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| Name: |  |
| Enrolment No: | |

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2021

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| Course/ Program: B.Tech (FSE) | Semester : VIII |
| Course Code: HSFS4007 | Time : 03 hrs. |
| Subject: Fundamental of Sustainable Development | Max. Marks: 100 |
| No. of page/s:4 | |

SECTION A (6*5=30 Marks)

| S. No. | Answer all the question | Marks | CO |
|--------|--|-------|-----|
| Q 1 | The concept of sustainability means that development efforts, including those aimed at protecting health and the environment, should be undertaken in a manner that “meets the needs of the present without compromising the ability of future generations to meet their own needs and there are three different type of approaches for it, describe it with some example. | 5 | CO1 |
| Q 2 | Define carbon trading and write importance of carbon trading in sustainable development. | 5 | CO1 |
| Q 3 | Outline the various dimensions of sustainable development. What are its fundamental principles? | 5 | CO3 |
| Q 4 | A misunderstanding of the difference between sustainability versus energy efficiency is preventing practitioners from reaching their goals of helping the environment. What do you understand by energy efficiency and certified emission reduction ? | 5 | CO2 |
| Q 5 | Project proponent needs to prepare a project design document (PDD) in order to register for project under CDM .Write briefly on common components of PDD. | 5 | CO2 |
| Q 6 | Sustainable development is a road-map, an action plan, for achieving sustainability in any activity that uses resources and where immediate and intergenerational replication is demanded. Explain how sustainable development coincides with further economic growth and human development in the developed economy (and society). | 5 | CO1 |

SECTION B (5*10=50 Marks)

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| | Answer four questions. | | CO |
| Q 7 | The view that human activities are likely responsible for most of the observed increase in global mean temperature ("global warming") since the mid-20th century is an accurate reflection of current scientific thinking. Human-induced warming of the climate is expected to continue throughout the 21st century and beyond. Explain Kyoto Protocol and its impact on sustainable development. | 10 | CO4 |
| Q 8 | Illustrate following and also emphasize their impact on sustainable development <ul style="list-style-type: none"> i. Montreal protocol ii. Geneva Convention iii. Carbon Piercy | 10 | CO3 |

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| Q 9 | <p>Explain in detail</p> <ul style="list-style-type: none"> a) Environment & Sustainability b) Sustainable development & Industrialization c) Sustainability planning d) Project life cycle for sustainability | 10 | CO3 |
| Q 10 | <p>The origins of the term "carrying capacity" are uncertain, with researchers variously stating that it was used "in the context of international shipping" or that it was first used during 19th-century laboratory experiments with micro-organisms. A recent review finds the first use of the term in an 1845 report by the US Secretary of State to the US Senate. List down the factors which effect carrying capacity and differentiate between Inter and Intra generational equity and justice?</p> | 10 | CO5 |
| Q 11 | <p>Define ESG & explain its application for industry as well as society.</p> | 10 | CO3 |
| SECTION-C | | | |
| | <p>Answer two questions.</p> | | CO4 |
| Q 12 | <p>Describe the following in detail</p> <ul style="list-style-type: none"> a) Ecological footprint b) Different standards for Sustainable development c) Cost component of CBA d) Green House effect <p style="text-align: center;">OR</p> <p>The CDM Executive Board was established as the UNFCCC secretariat to oversee the CDM process. In order to be registered as a CDM project activity, project proponents need to go through project cycle. Illustrate what are the steps involve in project life cycle.</p> | 20 | CO4 |