SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION

Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai

19MC003 - ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE

Syllabus

UNIT-I:

Introduction to traditional knowledge: Define traditional knowledge, nature and characteristics, scope and importance, kinds of traditional knowledge, Indigenous Knowledge (IK), characteristics, traditional knowledge vis-a-vis indigenous knowledge, traditional knowledge Vs western knowledge traditional knowledge

UNIT-2:

Protection of traditional knowledge: The need for protecting traditional knowledge Significance of TK Protection, value of TK in global economy, Role of Government to harness TK.

UNIT-3:

Legal framework and TK: The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, Plant Varieties Protection and Farmer's Rights Act, 2001 (PPVFR Act); The Biological Diversity Act 2002 and Rules 2004, the protection of traditional knowledge bill, 2016.

UNIT-4:

Traditional knowledge and intellectual property: Systems of traditional knowledge protection, Legal concepts for the protection of traditional knowledge, Patents and traditional knowledge, Strategies to increase protection of traditional knowledge

UNIT-5:

Traditional Knowledge in Different Sectors: Traditional knowledge and engineering, Traditional medicine system, TK in agriculture, Traditional societies depend on it for their food and healthcare needs, Importance of conservation and sustainable development of environment, Management of biodiversity, Food security of the country and protection of TK

Text Books:

1. Traditional Knowledge System in India, by Amit Jha, 2009.

Reference Books:

1. Traditional Knowledge System in India by Amit Jha Atlantic publishers, 2002.
2. "Knowledge Traditions and Practices of India" Kapil Kapoor1, Michel Danino2.

Two mark Question and answer

UNIT 5: Traditional Knowledge in Different Sectors

1. **How is Traditional Knowledge used in engineering?**

- TK influences **sustainable construction, water management (step wells, check dams), and energy-efficient designs.**

2. **Give an example of Traditional Knowledge in agriculture.**

- **Crop rotation and mixed cropping techniques** improve soil fertility and reduce pest infestations.

3. **How does TK contribute to the traditional medicine system?**

- TK forms the basis of **Ayurveda, Unani, and Siddha medicine, using herbal remedies for various ailments.**

4. **What role does TK play in food security?**

- TK ensures **preservation of indigenous crops, organic farming, and traditional food storage techniques.**

5. **How do traditional societies depend on TK for healthcare?**

- They use **herbal medicine, spiritual healing, and community-based healthcare practices.**

6. **What is the significance of TK in biodiversity conservation?**

- TK helps in **maintaining ecological balance, preserving native species, and promoting sustainable resource use.**

7. **How can TK aid in environmental sustainability?**

- By promoting **natural farming, forest conservation, and water harvesting techniques.**

8. **Give an example of a TK-based natural disaster management practice.**

- Coastal communities use **mangrove plantations to reduce tsunami impact and flood control.**

9. **How is TK applied in fisheries?**

- Traditional fishing methods like **bamboo fish traps and sustainable harvesting help maintain aquatic biodiversity.**

10. **Why should TK be integrated into modern scientific research?**

- Integration **combines ancient wisdom with modern innovation, leading to better healthcare, agriculture, and environmental solutions.**

Sixteen-mark question

UNIT 5: Traditional Knowledge in Different Sectors

1. How can traditional water conservation techniques be modified and applied in urban planning to combat climate change? *(Creating - Level 6)*

2. Assess the effectiveness of traditional agricultural practices in maintaining soil health compared to modern chemical-based methods. *(Evaluating - Level 5)*

3. Analyze the role of traditional knowledge in disaster preparedness and response strategies in indigenous communities. *(Analyzing - Level 4)*

4. Develop a business model that ethically commercializes traditional medicine while ensuring fair compensation for knowledge holders. *(Creating - Level 6)*

5. Evaluate the impact of cultural erosion on food security due to the loss of traditional agricultural practices. *(Evaluating - Level 5)*