

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2020

Course: SPACE SCIENCE AND SPACE ENVIRONEMNT **Semester:** VIII
Program: B.TECH (AEROSPACE ENGINEERING) SPZ AVIONICS **Time** 03 hrs
Course Code: ASEG 485 **Max. Marks:** 100

Instructions:

SECTION A

S. No.	State if the following statements are 'True' or 'False'.	Marks	CO
Q 1	TNOs are found in our galaxy, but out of our solar system.	3	CO1
Q 2	Earth has an intrinsic Magnetosphere.	3	CO2
Q 3	Cosmic rays are EM waves stronger than even the UV and Gamma rays.	3	CO3
Q 4	Solar wind is created on Earth in regions which receive intense solar radiation.	3	CO4
Q 5	The Heliopause lies between the Tropopause and the Stratopause.	3	CO1
Q 6	The number of Van Allen Belts around the Earth can change.	3	CO3
Q 7	Energetic electrons are part of solar wind.	3	CO4
Q 8	The solar corona lies between the chromosphere and the photosphere of the sun.	3	CO1
Q 9	Energetic charged particles find it easy to enter the Earth's atmosphere around its poles.	3	CO3
Q 10	Some Cosmic rays can come from the sun too.	3	CO3

SECTION B

Q 11	Discuss and analyze the Van Allen Belt(s) created in the Earth's atmosphere.	10	CO3
Q 12	Differentiate between the inner planets and the outer planets. In which group does Pluto lie?	8+2	CO1
Q 13	Analyze the Earth's atmosphere in terms of pressure and temperature, and accordingly stratify it into different zones. OR What is the phenomenon of temperature inversion in the Earth's atmosphere? How many times does it manifest itself?	10	CO2
Q 14	Analyze the interaction of the solar wind with the Earth's magnetic field.	10	CO4

Q 15	Discuss the Earth's magnetic field in terms of its origin, distribution and orientation.	10	CO2
SECTION-C			
Q 16	Beginning with the Proto-star stage explain the probable life cycle of our Sun till its supposed end.	20	CO1
	<u>OR</u> Give the most popular theories on the formation of solar system. Discuss in detail the most accepted one.	20	CO1