

**S'11 : 2 AN : AN 204/AD 304 (1404)**

**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 supple-  
mented with neat sketches. Unnecessary long answers  
may result in loss of marks.*

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giving proper justification.*

*Figures on the right-hand side margin indicate full marks.*

**Group A**

1. (a) Justify the statement that sociology studies social process. 10
- (b) Define and explain in brief the medical sociology. 5
- (c) Who formulated the Humanities and Social Science (HSS) curriculum for IIT, Kanpur in 1962 ? 5
2. (a) Explain in detail the social stratification. 10
- (b) What are the major factors eliminating slowly the caste system in India ? 10
3. (a) Write in brief the consequences of mobility. 10
- (b) Give main reasons behind crime in India. 5
- (c) Suggest concrete steps to control crime. 5

4. (a) What are the characteristics of under-development? 10  
 (b) 'India is a developed nation among under-developed nations and an under-developed nation among developed nations.' Analyse, assess and comment on this statement. 10

**Group B**

5. (a) What are the main causes of water pollution in India? 10  
 (b) Write a short note on 'Sustainable Development'. 10
6. (a) What are the objectives of ecology? 10  
 (b) Explain the  $N_2$  cycle. 10
7. (a) Explain clearly the adverse effects of oxides of sulphur. 7  
 (b) Write chemical equations for (a), where applicable. 3  
 (c) Write in brief at least *three* simple techniques to control pollution due to solid wastes. 10
8. (a) Write *ten* types of agricultural waste in India. 10  
 (b) Write *five* sources to obtain energy from the ocean. 10

**Group C**

9. (A) Match the following: 4 × 1
- |                            |                        |
|----------------------------|------------------------|
| (a) Dr M. Visvesvaraya     | (i) Politics ✓         |
| ✓ (b) Shakespeare          | (ii) Engineer          |
| (c) Kautilya               | (iii) Public Servant ✓ |
| ✓ (d) Pt. Jawaharlal Nehru | (iv) Literature        |

- (B) Explain following general terms used in India: 4 × 1

- (a) MHRD  
 (b) NAAC  
 (c) NBA (QA)  
 (d) DOE

- (C) Define 'Plan Holiday' and 'Rolling Plan'. 2+2

- (D) Define the following in 2-3 sentences: 4 × 2

- (a) Photosynthesis  
 (b) Greenhouse effect  
 (c) Fungi  
 (d) CFCs

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(Continued)

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**W'11:2 AN:AN 204/AD 304 (1404)**

**SOCIETY AND ENVIRONMENT**

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**Group A**

1. (a) Why should the engineers study and know the 'society' ? 12  
(b) What is meant by social stratification ? What are its salient features ? 8
2. Write in detail the evolution of 'occupation'. 20
3. (a) List major reasons behind international crimes. 10  
(b) Suggest steps to minimize the international crimes. 10

4. (a) What are the present methods to control population in India ? 10  
 (b) How far have we achieved ? 5  
 (c) How far have we failed ? 5

### Group B

5. (a) Explain the major outcomes of European and French industrial revolutions. 15  
 (b) How have the liberalisation, privatisation and globalisation helped India ? 5
6. Write a critical essay on ecosystem. 20
7. (a) What is ozone ? 5  
 (b) Mention the factors responsible to destroy the ozone layer. 15
8. (a) Define sustainable development. 5  
 (b) Write briefly on the technology of sustainable energy. 15

### Group C

9. Answer the following in brief : 10 × 2
- (i) Define anthropology.  
 (ii) What is black magic ?

- (iii) Match the following :

- (A) Tertiary sector (a) Communist manifesto  
 (B) Karl Marx (b) Dr. B. R. Ambedkar  
 (C) Untouchability (c) Mahatma Gandhi  
 (D) Pandit Nehru (d) Socialistic pattern of socie

- (iv) Define vertical social mobility.

- (v) What is an agrarian society ?

- (vi) Name the odd ones :

- (a) Poverty  
 (b) Population  
 (c) Economic Growth  
 (d) Pollution

- (vii) List *three* major life supporting elements.

- (viii) What is the reason behind hearing loss ?

- (ix) Define acid rain and e-wastes.

- (x) Fill in the blanks :

We have — inherited the world from our forefathers but have borrowed it for our — .

**S'12 : 4 FN : AN 204/AD 304(1404)**

**SOCIETY AND ENVIRONMENT**

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*All parts of a question ( a, b, etc. ) should be  
answered at one place.*

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giving proper justification.*

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**Group A**

- |    |  |   |
|----|--|---|
| 1. | (a) Define sociology.                      | 5 |
|    | (b) Why is the study of sociology useful ? | 5 |
|    | (c) What is social stratification ?        | 5 |
|    | (d) What is social change ?                | 5 |
| 2. | (a) Distinguish between caste and class.   | 5 |
|    | (b) Explain social mobility.               | 5 |

*( Turn Over )*

- (c) What is cultural heritage ? 5
- (d) State the special features of industrial society. 5
3. (a) What are the causes of social tension ? 10
- (b) State the chief parameters of development. 10
4. (a) What are the objectives of planning ? What needs to be done to plan for social development ? 10
- (b) What are the criteria for assessment of appropriate technology ? 5
- (c) How can women empowerment help in social development ? 5
- Group B**
5. (a) Why is the study of ecology so important ? 5
- (b) What is ecosystem ? What are the different types of ecosystem ? 5
- (c) What are the chief causes of eco-imbalance ? 5
- (d) Suggest few measures to protect ozone layer. 5
6. (a) What is environmental degradation ? 5
- (b) What are the effects of global warming ? 5
- (c) Write a note on wildlife preservation . 5
- (d) State the effects of deforestation. 5
7. (a) What is industrial waste ? How it affects environment ? 10
- (b) Define the following : (i) Hazardous waste, (ii) solid waste, and (iii) contaminants. 3 + 3 + 4
8. (a) What do you mean by sustainable development ? Why is it important ? 10
- (b) Discuss briefly the role of engineers in sustainable development. 10
- Group C**
9. (A) Give the full form of the following abbreviations : 5 × 1
- (i) UNEP
- (ii) AIDS
- (iii) TERI
- (iv) IBRD
- (v) SEBI
- (B) Why are the following personalities known for ? 5 × 1
- (i) A.P.J. Abdul Kalam
- (ii) Ms Kalpana Chawla
- (iii) Amartya Sen
- (iv) Acharya J.C. Bose
- (v) C.V. Raman
- S'12 : 4 FN : AN 204/AD304 (1404) ( 2 ) ( Continued ) S'12 : 4FN : AN 204/AD304 (1404) ( 3 ) ( Turn Over )

(C) Match the books given in column A with the authors given in column B:  $5 \times 1$

<u>Column A</u>	<u>Column B</u>
(i) Asian Drama	(I) J.K Galbraith
(ii) Das Capital	(II) Adam Smith
(iii) The Wealth of Nations	(III) Karl Marx
(iv) Ramayana	(IV) Gunnar Myrdal
(v) The Affluent Society	(V) Valmiki

(D) Match the following personalities with their achievements/events:  $5 \times 1$

<u>Name</u>	<u>Achievements / Events</u>
(a) Sania Mirza	(A) Film acting
(b) M. Vivian Foe	(B) Female tennis star
(c) Roger Federar	(C) An international tennis star
(d) Kiran Bedi	(D) A football player who died in the playground
(e) Yusuf Khan	(E) Famous for prison reforms

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**W'12:4 FN:AN 204/AD 304 (1404)**

**SOCIETY AND ENVIRONMENT**

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*Answer FIVE questions, taking ANY TWO from Group A,  
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**Group A**

1. (a) What is the basis of defining sociology as a science? 5
- (b) Why one should study sociology? 5
- (c) What do you mean by nuclear family? What are the  
advantages and disadvantages of a nuclear family? 5
- (d) How globalization has helped the transformation of  
societal norms and values? 5
2. (a) How is social stratification relevant in today's  
world? 5

*( Turn Over )*

- (b) 'Economic Class' has emerged as a strong indicator of social status today. Discuss. 5
- (c) What do you mean by 'social class'? What are its main features? 5
- (d) What do you mean by 'welfare state'? What is the role played by income distribution in a welfare state? 5
3. (a) What is conflict? Is it always destructive? Can we have constructive conflict? How can conflict be managed in a society? 10
- (b) What are the causes of social tension? 5
- (c) What do you understand by the social responsibility of a person in a civil society? 5
4. (a) What are the major obstacles for the developing countries in the path of national development? 5
- (b) Discuss the main parameters of development. 5
- (c) Differentiate between 'indigenous technology' and 'appropriate technology'. 5
- (d) What do you understand by the term 'technology transfer'? What are the steps required to transfer technology from the laboratory to field? 5
- Group B**
5. (a) What is food chain? Discuss its major characteristics? 5
- (b) What are the factors responsible for depletion of ozone layer? 5
- (c) What do you mean by 'clean technology'? 5
- (d) What is climate change? What efforts have been made to stabilize climate change for a sustainable energy future? 5
6. (a) What is e-waste? How can we reduce and manage e-waste? 5
- (b) What do you mean by 'earth hour' and 'earth day'? 5
- (c) What are the efforts needed to maintain biodiversity? 5
- (d) Discuss about the nitrogen cycle. 5
7. (a) What are the major air pollutants? Discuss their adverse impact on our life. 5
- (b) Discuss the impact of global warming on ecological system. 5
- (c) How is nitrogenous or photochemical smog formed? 5
- (d) How do we measure the water quality? 5
8. (a) What do you mean by solid waste management? 5
- (b) What do you understand by hazardous waste? How is it managed? 5
- (c) What is sustainable energy? What are the sources of sustainable energy? 5
- (d) What is environmental social responsibility? 5

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W'12:4FN:AN204/AD304 (1404) ( 3 ) (Turn Over)

**Group C**

1. (A) Discuss about the following personalities :  $4 \times 1$
- (i) Kalpana Chawla
  - (ii) Baba Amte
  - (iii) Bhupen Hazarika
  - (iv) Indra Nooyi
- (B) Give full form of the following :  $4 \times 1$
- (i) ESCAP
  - (ii) CBDT
  - (iii) MICR
  - (iv) NAFED
- (C) Answer the following :  $4 \times 2$
- (i) Who coined the slogan 'Jai Jawan Jai Kisan' ?
  - (ii) What is considered as the nobel prize for conservation ?
  - (iii) Who founded as the Indian Statistical Institute ?
  - (iv) Who gave the symbol for rupee ?
- (D) Explain the following concepts :  $2 \times 2$
- (i) Brain drain
  - (ii) Black money

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**S'13:4FN:AN 204/AD 304 (1404)****SOCIETY AND ENVIRONMENT**

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**Group A**

1. (a) Explain various types of social stratification. 5
- (b) 'Social values occupy important position in social change' – discuss the statement in detail. 5
- (c) Define occupation. Classify the occupation. 5
- (d) Describe the demographic factors which cause the social mobility. 5
2. (a) What are the main functions of sociology ? 5
- (b) Explain the main characteristics of caste system. 5
- (c) What is joint family system ? Discuss the merits and demerits of this system. 10

3. (a) What are the major objectives of economic planning in India ? 5  
 (b) What is the role of science and technology in the development process of a country ? 5  
 (c) What are the five stages of economic growth ? 5  
 (d) What are the measures recommended for human resource development ? 5
4. (a) What are the factors to be considered before introducing a new technology ? 5  
 (b) Differentiate between technology transfer and technology development. 5  
 (c) What is the appropriate technology syndrome ? 5  
 (d) What are the societal responsibilities in conflict management ? 5

**Group B**

5. (a) What do you mean by ecology ? Discuss its objectives. 5  
 (b) What factors cause eco-imbalance ? 5  
 (c) Explain different types of ecological pyramid ? 5  
 (d) What is the importance of sedimentary cycles in the biosphere ? 5
6. (a) What is environmental degradation ? How can environmental degradation be controlled ? 5  
 (b) What is 'global warming' ? Discuss the impact of global warming on climate and agriculture. 5  
 (c) Explain the causes of soil pollution. 5  
 (d) What are the different types of air pollution ? 5

7. (a) What is solid waste ? Mention various types of solid waste. 5  
 (b) Discuss various methods of urban waste disposal. 10  
 (c) What are the various sources of water pollution ? 5
8. (a) What are the principles of sustainable development ? 5  
 (b) Write a brief note on 'solar energy'. 5  
 (c) Differentiate between natural and artificial ecosystem. 5  
 (d) What is Food Web ? Explain with the help of an example. 5

**Group C**

9. (a) Give the full form of the following abbreviations : 5 × 1  
 (i) NABARD  
 (ii) SAIL  
 (iii) MSME  
 (iv) UNESCO  
 (v) IAEA
- (b) Why are the following personalities known for ? 5 × 1  
 (i) Ban Ki-moon  
 (ii) Ms Park Geun-hye  
 (iii) Cyrus P. Mistry  
 (iv) E Sridharan  
 (v) Ms Pratibha Roy
- (c) Match the books given in column A with the authors given in column B : 5 × 1
- | <u>Column A</u>       | <u>Column B</u>     |
|-----------------------|---------------------|
| (i) Between the Lines | (a) Charles Dickens |
| (ii) Das Capital      | (b) Nirad Chaudhary |

- | <u>Column A</u>                         | <u>Column B</u>      |
|---|----------------------|
| (iii) An idealist View of Life          | (c) Karl Marx        |
| (iv) Autobiography of an Unknown Indian | (d) S. Radhakrishnan |
| (v) A Tale of Two Cities                | (e) Kuldip Nayar     |
- (d) Match the trophies given in column A with the sports given in column B : 5 × 1

- | <u>Column A</u>    | <u>Column B</u>  |
|--------------------|------------------|
| (I) Aga Khan Cup   | (i) Golf         |
| (II) Davis Cup     | (ii) Hockey      |
| (III) Ranji Trophy | (iii) Football   |
| (IV) Rovers Cup    | (iv) Lawn Tennis |
| (V) Walker Cup     | (v) Cricket      |

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- |    |   |    |
|----|---|----|
| 1. | (a) What is sociology ?   | 5  |
|    | (b) Describe the factors which affect social mobility.                                | 5  |
|    | (c) Explain the main characteristics of caste system.                                 | 5  |
|    | (d) Why social values occupy important place in our life ?                            | 5  |
| 2. | (a) What do you mean by social tension ? What are the main causes of social tension ? | 10 |
|    | (b) What is social stratification ?   | 5  |
|    | (c) What is cultural heritage ?   | 5  |
| 3. | (a) State the important parameters of economic development.                           | 10 |
|    | (b) Discuss briefly the role of planning in social development.                       | 5  |

- (c) How income distribution affects the social structure of the society? 5
4. (a) Differentiate between indigenous technology and appropriate technology. 5
- (b) What is technology transfer? 5
- (c) Describe briefly the role of science and technology in the rural development. 5
- (d) Explain technology adaptation and its benefits. 5

**Group B**

5. (a) What do you mean by climate change? 5
- (b) Differentiate between carbon cycle and nitrogen cycle. 5
- (c) State the main causes of eco-imbalance. 5
- (d) What do you mean by ozone protection? 5
6. (a) What is environmental degradation? How can it be checked? 5
- (b) What is air pollution? State the measures to control air pollution. 5
- (c) What do you mean by earth day and earth hour? 5
- (d) Describe briefly the concept of carbon footprint and carbon credit. 5
7. (a) What is industrial waste? How can industrial waste be minimized and managed? 5
- (b) Explain hazardous waste? 5
- (c) How will you measure the water quality? 5
- (d) State the uses of agriculture waste. 5

8. (a) Discuss the concept of biodiversity? 5
- (b) What is solar energy? 5
- (c) What is sustainable energy? What are the sources of sustainable energy and explain them in detail. 5 + 5

**Group C**

9. (A) Give the full form of the following: 5 × 1
- (i) GPS
- (ii) IREDA
- (iii) ICSSR
- (iv) OECD
- (v) UNED
- (B) Write the names of the authors of following books: 5 × 1
- (i) My Experiment with Truth
- (ii) Discovery of India
- (iii) The Wealth of Nations
- (iv) Das Capital
- (v) Asia Drama
- (C) What do you know about the following: 5 × 1
- (i) Mira Nair
- (ii) Sam Pitroda
- (iii) Amartya Sen
- (iv) Vishwanath Anand
- (v) Rakesh Sharma

(D) Match the following in column A with column B : 5 × 1

<u>Column A</u>	<u>Column B</u>
(i) Acoustics	(a) Study of cells
(ii) Cytology	(b) Study of figures
(iii) Statistics	(c) Study of metals
(iv) Ergonomics	(d) Science of work
(v) Metallurgy	(e) Study of sound

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1. (a) Discuss why the study of sociology is important in the contemporary society ? 5
- (b) What types of stratification exist in Indian society ? 5
- (c) What factors contribute to inequality in income distribution ? 5
- (d) Discuss the role of family and school in the socialization. 5
2. (a) Discuss the role of religious institutions in conflict management. 5
- (b) How can proper governance help eliminate corruption in the society ? 5

- (c) Discuss the role of social media in creating a classless society. 5
- (d) How are social strata and economic classes related ? 5
3. (a) What is the role of the Government in economic development ? 5
- (b) What is India's policy on sustainable development ? 5
- (c) What are the major obstacles in the path of national development in India ? 5
- (d) 'Population growth nullifies the fruits of development'. Elaborate the statement in detail. 5
4. (a) What was the major focus of 11th Five-year Plan (2007-2012) ? 5
- (b) What are some of the major indicators to assess the achievement of planning in India ? 5
- (c) What is the major objective of human development ? How is it measured ? 5
- (d) What are the major criteria for assessment of appropriate technology ? 5
- Group B**
5. (a) Discuss the causes of depletion of ozone layer. What is ozone hole ? 5
- (b) What is the role of greenhouse gases in global warming ? 5
- (c) Differentiate between fog, smog and mist. 5
- (d) What is biological magnification ? 5
6. (a) What are different types of biogeochemical cycles ? Discuss about the carbon cycle. 5
- (b) What factors contribute to ecological imbalance ? 5
- (c) What are biotic components of forest ecosystem ? 5
- (d) What are different zones of marine ecosystem ? 5
7. (a) What are the main consequences of water and air pollution on health and productivity ? 5
- (b) How are pollutants distributed from its source into environmental segments ? What is pollution standard index ? 5
- (c) What are suspended particulate matter (SPM) ? What are the various devices that can be used to control air pollution ? 4 + 6
8. (a) What do you mean by pathogenes ? What are the different types of pathogenes present in the water ? 5
- (b) What is noise ? Discuss the major characteristics of noise. How is it measured ? 5
- (c) Discuss the reuse-recycle-recovery (3R) principle of waste management. 5
- (d) How can energy be produced from biodegradable solid waste ? 5
- Group C**
9. (A) Give the full form of the following abbreviations : 5 × 1
- (i) IAEA
- (ii) CTBT
- (iii) TRAI
- (iv) FERA
- (v) GSLV

(B) Write the name of the author for the following books :  $5 \times 1$

- (i) A Passage to India
- (ii) India Wins Freedom
- (iii) Life Divine
- (iv) The Social Control
- (v) Wake-up India

(C) Name the inventors of the following :  $5 \times 1$

- (i) Sea route to India
- (ii) Dynamo
- (iii) Photography (on paper)
- (iv) Stethoscope
- (v) Penicillin

(D) Why are the following personalities known ?  $5 \times 1$

- (i) Copernicus Nicolas
- (ii) Satish Dhawan
- (iii) Venkatraman Ramkrishna
- (iv) Meghnad Saha
- (v) Marconi Guglielmo

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**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 development ? 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 underdeveloped 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 field? 10  
 (c) What is 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 pollution. 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  
 (c) 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  
 (c) 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: 5 × 1  
 (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 Friend
- (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

<u>Column A</u>	<u>Column B</u>
(i) Links	(a) Billiards
(ii) Lob	(b) Boxing
(iii) Hook	(c) Tennis
(iv) Cannons	(d) Cricket
(v) Gully	(e) Golf

**S'15: 4FN: AN204/AD304 (1404)**

**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) 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 of religions in creating social tension. 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 upgradation? 5  
 (d) What is the criteria 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 are the measures required for the protection of ozone layer? 5  
 (d) What are the consequences of environmental degradation? 5
7. (a) Discuss the sources of renewable energy. 5  
 (b) Discuss various types of agricultural waste. How can it be used for generating energy? 5  
 (c) What are different types of industrial waste? 5  
 (d) What are 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 of celebrating World Environment Day on June 5 every year? 5  
 (c) What is carbon credit and carbon footprints? 5  
 (d) What do you mean by clean technology? 5
- Group C**
9. (A) Give the full form of the following abbreviations: 5 × 1  
 (i) SAARC  
 (ii) ESCAP  
 (iii) NEPA  
 (iv) NCEPC  
 (v) UNCTAD
- (B) Write the name of the author of the following books: 5 × 1  
 (i) The Gardener  
 (ii) India Divided

(iii) Mother India

(iv) Pinjar

(v) Satyartha Prakash

(C) Why are the following personalities known ?  $5 \times 1$

(i) Abdul Gaffar Khan

(ii) W C Bannerjee

(iii) James Watt

(iv) V V Giri

(v) Watt Disney

(D) Name the inventors of the following :  $5 \times 1$

(i) X-ray

(ii) Small pox vaccine

(iii) Microscope

(iv) Electric iron

(v) Microphone

**W'15 : 4 FN : AN 204/AD 304 (1404)**

**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) What do you mean by sociology ? 5
- (b) Why social values occupy important position in our life?  
Discuss briefly ? 5
- (c) Differentiate between class and caste. 5
- (d) State the advantages of joint family. 5
2. (a) What is social stratification ? 5
- (b) Discuss briefly the causes of social tension. 5
- (c) What needs to be done to manage conflict in  
society ? 5

- (d) How income plays a role in deciding the class ? 5
3. (a) State the parameters of economic development. 5  
 (b) What is the role of newly formed 'NITI AYOJ' in planning and development ? 5  
 (c) What is economic growth ? 5  
 (d) State briefly the objectives of planning. 5
4. (a) Discuss the role of science and technology in the development of a country. 5  
 (b) What is the appropriate technology syndrome ? 5  
 (c) Differentiate between 'indigenous technology' and 'appropriate technology'. 5  
 (d) What is technology adaptation ? 5
- Group B**
5. (a) What do you mean by 'ecology' ? State its main objectives. 5  
 (b) What factors cause eco-imbalance ? 5  
 (c) What is biosphere cycle ? State its main characteristics. 5  
 (d) What is food chain ? What are its characteristics ? 5
6. (a) Explain the causes of soil pollution. 5  
 (b) State the factors responsible for depletion of ozone layer ? 5  
 (c) What is sulphurous smog ? 5  
 (d) How can air pollution be controlled ? 5
7. (a) What is solid waste ? Mention various types of solid waste. 5  
 (b) State the bad effects of incineration. 5  
 (c) Explain biomedical waste. 5  
 (d) Explain various methods of urban waste disposal. 5
8. (a) State the principles of sustainable development. 5  
 (b) Write a brief note on 'solar energy'. 5  
 (c) What do you mean by water quality parameter ? 5  
 (d) Explain briefly the role of engineers in sustainable development. 5
- Group C**
9. (A) Give the full form of the following abbreviations : 5 × 1  
 (i) KYC  
 (ii) SEZ  
 (iii) MOU  
 (iv) NEERI  
 (v) OPEC
- (B) Why are the following personalities known for : 5 × 1  
 (i) Sania Mirza  
 (ii) Ratan Tata  
 (iii) Uma Bharti  
 (iv) Kailash Satyarthi  
 (v) Smiriti Irani

(C) Match the authors and books : 5 × 1

- |                      |                      |
|----------------------|----------------------|
| (a) Area of Darkness | (i) Amrita Pritam    |
| (b) Coolie           | (ii) Sarojini Naidu  |
| (c) Pinjar           | (iii) Vikram Seth    |
| (d) Broken Wings     | (iv) Mulak Raj Anand |
| (e) A Suitable Boy   | (v) V. S. Naipaul    |

(D) Match the books given in Column A with the authors given in Column B : 5 × 1

- | <u>Column A</u>                        | <u>Column B</u>       |
|--|-----------------------|
| (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 Tata of Two Cities               | (v) Kuldip Nayar      |

**S'16 : 4 FN: AN 204/AD 304 (1404)**

**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) Is sociology a science? Explain. 5
- (b) What is meant by social process? Give some examples. 5
- (c) Describe main patterns of social change in Indian society. 5
- (d) Differentiate between communalism and regionalism. 5
2. (a) Explain the main causes of poverty in India. 5
- (b) Differentiate between primary and secondary social groups. 5
- (c) Explain the concept of cultural lag with examples. 5

*( Turn Over )*

- (d) Explain the changes that have taken place in the institution of marriage. 5
3. (a) Discuss the role of information technology on social relationships. 5
- (b) What is the role of appropriate technology in meeting the requirements of poor nations' development needs? 5
- (c) Discuss the interrelation of technology growth with socio-economic growth. 5
- (d) What do you mean by eco-friendly technology? 5
4. (a) Discuss the social and ethical responsibilities of an engineer. 5
- (b) What is the role of NITI Ayog in planning and development? 5
- (c) What are the social parameters of development? 5
- (d) Do you think that greenhouse gases are causing global warming? Explain. 5
- Group B**
5. (a) What is ecological pyramid? What are the different types of ecological pyramid? 5
- (b) How one terms 'community' as 'social ecosystem'? Justify your answer. 5
- (c) What is biomagnification? Explain in detail. 5
- (d) What are the differences between BOD and COD methods? 5
6. (a) Discuss the role of Central Pollution Control Board (CPCB) in maintaining air quality standards. 5

S'16:4 FN:AN204/AD304 (1404) ( 2 )

(Continued)

- (b) What is thermal pollution? What are its adverse effects? 5
- (c) What do you mean by a wastewater treatment plant? Describe with the help of a neat diagram. 5
- (d) What is the 'EL NINO' and 'LA NINA' effect? 5
7. (a) What are the major sources of air pollution? How are they classified based on the source? 5
- (b) How is energy derived from the municipal solid waste? 5
- (c) What is hazardous waste management? 5
- (d) What do you mean by the 'life-cycle assessment of a product'? 5
8. (a) What do you mean by sustainable energy? 5
- (b) Discuss the role of engineers in sustainable development. 5
- (c) What are the major sectors responsible for polluting CO<sub>2</sub> (carbon dioxide) emissions? 5
- (d) In what way companies can help to contribute to reduce emissions to solve problems of climate change? 5
- Group C**
9. (A) Match the author and books : 5 × 1
- |                        |                        |
|------------------------|------------------------|
| (a) War and Peace      | (i) Winston Churchill  |
| (b) Gathering Storm    | (ii) Ernest Theringway |
| (c) We Indians         | (iii) Leo Tolstoy      |
| (d) A Farewell to Arms | (iv) Khuswant Singh    |
| (e) Vama               | (v) Mahadevi Verma     |

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(Turn Over)

(B) Match the following : 5 × 1

- |  |                     |
|--|---------------------|
| (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 labour | (v) Soma Biswas     |

(C) Give the full form of the following : 5 × 1

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

(D) Why are the following personalities famous ? 5 × 1

- (a) Shanti S. Bhatnagar
- (b) Narain Karthikeyan
- (c) Mira Nair
- (d) Vinod Khosla
- (e) Bhim Sen Joshi

**W'16: 4FN: AN204/AD304 (1404)**

**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.*

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proper justification.*

*Figures on the right-hand side margin indicate full marks.*

**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

*( Turn Over )*

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: 2 × 10  
 (a) What are the contributions of Liebig, Edison, Marconi 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 Gobard 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 CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub>?  
 (j) Name four major parameters to make an Indian City a Smart City.

**S'17: 4FN:AN204/AD304 (1404)**

**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.*

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proper justification.*

*Figures on the right-hand side margin indicate full marks.*

**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

*( Turn Over )*

- |  |    |   |    |
|--|----|---|----|
| (c) What are the various parameters of social development?   | 5  | 6. (a) Discuss the impact of global warming on agriculture sea water level and marine food.                       | 5  |
| (d) Discuss the role of 'NITI AYOJ' in economic development?   | 5  | (b) What are the causes of depletion of ozone layer in atmosphere?  | 5  |
| 3. (a) What are the main targets for the development process and how it can be achieved?   | 10 | (c) Discuss the physical, chemical and biological effect of thermal pollution.                                    | 5  |
| (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 | (d) How do we measure water quality through biological oxygen demand and chemical oxygen demand?                  | 5  |
| 4. (a) What are the stages of the development of technology? Differentiate between indigenous technology and appropriate technology.                       | 5  | 7. (a) Discuss the process of deriving energy from municipal solid waste?   | 5  |
| (b) What are the various criteria that can be considered to select a industry for appropriate technology transfer?   | 5  | (b) What do you understand by 'life-cycle' assessment of a product?   | 5  |
| (c) What is biomagnification and its impact on organisms?  | 5  | (c) Discuss the role of pollution control boards in maintaining air quality standards.                            | 5  |
| (d) What are the factors affecting the climate change?   | 5  | (d) What are the sources of noise. Discuss its adverse impact on human being.                                     | 5  |
| <b>Group B</b>   |    |   |    |
| 5. (a) How engineers can contribute to sustainable development?  | 5  | 8. (a) How recycling of paper, glass and metal can help in solid waste management?                                | 5  |
| (b) How grassland ecosystem is different from desert ecosystem?  | 5  | (b) Discuss the process of managing bio-medical waste.  | 5  |
| (c) What is biogeochemical cycle and how life is related with it?  | 5  | (c) Discuss the role of solar energy in saving the environment. What are the various application of solar energy? | 10 |
| (d) How do we measure Air pollution? How it can be prevented?  | 5  | <b>Group C</b>  |    |
|  |    | 9. (A) Write the full form of the following:  | 5  |
|  |    | (i) NEERI   |    |
|  |    | (ii) IAEA   |    |

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(Continued)

S'17:4FN:AN204/AD304 (1404) ( 3 )

( Turn Over )

(iii) IUCN

(iv) NAFED

(v) WMO

(B) Match the authors and the Books. 5

<i>Books</i>	<i>Authors</i>
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 Advani
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 contains mainly \_\_\_\_\_.

(v) \_\_\_\_\_ gave the first evidence of the big bang theory. 5

(D) (i) Which Indian state has the largest inland saline wetland ?

(ii) Who was the first person who invented stomic numbers.

(iii) What is the unit for measuring the speed for data transmission ?

(iv) What is mixed Economy ?

(v) Which crop is cultivated for ethonol ? 5

**W'17: 4FN: AN204/AD204 (1404)****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.*

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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) Explain various types of social stratification ? 5
- (b) What are the main causes of social tensions in society ? 5
- (c) Explain major attributes of caste system ? 5
- (d) Differentiate between society and community. 5
2. (a) Explain various parameters of social development ? 5
- (b) Write five stages of Economic Growth. 5
- (c) Narrate the role of science and technology in the development process. 5
- (d) Discuss the role of 'NITI' ayog in economic development of the country. 5

*( Turn Over )*

3. (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
4. (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**
5. (a) What are the various components of Biosphere? 5  
 (b) Explain characteristics of food chain. 5  
 (c) Explain different types of ecological pyramid. 5  
 (d) Discuss various causes of eco-imbalances. 5
6. (a) Discuss causes of environmental pollution. 5  
 (b) Explain main sources 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

W'17:4FN:AN204/AD204(1404) ( 2 )

( Continued )

- (d) Explain basic components 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 Authors and the Books : 5
- | <u>Books</u>                          | <u>Authors</u>         |
|---------------------------------------|------------------------|
| (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 Murthy |
| (iv) A better India : A Better World  | (d) Sunil Gavaskar     |
| (v) Sleeping on Jupiter               | (e) Sadrudin Hashwani  |
- (C) (i) The oceans cover \_\_\_\_\_ of the surfaces of the earth.  
 (ii) The role of chlorophyll in photosynthesis is \_\_\_\_\_

W'17:4FN:AN204/AD204(1404) ( 3 )

( Turn Over )

- 
- (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) Which Indian organisation has designed and build the Dr. APJ Abdul Kalam Memorial ?
- (iii) Which is the land of the Rising Sun ?
- (iv) How many squares are there in a Chess Board ?
- (v) Who discovered the Black Hole Theory ? 5

**S'18: 4 FN: AN 204/AD 304 (1404)**

**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

*( Turn Over )*

- (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 skill Development in India. 5
- (b) Define Science, Engineering and Technology. 5
- (c) Define and explain in 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 agricultural wastes. Explain in brief their utilization. 10
- (b) With a simple flow diagram, describe a method of manufacture particle boards from wastes. 10

S'18:4 FN:AN 204/AD 304 (1404) ( 2 )

(Continued)

**Group C**

9. Answer the following : 10 × 2
- (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 Environmental 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 sentence.
- (viii) Define an environmental pollutant based on Environmental Protection Act of Government of India.
- (ix) What is the main causes of Green House Effect ?
- (x) Match the following :
- |                             |                  |
|-----------------------------|------------------|
| (a) National Science Day    | (I) 15 September |
| (b) Clean Ganga Pledge Day  | (II) 28 February |
| (c) National Technology Day | (III) 02 May     |
| (d) Engineers' Day          | (IV) 11 May      |

S'18:4 FN:AN 204/AD 304 (1404) ( 3 )

AG-12,000

**W'18: 4FN: AN204/AD304 (1404)**

**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) Why sociology should be studied by engineering students ? 5
- (b) Briefly discuss the role of social values in our life. 5
- (c) Discuss the role of gender equality in resolving conflict in society. 5
- (d) Discuss the main patterns of social change in Indian society. 5
2. (a) What do you mean by social justice ? 5
- (b) What are the social responsibility of engineers ? 5
- (c) Discuss the role of NITI Ayog in socio-economic development. 5

*( Turn Over )*

- (d) 'Class has become more important than caste'. Discuss. 5
3. (a) Discuss the role of social media in social integration. 5  
 (b) What changes have taken place in the institution of Marriage ? 5  
 (c) Discuss the role of communalism and regionalism in creating social tension. 5  
 (d) What do you mean by technology adoption and technology upgradation ? 5
4. (a) Discuss the criteria for assessment of appropriate technology. 5  
 (b) Discuss the parameters of social development. 5  
 (c) What do you mean by indigenous technology ? 5  
 (d) What were the positive impacts of green revolution in India ? 5

**Group B**

5. (a) What do you understand by 'Ecology' ? Discuss its objectives and factors responsible for ecological imbalance. 10  
 (b) What is food chain ? What are its characteristics features ? What are the different types of food chain ? 10
6. (a) What is carbon cycle ? 5  
 (b) What are the factors affecting climate change ? 5  
 (c) What do you understand by the term 'social ecosystem' ? 5

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( Continued )

- (d) Discuss the role of engineers in sustainable development. 5
7. (a) Discuss the impact of global warming on marine food and sea water. 5  
 (b) What measures are needed for 'Air Pollution' ? 5  
 (c) How can we protect ozone layer ? 5  
 (d) What is 'solid waste management' ? 5
8. (a) Differentiate between 'BOD' and 'COD'. 5  
 (b) What measures are taken to control thermal pollution ? 5  
 (c) What do you mean by sustainable energy ? 5  
 (d) What do you mean by the 'life cycle Assessment' of a product ? 5

**Group C**

9. (a) Write the full form of the following : 5  
 (i) UNCED  
 (ii) FICCI  
 (iii) IAEA  
 (iv) PVC  
 (v) TRIPS
- (b) Match the books and authors : 5  
 A. My country my life (i) Nelson Mandela  
 B. A brief history of time (ii) Sachin Tendulkar  
 C. The audacity of hope (iii) Barack Obama  
 D. Playing it my way (iv) Stephen Hawking  
 E. Long walk to freedom (v) L.K. Advani

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( Turn Over )

- (c) (i) Irani Trophy is related to which sports ? 5  
(ii) Jnanpith award is given in which area ?  
(iii) Tansen award is given by *which state* in the field of music.  
(iv) S.S. Bhatnagar award is given by CSIR in which area(s) ?  
(v) In which field Homi Bhabha award is given ?

(d) Match the following : 5

- |                 |                         |
|-----------------|-------------------------|
| A. MUDRA        | (i) Tribe               |
| B. Shimon Peres | (ii) Fort               |
| C. Agni IV      | (iii) Ballastic Missile |
| D. Kandla       | (iv) Nobel Peace Prize  |
| E. Garos        | (v) BANK                |

**S'19: 4FN: AN 204/AD 304 (1404)****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) Discuss why the study of Sociology is relevant in today's contemporary society? 5
- (b) Explain the relationship between society and culture. 5
- (c) What are the different types of class that exist in our society? 5
- (d) Discuss the reason for the development more nucleus family in changing socio economic environment. 5
2. (a) Briefly discuss the causes of social tension. 5
- (b) Differentiate between primary and secondary social groups. 5

*( Turn Over )*

- (c) Unequal distribution of income to the society has created social conflict. Justify. 5
- (d) How gender equality can help the society resolve conflict? 5
3. (a) Explain the role of sciences and technology in social development. 5
- (b) Discuss the role of 'NITI Ayog' in economic development of the country. 5
- (c) What is India's policy related to social inclusiveness? What measures the Government has taken for social inclusiveness? 10
4. (a) Differentiate between technology transfer and technology development. 5
- (b) Explain technology adaptation and its benefits. 5
- (c) Explain the statement "Population growth nullifies the fruits of development". 5
- (d) How can digitization help eliminate corruption in the society? 5

#### Group B

5. (a) What are the different types of ecological balance? What factors causes ecoimbalance? 5
- (b) Differentiate between Carbon cycle and Nitrogen cycle. 5
- (c) What do you mean by biological magnification? 5
- (d) Discuss the effect of soil pollution on water and agriculture. 5
6. (a) What are the main characteristics of food chain? 5

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(Continued)

- (b) What are the consequences of environmental degradation? 5
- (c) What is thermal pollution? What are its adverse effects? 5
- (d) Explain the concept of EL NNIO and LA NINA. 5
7. (a) What is hazardous waste management? 5
- (b) What do you mean by life cycle assessment of a product? 5
- (c) What is the source of noise? Discuss its adverse impact of human being? 5
- (d) What do you mean by sustainable development? 5
8. (a) How recycling of paper, glass and metals can help in solid waste management? 5
- (b) Discuss the role of solar energy in saving the environment. 5
- (c) What is geothermal energy? Discuss its advantages. 5
- (d) What is the process of managing bio-medical waste? 5

#### Group C

9. (A) Write the full form of the following: 5
- (i) NEERI
- (ii) NATO
- (iii) NAFED
- (iv) ESCAP
- (v) IAEA

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( Turn Over )

(B) Match the author and the books : 5

- |  |                           |
|--|---------------------------|
| (a) Half Girlfriend                    | (i) NR Narayan Murthy     |
| (b) A better India : A better tomorrow | (ii) Rajendra Prasad      |
| (c) India wins freedom                 | (iii) Chetan Bhagat       |
| (d) One life is not enough             | (iv) APJ Abdul Kalam Azad |
| (e) India divided                      | (v) Natwar Singh          |

(C) Match the following : 5

- |                             |                      |
|-----------------------------|----------------------|
| (a) Engineers Day           | (i) 11th May         |
| (b) World Environment Day   | (ii) 22nd April      |
| (c) National Technology Day | (iii) 15th September |
| (d) Mother Earth Day        | (iv) 22nd March      |
| (e) World Water Day         | (v) 5th June         |

(D) Fill in the blanks : 5

- (a) The process of Pollination by birds is called \_\_\_\_\_ .
- (b) \_\_\_\_\_ is the unit for measuring the speed for data transmission.
- (c) Yeast used to make bread is known as \_\_\_\_\_ .
- (d) The role of chlorophyll in photosynthesis is \_\_\_\_\_ .
- (e) Blue revolution is related to \_\_\_\_\_ .

**W'19 : 4 FN : AN 204/AD 304 (1404)****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 Economics, History, Political Science, Sociology and Anthropology. 10
- (b) Write a short note on treaties in political science. 10
2. (a) List the four major castes in India and activity of each. 8
- (b) Explain the concept of occupation. 2
- (c) What are the four major advantages of joint family system in India ? 10
3. (a) Explain in brief five major causes of social tension in India. 10
- (b) List five ways of helping senior citizens. 10

*( Turn Over )*

4. (a) Explain invention and innovation. 10  
 (b) Define clearly socialism, capitalism and marxism. 10

**Group B**

5. (a) Write a critical note on pollution of air, soil and water due to plastics and polymers. 15  
 (b) Suggest measures in brief, for the pollution of air, soil and water due to plastics and polymers. 5
6. (a) Explain Carbon dioxide cycle. 15  
 (b) What is a food chain ? 5
7. (a) Explain the causes of rising noise pollution. 15  
 (b) Suggest some measures to minimize noise pollution. 5
8. (a) Explain "Sustainable Development". 10  
 (b) List at least three renewable energy sources. 10

**Group C**

9. Explain the following : 10 × 2
- (i) Define Acid Rain.
- (ii) Which is the best way to use Fly Ash ?
- (iii) Write two sentences on Total Dissolved Solids (TDS).
- (iv) When is the National Technology Day and why does India celebrate it ?
- (v) Write two lines on coal based Fertilizer Plant in India.

- (vi) How to prevent Global Warming ?
- (vii) List four desirable properties of a refrigerant.
- (viii) What do we understand by Sea Bitterns ?
- (ix) List four major causes behind Brain Drain.
- (x) Write two lines on Engineer's Day.

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