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**B.Tech / M.Tech (Integrated) DEGREE EXAMINATION, NOVEMBER 2024**  
Fifth Semester

**21EE0306T - SUSTAINABLE DEVELOPMENT PRACTICES**  
(For the candidates admitted from the academic year 2021-2022 to 2023-2024)

Note:

- (i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.  
(ii) **Part - B & Part - C** should be answered in answer booklet.

Time: 3 hours

Max. Marks: 75

**PART - A (20 x 1 = 20 Marks)**  
Answer ALL Questions

**Marks BL CO PO**

- Which of the following is NOT typically considered a key element of social sustainability? 1 1 1 7  
 A) Reducing gender inequality ☒ B) Promoting equal access to healthcare and education  
 C) Addressing climate change and carbon emissions ☐ D) Ensuring social justice and inclusion for marginalized communities
- The United Nations has established a total Sustainable Development Goals (SDGs) 1 1 1 7  
 A) 15 B) 16  
☒ C) 17 D) 18
- The 2030 Agenda for Sustainable Development (SDGs) acknowledge that all governments must promote action in the important areas listed as 1 1 1 7  
 A) People, Planet, Prosperity, Peace, and Partnership. B) People, planet, wealth, plants, and collaboration  
☒ C) People, prosperity, peace, and planet D) People, Planet, Prosperity, Peace, and Progress.
- In India, National Action Plan on Climate Change (NAPCC) was launched in the year 1 1 1 7  
 A) 2022 B) 2002  
 C) 2020 ☒ D) 2008
- The progress on sustainable development goals (SDGs) is monitored by NITI Aayog using which Index 1 1 1 7  
 A) SDG NITI Index B) SDG development Index  
 C) SDG Progress Index ☒ D) SDG India Index
- Under MGNREGA, what is the minimum number of days of wage employment guaranteed in a financial year to every household 1 1 2 7  
☒ A) 100 Days B) 120 Days  
 C) 90 Days D) 180 Days
- What was the new extreme poverty line set by the World Bank in September 2022? 1 1 1 7  
☒ A) \$1.90 B) \$2.00  
 C) \$2.15 D) \$2.50
- What does "ODF" stand for in the context of ODF Plus villages? 1 1 2 7  
 A) Open Drinking Facilities ☒ B) Open Defecation Free  
 C) Organized Development Framework D) Operational Development Facility

9. Kasturba Gandhi Balika Vidyalaya (KGBV) aim to help girls from disadvantaged groups in transitioning smoothly from elementary to which level of education? 1 1 2 7  
 A) College level B) Secondary and up to Class XII  
 C) Pre-primary level D) Vocational education
10. What is the main focus of Sustainable Development Goal (SDG) 5? 1 1 2 7  
 A) Reducing poverty B) Ensuring access to clean water and sanitation  
 C) Achieving gender equality and empowering all women and girls D) Promoting quality education
11. What percentage of the overall gender gap has India closed as per the latest report? 1 1 2 7  
 A) 50.4% B) 70.42%  
 C) 85.56% D) 64.3%
12. What is the health cover provided by PM-JAY (Pradhan Mantri Jan Arogya Yojana) per family per year? 1 1 2 1  
 A) Rs. 5 lakhs B) Rs. 7 lakhs  
 C) Rs. 10 lakhs D) Rs. 3 lakhs
13. What is the measurement unit for PM 2.5 and PM 10? 1 1 3 1  
 A) Parts per million B) Milligrams per cubic meter  
 C) Micrograms per cubic meter D) Micrograms per meter
14. What is the Pollution Index (PI) score range for industries classified under the Green category? 1 1 3 7  
 A) 0 to 20 B) 41 to 59  
 C) 60 and above D) 21 to 40
15. When was the draft of the National Resource Efficiency Policy released by the Ministry of Environment, Forest and Climate Change in India? 1 1 3 7  
 A) 2017 B) 2018  
 C) 2019 D) 2020
16. When were the recent E-Waste (Management) Rules, notified in India? 1 1 3 7  
 A) 2nd November, 2021 B) 2nd November, 2022  
 C) 2nd November, 2023 D) 2nd November, 2020
17. Which ministry in India is primarily responsible for formulating policies and guidelines related to Public-Private Partnerships (PPPs)? 1 1 3 7  
 A) Ministry of Road Transport and Highways B) Ministry of Corporate Affairs  
 C) Ministry of Rural Development D) Ministry of Economic Affairs
18. What role does NITI Aayog play in the localization of SDGs in India? 1 1 3 7  
 A) Monitors SDGs across India B) Conducts reviews and facilitates learning among states  
 C) Restricts states from implementing their initiatives D) Indexing the current status of National-level goals
19. What is India's rank in the Human Development Index (HDI) out of 193 countries and territories? 1 1 3 1  
 A) 109 B) 134  
 C) 140 D) 173

20. Which of the following statements about India's agricultural share in GDP is correct? 1 1 3 1  
 A) The share of agriculture in GDP increased to 35% in 2022-23  
 B) Agriculture's share in GDP decreased due to a drop in agricultural output  
 C) Agriculture's share declination is due to rapid growth in industrial and service sectors  
 D) The share of agriculture in India's GDP remains constant at 15%

**PART - B (5 x 8 = 40 Marks)**  
 Answer ALL Questions

Marks BL CO PO

- 21 a. Enumerate the contributions of the private sector, particularly investors and industries, to sustainable development. How can businesses align profitability with sustainability goals? 8 1 1 7  
 (OR)  
 b. Discuss the role of people as stakeholders in sustainable development. How can community engagement and grassroots initiatives promote sustainable practices? 8 1 1 7  
 22 a. Highlight the importance of energy sources and supply in India's development. What steps should be taken to address the energy deficiency? 8 1 2 1  
 (OR)  
 b. Articulate the housing crisis in India and suggest potential solutions to address inadequate housing for urban and rural populations 8 1 2 7  
 23 a. Discuss in detail the significance of skill development programs in reducing unemployment and promoting inclusive growth in India. 8 1 2 7  
 (OR)  
 b. Enumerate the importance of people's participation in decision-making processes for sustainable development. How can this be effectively implemented? 8 1 2 7  
 24 a. Explain the importance of preserving forests and water sources for environmental protection. How can policies and community actions help safeguard these resources? 8 1 3 7  
 (OR)  
 b. Examine the significance of pollution control measures in reducing environmental degradation. What technological advancements have enhanced pollution control efforts? 8 1 3 1  
 25 a. Identify the future trends in integrated approaches for sustainable development. How might technological innovations and global cooperation shape sustainable growth? 8 1 3 7  
 (OR)  
 b. Discuss a case study where an integrated approach to sustainable development was successfully implemented. What lessons can India learn from this example? 8 1 3 7

**PART - C (1 x 15 = 15 Marks)**  
 Answer ANY ONE Question

Marks BL CO PO

26. Examine the growing issue of unscientific waste management in Indian cities. Discuss the key challenges, including infrastructure, policy implementation, public awareness and the role of modern waste management techniques, public participation, and government policies. 15 1 2 1  
 27. Explain how sustainable energy sources can help mitigate the environmental impacts of fossil fuel consumption. Highlight the role of government policies, innovation, and international efforts in promoting renewable energy adoption. 15 1 3 7

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