Course No:
Course Title: Introduction to GIS
Date: 21/5/2011
Time: 2 hours
Using Calculator (yes)

University of Palestine

Final Exam
Total Marks: 40

Student No.: _____
Student Name: _____
College of Engineering
Using Dictionary (yes)

Q1- True or False: Mark T or F for the following statements (1 mark each)

1. In the Cartesian-Space Rectangular Coordinate System, the center of the earth is the origin ( )
2. Ellipsoid is the best fit for the earth surface ( )
3. Geodetic latitude varies from -180 degrees to +180 degrees ( )
4. Conformal projection preserve right angles between latitudes and longitude ( )
5. Each raster grid cell can have more than one value ( )
6. Spatial interpolation predict information for un-sampled locations ( )
7. Population density can be best interpolated by IDW ( )
8. Spline method of interpolation finds the optimal weight for each point ( )
9. In conversion from vector to raster, data loses some accuracy ( )
10. The larger cell size produces lower model accuracy ( )

Q2. Fill in the blank (2 marks each)

11. The following phenomena can be modeled by raster data

    _____

    _____

    _____

12. GIS shape files should have the following file extensions:

    _____

    _____

    _____

13. Map projection process involves the following steps or stages:

    _____

    _____

_____

_____

14. Spatial interpolation techniques are:

_____

_____

_____

15. The followings are examples of dat that can be interpolated by Kriging method:

_____

_____

Q3: Short essay questions (3 marks each)

16. Describe the difference between the shape file and the geo=database

_____

_____

_____

_____

17. For the following types of feature classes write the main digits characteristics

Long Integer: _____

Short Integer: _____

Float:_____

Double: _____

Text: _____

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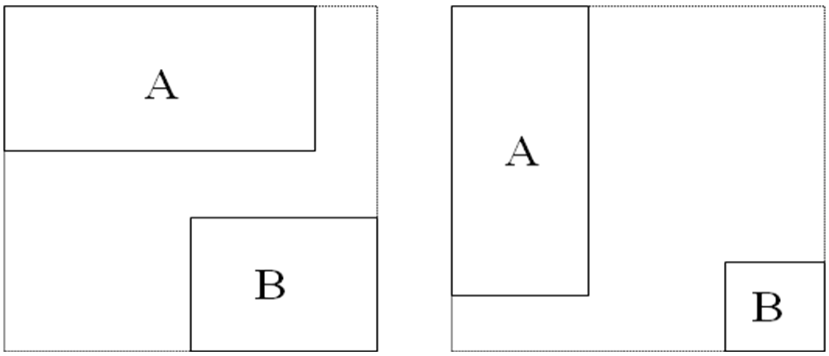
Q4 **(6 marks)**

18. For the following two shape files draw the intersection and the union, then complete the attribute tables for the intersection and the union?



ID	Landuse
A	Urban
B	Agriculture

ID	Ownership
A	private
B	governmental

Intersection Shape

Union Shape

Intersection attribute table:

ID	Attribute
A	
B	

Union attribute table:

ID	Attribute

Q5 **(8 marks)**

Given the following GIS files:

- Point shape file with topographic elevation (points indicating elevations from 10 to 100meters)
- Point shape file with temperature measurements (from 15 ^{o}C to 35 ^{o}C)

Using the functions of the **spatial analyst** and the **raster calculator**, explain the steps you need to do to select locations that satisfy the following characteristics:

- Elevation > 80 meters
- Slope < 0.02
- Temperature < 25^{o}C

End of questions
GOOD LUCK