



UNIVERSITY OF JOHANNESBURG

DEPARTMENT OF GEOGRAPHY, ENVIRONMENTAL MANAGEMENT & ENERGY STUDIES

MODULE:	GR1BFET Geography for Education 1B
CAMPUS:	APK
EXAM:	Supplementary January 2017

DATE: 13 January 2017

SESSION: 08:00 – 11:00

ASSESSOR:

**Ms D. Greenberg
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MODERATORS:

**Prof N. Kotze
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DURATION: 2 Hours

MARKS: 100

Please read the following instructions carefully:

1. Answer ALL questions
2. This paper consists of 2 sections.
3. Number your sections and answers carefully and neatly
4. This exam paper may not be removed from the exam venue

SECTION A - PHYSICAL GEOGRAPHY**QUESTION 1 - SOLAR ENERGY TO EARTH AND THE SEASONS**

Multiple choice:

- 1.1) The plane of Earth's orbit about the Sun is called
A) perihelion.
B) aphelion.
C) the plane of the ecliptic.
D) a great circle.
- 1.2) The uneven distribution of insolation by latitude is primarily a result of
A) variability in the Sun's output.
B) the changing distance of Earth from the Sun.
C) variation in the value of a watt.
D) Earth's curvature, which presents varied angles to parallel solar rays.
- 1.3) The southern hemisphere's summer solstice occurs
A) at the same time as the northern hemisphere's summer solstice.
B) on or around June 21.
C) on or around December 21.
D) during the northern hemisphere's equinox.
- 1.4) The Sun's altitude refers to
A) the angular distance from the equator to the latitude at which direct overhead insolation is received.
B) the angular height of the Sun above the horizon.
C) the subsolar point.
D) how far the Sun is from Earth.
- 1.5) The equinox
A) occurs four times during the year.
B) has 12 hours of day and 12 hours of night for all locations.
C) is the longest day of the year at any given place.
D) is when the subsolar point is at one of the tropics.

(5)

Define and discuss

- 1.6) Define and discuss Sunspots

(3)

Total Question 1 [8]

QUESTION 2 - EARTH'S MODERN ATMOSPHERE

Multiple choice:

- 2.1) Based on temperature, the atmosphere is divided into
A) four regions: ranging from the troposphere to the thermosphere.
B) two broad regions.
C) two functional areas that absorb radiation from the Sun.
D) nitrogen, oxygen, argon.
- 2.2) The outermost region of the atmosphere, based on composition, is the
A) homosphere.
B) heterosphere.
C) troposphere.
D) thermosphere.
- 2.3) The high temperature in the upper thermosphere
A) is produced by the absorption of UV radiation.
B) is more a measure of sensible temperature than kinetic energy.
C) is more a measure of kinetic energy than sensible temperature.
D) produces a tremendous amount of heat transfer.
- 2.4) In which two atmospheric zones does temperature decrease with altitude?
A) troposphere and mesosphere
B) troposphere and stratosphere
C) stratosphere and mesosphere
D) stratosphere and thermosphere
E) None of the above—temperature decreases with increasing altitude in all layers of the atmosphere.
- 2.5) Noctilucent clouds are associated with the ____ whereas the auroras are associated with the ____.
A) stratosphere; ozonosphere
B) thermosphere; ionosphere
C) troposphere; homosphere
D) mesosphere; ionosphere

(5)

Total Question 2 [5]

QUESTION 3 - ATMOSPHERE AND SURFACE ENERGY BALANCES

Multiple choice:

- 3.1) The passage of shortwave and longwave energy through the atmosphere and water is an example of
A) absorption
B) transmission.
C) refraction.
D) insolation.
- 3.2) Kinetic energy is defined as
A) stored energy.
B) energy flow between molecules.
C) the energy of motion.
D) energy gained or lost when a substance changes states.

3.3) A stove that circulates heated air to uniformly cook food is an example of _____ heat transfer.

- A) conduction
- B) convection
- C) kinetic
- D) latent

3.4) Conduction refers to

- A) strong vertical movement of air in the atmosphere.
- B) strong horizontal movement of air in the atmosphere.
- C) the molecule-to-molecule transfer of heat energy.
- D) the behavior of something.

3.5) Which two gases are primarily responsible for the greenhouse effect because of their ability to absorb infrared energy?

- A) oxygen and hydrogen
- B) ozone and dust
- C) nitrogen and oxygen
- D) water vapor and carbon dioxide

3.6) The principle that explains the differential scattering of shorter wavelength radiation and accounts for the Earth's blue sky is

- A) mie scattering.
- B) refraction.
- C) Rayleigh scattering.
- D) transmission.

(6)

Define the following concepts:

3.7) Albedo (1)

3.8) Sensible heat (1)

3.9) Advection (1)

3.10) Reflection (1)

(4)

Total Question 3 [10]

QUESTION 4 - WATER AND ATMOSPHERIC MOISTURE*Multiple Choice Questions*

- 4.1) Water molecules bind tightly to one another. This is a result of
A) hydrogen bonding.
B) covalent bonding.
C) atomic friction.
D) molecular hold.
- 4.2) _____ occurs when the relative humidity is 100%.
A) Saturation
B) Evaporation
C) Sublimation
D) Deposition
- 4.3) The general term that refers to the tendency of a parcel of air to either remain in place or change its initial position is
A) adiabatic.
B) stability.
C) conditional instability.
D) stasis.
- 4.4) The prefix nimbo- and the suffix -nimbus means
A) that clouds are generally forming.
B) clouds that occur in the middle altitudes (2000-6000 m).
C) that clouds are generally dissipating.
D) that the clouds are producing precipitation.
- 4.5) The condensation process requires
A) dew-point temperatures alone.
B) condensation nuclei and saturated air.
C) moisture droplets.
D) condensation nuclei alone.

(5)*Fill in the missing words:*

- 4.6) Liquid water density is _____. (1)
- 4.7) The human body contains _____% water. (1)
- 4.8) Water covers _____% of Earth by area (1)
- 4.9) _____ is a process by which water and water vapor emerge from layers deep within and below the crust (about 25 km deep). (1)
- 4.10) Water density reaches maximum at _____°C. (1)

(5)*List*

- 4.11) List the five steps involved in the cloud formation process (5)

Total Question 4 [15]

QUESTION 5 - WATER RESOURCES

Define the following terms:

- 5.1) Evaporation (1)
5.2) Evapotranspiration (2)
5.3) Interception (1)
5.4) Infiltration (1)
5.5) Soil moisture zone (1)
5.6) A wetland (2)

(8)

Fill in the missing words

- 5.7) Fresh water on the Earth's surface is found primarily in _____, rivers, lakes and wetlands. (1)
5.8) _____ lies beneath the surface beyond the soil moisture root zone. (1)
5.9) A/an _____ is a rock layer that is permeable to groundwater flow in usable amounts. (1)
5.10) The _____ is the upper limit of the saturation zone. (1)

Total Question 5 [12]

Total Section A [50]

TOTAL [100]

Section B – Human Geography**QUESTION 1 – MULTIPLE CHOICE (20)**

1. The study of place names as evidence of past cultural presence and change is called
 - A. topography.
 - B. topology.
 - C. toponymy.
 - D. loconumology.

2. Self-chosen segregation of ethnic groups can serve these four functions:
 - A. defense, public welfare, concealment, preservation.
 - B. defense, assertion, support, preservation.
 - C. assertion, concealment, assimilation, support.
 - D. isolation, nucleation, concentration, preservation.

3. The landscape created by human action is called the
 - A. created culture.
 - B. material envelope.
 - C. constructed landscape.
 - D. built environment.

4. When different, unconnected culture hearths display comparable characteristics and forms of development, they are said to display
 - A. identical creativity.
 - B. unilateral similarity.
 - C. interconnected uniformity.
 - D. multilineal evolution.

5. Popular culture
 - A. increases the individuality of landscapes defined by folk and ethnic culture.
 - B. reflects the grass-roots rejection of behavioral norms established by central governments and schools.
 - C. gives rise to clearly recognizable regional differentiation within Western societies, including the United States.
 - D. tends toward behavioral uniformity and the reduction of regional differences.

6. Cultural convergence implies that
 - A. distinctive cultures will disappear.
 - B. world populations increasingly share a common technology.
 - C. all cultures can be traced back to a common ancestor group.
 - D. world trade reduces the importance of national borders

7. The smallest distinctive item of culture is called a culture
 - A. norm.
 - B. complex.
 - C. trait.
 - D. phoneme.

8. The classification of languages by origin and historical relationship is called
 - A. symbiotic classification.
 - B. organic classification.
 - C. syncretic classification.
 - D. genetic classification.

9. The degree of segregation of minority groups is measured by their

- A. racial uniformalism.
- B. ethnic syncretism.
- C. economic acculturation.
- D. social distance.

10. The world's oldest major religion is

- A. Buddhism.
- B. Shintoism.
- C. Judaism.
- D. Hinduism.

11. The level of minority penetration of a neighborhood that initiates rapid exodus of the earlier dominant resident group is known as the

- A. tipping point.
- B. panic point.
- C. exodus ratio.
- D. flight level.

12. Folk customs are usually

- A. rapidly diffused from their origin points by television network publicity and advertising.
- B. developed in advanced societies able to experiment with different ways of doing things.
- C. the product of homogeneous, self-sufficient, isolated groups.
- D. inspired by newsworthy events and perpetuated to commemorate them.

13. An assemblage of interrelated culture traits comprises a culture

- A. realm.
- B. complex.
- C. region.
- D. landscape.

14. Buddhism, Islam, and Christianity have been called "universalizing" religions because each

- A. is widely distributed with many adherents on all continents.
- B. proclaims the divine origin of the universe.
- C. claims universal applicability and seeks converts.
- D. promises a universally accessible afterlife for all humanity.

15. Multiethnic societies everywhere have experienced a recent reduction of cultural pluralism and ethnic divisions as a result of better communication and economic development.

- A. True
- B. False

16. Preagricultural societies tended to be highly stratified socially and highly specialized functionally, reflecting the defensive, hunting, and gathering roles of their individual members.

- A. True
- B. False

17. All the universalizing religions had their origin hearths in the Near East.

- A. True
- B. False

18. Ethnocentrism is the feeling of the superiority of one's own ethnic group.

- A. True

B. False

19. Distance may serve as an absorbing barrier to diffusion.

A. True

B. False

20. Christianity expanded solely through expansion diffusion.

A. True

B. False

Total Question 1 [20]

QUESTION 2 – CULTURAL GEOGRAPHY

Answer any two of the following questions

2.1 Using relevant examples, distinguish between a Pidgin, Creole and Lingua Franca. (15)

2.2 Discuss the three sub-structures of culture. (15)

2.3 Distinguish between the concepts of environmental determinism, possibilism and cultural autonomy. (15)

Total Question 2 [30]

Total Section B [50]