Hunter College-CUNY
GEOG 101 – Extra Credit for Exam II
Spring 2021

Instructions

The extra credit exercises associated with each third of the course are worth a **maximum of 8 points** added to your score for that exam. As indicated on the syllabus, the number of extra credit points is based on the percent of correct answers.

For Exam II, the extra credit exercises consist of the following units:

1. Climate Location
2. Climographs
3. Climate Characteristics and Controls

The purpose of these and other exercises assigned during the semester is to supplement classroom discussion and textbook assignments and to help you:

- ✓ think geographically
- ✓ read maps and charts
- ✓ extract data
- ✓ interpret, analyze and correlate information
- ✓ apply geographic principles
- ✓ come to a result

Your answer sheet for this Extra Credit assignment is due via email no later than:

Thursday, April 8, 2021 at 10 PM.

There are 80 questions in Extra Credit II.

- Use the **Answer Sheet on the last page** of this exercise for your responses. There is also a separate fillable and savable answer sheet in MSWord format on both BlackBoard and the Course home page
- Be sure to include **Your Name and GEOG 101-02** at the **TOP**.
- **Type** or **clearly print** your answers on the blank answer sheet provided.
- Any omissions and double entries, in addition to incorrect answers, will be marked wrong. Please be very careful to place the answers in the correct spaces.
- Use **UPPER CASE** letters if you hand-write the answers. Completely erase all changes before submitting. If the answer is unreadable, it is wrong.
- **Then do one of the following:**
  - ➢ Copy and save the exercise as a file; delete all pages except for the answer sheet. Save the file again and then attach it to a return email to agrande@hunter.cuny.edu.
  - ➢ Print the blank answer sheet, fill in the answers. Then scan the completed answer sheet and send it to me as an attachment or within the body of the email.
  - ➢ On a sheet of paper, construct a 3-column list. Fill in the answers. Then scan the completed answer sheet and send it to me as an attachment or within the body of the email.
  - ➢ Within the body of an email to me, type the answers using a 3-column format.
- **PLEASE NOTE:** Extra credit exercises may **not** be turned in late. No answer sheet will be accepted after the submission deadline. **Any answer sheet with a time stamp after 10 PM will not be graded.**
- DO NOT RETURN THE QUESTION PAGES WITH YOUR ANSWERS.

GEOG 101 - EXTRA CREDIT EXERCISE 2
CLIMATES

Consult CHAPTER 2 of your Dahlman and Renwick textbook (descriptions, diagrams and maps), **an atlas to locate places, and your class notes for the answers to this extra credit assignment. There are climate, ocean current, and wind maps at the end of the exercise.**

I. LOCATION of WORLD CLIMATES. Consult the World Climate maps on pages 10-11.

1. Which continent has the **most** major climatic regions according to the Köppen Classification System? (Count the **letter designations including "H" pattern on the climate map located on pages 10-11 of this exercise** - but only once each.)
   - **a)** Europe (includes Iceland but not Greenland)
   - **b)** North America (includes Greenland, Central America and the Caribbean)
   - **c)** South America (excludes Central America and the Caribbean)
   - **d)** Asia (includes the Middle East and the islands of the East Indies)
   - **e)** Africa (includes Madagascar but not the Arabian Peninsula)

2. Which continent has the **fewest** major climatic regions according to the Köppen Classification System? (Count the **letter designations and "H" pattern on pp 10-11** but only once.)
   a) Australia **b)** South America **c)** Europe **d)** Africa **e)** Antarctica

Locate the following places and determine their climate. Do this by consulting the atlas's index to find each location's coordinates and then transfer these coordinates to the world climate map on the last page on this exercise. Use the following key to indicate your answer:

1 = Tropical rainforest: Af, Am	**7 = Humid Subtropical: Cfa**
2 = Tropical savanna: Aw	**8 = Humid Continental: Dfa, Dfb**
3 = Desert (arid): BW	**9 = Subarctic: Dfc, Dfd**
4 = Steppe (semi-arid): BS	**10 = Tundra: ET**
5 = Mediterranean: Cs	**11 = Icecap: EF**
6 = Marine West Coast: Cfb, Cfc	**12 = Highland: H**

3.	Addis Ababa, Ethiopia:	a) 9	b) 12	c) 5	d) 6	e) 2
4.	Algiers, Algeria:	a) 10	b) 12	c) 5	d) 6	e) 2
5.	Cape York Peninsula, Australia:	a) 3	b) 9	c) 2	d) 11	e) 1
6.	Charleston, South Carolina, USA:	a) 1	b) 9	c) 2	d) 7	e) 3
7.	Denver, USA:	a) 12	b) 4	c) 9	d) 8	e) 11
8.	Gaborone, Botswana:	a) 11	b) 4	c) 7	d) 5	e) 1
9.	Goa, India:	a) 2	b) 4	c) 8	d) 1	e) 12
10.	Iqaluit, Canada:	a) 1	b) 9	c) 5	d) 7	e) 10
11.	Iquique, Chile:	a) 3	b) 1	c) 7	d) 8	e) 11
12.	Lagos, Nigeria:	a) 2	b) 10	c) 8	d) 6	e) 7
13.	Lhasa (Tibet), China:	a) 8	b) 4	c) 1	d) 3	e) 12
14.	Los Angeles, USA:	a) 1	b) 3	c) 11	d) 8	e) 5
15.	Manaus, Brazil:	a) 9	b) 2	c) 5	d) 1	e) 4
16.	Mecca, Saudi Arabia:	a) 10	b) 3	c) 5	d) 9	e) 11
17.	Montreal, Canada:	a) 3	b) 5	c) 7	d) 8	e) 9
18.	Moscow, Russia	a) 1	b) 4	c) 7	d) 11	e) 8
19.	Perth, Australia	a) 6	b) 5	c) 7	d) 12	e) 3
20.	Seattle, USA:	a) 10	b) 6	c) 3	d) 4	e) 11

21. 75ºN, 40ºW, Greenland: a) 11 b) 3 c) 7 d) 8 e) 1
22. Shanghai, China: a) 1 b) 5 c) 7 d) 8 e) 12
23. South Pole, Antarctica a) 11 b) 4 c) 7 d) 8 e) 1
24. Tokyo, Japan: a) 1 b) 9 c) 2 d) 11 e) 7
25. Wellington, New Zealand: a) 9 b) 12 c) 6 d) 4 e) 10
26. Yakutsk, Russia: a) 11 b) 6 c) 7 d) 9 e) 3

In general, the world's climate regions are aligned in a latitudinal (east-west) direction.

27. This arrangement is a reaction to the amount of _____ at different latitudes.

a) speed of the rotation of the earth
b) evaporation from the oceans
c) precipitation received
d) solar energy received

Exceptions to this general alignment are found around the world. Match the region with the strongest influence that causes the exception.

Use the following key to indicate your answer:

a. north-south orientation of a topographic barrier
b. nearby warm ocean current
c. nearby cold ocean current
d. longitude

28. West coast of the Scandinavian Peninsula **a. –- b. –- c. –- d. –-**
29. Island of Madagascar **a. –- b. –- c. –- d. –-**
30. Coastal southwest Africa **a. –- b. –- c. –- d. –-**

II. CLIMOGRAPHS. *Climographs help us see the average climate characteristics for each month of the year.*

31. When a location's temperature line on a climograph looks like a "valley" (not a "hill" or a "straight line") it is an indication that the site is located in the

a) Northern hemisphere
b) Polar region
c) Tropics
d) Southern hemisphere

CONSULT THE FOLLOWING WEB SITE TO ANSWER THE QUESTIONS POSED FOR THE SPECIFIC CITIES NAMED: https://www.usclimatedata.com/. Other data sources may give you wrong choices for this exercise. Click on the state name or state outline to see the list of its cities. Click on a city name to see its climograph and related chart. *Scroll down the page to the climograph.* ***Move the cursor over the graph for the data. NOTE: Pay attention to the scale of the climograph axes. They are different, so just don't "eyeball" the graph for the data.***

32. For **Caribou, Maine** the climate statistics indicate that the average temperature (aver. high temp + aver. low temp divided by 2) for the coldest months (Jan. and Feb.) is above 32°F.

a) TRUE **b)** FALSE

33. Which city of Alaska experiences the greatest difference in its high temperature between its coldest and warmest months?

a) Nome **b)** Fairbanks **c)** Juneau d) Anchorage

34. Seattle, Washington has a summer dry season.

a) TRUE **b)** FALSE

35. For **Birmingham, Alabama**, the greatest amount of precipitation occurs during the summer months (Jun-Sep).
a) TRUE **b)** FALSE

36. Compare the climographs for Houston, TX (1st entry), **New Orleans, LA** (1st entry) and **Miami, FL.** Which city has **both** the smallest temperature range of average high monthly temperatures (over 12 months) **and** a noticeable dry season?
a) Houston **b)** New Orleans **c)** Miami

37. California's Bay Area is anchored by the cities of **San Francisco**, **San Jose** and **Oakland.** All have a dry summer. Comparing their climographs, which city has the average wettest winter season (November-March)?
a) San Francisco **b)** San Jose **c)** Oakland

38. California's Bay Area's city with the warmest average temperature (high/low) for July is:
a) San Francisco **b)** San Jose **c)** Oakland

39. Boston, Massachusetts has a noticeable warm season during which it receives the greatest amount of monthly precipitation.
a) TRUE **b)** FALSE

40. Which city receives a **higher annual average snowfall**?
a) Portland, Arkansas **b)** Portland, Maine **c)** Portland, Oregon

41. In **Phoenix, Arizona**, which month receives **more than 1 inch** of precipitation on average annually?
a) January **b)** March **c)** May **d)** July

42. For **Honolulu, Hawaii,** the climograph indicates that the average temperature range in degrees for each month (warmest compared to coldest) is essentially the same.
a) TRUE **b)** FALSE

III. CHARACTERISTICS and CONTROLS of WORLD CLIMATES

Consult the Climate Classification Chart.

Each climate group has unique characteristics. For each characteristic listed, select the corresponding climate group.

Use the following key to indicate your answer:

a. A - Tropical humid b. B - Dry c. C - Warm mid-latitudes d. D - Continental e. E - Polar

43. Warm summers and mild winters:	**a. –-**	**b. –-**	**c. –-**	**d. –-**	**e. –**
44. Warm and rainy throughout the year:	**a. –-**	**b. –-**	**c. –-**	**d. –-**	**e. –-**
45. Very short, cool summers; long, very cold winters:	**a. –-**	**b. –-**	**c. –-**	**d. –-**	**e. –-**
46. Hot summers with rain and cold snowy winters:	**a. –-**	**b. –-**	**c. –-**	**d. –-**	**e. –-**
47. Great seasonal contrasts in temperature:	**a. –-**	**b. –-**	**c. –-**	**d. –-**	**e. –-**
48. Evapotranspiration exceeds precipitation:	**a. –-**	**b. –-**	**c. –-**	**d. –-**	**e. –-**

OCEAN INFLUENCES. *Consult the Oceans Currents Map.*

49. Which current **DOES NOT** form part of the circulation system of the North Atlantic Ocean?
a) Canary **b)** Gulf Stream **c)** Norwegian **d)** Benguela

50. Which current is **NOT a cold** current?
a) Peru **b)** West Australia **c)** Alaska **d)** California

51. TRUE - FALSE: The Equatorial Counter Current separates the ocean circulation system of the northern ocean basin from the circulation system of the southern ocean basin.

a) TRUE **b)** FALSE

CLIMATE PATTERNS OF SOUTH AMERICA.

***From latitudes 10˚S to 25˚S, the Atlantic Ocean coasts of South America and Africa, although both tropical, have opposite precipitation characteristics*.**

52. What causes the South American coast to be hot/wet while the African coast is hot/dry?

a) temperature of the ocean currents
b) predominant direction of wind flow
c) combination of "a" and "b"
d) mountain ranges
e) combination of "a" and "d"

FOCUS YOUR ATTENTION ON PERU

53. Which pattern does the climate regions of Peru exhibit?

a) No pattern. The climate is generally uniform throughout the country.
b) Climates run in a general east-west direction parallel to lines of latitude.
c) Climates run in a general north-south direction parallel to the coastline.
d) The general pattern of the climate regions is one of small oval units.

54. Which is climate region is NOT found in Peru?

a) A - tropical rainforest
b) B - dry
c) D - humid continental
d) H - highland

55. Comparing the general pattern Peru's climates with terrain, proximity to the ocean, and the location on earth of its climates, which is **NOT** a determining factor for their existence?

a) landforms **b)** ocean currents **c)** longitude **d)** elevation

FOCUS YOUR ATTENTION ON PATAGONIA, a region of Argentina. Consult the climate and landform maps and the global wind system diagram at the end of the exercise.

56. The climate of Patagonia is classified as being mostly

a) arid **b)** tropical rainforest **c)** humid subtropical **d)** tundra

57. The predominant winds found in this region are the

a) westerlies **b)** polar easterlies **c)** southerlies **d)** southeast trades

58. Patagonia's precipitation and environment characteristics are a result of its location

a) at very high elevations.
b) on the windward side of the Andes Mts.
c) on the leeside of the Andes Mts.
d) near the Atlantic Ocean.

To the north, in contrast to Patagonia, the Pampas of Argentina exhibit humid subtropical climatic characteristics.

59. It is warmer as one goes from south to north in Argentina because

a) there is an urban heat island affect radiating from Buenos Aires
b) the elevation is lower in the north.
c) north is in the direction of the equator.
d) a warm water current flows into the Rio de la Plata.

FOCUS YOUR ATTENTION ON THE TROPICS.

60. The **temperature** characteristics of the tropical climates can be **generalized** as
- **a)** being always very warm.
- **b)** having a hot summer with a mild winter
- **c)** having a cool winter with a mild summer
- **d)** variable (cool to mild) with the seasons.

61. The **average annual precipitation** associated with the **tropical humid zone** (Af, Am) is
a) Less than 10 inches **b)** between 20 and 60 inches **c)** 60 or more inches.

62. The **average annual precipitation** associated with the **tropical desert zone** (BWh) is
a) Less than 10 inches **b)** between 20 and 60 inches **c)** 60 or more inches.

63. Which subgroup of the humid tropical "A" climate experiences a pronounced dry period during its "cooler" months?
a) Af **b)** Am **c)** Aw

FOCUS YOUR ATTENTION ON DESERT AREAS.

Locate the listed deserts by continent. Use the following key to indicate your answer:

a. Australia b. Africa c. North America d. Asia e. South America

64. Ar Rub al Khali:	**a. –**	**b. –**	**c. –**	**d. –**	**e. –**
65. Atacama:	**a. –**	**b. –**	**c. –**	**d. –**	**e. –**
66. Gobi:	**a. –**	**b. –**	**c. –**	**d. –**	**e. –**
67. Great Victoria:	**a. –**	**b. –**	**c. –**	**d. –**	**e. –**
68. Kalahari:	**a. –**	**b. –**	**c. –**	**d. –**	**e. –**
69. Mojave:	**a. –**	**b. –**	**c. –**	**d. –**	**e. –**

70. TRUE - FALSE: All subgroups of the "B" climate group are totally barren of vegetation.
a) TRUE **b)** FALSE

71. TRUE - FALSE: It never snows in any of the "B" climate subgroup areas.
a) TRUE **b)** FALSE

FOCUS YOUR ATTENTION ON THE TEMPERATE CLIMATES.

72. Which subgroup of the warm midlatitude "C" climate group has a distinctive summer dry period?
a) Cfa Humid subtropical **b)** Cfb Marine West Coast **c)** Cs Mediterranean

73. The humid subtropical climates of southeastern United States, southeastern China and southern South America are a result of **several unifying characteristics** that have joined to create subtropical conditions. **These conditions are:**
- **a)** mountains funneling moist westerly winds into each region.
- **b)** onshore winds blowing over warm ocean current.
- **c)** onshore winds blowing over cold ocean current.
- **d)** cold offshore current and winds blowing from land to ocean.

The coastal cities of Reykjavik, Iceland and Bergen Norway are located between 60˚ and 65˚ north latitude, yet both have moderate "C" climates.

74. Why are they so warm at such high latitudes?
- **a)** At this latitude, there are equal hours of day and night throughout the year.
- **b)** Cloudless skies give maximum solar energy.
- **c)** The temperature of the North Atlantic Drift moderates the temperature.
- **d)** Mountain ranges protect the cities from cold Arctic air masses.

London, Paris and Rome *(located between 45° N -55° N)* ***with a "C" climate are warmer than other cities of Eurasia at similar latitudes because of the influence of warm, moist air masses*****.**

75. Eurasian cities located further east along the same latitudes are NOT affected by these air masses**. Why?**

a) High north-south mountains block the winds from flowing across Eurasia.
b) Because of the great distances involved, the air masses lose their characteristics as they move eastward across Europe.
c) The amount of solar energy received varies with longitude.
d) Continental influence of the land warms the air in winter and cools it in summer.

FOCUS YOUR ATTENTION ON THE COLD CLIMATES.

76. TRUE - FALSE: The humid continental climate zones (D group) are found in both the northern and southern hemispheres.

a) TRUE **b)** FALSE

77. The controlling factor for the existence of continental climates is

a) climatologic data.
b) large landmass.
c) mountains to cool the prevailing winds.
d) vast expanses of oceans

78. TRUE - FALSE: The humid continental "D" climates extend further south along the eastern side of North America, Europe, and Asia than on their western sides.

a) TRUE **b)** FALSE

79. All of the following statements support your answer to the previous question <u>except</u>:

a) On the east side of the continents, the prevailing winds blow from water to land, thereby cooling the landmasses.
b) On the west side of the continents, the prevailing winds blow over warm currents, thereby moderating the climates at higher latitudes.
c) On the east side of the continents, the prevailing winds blow the moderating influences away from the land.
d) Winds coming from the west that had been moderated by the warm ocean currents lose their moderating characteristics while traveling over the continental land masses.

80. Which subgroup of the Polar "E" climate never averages a monthly temperature <u>above</u> freezing?

a) ET **b)** EF

The MAP SECTION starts on next page >>

MAP SECTION

Figure 1 Global wind systems
Figure 2 Wind zones
Figure 3 Surface ocean currents
Figure 4a and 4b World climates

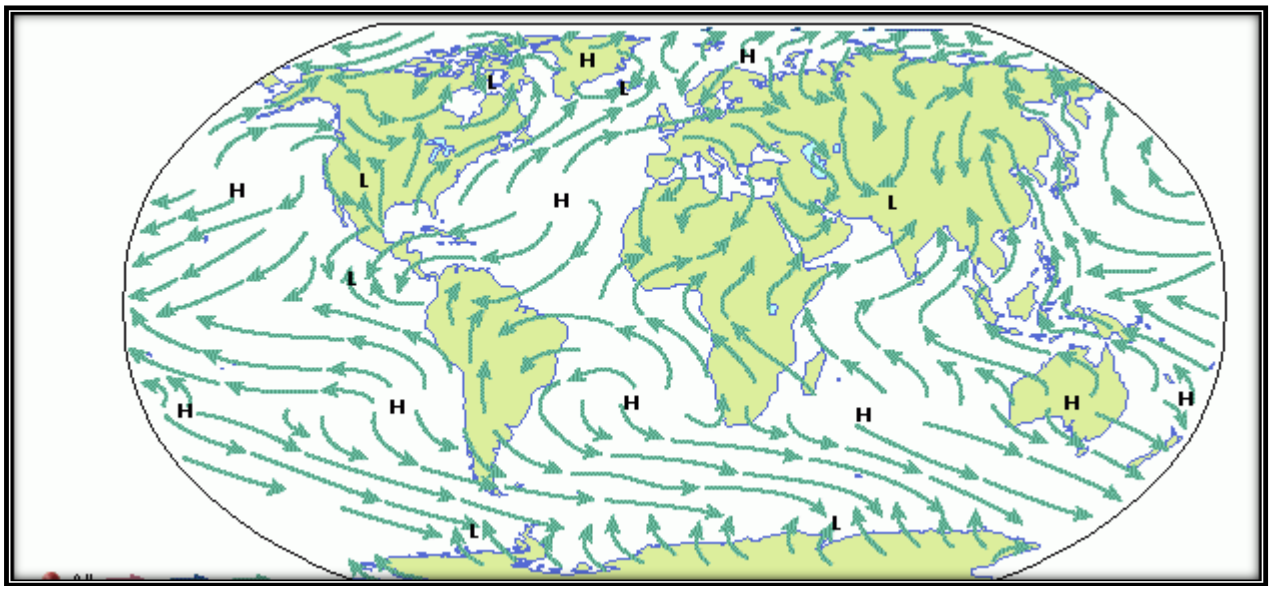


Figure 1. Global Wind Systems (H = high pressure cell; L = low pressure cell)

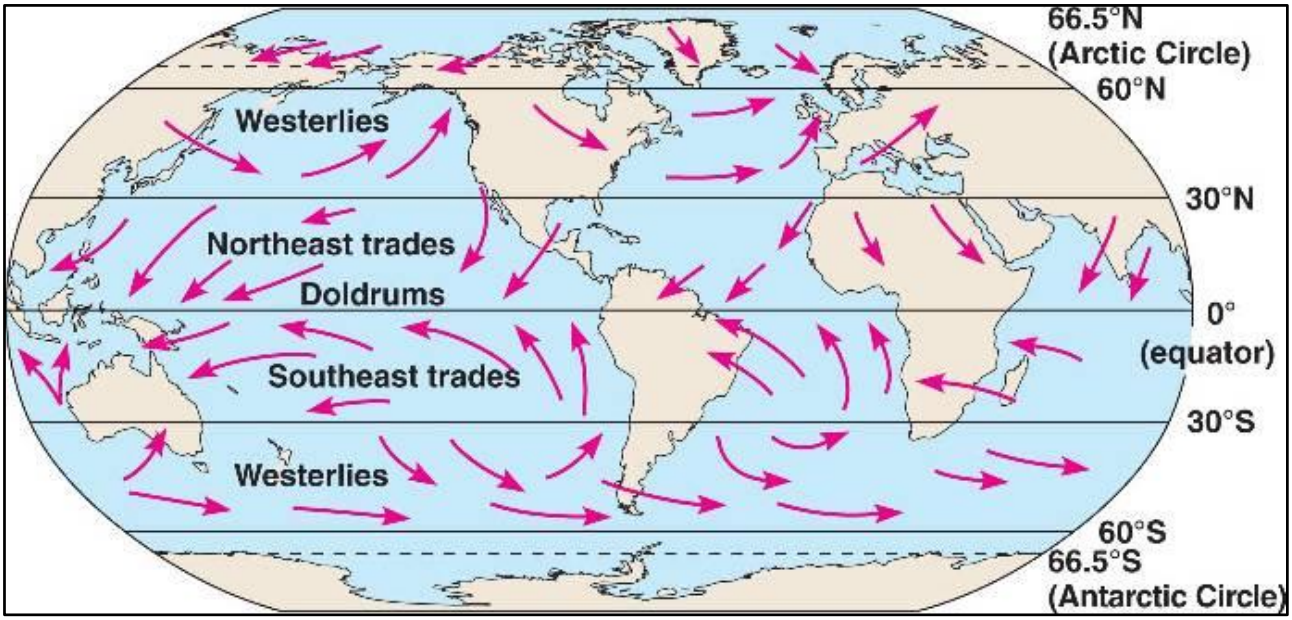


Figure 2. Named Wind Zones with Latitude Markers. The arrows indicate predominant wind direction.

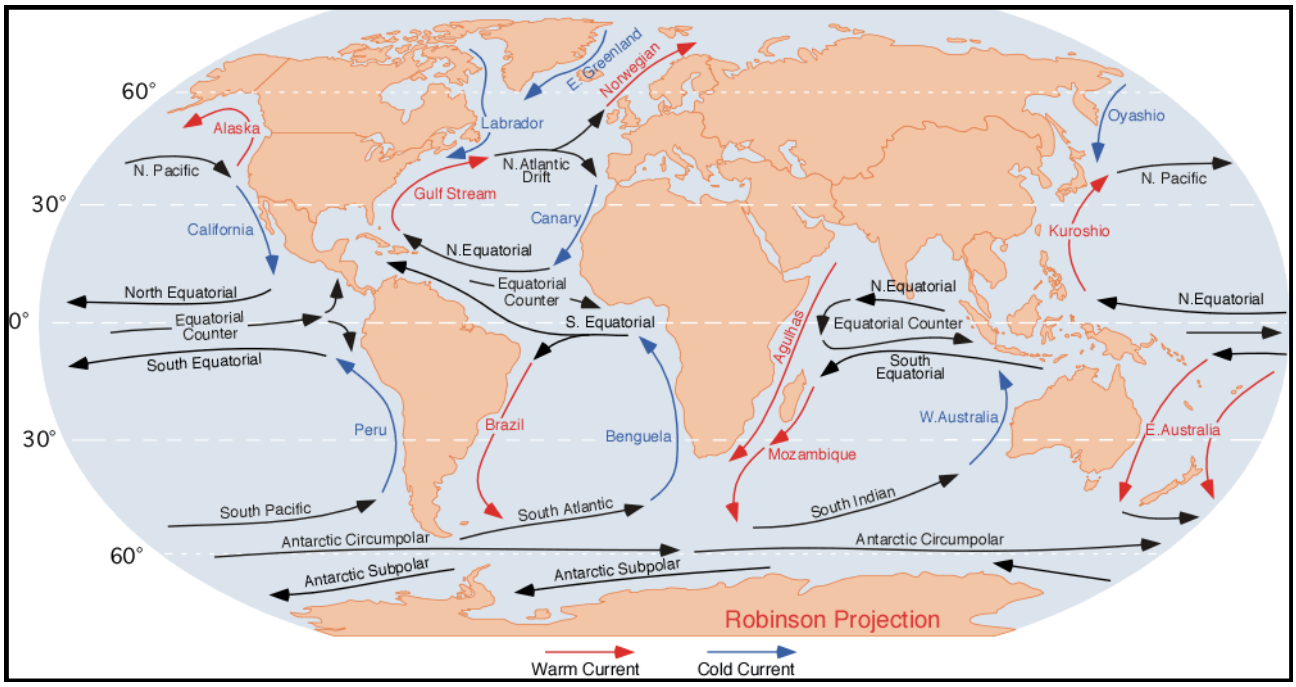


Figure 3. Surface ocean currents

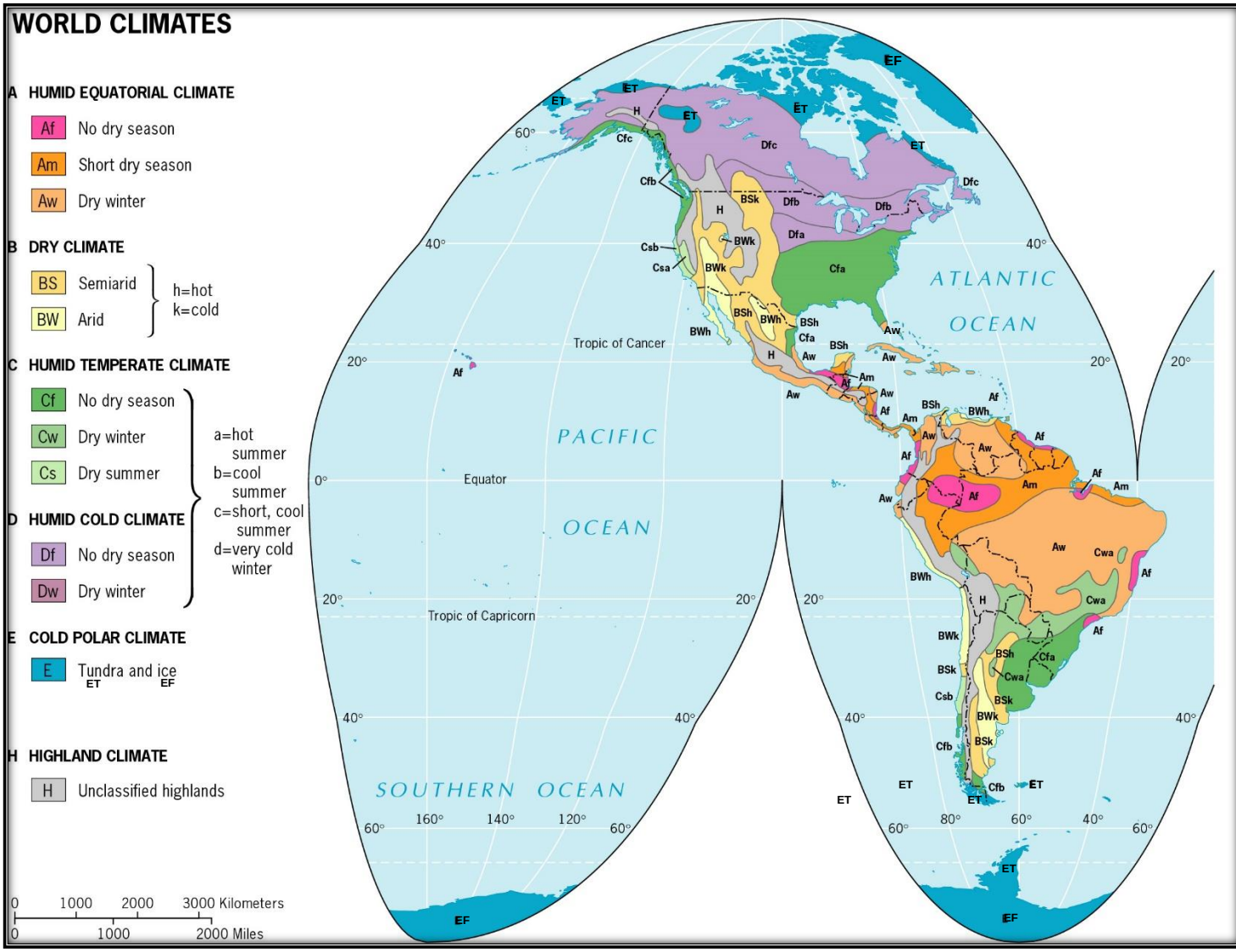
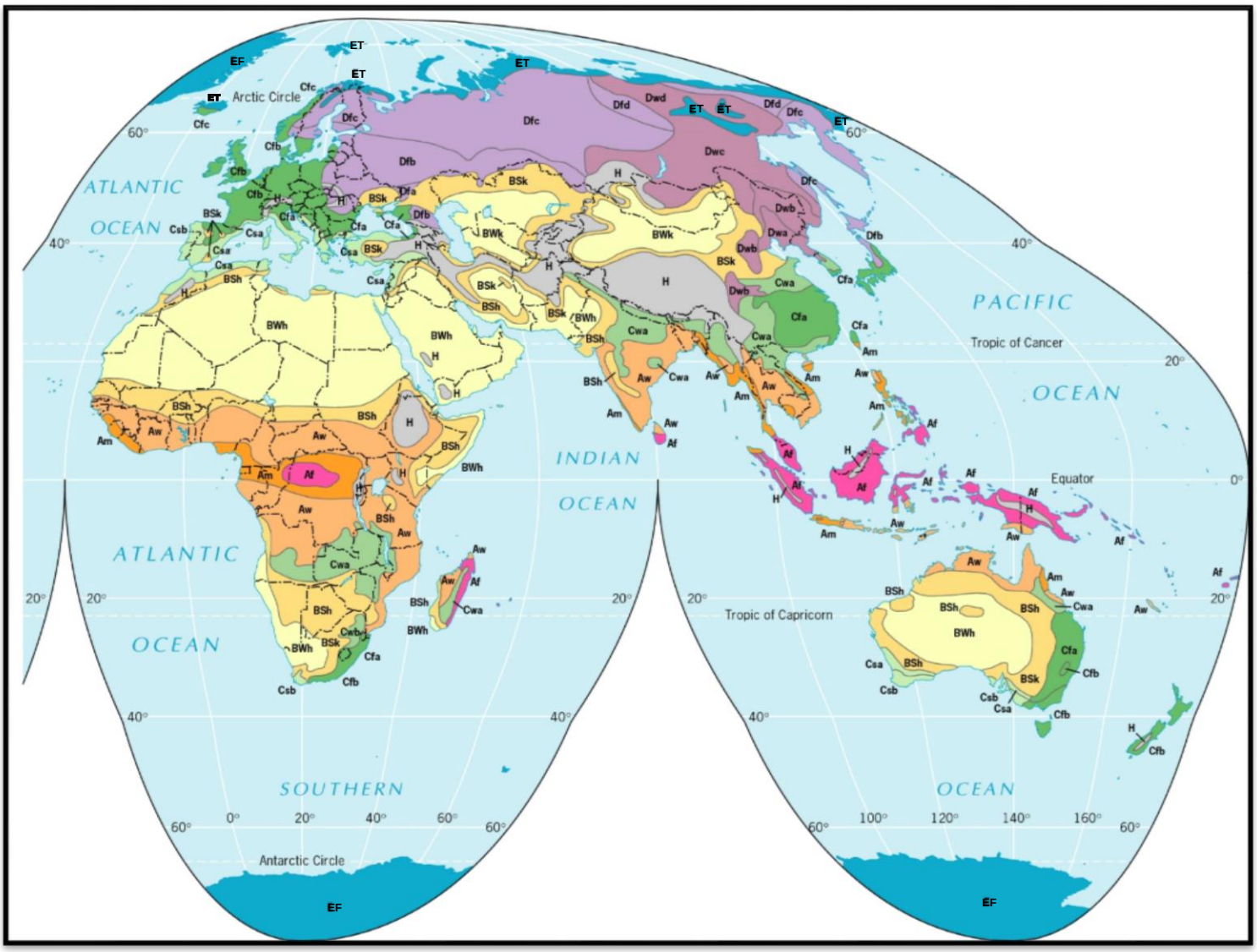


Figure 4a. World climate map (Köppen Classification System). Also consult map in textbook

Figure 4b. World climate map (Köppen Classification System). Also consult map in textbook



GEOG 101 SPRING 2021

ANSWER SHEET FOR EXTRA CREDIT II

Type or clearly hand-print your answers in the spaces provided.

Copy or scan just this answer sheet.
ATTACH the file to an email addressed to: agrande@hunter.cuny.edu
no later than 10 PM Thursday, April 8, 2021

YOUR NAME: _____ **GEOG 101-02 Extra Credit I**

QUESTION NUMBER	ANS.	QUESTION NUMBER	ANS.	QUESTION NUMBER	ANS.	QUESTION NUMBER	ANS.
1		21		41		61	
2		22		42		62	
3		23		43		63	
4		24		44		64	
5		25		45		65	
6		26		46		66	
7		27		47		67	
8		28		48		68	
9		29		49		69	
10		30		50		70	
11		31		51		71	
12		32		52		72	
13		33		53		73	
14		34		54		74	
15		35		55		75	
16		36		56		76	
17		37		57		77	
18		38		58		78	
19		39		59		79	
20		40		60		80	