gases still emitted (2)
Less developed countries cannot afford less harmful methods to generate energy (2)
General rise in temperatures still evident (2)
USA not part of Protocol (2)
USA has largest percentage of world's industries (2)

OR

Yes (2) Coal fired power stations reduced in developing countries (2)
Pollution controlled more effectively in developed countries (2)
Energy saving appliances used in developed countries (2)
Environmentally friendly power sources used in developed countries (2)
Using biogas as alternative (2)

[Any TWO reasons for answer] (3 x 2) (6)

2.5.1 D – Trellis (2)
E – Angular/Rectangular (2) (2 x 2) (4)

2.5.2 Deciduous woodland (2)
Semi-permeable sandstone (2)
[Any ONE] (1 x 2) (2)

2.5.3 Dam/Reservoir (2) (1 x 2) (2)

2.5.4 Increases infiltration (2)
Groundwater content increases (2)
Increase in base flow to maintain river run-off (2)
Decrease in evaporation to increase availability of water (2)
Decreases run-off and soil erosion (2)
[Any TWO] (2 x 2) (4)

2.5.5 First rainfall infiltrates the soil and does not contribute to run-off (2)
Rainfall first forms sheet flow before it reaches a stream (2) (2 x 2) (4)

2.5.6 B (2) (1 x 2) (2)

2.5.7 Woodland will retard flow of water (2)
More water will infiltrate (2)
Will take longer for water to reach main stream at B (2)
Built up area will reduce infiltration (2)
Run-off will reach main stream at A quicker (2)
More tributaries run into stream B (2)
[Any ONE] (1 x 2) (2)

2.6.1 C – Cutback/Undercut (2)
D – Slip off (2) (2 x 2) (4)

2.6.2 Water flows slower (2)
Stream looses energy and cannot carry its load (2)
[Any ONE] (1 x 2) (2)

2.6.3 Fine soluble particles dissolve in water (2) and is transported as solution load (2)
Fine, insoluble is carried in suspension (2) and is transported as suspension load (2)
Particles to heavy to be carried in suspension (gravel, sand) is lifted and deposited (2) to bounce along as the saltation load (2)
Large stones and rocks are rolled along the riverbed (2) and is transported as the bed load / traction load (2)
[Refer to any ONE method of transportation] (2 x 2) (4)

2.6.4 Velocity increases, water can't negotiate the bend and burst its banks (2) (1 x 2) (2)

2.7.1 E – Homoclinal ridge / Cuesta (2)
F – Mesa (2) (2 x 2) (4)

2.7.2 E tilted more in relation to the Earth's surface (2)
E has two steep slopes (2)
F has one steep and one gentle slope (2)
[Any ONE] (1 x 2) (2)

2.7.3 Of strategic importance – defensibility (2)
Soft layers between ridges form fertile soil suitable for agriculture (2)
If formed around basin shaped features it could trap ground water (2)
Steep slopes afforested (2)
[Any TWO. Accept other] (2 x 2) (4)

[100]

QUESTION 3

3.1.1 urban (2)
3.1.2 nucleated (2)
3.1.3 urban profile (2)
3.1.4 high (2)
3.1.5 high (2) (5 x 2) (10)

3.2.1 (iii) (2)
3.2.2 (i) (2)
3.2.3 (iv) (2)
3.2.4 (ii) (2)
3.2.5 (vi) (2) (5 x 2) (10)

3.3.1 (a) Isolated/Dispersed/Single farmstead (2) (1 x 2) (2)
(b) Isolated/Dispersed (2) (1 x 2) (2)

3.3.2 (a) Kingstown (2) (1 x 2) (2)
(b) Services offered are of a higher order (2)
Greater variety of services offered (2)
[Any ONE] (1 x 2) (2)
(c) Kingstown (2) (1 x 2) (2)
(d) Offer higher order services (2)
More specialised services (2)
Larger settlement (2)
[Any ONE] (1 x 2) (2)
(e) The higher the rank order, the fewer the number of settlements (2)
OR
The lower the rank order, the higher the number of settlements (2) (1 x 2) (2)

3.3.3 (a) Droughts (2)
Floods (2)
Infertile soil (2)
[Any ONE] (1 x 2) (2)
(b) Lack of entertainment (2)
Unsafe (2)
Lack of schools/health facilities (2)
Poor infrastructure (2)
Mechanisation of agriculture/Unemployment (2)
Poor housing (2)
[Any ONE] (1 x 2) (2)
(c) Resources (soil) no longer utilised (2)
Drop in agricultural production (2)
Abandoned farmhouses (2)
Ageing of population (2)
Service delivery drops in quality (2)
Many services close down (2)
Ghost towns develop (2)
[Any TWO. Accept other] (2 x 2) (4)

(d) Incentives to keep farmers on their farms (2)
Train young farmers to occupy the land (2)
Improve infrastructure (2)
Improve social services (2)
Create employment through industrial decentralisation (2)
Create employment by establishing game parks in rural areas (2)
Attract retired people to live in rural towns (2)
Attract commuters to live in rural towns (2)
[Any TWO] (2 x 2) (4)

3.4.1 People migrate to cities but cannot find employment and cannot afford formal housing (2)
Rapid urbanisation has resulted in a shortage of houses (2)
[Any ONE] (1 x 2) (2)

3.4.2 Shack burnings (2) (1 x 2) (2)

3.4.3 Living in shacks (2)
Dirty environment (2)
Inadequate garbage collection (2)
Lack of electricity and water (2)
Lack of playgrounds (2)
[Any TWO] (2 x 2) (4)

3.4.4 Selling fruit and vegetables (2)
Selling sweets, cigarettes on street corners (2)
Spaza shops (2)
Hair dressing (2)
Backyard mechanics (2)
Selling curious (2)
[Any ONE. Accept other] (1 x 2) (2)

3.4.5 Yes (2) People are provided with shelter (2)
Basic amenities (running water, sanitation) provided (2)
Minimise illegal occupation of land (2)

OR

No (2) Unsightly (2)
Crime in areas (2)
Health risks (2)
Urban infrastructure cannot cope (2)
[Any TWO reasons for answer] (3 x 2) (6)

3.5.1 Mining (2) (1 x 2) (2)

3.5.2 Power station (2)
Cement factory (2)
Industry (2)
[Any ONE] (1 x 2) (2)

3.5.3 Transport/roads/railway line/air port (2)
Commercial (2)
Electricity (2)
[Any ONE] (1 x 2) (2)

3.5.4 (a) Power source (2)
Needed for industrial development (2)
Exported (2)
Provide income/foreign capital (2)
Employment (2)
[Any TWO] (2 x 2) (4)

(b) Exported as a raw material at a low cost (2)
Smaller income provided to the country (2) (2 x 2) (4)

(c) Sinkholes (2)
Unsightly mine dumps (2)
Unsightly quarries (2)
Vegetation removed (2)
Natural habitat of organisms destroyed (2)
Ecosystems destroyed (2)
Increase dust in the atmosphere (2)
[Any TWO. Accept others] (2 x 2) (4)

(d) Fill quarries with soil (2)
Restore indigenous vegetation (2)
Plant indigenous vegetation on mine dumps (2)
Create artificial lakes by filling quarries with water (2)
Create recreational areas around lakes (2)
[Any THREE. Accept other] (3 x 2) (6)

3.5.5 (a) Variety of transport facilities leading in and out of the settlement (2) (1 x 2) (2)

(b) Raw materials transported to market / industries (2)
Will encourage industrial development (2)
Finished goods transported to market (2)
Wider variety of goods can be sold (2)
Transport of people to place of work (2)
Greater income for the country (2)
[Any THREE] (3 x 2) (6)

(c) Transport network cannot cope with more vehicles (2)
Traffic congestion and people late for work (2)
Accident rates increase – costly for country (2)
Costly to maintain transport facilities (2)
[Any THREE. Accept other] (3 x 2) (6)

[100]

QUESTION 4

4.1.1 A – rural settlement (2)
4.1.2 B – dispersed (2)
4.1.3 C – rural urban fringe (2)
4.1.4 D – break of bulk point (2)
4.1.5 E – site (2)
4.1.6 F – secondary (2)
4.1.7 G – mining (2)
4.1.8 H – green belt (2)
4.1.9 I – positive balance of trade (2)
4.1.10 J – quarternary activities (2) 10 x 2) (20)

4.2.1 It poses the greatest threat to human health world wide (2) (1 x 2) (2)

4.2.2 Migrants leave families in rural areas to find work in the urban areas (2)
Exposed to higher levels of contacting the HIV/Aids virus in urban areas (2)
On returning home they expose family members to the HIV/Aids virus (2)
[Any TWO. Accept other answers] (2 x 2) (4)

4.2.3 Labour shortages (2)
Increased production costs (2)
Removal of children from school (2)
Child headed families (2)
Poverty increases (2) (3 x 2) (6)

4.2.4 May not be able to afford paying for substitute labour (2)
Make smaller profit (2)
May not find suitably trained substitute labourers (2)
[Any ONE] (1 x 2) (2)

4.2.5 Educate community (2)
Generate job opportunities in the area (2)
Compulsory testing of migrants for HIV/Aids virus (2)
Empowering women (2)
Using anti-retroviral medication to decrease mother to child transfer (2)
Awareness campaigns (2)
[Any TWO] (2 x 2) (4)

4.3.1 Migration/rural urban migration (2)
Urban reproduction (2) (2 x 2) (4)

4.3.2 An increase in the percentage of people living in urban areas (2)
[Concept] (1 x 2) (2)

4.3.3 Traffic congestion (2)
Growing informal settlements (2)
Pollution (2)
Crime levels increasing (2)
Pressure on service delivery (2)
Poverty (2)
Unemployment (2)
[Any THREE] (3 x 2) (6)

4.3.4 Transition zone/zone of decay (2) (1 x 2) (2)

4.3.5 Educated women work and have fewer children (2)
More likely to use contraceptives (2)
Will not be forced against their will to have large families (2)
[Any TWO] (2 x 2) (4)

4.3.6 Recycling of waste material (2)
Lead free petrol to reduced pollution (2)
Water tanks to save water (2)
[Any TWO] (2 x 2) (4)

4.4.1 Secondary (2) (1 x 2) (2)

4.4.2 Concentration of industries in a few core areas (2)
[Concept] (1 x 2) (2)

4.4.3 Creation of Jobs (2)
Income earned from export products (2)
Encourage foreign investment (2)
Creates stimulus to agriculture and mining (2)
Expansion of harbours (2)
Infrastructure development (2)
[Any THREE. Accept any other reasonable alternatives] (3 x 2) (6)

4.4.4 High rate of inflation (2)
High price of crude oil (2)
Vital raw materials absent in certain areas (2)
Labour strikes (2)
Loss of labourers as a result of HIV/Aids (2)
Skills shortage (2)
Environmental assessment studies (2)
Restrictions on carbon emissions (2)
Infrastructure can no longer cope with demand (2)
Lack of space for expansion (2)
[Any TWO. Accept any other reasonable alternatives] (2 x 2) (4)

4.4.5 Heavy industrial activities cannot develop alongside certain functions (2)
Heavy industries far away from the CBD because of high land values, noise and air pollution (2)
Heavy industries also located away from high income residential areas because of nuisance factors (2)
[Any TWO. Accept other reasonable explanations] (2 x 2) (4)

4.5.1 1 736 000 tons/1 736 thousand tons (2) (1 x 2) (2)

4.5.2 No (2)
The amount produced is lower than the demand (2) (2 x 2) (4)

4.5.3 366 000 tons/366 thousand tons (2) (1 x 2) (2)

4.5.4 Plant mainly for own use (2)
Use traditional farming methods (2)
Lack of capital (2)
Small plots of land (2)
[Any TWO] (2 x 2) (4)

4.5.5 It stimulates the export/import trade (2)
Generates foreign capital (2)
Provides employment (2)
Development of infrastructure (2)
Supplies raw materials to industries (2)
Meet some of the countries food demands (2)
[Any THREE] (3 x 2) (6)

4.5.6 In areas of low rainfall the use of irrigation increases the cost of production (2)
Use of hybrid seeds which makes crops more drought resistant are expensive (2)
It limits agricultural output (2)
[Any TWO] (2 x 2) (4)
[100]

GRAND TOTAL: 300