

EVS (Nov/Dec.)

Answer Keys

- Q1. (i) Conditions of a building in which more than 20% of the occupants are suffering from adverse health effects but with no clinically diagnosable disease present.
- (ii) Rapid Industrial growth leads to increased energy consumption resulting in increased carbon dioxide and other gas emissions, global warming, increased sea levels, changes in climate, changes in crop yield, etc.
- (iii) To identify, examine access and evaluate the environmental impacts and work out remedial action plan.
- (iv) Sustainable development is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- (v) Solar energy, wind energy, tidal energy, hydro power, etc.
- (vi) a. It threatens the existence of many wildlife species due to destruction of their natural habitat.
- b. Hydrological cycle gets affected thereby influencing rainfall.
- (vii) Secondary air pollutant formed by interaction of primary pollutants with other primary pollutants or with some natural constituents of atmosphere e.g. ozone, photochemical smog.
- (viii) Disaster management is a multidisciplinary area in which a wide range of issues that range from forecasting, warning, evacuation, search and rescue, relief, reconstruction, and rehabilitation are included.

Techniques for disaster management:-

- Pre- disaster mitigation
- Mitigation measures
- Rescue, relief, reconstruction and rehabilitation

(ix) BOD is defined as the amount of dissolved oxygen required to aerobically decompose biodegradable organic matter of a given volume of water over a period of 5 days at 20°C.

(x) Merits:- 1) Wind energy does not cause any air pollution.

2) After the initial installation cost. the wind energy is very cheap.

3) Few environmental impacts as there are virtually no air or water emissions or radiations or solid waste production.

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4) The amount of area used by the turbines is less than 1% of the total area covered by the wind farm. The rest of the area can be used for agriculture purpose.

Demerits:- 1) Bird Kills, noise, effects on TV reception.

Q2. (i) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer page no Pg. No. 48-50

(ii) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer page no Pg. No. 232

OR

Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer page no PG. No. 230-231

(iii) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer page no Pg. No. 214-215

Q3.(i) Nutrients like carbon, nitrogen, sulphur, oxygen, hydrogen, phosphorous etc. move in circular paths through biotic and abiotic components and are therefore known as biogeological cycles. Nitrogen cycle or Carbon cycle-

Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer page no Pg. no. 93,94.

(ii) Sources and effects of noise pollution-

Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer page no Pg.no.151.

Control of noise pollution-

Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer Pg.no.154.

(iii) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer Page no.173

Q4. (i) Hydropower generation:- Environmental Studies, Second Edition, Benny Joseph

(ii) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik,

Refer Page no. 273-275

OR

Indoor air pollution - Definition, factors that determine the quality of indoor air, sources of pollutants, fuels causing indoor pollution, health effects.

(iii) Scope of environmental education-

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Environmental studies as a subject has a wide scope. It encompasses a large number of areas and aspects as follows:

- Natural Resources- Their conservation and management.
- Ecology and biodiversity
- Environmental pollution and control
- Social issues in relation to development and environment
- Human pollution and environment

These basic aspects of environmental studies have a direct relevance to every section of the society. Several career options have emerged in this field such as:-

- Research and Development in environment for developing cleaner technologies and promoting sustainable development.
- Green Marketing- while ensuring the quality of product with ISO mark, there is an increasing emphasis on marketing goods that are environment friendly.
- Green media:- Environmental awareness can be spread through mass media like television, radio, newspaper, advertisement, etc. for which environmental friendly persons are required.
- Environment consultancy:- Many NGO's, industries and government engage environmental consultants for systematically studying and tackling environment related problems.

Q5. (i) Textbook of environmental studies- Erach Bharucha (Page no. 154)

(ii) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik,

Refer Page no. 157- effect of water pollution on global health.

OR

Green building also known as eco-friendly or sustainable building refers to a structure using process that is environmentally resource efficient throughout a building's life cycle from setting to design, construction, operation, maintenance, renovation and demolition.

Benefits:-

- The green building practice covers and balances the building design concerns of economy, utility, durability and comfort.
- It reduces the overall impact of the construction activity on human health and the natural environment by:-
 - Utilizing energy, water and other resources in an efficient manner
 - Improving the health
 - Reducing waste, pollution and environmental degradation
- Choosing to build green also saves energy
- Green products ensures that less energy is utilized in every step of their manufacture
- It helps in building a healthier indoor environment.

(iii) An ecosystem is a self regulating group of biotic communities of species interacting with one another and with their non-living environment exchanging energy and matter.

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Biotic structure: Plants, animals and micro-organisms i.e. producers, consumers and decomposers.

- Producers- Photo-autotrophs, chemo-autotrophs
- Consumers- Herbivores, carnivores, omnivores, detritivores
- Decomposer
Abiotic structure Ref.:- Page no. 80, 81
- Physical factors
- chemical factors

Q6. (i) Details of 4 steps in environmental Clearance i.e.

(a) Screening (b) Scoping (c) Public Construction (d) Appraisal

(ii) Perspectives in Environmental Studies, 3rd Edition by Anubha Kaushik, C. P. Kaushik, Refer Page no. 16, 17

(iii) Page no. 177, 178 OR Page no.148

Ref. book - Perspectives in Environmental studies 3rd edition by Anubha Kaushik, C.P. Kaushik, Page no. 16.