

KATHMANDU UNIVERSITY
End Semester Examination
March/ April, 2017

Marks Scored:

Level : B.Sc./B.Tech.

Year : III

Course : ENV5 333

Semester: I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date APR 11 2017

SECTION "A"
[20 Q.×0.5=10 marks]

Mark "√" in the appropriate box.

1. Raindrops falling from sky but, not reaching to the ground is known as
 freezing rain snow virga glaze
2. In an isothermal layer of atmosphere, air temperature
 increases with increasing elevation
 decreases with increasing elevation
 decreases with decreasing elevation
 remains constant throughout the layer.
3. When Earth is at perihelion, it is about
 250 million Km from sun 147 million Km from sun
 450 million Km from sun 547 million Km from sun
4. Highest composition of gas in an atmosphere by volume is
 Carbon dioxide Nitrogen Methane Oxygen
5. In the vertical division of atmosphere, thermosphere is warmed due to presence of
 Nitrogen gas Ozone gas Helium gas Ions
6. Hail is produced only by
 Stratus cloud Cirro cumulus cloud
 Cumulonimbus cloud Cirrus cloud
7. Tropopause is facilitated with
 Geostrophic wind Katabatic wind
 Jet stream Anabatic wind
8. Water droplets freely suspended in the atmosphere having temperature below zero but, not freezing is known as
 dew super cooled frost rain
9. When the position of the earth is far from the sun, it is known as
 Perihelion Aphelion Equinox Solstice
10. When cold air mass moves towards the warm air mass, the boundary of discontinuity is called
 Occluded front Cold front
 Warm front Stationary front

11. Terrestrial radiation is the radiation emitted by
 Earth Sun
 Moon Unknown planet
12. Cold air blowing up along the slope of the mountain is called
 anabatic wind geostrophic wind
 katabatic wind gradient wind
13. Pyranohelimeter is an instrument that measures
 solar intensity sunshine duration
 wind direction and speed rainfall intensity
14. Prime Meridian is known for
 0 degree latitude 0 degree longitude
 90 degree latitude 90 degree longitude
15. As density of air rises, atmospheric pressure
 increases decreases
 will have no change remains constant
16. Isotach is a line joining equal
 wind speed rain fall air pressure air temperature
17. The process of generation of a front is known as
 synopsis frontolysis
 frontogenesis weather analysis
18. Neutral position between two low and two high pressure areas is known as
 trough col ridge cyclone
19. Winter solstice is
 shortest day of the year in the Northern Hemisphere
 longest day of the year in Northern Hemisphere
 equal day and night length in Northern Hemisphere
 shortest night in the Northern Hemisphere
20. Koppen's climate classification is based on
 average monthly precipitation and average monthly temperature
 average monthly evaporation and average monthly temperature
 average monthly atmospheric pressure
 average monthly solar radiation

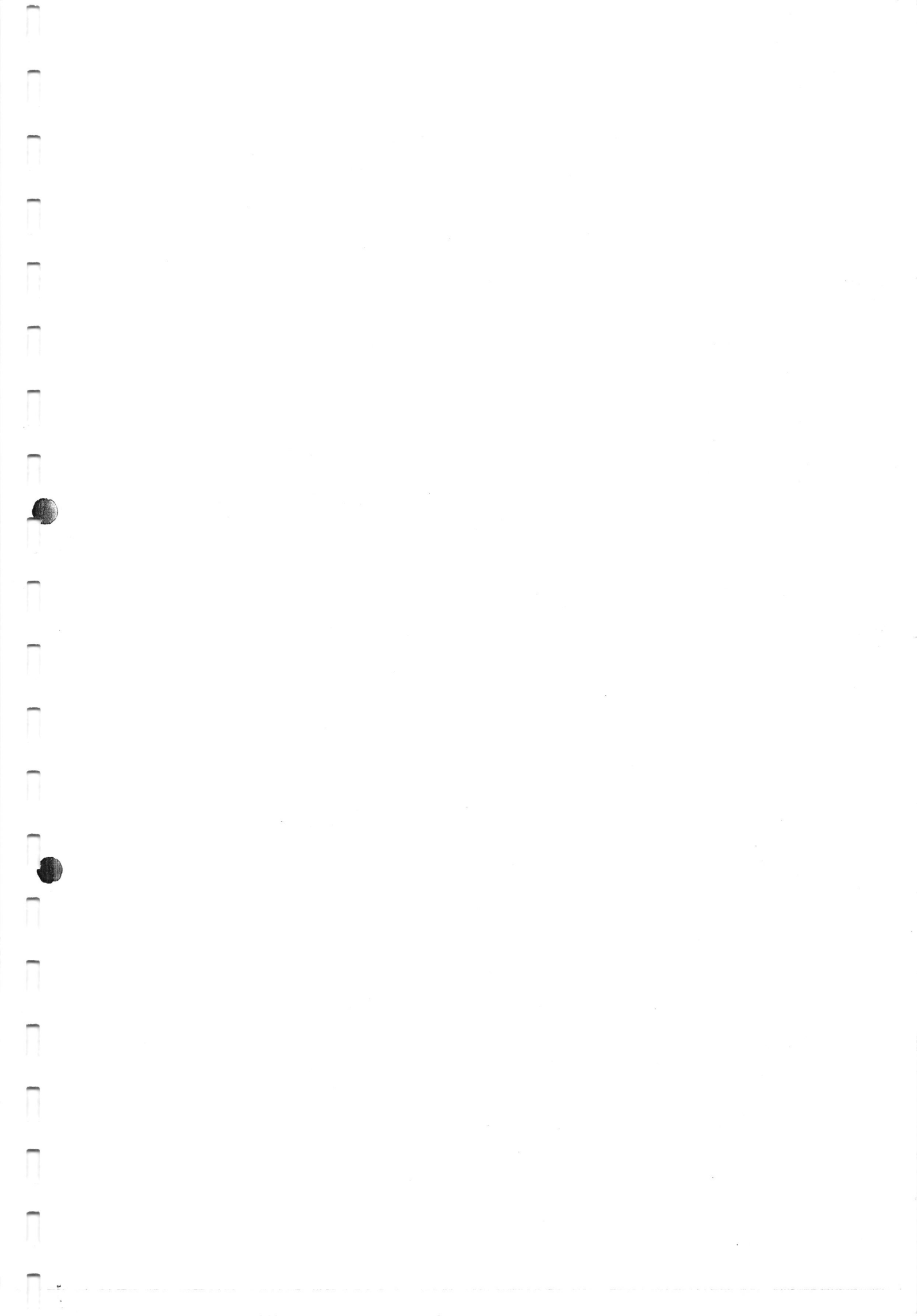
SECTION "B"

[20 Q × 0.5 = 10 marks]

Fill in the blanks.

21. Relative humidity is measured in terms of

22. In a vertical division of the atmosphere, the lowest layer of an atmosphere is known as
23. Cirrus is alevel cloud.
24. The atmospheric pressure exerted by each individual gas in the atmosphere is known as
25. Positive temperature anomaly indicates that the observed temperature isthan the normal value.
26. Winter precipitation in Nepal is caused mainly by
27. An elongated area of high pressure system is known as
28. Microscopic solid or liquid matter suspended in earth's atmosphere is known as.....
29. Hail is associated with only.....clouds
30. Buys Ballot's law states that in the Northern Hemisphere, if a person stands with his back to the wind, the low pressure area will be on his
31. A rapidly rotating column of air that spins while in contact with both the surface of the earth and a cumulonimbus cloud is often referred to as
32. Kepler's first law of planetary motion states that planet moves in
33. During vernal equinox, day and night are of length.
34. 1 mb vapor pressure is equivalent to N/m^2
35. ITCZ understands for
36. Land breeze is a gentle wind blowing from land to
37. The loss of solar radiation in passing through the atmosphere is called atmospheric
38. Trough is always associated withpressure system.
39. Air will bewhen it reaches to dew point temperature.
40. Isogon is a line joining equal



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Semester: I
F.M. : 55

SECTION "C"
[3 Q.×7=21 marks]

Attempt ANY THREE questions.

1. What is the role of Western disturbance in Nepal during the Winter season?. How is it different from monsoon? [7]
2. Write down the name of different types of front and explain them in brief. What do you understand by frontogenesis and frontolysis? [7]
3. What are the basis of Climatic classification? Write down the benefits and limitations of Koppen's classification. Explain in brief the reasons behind the popularity of Koppen's classification in the world. [7]
4. What do you understand by Green house gas? Write down the effects of Green house gases in climate change in the globe. [7]

SECTION "D"
(Short Answer Questions)

5. Differentiate between ANY FOUR. [4Q.×4=16]
 - a) Land breeze and Sea breeze.
 - b) Low cloud and High cloud.
 - c) Lapsrate and Temperature inversion.
 - d) Troposphere and Stratosphere.
 - e) Tornado and Cyclone.
6. Write short notes on ANY THREE. [3Q.×4=12]
 - a) Air pollution.
 - b) Global warming
 - c) Milankovitch Cycles
 - d) Monsoon
7. Give reasons why? [2Q.×3=6]
 - a) Surface heating causes instability in an atmosphere.
 - b) Wind blows from high pressure to low pressure area.

