REV-00
MGE/52/58

2016/12

MA GEOGRAPHY
First Semester
CLIMATOLOGY & OCEANOGRAPHY
(MGE - 102)

Duration: 3Hrs. **Full Marks: 70**

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins. **Marks: 50**

Answer any *four* from *Question no.* 2 to 8
***Question no.* 1 is compulsory.**

1. Define climatology. Explain its scope in terms of applied climatology. (3+7=10)
2. Distinguish between airmass and front. Provide classification of any one of them with suitable diagrams. (4+6=10)
3. What are the basis of climatic classification? Explain. Put forward Koeppen's climatic classification. (4+6=10)
4. What is the basic composition of atmospheric gases? Incoming solar radiation-outgoing solar radiation=0, explain. (5+5=10)
5. Put forward justified explanations about characteristics of ocean waters. Brief about oceans of the world. (5+5=10)
6. Define ocean dynamics. Brief about oceanic ice. (7+3=10)
7. Explain applied oceanography in terms of world economy. How remote sensing is related to oceanographic studies? (6+4=10)
8. Write short notes on *any two*: (5+5=10)
   a. Permafrost b. Coral reefs.
   c. Micro climates d. El Nino & La Nina and climatic change.

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Duration: 20 minutes **Marks – 20**

(PART A - Objective Type)

I. Choose the correct answer: **1×20=20**

1. The difference between all incoming solar energy and all outgoing terrestrial energy by both short wave and long wave radiation is called:
   a) Energy deficit b) Net radiation
   c) Energy surplus d) None of these

2. The process associated with the creation of new fronts is called:
   a) Front genesis b) Frontolysis
   c) Cold front d) Warm front

3. Atmosphere extends outward at least:
   a) 6000km b) 480km c) 8000km d) 13,000km

4. Argon makes up …..% in the atmosphere.
   a) 78.084 b) 0.00182 c) 0.934 d) 20.946

5. The average salinity of sea water is about:
   a) 30 parts per thousand b) 35 parts per thousand
   c) 75 parts per thousand d) None of the above

6. *Forminifera* is a:
   a) Coral polyps b) Microscopic creature
   c) Fish d) Flora

7. The term 'albedo' implies:
   a) Capacity to absorb heat.
   b) Capacity to modify the path of solar beam.
   c) Proportion of light reflected by surface.
   d) Amount of heat transferred to air by the surface.

8. On an ideal earth model the total number of pressure belts is:
   a) 5 b) 6 c) 7 d) 8

9. The coriollis effect is the result of:
   a) Earth's rotation b) Earth's revolution
   c) Earth's rotation and revolution d) Pressure gradient

10. 1 Nautical Mile = …?
    a) 1.852 km b)1.582km c)1.258km d)1.800km

11. Atmospheric pressure generated on the earth's surface is due to:
    a) Earth's rotation b) Earth's revolution
    c) Gravitational force d) None of these

12. Blizzards are characteristic feature of :
    a) Equatorial region b) Tropical region
    c) Antarctic region d) Temperate region

13. In Yogoslavia Mediterranean wind is called:
    a) Mistral b) Bora
    c) Pampero d) Gibli

14. Java has a world record of an average of.....days thunderstorms per year.
    a) 300 days b) 322 days c) 365 days d) 330 days

15. Doldrums in equatorial climate is a:
    a) Disturbed areas b) Calm areas
    c) Rainfall zones d) Cyclone zones

16. Wind rose represents:
    a) Wind data b) Wind turbulance
    c) Wind pressure d) Wind temperature

17. Which of the following winds is called anti-trade wind?
    a) Chinook b) Cyclone
    c) Typhoon d) Westerlies

18. Trade winds are due to:
    a) Conduction b) Convection
    c) Radiation d) Scattering

19. A wall of sea water in Bay of Fundy is called:
    a) Neap tide b) Tidal bore
    c) Spring tide d) Frontal rainfall

20. What is the cause behind frontal rain?
    a) Tropical air meets cold polar air b) Cold air from sea
    c) Convection currents d) None of these

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