



Summer 2018
SOCIETY AND ENVIRONMENT

Time : Three hours
Maximum Marks : 100

Answer FIVE questions, taking ANY TWO from Group A,
ANY TWO from Group B and ALL from Group C.
All parts of a question (a,b,etc.) should be answered at one place .
Answer should be brief and to-the-point and be supplemented with neat sketches.
Unnecessary long answers may result in loss of marks.
Any missing or wrong data may be assumed suitably giving proper justification.
Figures on the right-hand side margin indicate full marks.

Group A

1. (a) Define and explain Sociology in brief. 10
(b) Differentiate Sociology from Political Science. 5
(c) "A student of engineering need to study Sociology".
Justify the statement 5
2. (a) Write in brief the origin of caste system in India and its present status. 10
(b) Write a critical note on culture. 5
(c) Explain the concept of occupation. 5
3. (a) Define and explain in brief Mobility. 10
(b) Write in brief the main reasons behind Crime. 5
(c) Suggest in brief the ways to achieve Tribal Welfare. 5
4. (a) Suggest in brief five means of skills Development in India. 5
(b) Define science, Engineering and Technology. 5
(c) Define and explain brief Appropriate – Technology. 5
(d) Write a short note on technology Adaptation. 5

Group B

5. (a) Explain in brief five causes of water pollution. 10
(b) Write in brief the main causes of noise pollution and its effect on mankind. 5
(c) Define clearly the sustainable Development. 5
6. (a) Write a critical note on Oxygen Cycle. 10
(b) Define and explain Acid rain. 5
(c) Define and explain global warming. 5
7. (a) Explain in brief various methods of control solid wastes 10
(b) Write a critical note on thinning of Ozone layer and its prevention. 10
8. (a) List five agriculture wastes. Explain in brief their utilization. 10
(b) With a simple flow diagram, describe a method of manufacture particle boards from wastes 10

Group C

9. Answer the following:
 - (i) Match the following:

(a) World pollution prevention Day	(i) 22 March
(b) World Water Day	(ii) 05 June
(c) Mother Earth Day	(iii) 02 December
(d) World Environment Day	(iv) 22 April
 - (ii) What are the four main castes in India ?
 - (iii) Why are plastics harmful to environment?
 - (iv) List four consequences of inequality.
 - (v) Mention four measures to prevent Brain – Drain.
 - (vi) List four chemical elements required by mankind.
 - (vii) Define Environment in one sentences

(viii) Define an environmental pollutant based on Environmental protection Act of Government of India.

(ix) What is the main causes of Green Houses Effect?

(x) Match the following:

- | | |
|-----------------------------|-------------------|
| (a) National Science Day | (i) 15 September |
| (b) Clean Ganga Pledge Day | (ii) 28 September |
| (c) National Technology Day | (iii) 02 May |
| (d) Engineer's Day | (iv) 11 May |



Winter 2017
SOCIETY AND ENVIRONMENT

academy of ENGINEERS
9818003202

Time : Three hours
Maximum marks : 100

Group A

- (a) Explain various type of social stratification? 5

(b) What are the main causes of social tension in society? 5

(c) Explain major attributes of cast system? 5

(d) Differentiate between society and community 5
- (a) Explain various parameters of social development? 5

(b) Write five stages of Economics Growth 5

(c) Narrate the role of science and technology in the development 5

(d) discuss the role of 'NITI' ayog in economic development of the country. 5
- (a) Discuss the role of ergonomics in technology development. 5

(b) Explain the factors which are to be considered before the introduction of New technology 5

(c) What is appropriate technology syndrome ? 5

(d) Discuss the pitfalls of technology transfer. 5
- (a) Discuss the Euroquip 'T' method of technology transfer 10

(b) Discuss the factors which contribute to sustainable development. 5

(c) Discuss various types of occupational hazards 5

Group B

- (a) What are the various component of Biosphere ? 5

(b) Explain characteristics of food chain 5

(c) Explain different type of ecological pyramid. 5

(d) Discuss various causes of eco-imbalances. 5

6. (a) Discuss causes of environmental pollution . 5
 (b) Explain main source of air pollution. 5
 (c) Narrate various causes of soil pollution . 5
 (d) How ‘global warming ‘ can be controlled? 5
 7. (a) Explain various waste disposal methods 5
 (b) What is 3R principle of waste management ? 5
 (c) Write a brief note on Agriculture related environmental pollution 5
 (d) Explain basic component of a pond Ecosystem . 5
 8. (a) Discuss how to dispose urban waste properly. 5
 (b) What is Geothermal Energy? Discuss its disadvantages. 5
 (c) What is Solar Distillation? 5
 (d) Define SMOG ? What are its components ? 5

Group C

9. (A) Write the full form of the following 5
 (i) ABM
 (ii) ICAR
 (iii) IRDA
 (iv)NATO
 (v)ZSI

- (B) Match the Author and the Books 5

Books

Authors

- | | |
|--------------------------------------|-----------------------|
| (i) Truth always prevails | (a) Anuradha Roy |
| (ii) Runs in Ruins | (b) Anupam Kher |
| (iii)The best thing about you is you | (c) NR Narayana |
| (iv)A better India: A Better World | (d) Sunil Gavaskar |
| (v) Sleep on Jupiter | (e) Sadeudin Hashwani |

- (C) (i) The ocean cover _____ of the surface of the earth
 (ii)The role of chlorophyll in photosynthesis is _____
 (iii)Non-conventional source of energy best suited for India is _____
 (iv)Protective foods in our diet are _____
 (v)Blue revolution is related to _____ 5
 (D) (i) Which is the coldest planet in the solar system?
 (ii)Indian organization has designed and build the Dr.APJ Abdul Kalam Memorial?
 (iii) Which is the land of the Rising Sun ?
 (iv) How many square are there in a chess Board ?
 (v)Who discovered the Black Hole Theory? 5



**Society and Environment
 Summer 2017**

**academy of ENGINEERS
 9818003202**

Time : Three hours
 Maximum marks : 100

Group A

1. (a) What principles of Science can be applied to study sociology? 5
 (b) Do you think that social stratification system is changing due to socio-economic challenges 5
 (c) “Unequal distribution of income in the society has created social conflict “. Discuss 5
 (d) As a socially responsible citizen, what needs to be done to eradicate corruption? 5
 2. (a) What is social justice? 5
 (b) How gender equality can help the society to resolve conflict? 5
 (c) What are the various parameters of social development? 5

- (d) Discuss the role of 'NITI AYOJ' in economic development? 5
3. (a) What are the main targets for the development process and how it can be achieved? 10
 (b) Do you think that increase in population would affect the development of a country? What need to be done to control the growth rate of the population? 10
4. (a) What are the stages of the development of technology? Differentiate between indigenous technology and appropriate technology. 5
 (b) What are the various criteria that can be considered to select a industry for appropriate technology transfer? 5
 (c) What is bio magnification and its impact on organisms? 5
 (d) What are the factors affecting the climate change? 5

Group B

5. (a) How engineers can contribute to sustainable development? 5
 (b) How grassland ecosystem is different from desert ecosystem? 5
 (c) What is biogeochemical cycle and how life is related with it? 5
 (d) How do we measure air pollution? How it can be prevented? 5
6. (a) Discuss the impact of global warming on agriculture sea water level and marine food. 5
 (b) What is the cause of depletion of ozone layer in atmosphere? 5
 (c) Discuss the physical, chemical and biological effect of thermal pollution. 5
 (d) How do we measure water quality through biological oxygen demand and chemical oxygen demand? 5
7. (a) Discuss the process of deriving energy from municipal solid waste? 5
 (b) What do you understand by 'life-cycle' assessment of a product? 5
 (c) Discuss the role of pollution control boards in maintaining air quality standards. 5
 (d) What are the sources of noise? Discuss its adverse impact on human being 5
8. (a) How recycling of paper, glass and metal can help in solid waste management? 5
 (b) Discuss the process of managing bio-medical waste. 5
 (c) Discuss the role of solar energy in saving the environment. What are the various application of solar energy? 10

Group c

9. (a) write the full form of the following: 5
 (i) NEERI
 (ii) IAEA
 (iii) IUCN
 (iv) NAFED
 (v) WMO

(B) Match the authors and the books (5m)

Books	Authors
a. We the people	(i) Jhumpa Lahiri
b. My country my life	(ii) Chetan Bhagat
c. One life is not enough	(iii) Natwar Singh
d. Half girlfriend	(iv) L K Adwani
e. Unaccustomed earth	(v) Nani Pallainali

- (C) (i) The process of turning gas into liquid is called -----.
 (ii) Pollination by birds is called -----.
 (iii) Yeast used in making bread is known as -----.

- (iv) Gobar gas mainly contains -----.
- (v) -----gave the first evidence of the big bang theory. (5m)
- (D) (i) Which Indian state has the largest inland saline wetland?
- (ii) Who was the first person who invented atomic numbers?
- (iii) What is the unit for measuring speed for data transmission?
- (iv) What is mixed economy?
- (v) Which crop is cultivated for ethanol? (5m)



WINTER 2016
SOCIETY AND ENVIRONMENT

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Time : Three hours
Maximum marks : 100

GROUP A

1. (a) Why should a student of engineering study sociology? 14
- (b) Name two major fields of Sociology 4
- (c) Name a famous sociologist. 2
2. (a) Write a short note on caste system in India. 12
- (b) Write the simplest form of Pareto's law mathematically. Explain each term. 8
3. (a) What is plan holiday? 6
- (b) What is rolling plan? 6
- (c) Who gave the idea of planned economy for India? Write a brief note on him. 8
4. (a) Write a brief critical note on Charles Darwin's theory 12
- (b) What are the major four technological developments in India after its independence? 8

GROUP B

5. (a) Write three major sources of water pollution. 6
- (b) How can one minimize one of the three above? Explain in brief. 14
6. (a) Explain in brief the oxygen cycle. 10
- (b) What is Acid Rain? What are its Causes? 10
7. (a) Define sustainability. 8
- (b) How can one protect ozone layer? 12
8. (a) Name four non-metallic materials. 4
- (b) Explain in brief the manufacturing process of sponge iron. 10
- (c) What was the slogan of Brundtland in "Our Common Future"? 6

GROUP C

9. Answer the following 2x10
- (a) What are the contributions of Liebig, Edison, Marcon and Bell?
 - (b) State four causes of social tension.
 - (c) Name the author of the book, "Planned Economy in India."
 - (d) Write four sentences on "Bopal gas tragedy".
 - (e) Expand EIA and MINAS.
 - (f) Write four sentences on gobar gas plant.
 - (g) Name four chemicals which can be derived from industrial wastes.

- (h) Name the dates and months when world celebrates forest day , water day , earth day and environment day.
- (i) What are cox, nox and sox?
- (j) name four major parameters to make an Indian city a Smart City.



SUMMER 2016
SOCIETY AND ENVIRONMENT
Group A

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1. (a) Is sociology a science? Explain (5M)
 (b) What is meant by social process? Give some examples (5M)
 (c) Describe the main patterns of social change in Indian society. (5M)
 (d) Differentiate between communalism and regionalism (5M)
- Q. 2. (a) Explain the main causes of poverty in India (5M)
 (b) Differentiate between primary and secondary social groups. (5M)
 (c) Explain the concept of cultural lag with examples. (5M)
 (d) Explain the changes that have taken place in the institution of marriage. (5M)
- Q. 3. (a) Discuss the role of information technology on social relationship. (5M)
 (b) What is role of appropriate technology in meeting the requirements of poor nation's development needs? (5M)
 (c) Discuss the inter-relation of technology growth with socio-economic growth. (5M)
 (d) What do you mean by eco-friendly technology? (5M)
- Q. 4. (a) Discuss the social and ethical responsibilities of an engineer. (5M)
 (b) What is role of NITI Ayog in planning and development? (5M)
 (c) What are the social parameters of development? (5M)
 (d) Do you think that greenhouse gases are causing global warming? Explain. (5M)

Group B

- Q. 5. (a) What is a ecological pyramid? What are different types of ecological pyramid? (5M)
 (b) How one terms 'community' as a social ecosystem? (5M)
 (c) What is biomagnifications? Explain in detail. (5M)
 (d) What are the differences between BOD and COD methods? (5M)
- Q. 6. (a) Discuss the role of Central Pollution Control Board (CPCB) in maintaining air quality standards. (5M)
 (b) What is thermal Pollution? What are its adverse effects? (5M)
 (c) What do you mean by a waste water treatment plant? Describe with help of a neat diagram. (5M)
 (d) What is the EL NINO and LA NINA Effect? (5M)
- Q.7. (a) What are the major sources of air-pollution? How are they classified based on the source? (5M)
 (b) How is energy derived from the municipal solid waste? (5M)
 (c) What is hazardous Management? (5M)
 (d) What do you meant by Life Cycle assessment of product? (5M)
- Q. 8. (a) What do you meant by sustainable energy? (5M)
 (b) Discuss the role of engineers in sustainable development. (5M)
 (c) What are the major sectors responsible for polluting Carbon dioxide emissions? (5M)
 (d) In what way companies can help to contribute to reduce emissions to solve problems of climate change? (5M)

Group C

Q. 9. (A) Match the Author and Book (5M)

- | | |
|------------------------|-----------------------|
| (a) War and Peace | (i) Winston Churchill |
| (b) Gathering storm | (ii) Ernest Hemingway |
| (c) We Indians | (iii) Leo Tolstoy |
| (d) A Farewell to Arms | (iv) Khuswant Singh |
| (e) Vama | (v) Mahadevi Verma |

(B) Match the following (5M)

- | | |
|---|---------------------|
| (a) Lead character in Bandit Queen | (i) Euclid |
| (b) Father of geometry | (ii) Agriculture |
| (c) M.S. Swaminathan | (iii) Architecture |
| (d) Charles Correa | (iv) Swami Agnivesh |
| (e) Social activist against child labor | (v) Soma Biswas |

(C) Give the full form of the following; (5M)

- | | |
|----------|----------|
| (a) URL | (b) NSDC |
| (c) UNEP | (d) WIPO |
| (e) ICBM | |

(D) Why are the following personalities famous? (5M)

- Shanti S Bhatnagar
- Narain Karthikeyan
- Mira Nair
- Vinod Khosla
- Bhim Sen Joshi



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WINTER 2015
SOCIETY AND ENVIRONMENT

Group A

- Q. 1. (a) What do you mean by sociology? (5M)
(b) Why social values occupy important position in our life? Discuss briefly? (5M)
(c) Differentiate between class and caste (5M)
(d) State the advantages of joint family (5M)

- Q. 2. (a) What is social stratification? (5M)
 (b) Discuss briefly the causes of social tension (5M)
 (c) What needs to be done to manage conflict in society? (5M)
 (d) How income plays a role in deciding the class? (5M)
- Q. 3. (a) State the parameters of economic development. (5M)
 (b) What is the role of newly formed NITI AYOOG in planning & development? (5M)
 (c) What is economic growth? (5M)
 (d) State briefly the objectives of planning (5M)
- Q. 4. (a) Discuss the role of science and technology in the development of a country. (5M)
 (b) What is the appropriate technology syndrome? (5M)
 (c) Differentiate between “indigenous technology” and appropriate technology (5M)
 (d) What is technology adoption? (5M)

Group B

- Q. 5. (a) What do you mean by “ecology”? State its main objectives. (5M)
 (b) What factors cause eco-imbalance? (5M)
 (c) What is biosphere cycle? State its main characteristics? (5M)
 (d) What is food chain? What are its main characteristics? (5M)
- Q. 6. (a) Explain the causes of soil pollution (5M)
 (b) State the factors responsible for depletion of ozone layer (5M)
 (c) What is sulphurous smog? (5M)
 (d) How can air pollution be controlled (5M)
- Q. 7. (a) What is solid waste? Mention various types of solid waste. (5M)
 (b) State the bad effects of incineration. (5M)
 (c) Explain biomedical waste. (5M)
 (d) Explain various methods of urban waste disposal. (5M)
- Q. 8. (a) State the principles of sustainable development. (5M)
 (b) Write a brief note on solar energy (5M)
 (c) What do you mean by water quality parameter? (5M)
 (d) Explain briefly the role of engineers in sustainable development. (5M)

Group C

- Q. 9. (A) Give the full form of the following abbreviations (5M)
 (i) KYC (ii) SEZ
 (iii) MOU (iv) NEEERI
 (v) OPEC
- (B) Why are the following personalities known for; (5M)
 (i) Sania Mirza (ii) Rattan Tata
 (iii) Uma Bharati (iv) Kailash Satyarthi
 (v) Smriti Irani
- (C) Match the authors and books; (5M)
 (a) Area of Darkness (i) Amrita Pritam
 (b) Coolie (ii) Sarojini Naidu

- | | |
|--------------------|---------------------|
| (c) Pinjar | (iii) Vikram Seth |
| (d) Broken Wings | (iv) Mulk Raj Anand |
| (e) A Suitable Boy | (v) V.S. Naipaul |

(D) Match the books given in Columns A with the authors given in Column B; (5M)

- | Column A | Column B |
|--|-----------------------|
| (a) Between the Lines | (i) Charles Dickens |
| (b) Das Capital | (ii) Nirad Chaudhary |
| (c) An Idealist view of Life | (iii) Karl Marx |
| (d) Autobiography of an Unknown Indian | (iv) S. Radhakrishnan |
| (e) A Tale of two cities | (v) Kuldip Nayyar |



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Summer 2015
SOCIETY AND ENVIRONMENT

Group A

- 1 (a) Is sociology a science or an art? Elaborate. 5
- (b) What are different types of class that exist in our society? Discuss. 5
- (c) What do you mean by cultural heritage? 5
- (d) Differentiate between community and society. 5
2. (a) Discuss the factors responsible for social mobility. 5
- (b) Discuss the role religions in creating social mobility 5
- (c) What are the social responsibilities of engineers? 5
- (d) What are the factors responsible for disintegration of family system in India? 5
- 3 (a) Discuss the parameters of social development 5
- (b) Should planning commission be replaced with a new institution? Has it lost its relevance? 5
- (c) Discuss the role of information technology (IT) in social integration. 5
- (d) How can social media be used to create awareness about the social evils? 5
4. (a) What is the role of engineers in economic development? 5
- (b) What do you mean by corporate social responsibility? 5
- (c) What do you mean by technology adoption and technological up gradation? 5
- (d) What is the criterion for assessment of appropriate technology? 5

GROUP B

- 5 (a) What do you mean by climate change? What measures can be adopted to reduce the adverse impact of climate change? 5
- (b) Differentiate between deforestation and afforestation. 5
- (c) What are the causes of soil pollution? How can it be prevented? 5
- (d) What do you mean by biosphere cycle? 5
- 6 (a) How seasons change? 5
- (b) What do you mean by atmosphere ? Discuss the atmosphere of earth . 5
- (c) What is the measures request for the protection of ozone layer? 5
- (d) What are the consequences of environmental degradation? 5
- 7 (a) Discuss the source of renewable energy? 5
- (b) Discuss various type of agriculture waste. How can it be used for generating energy? 5
- (c) What are the different types of industrial waste? 5
- (d) What are the different types of urban waste disposal system? 5

- 8 (a) What is green growth in the context of India's forest policy? 5
 (b) What is the objective celebrating World Environment Day on June 5 every year? 5
 (c) What is carbon credit and carbon footprint? 5
 (d) What do you mean by clean technology? 5

Group C

- 9 (A) Give the full form of the following abbreviation: 5x1
 I. SAARC
 II. ESCAP
 III. NEPA
 IV. NCEPC
 V. UNCTAD
- (B) Write the name of the author of the following books : 5x1
 I. The Gardener
 II. India Divided
 III. Mother India
 IV. Pin jar
 V. Satyarthha Prakash
- (C) Why are the following personalities known? 5x1
 I. Abdul Gaffar khan
 II. W C Bannerjee
 III. James Watt
 IV. V V Giri
 V. Watt Disney
- (D) Name the inventers of the following? 5x1
 I. X-ray
 II. Small pox Vaccine
 III. Microscope
 IV. Electric iron
 V. Microphone



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WINTER 2014
SOCIETY AND ENVIRONMENT

Time : Three hours
 Maximum Marks : 100

Group A

- 1 (a) Explain the characteristics of social stratification. (5)
 (b) What is the relationship between society and culture. (5)
 (c) What is social developed. (5)
 (d) What are the attributes of caste system? (5)
2. (a) Discuss the factors which affect social change. Discuss some major social changes in our society. (10)
 (b) What are the main objectives of economic planning? (5)
 (c) What are the obstacles in the path of development for the under developed countries? (5)
3. (a) Describe the role of social reformers in managing social conflicts (5)
 (b) What are the five stages of economic growth? (5)

- (c) What are the factors to be considered before introducing a new technology? (5)
 (d) What is occupation? Classify various types of occupation. (5)

- 4 (a) 'Science and technology help to raise the standard of living of the general mass'. Comment. (5)
 (b) How can industry institute interaction facilitate the transfer of technology from lab to the world? (10)
 (c) What are the criteria for the assessment of appropriate technology? (5)

GROUP B

5. (a) What are the objectives of ecology? (5)
 (b) Differentiate between terrestrial ecosystem and aquatic ecosystem? (5)
 (c) State the effects of soil pollutions (5)
 (d) What is sulphurous smog? What are the components of sulphurous smog? (5)
6. (a) What are the major characteristics of food chain? (5)
 (b) How can Global warming be controlled? (5)
 (c) Describe the important causes for environmental pollution? (5)
 (d) Explain the EL Nino and LA Nino effects on the environment. (5)

7. (a) What do you mean by ecological pyramid? Explain different types of ecological pyramid. (5)
 (b) What are the bad effects of incineration? (5)
 © State the sources of solid wastes. (5)
 (d) Explain biomedical waste (5)

8. (a) Describe the stages of life cycle assessment of a product (5)
 (b) What are the components of sustainable development? (5)
 © Explain the role of engineers in sustainable development (5)
 (d) Discuss different sources of renewable energy. (5)

Group C

9. (A) Give the full form of the following (5x1)
 (i) BARC (ii) IBRD
 (iii) MGNREGA (iv) DRDO
 (v) ASI
- (B) What do you know about the following (5*1)
 (i) Mahesh Bhupati
 (ii) K. Radhakrishnan
 (iii) S.N. Subba Rao
 (iv) Arundhati Roy
 (v) Muhammad Yunus
- (C) Write names of the authors of the following books: (5*1)
 (i) Half Girl Fried
 (ii) One Life is not enough
 (iii) Romeo and Juliet
 (iv) An American Dilemma
 (v) David Copperfield
- (D) Match THE following in column A with column B; (5*1)
 (i) Link (a) Billiard
 (ii) Lob (b) Boxing
 (iii) Hook (c) Tennis
 (iv) Cannons (d) Cricket
 (v) Gully (e) Golf