

SEMESTER- I
VALUE ADDED COURSE
PAPER CODE: 1061 [COURSE NO. 1]
ENVIRONMENTAL SCIENCE/ EDUCATION
TOTAL CREDITS: 4
[3 - 0 - 1 :: 60+20+20]

TIME: 3 Hours

MARKS: 60

Learning objectives

- *To create awareness and understanding of the environment and its different components*
- *To get knowledge on different current environmental problems and issues in national and international levels*
- *To impart knowledge about the management practices of different environmental problems*
- *To get real life experiences of different environmental resources, ecosystems and environmental degradation*

Unit 1: Basics of Environmental Studies: (05)

Definition, Nature, Scope and Importance; Components of environment: Environmental education

Unit 2: Natural Resources: Renewable and Nonrenewable Resources (10)

Nature and natural resources their conservation and associated problems:

- Forest resources: Uses, types and importance, Joint Forest Management & symbiotic relationship between tribal population and forests, Deforestation and its effects
- Water resources: Distribution of water on Earth; Use, over exploitation of surface and ground water; Dams: Benefits and problems; Flood and Drought
- Mineral resources: Mineral resources in India; Use and exploitation, Social impacts of mining
- Food resources: World food problems and food insecurities.
- Energy resources: Renewable and Nonrenewable energy sources; Use of alternate energy sources - Case studies
- Land resources: Land as a resource; Land degradation, landslides, soil erosion, desertification
- Use of resources for sustainable development (Concepts & Goals)

Unit 3: Ecology and Ecosystems (08)

- Concept of ecology, Population ecology, Community ecology
- Concept of an ecosystem, different types of ecosystem
- Food chains, food webs and ecological succession
- Energy flow in the ecosystem and energy flow models

Unit 4: Biodiversity and its conservation (08)

Biodiversity: Levels of biological diversity

- Values of biodiversity
- Hot-Spots of biodiversity, IUCN Red Data Book, Mega-biodiversity countries
- Threat to biodiversity
- Threatened and endemic species of India

Handwritten signature and date: 4/11/2023

Handwritten signature and date: 4/11/2023

Principal
Mahavidyalaya

- Conservation of biodiversity (*In-situ* and *Ex-situ*)
- Ecosystem services: Ecological, Economic, Social, Ethical, Aesthetical and Informational values

Unit 5: Environmental Pollution and Management (08)

- (a) Nature, Causes, Effects and Control measures of – Air pollution, Water pollution, Soil pollution, Noise pollution
- (b) Solid waste management: Causes, effects and disposal methods; Management of biomedical and municipal solid wastes
- (c) Disaster management: Floods, Earthquake, Droughts, Cyclone and Landslides

Unit 6: Environmental Policies and Practices (10)

Constitutional Provisions for protecting environment- Article 48(A), 51A(g)

- Environmental Laws: The Environment (Protection) Act, 1986; The Air (Prevention and Control of Pollution) Act, 1981; The Water (Prevention and Control of Pollution) Act 1974; Forest (Conservation) Act, 1980
- The wildlife Protection Act, 1972
- Climate change, Global warming, ENSO, Acid rain, Ozone layer depletion; Montreal and Kyoto Protocols

Unit 7: Human Communities and Environment (06)

- Human population growth; Impacts on environment
- Environment and human health: Concept of health and disease; Common communicable and Non- communicable diseases; Health awareness programmes in India
- Environment movements in India: Chipko Movements, Silent Valley Movement, *Narmada Bachao Aandolan*

Unit 8: Field Work Report/Project Report/Term paper **Marks: 20**
[Based on any one of the following topics and to be evaluated by internal teachers only]

- Environmental assets - River/Forest/Grassland/Hill/Mountain *etc.*
- Environmental pollution - Urban/Rural/Industrial/Agricultural
- Study of common Plants/Insect /Birds/Wild life *etc.*
- Study of simple ecosystems: Pond/River/Hill slope *etc.*

Learning outcomes

- *Understanding on environment and its importance*
- *Knowledge on different natural resources, causes of depletion and its sustainable uses*
- *Understanding the significance of biodiversity and its conservation*
- *Ideas on provisions of Indian Constitution for environmental protection*
- *Understanding the interrelationship among human population growth, environment and human health*
- *Knowledge of on-field experience on environmental issues through project work*

04/11/2023

04/11/2023
Principal
Gurukrupa Mahavidyalaya

GUSHKARA MAHAVIDYALAYA

ROUTINE FOR 1ST SEMESTER VAC (ENVS/E) -2023 (FOR BOTH DAY AND MORNING SECTION)

AS PER N.E.P. 2020

ROOM NO.	TIME	DATE	06.11.2023	07.11.2023	08.11.2023
		DAY	MONDAY	TUESDAY	WEDNESDAY
N-1	10-15 A.M.	DAY GROUP-A (ROLL NO 1-250)	BM-GEO(U-1)	BR-PHY(U-2)	TK-GEO(U-3)
N-2	10-15 A.M.	DAY GROUP-B (ROLL NO 251-619)	MD-PHY(U-2)	NR-ZOO(U-3)	ANR-ZOO(U-4)
26	10-15 A.M.	DAY GROUP-C (ROLL NO 620-869)	AR-BOT(U-3)	RK-ZOO(U-4)	DD-CHEM(U-5)
19	10-15 A.M.	DAY GROUP-D (ROLL NO 870-REST)	PR-ZOO(U-4)	PR-CHEM(U-5)	KM-PHY(U-6)
1	10-15 A.M.	MORNING GROUP-E (ROLL NO 1-250)	SK.S-CHEM(U-5)	AKB-COM(U-6)	MB-MATH(U-7)
2	10-15 A.M.	MORNING GROUP-F (ROLL NO 250-500)	MS-COM(U-6)	MS-ECO(U-7)	RP-BOT(U-1)
3	10-15 A.M.	MORNING GROUP-G (ROLL NO 501-REST)+SCIENCE (HONS.+GENERAL) & COMMERCE (HONS.+GENERAL)	AP-ECO(U-7)	KS-GEO(U-1)	KCS-PHY(U-2)
		DATE	22.11.2023	28.11.2023	29.11.2023
		DAY	WEDNESDAY	TUESDAY	WEDNESDAY
N-1	10-15 A.M.	DAY GROUP-A (ROLL NO 1-250)	ANR-ZOO(U-4)	PR-CHEM(U-5)	PD-ECO(U-6)
N-2	10-15 A.M.	DAY GROUP-B (ROLL NO 251-619)	DD-CHEM(U-5)	AKB-COM(U-6)	TS-MATH(U-7)
26	10-15 A.M.	DAY GROUP-C (ROLL NO 620-869)	KM-PHY(U-6)	MS-ECO(U-7)	BM-PHY(U-1)
19	10-15 A.M.	DAY GROUP-D (ROLL NO 870-REST)	MB-MATH(U-7)	KS-GEO(U-1)	BG-PHY(U-2)
1	10-15 A.M.	MORNING GROUP-E (ROLL NO 1-250)	RP-BOT(U-1)	BR-PHY(U-2)	SS-ZOO(U-3)
2	10-15 A.M.	MORNING GROUP-F (ROLL NO 250-500)	KCS-PHY(U-2)	NR-ZOO(U-3)	SR-ZOO(U-4)
3	10-15 A.M.	MORNING GROUP-G (ROLL NO 501-REST)+SCIENCE (HONS.+GENERAL) & COMMERCE (HONS.+GENERAL)	TK-GEO(U-3)	RK-ZOO(U-4)	MRG-MATH(U-5)

Principal
Gushkara Mahavidyalaya
04/11/2023

ROOM NO.	TIME	DATE	DAY	04.12.2023	05.12.2023	06.12.2023
N-1	10-15 A.M.	DAY GROUP-A (ROLL NO 1-250)	MONDAY	AP-ECO(U-7)	KCS-PHY(U-1)	BG-PHY(U-2)
N-2	10-15 A.M.	DAY GROUP-B (ROLL NO 251-619)	MONDAY	BM-GEO(U-1)	MB-PHY(U-2)	SS-ZOO(U-3)
26	10-15 A.M.	DAY GROUP-C (ROLL NO 620-869)	MONDAY	MD-PHY(U-2)	SM-BOT(U-3)	SR-ZOO(U-4)
19	10-15 A.M.	DAY GROUP-D (ROLL NO 870-REST)	TUESDAY	AR-BOT(U-3)	RP-BOT(U-4)	MKG-MATH(U-5)
1	10-15 A.M.	MORNING GROUP-E (ROLL NO 1-250)	TUESDAY	PR-ZOO(U-4)	BNS-CHEM(U-5)	PD-ECO(U-6)
2	10-15 A.M.	MORNING GROUP-F (ROLL NO 250-500)	TUESDAY	SK-S-CHEM(U-5)	MS-COM(U-6)	TS-MATH(U-7)
3	10-15 A.M.	MORNING GROUP-G (ROLL NO 501-REST)+SCIENCE (HONS.+GENERAL) & COMMERCE (HONS.+GENERAL)	WEDNESDAY	MS-COM(U-6)	MS-ECO(U-7)	BM-PHY(U-1)

[Signature]
04/11/2023

[Signature]
04/11/2023
Principal
Gushkara Mahavidyalaya