Sanjay Ghodawat University, Kolhapur   2018-19

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XL, 2017

Year and Program B.Sc. II   School of Science   Physics
Course Code: PHS 204   Course Title: Weather Forecasting   Semester – Even (IV)
Day and Date: Tuesday   Time: 30 minute 2.30-3.00
28/05/2019   End Semester Examination   Max Marks:15

Seat No.:   PRN No.:   Student Sign:

Invigilator Sign: Examiner Sign: Marks Obtained:
                                         (A)

Instructions:

1) All Questions are compulsory.

2) Mark √ to the correct option. Do not circle.

3) More than one options marked will not be considered for assessment.

4) Rough calculations on paper are not allowed.

5) Use non-programmable calculator is allowed

Q.1	Sr. No	Choose the correct alternative.	Marks (15)	Bloom's level	CO
	1	Three quarters of Earth's atmosphere lies within......... of the surface. A) 11 Km B) 50 Km C) 5 Km D) 100 Km	1	L1	204.1
	2	An imaginary surface about 120 Km from surface is called the.......... A) Exosphere B) Thermosphere C) Karman line D) Troposphere	1	L1	204.1
	3	Ozone, Co2 & water vapor are three main atmospheric constituents which...................... radiation A) scatters B) absorbs C) reflects D) refracts	1	L1	204.1
	4	In meteorology atmospheric pressure is reported in............. A) Pascal B) psi C) N/m^2 D) hectopascal	1	L1	204.1
	5	The increase in atmospheric temperature at stratosphere is due to ...., of radiation A) absorption B) scattering C) reflection D) refraction	1	L1	204.1
	6	If the wind move from west to east they are called as................. A) westerlies B) westward C) easterlies D) eastward	1	L1	204.2

ESE

7	Hadley cell is a closed circulation loop which descends at .... latitude	1	L1	204.2

A) 30^0 N/S   B) 60^0 N/S   C) 90^0 N/S   D) 0^0 N/s

8	The polar cell is smallest & weakest cell which extends between......... N & S to the poles.	1	L1	204.2

A) 0^0 & 30^0 B) 60^0 &70^0 C) 30^0 & 60^0 D) 60^0 &60^0

9	A narrow band of strong wind in the troposphere is...................	1	L1	204.2

A) Air fronts   B) Air masses   C) jet streams   D) tornadoes

10	A boundary between air masses with different properties is...........	1	L1	204.2

A) cyclone   B) air masses   C) clouds   D) air fronts

11	Short range forecast is valid from...................	1	L1	204.3

A) few hours to 72 hours   B) few hours to 12 hours

C) few hours to 6 hours   D) few hours to 3 weeks.

12	Persistence method of forecasting depends upon.............weather	1	L1	204.3

A) past   B) future   C) current   D) average

13	The weather forecasting is prediction of atmospheric condition at a given...........	1	L1	204.3

A) volume & pressure   B) pressure & temperature

C) location & time   D) velocity & time

14	.... is an atmospheric parameter which is not measured by weather station at SGU.	1	L1	204.3

A) Rainfall   B) Lightning   C) Solar radiation   D) Pressure

15	.... data is used in determining upper tropospheric anomalies	1	L1	204.3

A) IR sounder   B) Microwave sounder

C) Scatterometer   D) Radar altimeter

ESE

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Course Code: PHS 204
Day and Date: Tuesday
          28/05/2019

School of Science
Course Title: Weather Forecasting
End Semester Examination

Physics
Semester – Even (IV)
Time: 2hrs. 30 min.
Max Marks:85
          3.00 to 5.30 pm

Instructions:
1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Neat diagrams must be drawn wherever necessary.
4) Use of logarithmic table and calculator are allowed.

(B)

Q.2		Answer the following questions	Marks (25)	Bloom's level	CO
	a)	What is air temperature? Describe requirements to measure air temperature.	10	L2	204.1
	b)	Explain different types of scattering in the atmosphere.	5	L2	204.1
	c)	State advantages of Aneroid barometer over simple barometer.	5	L1	204.1
	d)	State and explain radiation laws in the atmosphere.	5	L2	204.1
		OR			
	d)	With neat diagram explain construction and working of any two barometers.	5	L2	204.1

Q.3		Answer the following questions	Marks (30)	Bloom's level	CO
	a)	Explain forces to produce wind and thus global wind system with neat diagram.	10	L4	204.2
	b)	What is cyclone and anticyclone?Explain types of cyclones and state characteristics of anticyclone.	10	L2	204.2
		OR			
	b)	What is weather and climate? How climate is classified according temperature & precipitation?	10	L2	204.2

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		Marks	Bloom's	CO
c)	Describe causes of ozone depletion with chemical equations.	5	L3	204.2
d)	What is cloud? Explain formation of different types of clouds	5	L3	204.2

Q.4	**Answer the following questions (Any Five)**	**Marks (30)**	**Bloom's level**	**CO**
a)	What is weather forecasting? Explain how it is classified according to duration.	06	L3	204.3
b)	Describe types of forecasting methods	06	L3	204.3
c)	Explain the criteria to choose weather station.	06	L3	204.3
d)	Discuss the types of satellites used to forecast weather	06	L3	204.3
e)	Explain the need of measuring weather.	06	L3	204.3
f)	Explain weather maps. Draw a table showing different types weather symbol with usual meaning.	06	L3	204.3

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