

Bachelor of Civil Engineering Examination 2019

(3rd Year 1st semester)

Ecology and Environmental Management

Time: Three Hours

Full Marks: 100

Use separate answer script for each part (60 marks for Part I and 40 marks for Part II)

Part-I

1. Answer the followings very briefly:
 - a) Why is it difficult to achieve the goal of sustainable development through *waste treatment* only?
 - b) Correlate *Rachel Carson* and Environmental Management.
 - c) Define *carrying capacity* of an ecosystem.
 - d) Compare '*offsite*' and '*onsite*' recycling.
 - e) 'EIA is recognised as a key support tool for *sustainable development*'-explain 2x5=10

2. Answer the followings very briefly:
 - a) Why are pollutants both *measured and predicted* in an EIA study?
 - b) 'EIA is a waste minimization process *before generation* of waste'-explain.
 - c) Mention about *first introduction* of EIA in India and its limitation.
 - d) Mention the *types* of EIA. In *India*, how is it decided about the type of EIA to be followed?
 - e) Name the authorities/committees *to whom* applications for prior ECs are to be made.
 - f) Give examples of screening based on *scale* and *nature* of activity.
 - g) Mention the steps *between* planning of a project and application for its EC.
 - h) Name the main four *stakeholders* of an EIA process.
 - i) *How many* types of projects/activities are there in the schedule? Which may be regarded as *odd* one?
 - j) Give examples of a (i) *B1* project with *three* stages (ii) *B* project with *two* stages 2x10=20

Bachelor of Civil Engineering Examination 2019

(3rd Year 1st semester)

Ecology and Environmental Management

Use separate answer script for each part (60 marks for Part I and 40 marks for Part II)

Part-I

Time: Three Hours

Full Marks: 100

3. a) Why is *background monitoring* called *base line standard* of an EIA study? Why is it not done in rainy season? Name the *committees* who decide about extent of monitoring. In which *stage* is it decided? Mention about the *time limit* of taking that decision. What is the *validity* of that decision? What may happen if that time limit is *crossed*?
- b) Mention threshold limit related with EIA for *Thermal Power Plants*.
- c) 'The process of granting EC for sustainable sand mining and mining of minor minerals has been *decentralized*'-explain.
- d) Mention '*General Conditions*'. Which one can be *done away with* and under what condition? **20**

Or

4. a) Mention the roles of following very briefly in introduction of EIA *as a whole/in India*
(i) NEPA (ii) ADB (iii) River Valley Projects (iv) E(P)A, 1986
- b) Draw a flow chart to show EC procedure for a *proposed project*.
- c) What are the basic differences between 'public hearing' and 'public consultation'?
- d) Mention threshold limit related with EIA for *Thermal Power Plants*.
- e) Write about '*specific conditions*' with relevant examples.
- f) What is the *limitation of EIA* in India? **20**

Bachelor of Civil Engineering Examination 2019(3rd Year 1st semester)**Ecology and Environmental Management**

Use separate answer script for each part (60 marks for Part I and 40 marks for Part II)

Part-I

Time: Three Hours

Full Marks: 100

5. a) With a *sketch* explain Environmental Management hierarchy.
b) Discuss about *sustainable 'R's*.

10

Or

6. a) Mention about (at least) four tools for *selection of the suitable alternative* and write a brief paragraph about each of them.
b) What is the basic difference between *location alternative* and *site layout alternative*? Give two examples where consideration of alternative location is *not possible*.

10

BACHELOR OF CIVIL ENGINEERING 3RD YEAR EXAMINATION, 2019
(1st-Semester)

SUBJECT: Ecology & Environmental Management

Time: Three hours

Full Marks 100

Use a separate Answer-Script for each part

No. of Questions	Part II (40 marks)	Marks
	Answer all the questions. Answer should be brief and to the point. Use pencil for any sketch. Assume any relevant data if not provided	
Q1.a)	Draw the neat labeled Y shaped model of energy flow diagram with a brief description. With an example of an ideal ecosystem describe the major components of an ideal ecosystem.	4+6
b)	With the examples of different types of ecological pyramid justify the sentence 'energy flow provides more suitable index for comparing any or all the components of ecosystem'.	6
c)	Differentiate between: (i) food web and food chain, (ii) estuarine ecosystem and marine ecosystem	2×2
Q2.a)	What do you mean by maximum carrying capacity for an ecosystem? Write the three basic characteristics of population ecology. With a neat sketch explain J shaped and S shaped population growth curves. With proper reason state what may be the age structure for India. Justify 'immigration is not good for population ecology'.	2+3+6 +2+2=15
b)	What is biogeochemical cycle? Write the significance of biogeochemical cycles on protecting sustainability of aquatic ecosystem.	2+3=5