



GENERAL INSTRUCTIONS TO THE CANDIDATES

1. Candidates are instructed to answer the questions as per Bloom's Taxonomy knowledge level (K₁ to K₆)
2. Candidates are strictly instructed not to write anything in the question paper other than their roll number.
3. Candidates should search their pockets, desks and benches and handover to the Hall Superintendent/ Invigilator if any paper, book or note which they may find therein as soon as they enter the examination hall.
4. Candidates are not permitted to bring electronic watches with memory, laptop computers, personal systems, walkie-talkie sets, paging devices, mobile phones, cameras, recording systems or any other gadget / device /object that would be of unfair assistance to him / her.
5. Corrective measures as per KCT examination policies will be imposed for malpractice in the hall like copying from any papers, books or notes and attempting to elicit the answer from neighbours.

B.E/B.TECH DEGREE EXAMINATIONS: DEC 2015

(Regulation 2014)

Third Semester

U14GST001 : ENVIRONMENTAL SCIENCE AND ENGINEERING

(Common to AERO/CSE/EEE/MCT/IT)

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Sequence the following processes that are performed in treating the sewage CO3 [K₂]
 - i. Activated sludge process
 - ii. Aeration
 - iii. Filtration
 - iv. Clariflocculation

a) i, ii, iii, iv	b) ii, i, iv, iii
c) iv, iii, ii, i	d) i, iii, iv, ii
2. Natural hydrologic entity that cover a specific area of land surface from which the rainfall runoff flow to a define drain or river is called CO4 [K₂]

a) Watershed	b) Lagoon
c) Aquifer	d) Lake

**Answer any FIVE Questions:-
PART C (5 x 14 = 70 Marks)
(Answer not more than 300 words)**

Q.No. 21 is Compulsory

21. (i) Enumerate the supporting efforts to halt deforestation and conserve forests (8) CO1 [K₃]
- (ii) Suggest and discuss few approaches that should be taken to tackle a situation when excess and continuous rainfall occurs to avoid any disastrous damages for human and environment. (6) CO4 [K₄]
22. (i) Elaborate on the renewable energy resources that could support in achieving a sustainable energy base (10) CO1 [K₂]
- (ii) “Dam – a boon or bane to human civilization” – Discuss this with respect to ethical dilemma regarding construction of dams. (4) CO2 [K₃]
23. (i) List down the importance of protecting the biodiversity of earth and explain the different efforts adopted to conserve biodiversity. (8) CO5 [K₃]
- (ii) “The first law of ecology is that everything is related to everything else” – Validate this fact by discussing the structure and function of an ecosystem of your own choice. (6) CO5 [K₃]
24. (i) List the major air pollutants and elaborate the causes of air pollution along with the measures that could be taken in order to avoid air pollution (10) CO2 [K₃]
- (ii) Illustrate the recycling options of solid waste generated from educational institutions. (4) CO1 [K₄]
25. Write short notes on the following CO3 [K₂]
- (i) Environment Protection Act (5)
- (ii) Ozone Layer Depletion (5)
- (iii) Environmental Ethics (4)
26. (i) What is the role of IT in environment and human health? (8) CO5 [K₃]
- (ii) Explain the environmental problems posed by population explosion. (6) CO4 [K₃]
