

Name:

Enrolment No:



School of Business
UPES
End Semester Examination December 2022

Program: BBA (GES)
Subject/Course: Introduction to Sustainability Development
Course Code: OGET 1002

Semester: 1st
Max. Marks: 100
Duration: 3 Hours

SECTION A
10Qx2M=20Marks

Q.No		Marks	Cos
Q1	How has the Government of India aided the achievement of SDG 1 – No Poverty?	2	CO1
Q2	Ensuring sustainable consumption and production patterns is the primary target of SDG 12 – Responsible Production and Consumption. (True/False)	2	CO2
Q3	Protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably managing forests, combating desertification, halting and reversing land degradation, and halting biodiversity loss are related to which of the following sustainable development goals? a) SDG 15 – Life on Land b) SDG 14 – Life Below Water c) SDG 16 – Peace, Justice, and Strong Institutions d) SDG 10 – Reduced Inequality	2	CO2
Q4	Write a note on the renewable energy mix of India.	2	CO1
Q5	Is climate change real? Write for or against the statement.	2	CO2
Q6	What does “Partnership of the Goals” mean?	2	CO2
Q7	Strengthening the means of implementation and revitalizing the global partnership for sustainable development can help in achieving sustainable development goals. (True/False)	2	CO1
Q8	Explain the term “Green Energy”.	2	CO1
Q9	How can the protection and restoration of water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes lead to sustainable development?	2	CO1

Q10	How can providing universal access to safe, inclusive, and accessible, green and public spaces, in particular for women and children, older persons, and persons with disabilities aid in sustainable development?	2	CO1
SECTION B 4Qx5M= 20 Marks			
Q11	How can the generation and use of renewable energy help in reducing the impact of climate change?	5	CO2
Q12	How can Industry and Infrastructure be made more sustainable?	5	CO3
Q13	How can supporting and strengthening the local communities help in improving water and sanitization management?	5	CO3
Q14	Sustainable Development cannot be discussed beyond the Sustainable Development Goals. Comment on the statement.	5	CO2
SECTION-C 3Qx10M=30 Marks			
Q15	Climate Change and Sustainability are directly related to each other. Comment in favor or against the statement.	10	CO3
Q16	Discuss any 3 targets of SDG 7 – Affordable and Clean Energy.	10	CO4
Q17	Discuss in detail SDG 4 – Quality Education.	10	CO3
SECTION-D 3Qx15M= 30 Marks			
Q18	<p>Read the following case and answer the questions that follow.</p> <p style="text-align: center;">Gosaba island, West Bengal (biomass for electricity):</p> <p>Gosaba Island is one of the 54 inhabited islands (out of a total of 104 islands) in the Sundarbans, a large mangrove forest region situated on the Ganges Delta. Farming here depends almost completely on the monsoon and the area is low-lying. After independence, the overall progress of the people remained severely hindered due to the absence of electric power in the region. The conventional electric power line had not reached the region due to its geographical location, and also because most of these places are separated from the mainland by wide rivers or creeks.</p> <p>Electricity was available to only a few houses situated near specific shops or marketplaces. This was generated and supplied for 3-4 hours using small diesel generators. Customers paid Rs.4 per day per point (typically a 40W bulb or tube light), which was a very high rate (the present rate is Rs.18 per kWh). Kerosene lamps were the only source of light for students studying at night.</p>	30	CO4

Then, a biomass gasifier power plant was commissioned on 20th June 1997 as a collaboration of the state and central government. It uses two fuels to generate electricity via gasification. The main fuel is biomass in the form of tree branches, twigs, and bark (70%). The support fuel is diesel (30%). (Diesel is used here because when this plant was built; up till then the technology for generating power using only biomass was still not available). Local people called it the “wood electricity” plant.

One of the reasons for the project’s success was that locals were involved in decision-making from the very start. Door-to-door visits were made and briefings on different aspects of the project were given to the village panchayat representatives, who in turn discussed it with the local people. A series of public meetings were held to raise awareness of the technology, its limitations, advantages, and the need for an energy plantation.

Concerned by the threat to their incomes, the local diesel operators initially opposed the setting up of the power plant. But other members of the community undertook a vigorous campaign to sell the benefits of the new approach (which included the health benefit of cutting the toxic fumes from the diesel generators). This dissipated the opposition to a large extent and some of the diesel operators were later employed in the plant.

The plant is locally owned and managed through the ‘Gosaba Rural Energy Cooperative’. This body was set up by the West Bengal Renewable Energy Development Agency (WBREDA) in 1996. Members of the village panchayats are on the board, which is one of the ways of ensuring a good level of community ownership. The Cooperative sets the tariff, advises WBREDA on where the power line should go and is responsible for collecting electricity bills from each household. It is a matter of pride that there have been no instances of electricity ‘theft’ or of defaulting on bills.

For the energy plantation, trees were planted on 71 hectares of low-lying riverbank silt beds (char lands). After three years, the plantation was fully established and was providing a steady supply of wood to the plant. Additional biomass is supplied by local farmers.

This is a relatively large biofuel plant of 500 KW, benefiting 3,027 households and a total population of 18,220. The availability of electricity has allowed students to study at night and achieve better exam results. Small-scale factories have been established which are using electric machinery to carry out boat repairs, welding, knife- and tool-sharpening, and spice-grinding. An operating theatre is now functioning at the government health center on the island. With the availability of refrigerators, it has become possible for the first time to store life-saving vaccines and medicines.

	<p>Electric pumps are now being used for irrigation; people can watch sports and other programs on cable television, which was not thought possible earlier; films are being screened in newly-established video parlors; a computer training center has also been opened, and electric sewing machines are being used to make fishing nets.</p> <p>Q18 (a): Referring to the above case, which Sustainable Development Goals can be covered?</p> <p>Q18 (b): What was the main success factor of the biomass gasifier plant installed on the island?</p> <p>Q18 (c): Can the village be considered an example of a Sustainable Developed Village? Provide valid reasons for your choice.</p>		
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