

KATHMANDU UNIVERSITY
End Semester Examination [C]
July, 2017

Level : B. Sc./B. Tech.
Year : III

Course : ENVS 333
Semester: I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date JUL 14 2017

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Mark "✓" in the appropriate box.

1. The surface temperature of sun is estimated to be nearly
 6000⁰ C 1000⁰ C 2000⁰ C 3000⁰ C
2. In an isothermal layer of an atmosphere, air temperature
 increases with increasing elevation decreases with increasing elevation
 decreases with decreasing elevation remains constant throughout the layer
3. Winter rain in Nepal is caused by
 South west monsoon Winter monsoon
 Western disturbance Trade wind
4. Visible light of the Solar radiation from blue to red lies in the range between the wave length
 0.4 – 0.7 micron 4 – 100 micron
 100 – 400 micron 300 -400 micron
5. In the vertical division of an atmosphere, thermosphere is warmed due to presence of
 Nitrogen gas Ozone gas Helium gas Ions
6. Low clouds are below
 2 km 5 km 6 km 8 km
7. Tropopause is faciliated 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. Raindrops falling from sky but, not reaching to the ground is known as
 freezing rain snow virga glaze
10. Cold air mass moving towards warm air mass makes a boundary of discontinuity known as
 Occluded front cold front warm front stationary front

11. Terrestrial radiation is emitted by
 Earth Sun Moon unknown planet
12. Warm 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. Air density
 increases with increasing altitude decreases with increasing altitude
 decreases with increasing altitude remains constant throughout the altitude
16. Isotach is a line joining equal
 wind direction rain fall air pressure wind speed.
17. Front decaying process is known as
 synopsis frontolysis frontogenesis analysis
18. Neutral position between two low and two high pressure areas is known as
 trough col ridge cyclone
19. Geostrophic wind is a wind that blows in a straight line when forces acting on it such as
 pressure gradient force and Coriolis forces are equal
 pressure gradient force is greater than Coriolis force
 pressure gradient force is less than Coriolis force
 frictional force is equal to Coriolis force.
20. Continuous rain giving cloud that occurs mostly during the monsoon season is known as
 Nimbostratus Cumulonimbus Stratus Cirrus

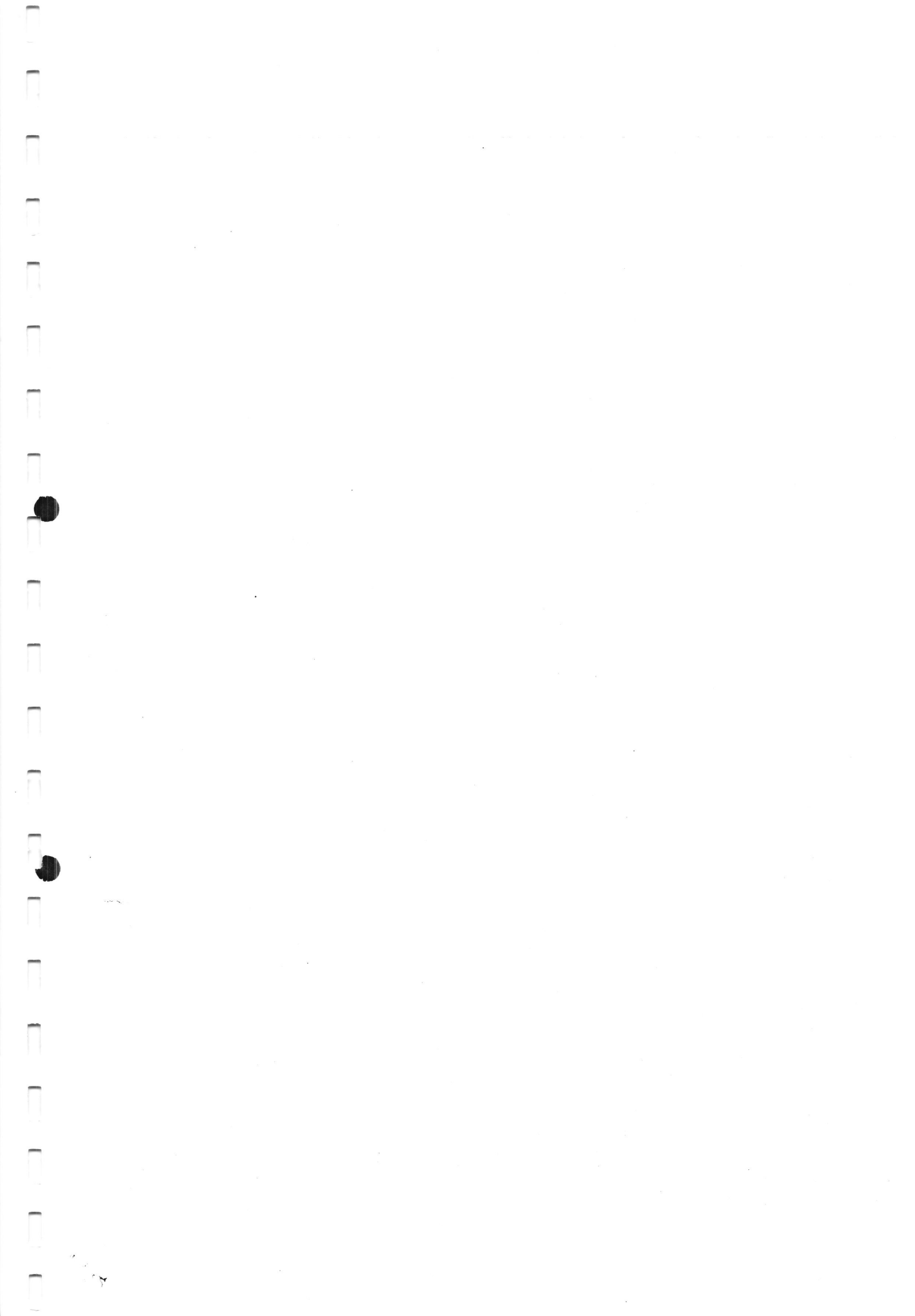
SECTION "B"

[20 Q × 0.5 = 10 marks]

Fill in the blanks.

21. In a vertical division of the atmosphere, Tropopause is the ceiling of
22. Earth moves around the sun in an.....orbit.
23. The atmospheric pressure exerted by each individual gas in the atmosphere is known as

24. Relative humidity is measured in terms of
25. Positive temperature anomaly indicates that the observed temperature is than the normal value.
26. When dry bulb temperature and dew point temperature are equal, air will be.....
27. Trough is an elongated area of system.
28. Microscopic solid or liquid matter suspended in earth's atmosphere is known as.....
29. Storm 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. Air density will beduring cloudy condition of an atmosphere.
32. Kepler's first law of planetary motion states that planets move in orbit.
33. During vernal equinox, day and night are of length.
34. 1 mb vapor pressure is equivalent to N/m^2
35. Koppen's classification is based on average precipitation and average.....
36. Barograph is an instrument that measures.....
37. A line joining equal rainfall is known as
38. Ridge is associated withpressure system.
39. Radiation is measured in terms of
40. Minimum temperature of a day is noted usually in the



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JUL 14 2017
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F. M. : 55

Level : B. Sc./B. Tech.
Year : III
Time : 2 hrs. 30 mins.

SECTION "C"

[3 Q. × 7 = 21 marks]

Attempt *ANY THREE* questions.

1. What do you understand by an atmosphere? Write down the name of different layers of atmosphere in its vertical division. Explain in brief the importance of Troposphere for the living beings on earth.
2. What do you understand by air mass? How does the characteristic of an air mass depend upon source region? How is frontogenesis different from frontolysis?
3. What do you understand by monsoon? Write down the main cause of occurrence of monsoon in South Asia. Why is it important for a country like Nepal?
4. What do you understand by Climate change? Explain in brief the affects of climate change in the livelihood of the human beings.

SECTION "D"

(Short answer questions)

5. Differentiate between *ANY FOUR* [4 Q. × 4 = 16]
 - a) Troposphere and Thermosphere.
 - b) Weather and Climate.
 - c) Monsoon and Western disturbance.
 - d) High and Low cloud
 - e) Air mass and Front
6. Write short notes on *ANY THREE* [3 Q. × 4 = 12]
 - a) Isothermal layer of an atmosphere.
 - b) Greenhouse gases
 - c) Air pollution
 - d) Monsoon trough.
7. Give reasons why? [2 Q. × 3 = 6]
 - a) Cumulonimbus cloud is associated with storm, heavy rain and hail.
 - b) Atmospheric pressure decreases with altitude.

