

**U.G. 6th Semester Examination - 2020****PHYSICS****Course Code : BPHSDSHT6****Course Title : Physics of Earth**

Full Marks : 40

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **ten** questions:  $1 \times 10 = 10$ 

- Write down approximate age of the earth.
- What is geothermal energy?
- What is Cryosphere?
- What is the duty of a meteorologist?
- What is earth's heat budget?
- What is "Ring of fire" related with earthquake belts?
- According to plate tectonics, how many major plates exists within earth?
- Name two active volcanoes.

*[Turn Over]*

- What is Hydrosphere?
- What are the causes behind eustatic rise in sea level?
- What do you mean by Tsunami?
- What do you mean by continental drift?
- What do you mean by generalized coordinates?
- What is the difference between asteroid and meteorites?
- Which factors affects human population growth?

2. Answer any **five** questions:  $2 \times 5 = 10$ 

- List important functions of Earth scientists.
- What do you mean by greenhouse effect?
- Which forces drive ocean currents?
- Explain concept of time in geological studies.
- Discuss about origin of life on earth.
- What are the application of geochronology?
- How oceans and continents originated?
- What types of energy and particle fluxes incident on the earth?

3. Answer any **two** questions:  $5 \times 2 = 10$

a) Describe shortly about Indian monsoon system. What do you mean by carbon cycle?

$$2 \frac{1}{2} + 2 \frac{1}{2} = 5$$

b) Discuss the roll of biosphere in shaping the environment. Discuss about end of the earth according to geologists.

$$3 + 2 = 5$$

c) Discuss about safe disposal of nuclear waste. How a steady state is maintain in the biosphere through various cycles?

$$2 \frac{1}{2} + 2 \frac{1}{2} = 5$$

4. Answer any **one** questions:  $10 \times 1 = 10$

a) What are the possible sources of Earth's magnetic field? Write a short note on how various elements of the earth created. Discuss about shape and topology, density and rotational motion of the earth.

$$3 + 3 + 4 = 10$$

b) How the temperature of the atmosphere surrounding the earrth varies? What are the role of polar caps and ice sheet to balance life in earth? How oceans, continents and mountains originated?

$$3 + 2 + 5 = 10$$

c) Write a short note on biodiversity loss and its effect on ecosystem. How life was originated and evolved to the present state? Discuss shortly about extent, depth, volume and chemical compositions of oceans.

$$3 + 3 + 4 = 10$$