

SUMMER 2005
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.*

*Answer should be brief and to-the –point and be supplemented with neat sketches. Unnecessary
long answers may result in loss of marks.*

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

Group A

1. (a) Is Sociology a science? Discuss. (5)
(b) Discuss the relationship of Sociology with other social science. (5)
(c) Differentiate between Folk ways and Mores. (5)
(d) Differentiate between Culture and Civilization. (5)
- 2.(a) What are the major form of stratification system? (5)
(b) What do you mean by social mobility? What are the different types of mobility? (5)
(c) What are the recent changes in the Caste System? (5)
(d) Discuss the changing role and functions of family. (5)
3. (a) Explain the meaning of ‘work’. ‘Work is a central focus in society’. Comment. (5)
(b) Differentiate between ‘Science’ and ‘Technology’. (5)
(c) ‘The process of production and consumption take places in a social change. (5)
(d)Discuss the impact of technological and cultural factors on social change. (5)
4. (a) What is planning ? How it can be made more effective? (5)
(b) Discuss the criteria for the assessment of appropriate technology (5)
(c) What do you mean by ‘Scientific Management’ ? (5)
(d) ‘Technology adaptation depends upon a number of factors.’ Comment. (5)

GROUP B

5. (a) What do you mean by ‘Biosphere Cycle’? (5)
(b) What factors contribute to ecological imbalance? (5)
(c) What preventive measures are required for ecological balance? (5)
(d) What do you understand by the term ‘Global Warming’? (5)
6. (a) Does over population create environmental degradation? Explain. (5)
(b) What is noise pollution? How it can be controlled? (5)
(c) What measures are necessary for the protection of ozone layer? (5)
(d) What efforts are required by the industries to minimize the impact of industrial waste on society? (5)
7. (a)What can be done to better utilize urban waste? (5)
(b)What need to be done to preserve our agriculture products, so that is not wasted? (5)
(c) What are the roles of engineers to better manage the waste? (5)
(d) What is Environment? What are the major causes of soil pollution? (5)
8. (a) What do you mean by sustainable development? (5)
(b) What is the role of technology to create sustainable energy? (5)
(c) What can be done to preserve and save the natural material for long-term sustainability? (5)

(d) What do you mean by 'Social forestry'? (5)

GROUP C

9. Answer the following:

- (i) Explain the full form of the following words (1×4)
(a)ITES (b) GATT (c) CSIR (d) UNDP
- (ii) Name the authors of the following books. (1×4)
(a)Seven habit of the following books
(b)You Can Win
(c)Human Society
(d)Area of Darkness
- (iii) Explain why these personalities are famous (1×4)
(a)Amartya Sen (b) V.V. Giri
(c) Gopal Krishna Gokhale (d)Aurobindo Ghosh
- (iv) Who are associated with the following discoveries? (1×4)
(a) Fountain Pen (b) Microphone (c) Thermometer (d) Typewriter
- (v) Explain the following (1×4)
(a) Astrophysics (b) Horticulture (c) Mycology (d) Oncology

WINTER 2005
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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long answers may result in loss of marks.*

Any missing or wrong data may be assumed suitably giving proper justification

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Group A

1. (a) What is social stratification? Explain in brief. 6
(b) Write a critical note on the origin of caste system in India and the recent changes taking place in caste system. 8
(c) Give an account of the current trends with respect to occupation. 6
2. (a) What are the consequences of inequality and how can these be reduced? 8
(b) What are the major causes of social tensions? Write in brief. 8
(c) Write in brief the most effective methods of population control. 4
3. (a) Define Plan Holiday and Rolling Plan. 5
(b) Explain Green Revolution. 5
(c) What are the genuine steps required for 'Garibi Hatao'? 10
4. (a) Describe the technological developments during the 20th century. 12
(b) List the major criteria for assessment of appropriate technology. 8

Group B

5. (a) What are the six classes of the components of ecosystems ? Describe in brief. 8
(b) Write a critical note on biosphere cycles and explain the carbon dioxide cycle. 12
6. (a) List the main causes of eco-imbalance. Suggest the remedies to prevent them. 8
(b) Explain in brief the causes for environmental degradation in India. 8
(c) Suggest the methods to control the noise pollution. 4
7. {a) How is the ozone layer being destroyed and how to prevent it ? (8)
(b) Describe in brief the sanitary land-filling method for solid waste disposal. 12
8. (a) What do you understand by urban wastes ? How can these be treated? 8
{b) What are the salient features of the Brundtland Report, 'Our Common Future'? 6
(c) Write a critical note on technology for sustainable energy. 6

Group C

9. Answer the following: 2 x10
 - (i) Define culture.
 - (ii) What is social mobility?
 - (iii) Write the Pareto's law mathematically.
 - (iv) Define engineering and technology.
 - (v) Mention two e-wastes.
 - (vi) What is CNG?
 - (vii) As per the white paper of the UK Government, how many indicators are there for a better quality of life?

(viii) Write the *correct* answer:

Thermal power plants use

- (a) coal
- (b) oil
- (c) uranium
- (d) all of these.

(ix) The Institution of Engineers (India) can be called

- (a) a Society
- (b) an Association
- (c) a Trust
- (d) none of these

(x) Write the odd one:

- (a) nitrogen
- (b) phosphate
- (c) oxygen
- (d) potash.

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Group A

1. (a) Do you agree with the statement that man is a social animal? 8
(b) What is social mobility? 6
(c) Discuss the factors that bring social change. 6
2. (a) Differentiate between the following: 8
(i) Association and Institution
(ii) Mores and Folkways.
(b) Discuss the major characteristics of caste system. 6
(c) What is Cultural Lag 6
3. (a) What is manpower planning? 10
(b) Briefly describe technological development in India after independence. 10
4. (a) Discuss the role of science and technology in social development. 8
(b) Discuss the technology policy of India. 7
(c) What is e-commerce? 5

Group B

5. (a) What are the causes of global warming? State its effects briefly. 8
(b) How is ozone layer being depleted? 6
(c) What is ecology? 6
6. (a) What are the factors responsible for ecological imbalance? 6
(b) Name the different sources of air pollution 6
(c) Write a note on wildlife preservation. What measures would you suggest in this regard? 8
7. (a) State the effects of deforestation. 6
(b) Do you like to ban Gutka-panmasala legally? How will you proceed? 6
(c) Use of plastic bags is causing incalculable loss to human being as well as animals. Comment and suggest methods to replace it. 8
8. (a) Write a note on pollution problems from automobile exhausts. 6
(b) Is political stability necessary for sustainable economic development? Discuss it in the context of present political situation in India. 8
(c) What do you understand by industrial wastes? How can these be treated? 6

Group C

9. (a) Why the following personalities are known for? 1 × 5
(i) Sunderlal Bahuguna
(ij) Amartya Sen
(iii) Bill Gates .
(iv) Medha Patkar
(v) Greg Chappell.
- (b) Write the author(s) of the following books: 1x5
(i) India Wins Freedom
(ii) Asian Drama

- (iii) Discovery of India
- (iv) Midnight's Children
- (v) Anandmath

(c) Match the item in Column A with Column B:

1×5

Column A

Column B

- (i) Das Kapital
- (ii) Wealth of Nations
- (iii) A God of Small Things
- (iv) You Can Win
- (v) A China Passage

- (1) J.K.Galbrath
- (2) Arundhati Rai
- (3) ShivKhera
- 4) Adam Smith
- (5) Karl Marx

(d) Write full forms of the following:

- (i) WHO
- (ii) FIR
- (iii) EU
- (iv) MOU
- (v) RBI

Winter 2006

SOCIETY AND ENVIRONMENT

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GROUP A

1. (a) Do you agree with the statement that sociology is the study of social relationship? (M6)

(b) Discuss the social characteristics of primary and secondary groups with suitable examples. (M 8)
(c) Define the concept of social conformity, variation, and deviance. (M6)
2. (a) Explain the concept of social stratification. How it is related to mobility? (M5)
(b) Discuss the impact of social change (M5)
(c) Differentiate between Custom and Tradition. (M5)
(d) Discuss the relationship of sociology and psychology (M5)
3. (a) What do you mean by social conflict? (M5)
(b) Is social inequality is a result of class, caste and occupation? (M5)
(c) Do you agree that information technology has improved our effectiveness at workplace? (M5)
(d) Discuss the advantage of joint family system. Why it is disintegrating today? (M5)
4. (a) What are the major factors responsible for social development? How it has been influenced by economic environment? (M7)
(b) What is Planning? Do you think that five years plans have met their objectives (M7)

(c) What is appropriate technology? How can we identify appropriate technology for rural population? (M6)

Group B

5. (a) What is greenhouse effect? State its effects briefly. (M6)
(b) What is Bio-sphere cycle? (M6)
(c) What are the causes of ecological imbalance? How it can be prevented? (M8)
6. (a) What do you mean by environmental degradation? What are its causes? (M8)
(b) How noise pollution effect our health? (M6)
(c) What can be done to protect ozone layer? (M6)
7. (a) Differentiate between aforestation, deforestation and reforestation. (M5)
(b) 'Use of plastic should be banned.' Do you agree with this statement. (M5)
(c) Discuss the role of Pollution Control Board in protecting the environment (M5)
(d) What can be done to stop the discharge of industrial waste into our rivers? (M5)
8. (a) What can be done to minimize the waste from agricultural products? (M5)
(b) What are sources of alternate energy? (M5)
(c) What do you understand by the term sustainable development? (M5)
(d) What is the role of engineers in effective disposal of waste in urban areas? (M5)

Group C

9. (A) Write the full forms of the following: (M5)

- (a) SAARC
- (b) WAN
- (c) NDA
- (d) RITES
- (e) UPSC

(B) Name the authors of the following books: (M5)

- (a) Origin of Species
- (b) A Passage to England
- (c) Wake up India
- (d) The wonder that was India
- (e) Mother

(C) Why these personalities are famous for? (M5)

- (a) Aurobindo Ghosh
- (b) Rajendra Prasad
- (c) V.V. Giri
- (d) Zakir Hussain
- (e) Sarojini Naidu

(D) Match the following Columns for diseases: (M5)

- | Column I | Column II |
|----------------|------------------|
| (a) Airborne | (1) Tetanus |
| (b) Waterborne | (2) Tuberculosis |
| (c) Contact | (3) Cholera |
| (d) Wound | (4) Syphilis |

SUMMER 2007
SOCIETY AND ENVIRONMENT

*Answer FIVE questions, taking ANY TWO from Group A,
ANY TWO from Group B and ALL from Group C.
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Group A

1. (a) What do you understand by the term 'social stratification'? (M5)
(b) What is society? Discuss its characteristics? (M5)
(c) Define culture. What is cultural lag? (M5)
(d) Trace the relationship between religion and culture? (M5)
2. (a) Sociology is a scientific study of society and human behaviour. Discuss. (M5)
(b) What is social mobility? What factors are responsible for social mobility? (M5)
(c) Is conflict the result of inequality in society? (M5)
(d) Discuss the characteristics and effect of caste system. (M5)
3. Differentiate between the following:
(a) Human society and Animal society. (M5)
(b) Formal group and Informal group (M5)
(c) Institution and Association. (M5)
(d) Competition and Conflict. (M5)
4. (a) How has industrialization affected the joint family system? (M6)
(b) What is appropriate technology? How will you select a technology for rural population? (M7)
(c) Information technology has played a major role in social development. Discuss. (M7)

Group B

5. (a) What is planning? How an engineer can help in better planning of resources? (M5)
(b) Discuss Human Relation Approach (M5)
(c) What is ecosystem? How are human activities responsible for degradation of ecosystem? (M5)
(d) Discuss oxygen cycle diagrammatically? (M5)
6. (a) What are natural resources? Explain? (M5)
(b) How is population growth a cause for resources depletion? (M5)
(c) Define reuse and recycling. What are the benefits of recycling? (M5)
(d) What is e-Waste and biodegradable waste? (M5)
7. (a) What is greenhouse effect? Discuss its causes, consequences and control measures. (M5)
(b) What, according to you as an engineer, is an ideal waste management system in urban as well as in rural areas? (M10)
(c) What is sustainable development? What are the political challenges being faced by sustainable development? (M5)
8. (a) Describe pollution. Explain the causes and effects of air pollution. (M5)
(b) Nature has its own way to keep balance in itself. Discuss. (M5)
(c) How is public awareness an important factor in managing the environment? (M5)
(d) Discuss technology adaptation in India in view of Indian environment? (M5)

Group C

9. Answer the following questions:

(i) Write full form of the following

(1×5M)

- (a) CPCB
- (b) UNICEF
- (c) UPSC
- (d) EIA
- (e) TERI

(ii) Why are the following personalities known for?

(1×5M)

- (a) N.R. Narayan Murty
- (b) R.S. Rathore
- (c) Sunita Williams
- (d) Bob Woolmer
- (e) L.N. Mittal

(iii) Name the authors of following books:

(1×5M)

- (a) Broken Wings
- (b) India of My Dreams
- (c) Adhe Adhure
- (d) The old Man and The Sea
- (e) The Power and The Glory

(iv) What do you know about these terms:

(1×5M)

- (a) Sericulture
- (b) Joule
- (c) Land of rising sun
- (d) Aryabhatta
- (e) 8th September

WINTER 2007
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*Answer FIVE questions, taking ANY TWO from Group A,
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Group A

1. (a) What do you understand by the term socialization? How is it different from 'Socialism'? (5)
(b) Differentiate between 'culture ' and 'tradition' ? (5)
(c) Is sociology a science? How is it different from psychology? (5)
(d) What do you mean by cultural heritage? Explain. (5)
2. (a) What are the factors responsible for social change ? (5)
(b) Differentiate between 'social change' and social development. (5)
(c) What are the parameters used to measure social development? (5)
(d) What are the causes of social tension? (5)
3. (a) What are the objectives of planning ? (5)
(b) What do you mean by manpower planning? (5)
(c) Discuss the role of science and technology in development. (5)
(d) Do you think that five year plans have met their objectives? Briefly explain. (5)
4. (a) What are the criteria for assessment of imported technology ? (5)
(b) What do you mean by technology transfer? (5)
(c) What is the appropriate technology syndrome? (5)
(d) What can be done to facilitate the transfer of technology in rural sector? (5)

Group B

5. (a) What are the factors responsible for ecological imbalance ? (5)
(b)What are the causes of noise pollution? What can be done to prevent it? (5)
(c) What do you mean by 'Biosphere Cycle'? (5)
(d) What is global warming? What are its effects? (5)
6. (a) Differentiate between afforestation, deforestation and reforestation. (5)
(b) What are the measures required to protect the ozone layer? (5)
(c) What do you mean by industrial waste? (5)
(d) Discuss the role of engineers in pollution control. (5)
7. (a) Discuss the technology policy of India. (5)
(b) What can be done to prevent waste from agricultural products? (5)
(c) How is soil polluted? What are the measures required to prevent soil pollution. ? Do you think that excessive use of pests / fertilizers be banned. (5)
(d) 'Pesticides' are damaging and polluting the rivers and oceans .Discuss. (5)
8. (a) We need a strong 'political system' and 'political will' for sustainable development. Discuss. (5)
(b) Discuss the alternative sources of energy. (5)
(c) What is 'quality of life' ? (5)
(d) What is wild life preservation? How it helps in sustainable development? (5)

Group C

9. (A) Write the full form of the following words (1× 5)

(i) NEERI (ii) WTO (iii) FICCI (iv) OPEC (v) ICAR

(B) Write the authors of the following books (1× 5)

(i) Affluent Society (ii) Area of Darkness
(iii) The Gardener (iv) Macbeth (v) Odyssey

(C) Write about the following personalities (1× 4)

(i) Fa-hien (ii) Galileo (iii) Dhyan Chand (iv) Walt Disney

(D) Match the following (1× 4)

(i) Yeast	1. Protozoa
(ii) Amoeba	2. Algae
(iii) Chlorella	3. Bacteria
(iv) Salmonella	4. Fungi

(E) What do you know about the following terms: (1× 2)

(i) Dermatology (ii) Ornithology.

Summer 2008
SOCIETY AND ENVIRONMENT

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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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Group A

1. (a) Describe in brief the caste system in India and the main factors which gave made it now flexible (5)
- (b) Based on Max Weber's theory, outline the important factors responsible to identify the class system. (5)
- (c) Describe in brief the present class structure in India (5)
- (d) What are the main causes for income inequality and its consequences? (5)
2. (a) Explain the major impediments to development (10)
- (b) What are the possible measures to be taken in India to check brain drain? Explain (10)
3. (a) How can we apply technology for rural development in India ? Explain in detail. (10)
- (b) According to Pandit Nehru, ' Planning without action is futile and action without planning is futile' Justify this statement. (5)
- (c) Make a judicious assessment of India's tenth Five Year plan. (5)
4. (a) How are appropriate technology and technology adaptation defined and explained ? (10)
- (b) Outline some aspects of technology transfer? (10)

Group B

5. (a) What are the main components of ecosystem ? Describe in brief. (10)
- (b) Explain the carbon dioxide cycle. (5)
- (c) What are the adverse effects of eco-imbalance? (5)
6. (a) What is a food chain ? (5)
- (b) Write briefly the effects of environmental degradation climate. (10)
- © What are the e-wastes and how can we minimize these? (5)
7. (a) Define and explain industrial wastes (5)
- (b) Explain briefly the mechanism for depletion of ozone layer (5)
- © Write a short note on 'gobar gas' (5)
- (d) How can we derive wealth from fly ash? Write in brief. (5)
8. (a) Define and explain acid rain. (5)
- (b) Write a short note on 'afforestation'. (5)
- © Define and explain sustainable development. (5)
- (d) Write the chemical equation for conversion of coke/coal to methanol. (5)

Group C

9. Answer the following in brief: (2 × 10)
 - (i) Differentiate sociology from political science.
 - (ii) What is the main difference between a caste and a class?
 - (iii) Draw an empirical Lorenz curve for equal distribution of income.
 - (iv) What is rolling plan.
 - (v) What was the ultimate outcome of industrial revolution in Europe ?
 - (vi) List major four needs of mankind.
 - (vii) Define ecology.
 - (viii) What are SO_x and NO_x ?
 - (ix) Define biomethanisation
 - (x) What is CNG and what are its main uses?

Winter 2008
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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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GROUP A

1. (a) What is social stratification? Discuss the main characteristics of social stratification (5)
(b) Discuss various factors which contribute to social mobility. (5)
(c) Describe the essential elements of a community (5)
(d) Distinguish between institution and association. (5)
2. (a) Discuss various parameters of social development which help in understanding the change in a developing society. (10)
(b) Discuss the five stages of economic growth for a traditional society become an advanced society (5)
(c) Explain the role of science and technology in the development process. (5)
3. (a) Discuss the main objectives of economic planning in India (5)
(b) Explain the course which are responsible for the migration of large number of people from rural to urban areas (5)
(c) What are factors responsible for social change in the society? (5)
(d) Discuss the contribution made by public sector organization in India's economic development after independence (5)
4. (a) Discuss various non-conventional sources of energy. (10 M)
(b) Explain various methods of technology transfer. (5M)
(c) Explain the criteria to be considered while selecting industry for appropriate technology transfer (5M)

Group B

5. (a) How ecological factors affect the environment? (5M)
(b) Discuss various types of biogeochemical cycle. (10 M)
(c) What is a 'food web'? (5M)
6. (a) Discuss various causes of environmental pollution. (5M)
(b) Explain the main sources of air pollution. (5M)
(c) Discuss adverse effects of global warming on the environment? (5M)
(d) What are the methods used for soil conservation? (5M)
7. (a) Discuss various types of solid wastes. (5M)
(b) What are biomedical wastes? Discuss various methods of their disposal. (10M)
(c) What are the tests carried out to determine the quality of water? (5M)
8. (a) Discuss the basic components of sustainable development? (5M)
(b) Explain the role of engineers in sustainable development. (5M)
(c) What is 'Pyramid of Biomass'? (5M)
(d) Write a note on human resource development in India. (5M)

Group C

9. Answer the following in brief:

(2 × 10)

- (i) Differentiate between material culture and non material culture?
- (ii) Why is family relationship breaking in Indian society?
- (iii) Write the functions of Planning Commission?
- (iv) What are the characteristics of modernization?
- (v) Differentiate between abiotic and biotic factors?
- (vi) What is greenhouse effect?
- (vii) What is CO₂ cycle?
- (viii) What are the effects of noise pollution?
- (ix) Define incineration
- (x) Differentiate between deforestation and reforestation.

SUMMER 2009

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 do you understand by social system and social institution? (5)
(b) 'Sociology is a science of society'. Comment on this statement. (5)
(c) What do you mean by social stratification? What are its salient characteristics? (5)
(d) What is social class? How is it different from economic class? (5)
2. (a) What is social tension? What are the different causes of social tension? (5)
(b) Discuss the role of science and technology in the development process of society (5)
(c) What are the objectives of planning? What needs to be done to plan objectives? (5)
(d) What do you mean by human resource development? (5)
3. (a) What are the criteria for assessment of appropriate technology? (5)
(b) What do you mean by technology transfer? What are its pitfalls? (5)
(c) What are the reasons for failure of technology transfer from laboratory to field? (5)
(d) Discuss the development of science and technology in India before independence. (5)
4. (a) What are the different parameters of development? (5)
(b) How does conflict arise in society? How can it be managed? (5)
(c) How does population become responsible for the development of our country? What are the measures required to contain the growth rate of population? (5)
(d) Difference between a developed, developing and undeveloped economy? (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 main characteristics of food chain? Classify different types of food chain. (5)
(d) What do you understand by ecological pyramid? What are the different types of ecological pyramid? (5)
6. (a) What do you mean by bio magnification? What are its different stages? (5)
(b) Differentiate between phosphorus cycle and sulphur cycle. (5)
(c) What is eco imbalance? How are people responsible for it? (5)
(d) What are the biotic components of forest ecosystem? (5)
7. (a) Discuss the different components of marine ecosystem with example. (5)
(b) What are the different sources of environmental pollution? (5)
(c) What do you mean by air pollution? How can it be controlled? (5)
(d) What is global warming? Discuss its impact on climate, agriculture, and marine food. (5)
8. (a) What is smog? What are different types of smog? (5)
(b) What is biomedical waste? What are the methods of biomedical waste management? (5)

- (c) What are the different sources of renewable energy? (5)
(d) What do you mean by sustainable development? What are the rules of sustainable development? (5)

Group C

9. (A) Define the following terms: (5×1)
(i) Seismology (ii) Polygraph
(iii) AIDS (iv) Firmwave
(v) Genetics
- (B) What are the uses of these scientific instruments? (5×1)
(i) Audiometer (ii) Fathometer
(iii) Salinometer (iv) Theodolite
- (C) Choose the correct answer for the following: (5×1)
- (i) What organism kills and eat other organism?
(a) predator (b) parasite
(c) decomposer (d) producer
- (ii) Which one of the following is a greenhouse gas?
(a) Nitrogen (b) Oxygen
(c) Methane (d) Inert gas
- (iii) Acid rain is caused due to mixing of rain water with
(a) SO₂ AND NO_x (b) CO₂
(c) CO (d) O₂
- (iv) Biological Oxygen Demand (BOD) determines the health of
(a) air (b) water
(c) soil (d) solid waste
- (v) Which one of the following is the fossil fuel?
(a) Gobar gas (b) Coal
(c) Methane (d) Soil
- (D) Write the full form of the following:
(i) SAARC (ii) FERA
(iii) GATT (iv) NEERI

WINTER 2009
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**.
Figures on the right-hand side margin indicate full marks*

Group A

1. Differentiate between the following: (4× 5)
 - (a) Sociology and Psychology.
 - (b) Class and caste
 - (c) Association and institution.
 - (d) Society and Community
2. (a) What do you mean by social tension? What are the main causes of social tension? (10)
(b) What is social stratification? Name different types of social stratification. (10)
3. (a) Discuss the role of science and technology in the rural development. (10)
(b) What are the parameters of the development of a country? (5)
(c) Discuss briefly the role of planning. (5)
4. (a) What do you mean by technology transfer? (10)
(b) How do you like to transfer the technology from laboratory to field? (10)

Group B

5. (a) What is biosphere cycle? (5)
(b) Differentiate between carbon cycle and nitrogen cycle. (5)
(c) State different types of ecosystem. (5)
(d) Explain the meaning of ecological imbalance (5)
6. (a) What is meant by 'environmental degradation'? Suggest measures to control environmental degradation? (10)
(b) What is global warming? Suggest measures to control global warming. (10)
7. (a) What is solid waste? Name the chief sources of solid waste. (10)
(b) Explain hazardous waste? (5)
(c) Write a note on 'life cycle assessment' of a product. (5)
8. (a) What is solar energy/ Discuss different applications of solar energy? (10)
(b) Define sustainable development. What are the measures for planning sustainable development? (10)

Group C

9. Answer the following in brief : (10 × 2)
 - (i) Importance of sociology
 - (ii) Define culture.
 - (iii) What is social mobility?
 - (iv) Advantages of joint family.
 - (v) Role of women in society.
 - (vi) What is SMOG?
 - (vii) What is recycling of plastic?
 - (viii) Chipko movement achievements.
 - (ix) Causes of soil pollution.
 - (x) Justice and equity in society. Comment on this statement.

SUMMER 2010

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**.*

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

Group A

1. (a) What is the importance of sociology in modern times ? 5
(b) Give major characteristics of community.
(c) Define cultural heritage.
(d) What is the difference between caste and class?
2. (a) What are the main social responsibilities of an individual? 5
(b) 'Social tension has increased with the advancement of science and technology.'
Do you agree? Give reasons.
(c) What are the advantages of joint family system?
(d) What is manpower planning?
3. (a) What are the parameters for social development? 5
(b) Discuss the role of science and technology in social development.
(c) Do you favour women's empowerment ? If yes, give reasons.
(d) 'The use of computer has revolutionized our social structure.' Comment on this Statement with examples.
4. (a) What do you understand by indigenous technology? 5
(b) What is biotechnology ? What are its fields of application?
(c) Explain the concept of appropriate technology. How is it assessed?
(d) What changes would you recommend in our science / technology policy in the in the light of recent development in the field of nuclear power?

Group B

5. (a) What are the main components of ecosystem? Describe in brief. 5
(b) Explain the carbon-dioxide cycle. 5
(c) What are the adverse effects of eco-imbalance? 5
(d) Write briefly the effects of environmental degradation on climate. 5
6. (a) Explain briefly the mechanism for depletion of ozone layer. 5
(b) Suggest few steps for wildlife preservation. 5
(c) What is food-chain ? 5
(d) What is CNG and what are its main uses? 5
7. (a) Define industrial wastes. 5
(b) State the effects of deforestation. 5
(c) Sustainable economic development could go only with a stable political system and strong political will. Examine this statement. 5
(d) What is acid rain? Discuss its causes. 5
8. (a) What is ecology? State its significance. 5
(b) Discuss the ill-effects of environmental pollution. 5
(c) State the different sources of renewable energy. 5
(d) Discuss how energy is derived from municipal solid waste? 5

Group C

9. (A) Why the following personalities known for ? 5×1
- (1) M.F. Hussain
 - (2) Ratan Tata
 - (3) Sunder Lal Bahuguna
 - (4) Amartya Sen
 - (5) B.Subbarao
- (B) Give full forms of the following: 5×1
- (1) NEERI
 - (2) DST
 - (3) NCHER
 - (4) UNCTAD
 - (5) AICTE
- (C) Name the authers of the following books : 5×1
- (1) Gitanjali
 - (2) My Experiment with Truth
 - (3) Kamayani
 - (4) Wealth of Nations
 - (5) Discovery of India
- (D) Define the following terms: 5×1
- (1) Psychology
 - (2) Anthropology
 - (3) Statistics
 - (4) Geology
 - (5) Philology

WINTER 2010
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.*
Figures on the right-hand side margin indicate full marks

Group A

1. (a) Differentiate between sociology and anthropology. (5)
(b) "Sociology is the science of society". Justify this statement. (5)
(c) How is social system and social institution different from each other? (5)
(d) How stratification takes place in Indian society? (5)
2. (a) What do you mean by social conflict? How can it be removed? (5)
(b) What are the hurdles of the development process? (5)
(c) How do you like to assess the planning for social development? (5)
(d) Discuss the relationship of population growth and social development (5)
3. (a) What are the criteria of indigenous technology and foreign technology assessments? (5)
(b) What do you mean by appropriate technology? What are the pitfalls of technology transfer? (10)
(c) Different between technology transfer and technology development. (5)
4. (a) Discuss the role of women in social development. How can women empowerment help in the process of social development? (10)
(b) What are different stages of economic growth of a society? What measures can be recommended to achieve the targets of economic growth? (10)

Group B

5. (a) Describe the sulphur cycle? (5)
(b) Can we call community as social ecosystem? Justify your answer. (5)
(b) How ecological factors affect the environment? (5)
(c) What are different types of ecological pyramid? (5)
6. (a) What are major form of environmental degradation and consequences? (5)
(b) Define the following concept (i) pollution (ii) contaminants (iii) speculation (iv) threshold unit value, and (v) pollution standard index. (10)
(c) What are pesticides? How are pesticides spread in the environment? (5)
7. (a) How are public health and the solid waste related? (5)
(b) How is energy derived from the municipal solid waste? (5)
(c) What do you mean by hazardous waste? What are the characteristic features of hazardous waste? (5)
(d) What do you mean by the 'life cycle assessment' of a product? (5)
8. (a) What are the rules of sustainable development ? (5)
(b) What do you mean by sustainable energy? (5)
(c) What is geothermal energy? Where are these located? (5)
(d) What do you mean by solar distillation and solar pond? (5)

Group C

- 9.(A) Answer the following in brief: (5 × 1)
- (i) What is tropical winds?
 - (ii) What is mesosphere?
 - (iii) What is Bhaskara II ?
 - (iv) What is RAM?
 - (v) What is the effect of deficit financing on economy?
- (B) Give full form of the following abbreviations? (5 × 1)
- (i) NEERI (ii) ASSOCHAM (iii) BIFR (iv) FEMA (v) GATS
- (C) What for these personalities famous for? (5 × 1)
- (i) Madhavacharya (ii) Stephen Hawking
 - (II) Lee Lacocca (iv) Medha Patekar
 - (v) Vikram Sarabhai
- (D) Answer the following in one word: (5 × 1)
- (i) The words 'Satya Meva Jayate' are taken from.....
 - (ii) The Indian Military Academy is located at.....
 - (ii) The national calendar of India is based on.....
 - (iv) Who certifies a site on the Internet as a secure site?.....
 - (v) Blood circulation in human body was discovered by

SUMMER 2011 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.
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 factor elimination slowly the caste system in India 10
- 3 (a) Where 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 nation among developed nations, Analyse, assess and comment on this statement 10

Group B

5. (a) What are the main causes of whater pollution in India 10
- (b)Write a short note on 'Sustainable Development' 10
6. (a) What are the objective of ecology 10
- (b) Explain the N₂ cycle. 10
7. (a) Explain clearly the adverse effect 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) DrM. 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

WINTER 2011

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 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 liberalization, privatization and globalization 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 society |
- (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

Winter 2012

SOCIETY AND ENVIRONMENT

Time : Three Hours

Maximum Marks : 100

*Answer FIVE questions, talking ANY TWO from Group A,
 ANY TWO from Group B and ALL from Group C.*

*All Parts of a questions, (a,b,etc.) should be
 answered 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.*

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
 (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 diverse impact 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

Group C

- 9 (A) Discuss About the following personalities : 4x1
(i) Kalpana Chawla
(ii) Baba Amte
(iii) Bhupen Hazarika
(iv) Indra Nooyi
- (B) Give full form of the following 4x1
(i) ESCAP
(ii) CBDT
(iii) MICR
(iv) NAFED
- (C) Answer the following: 4x2
(i) Who coined the slogan 'Jain Jawan Jai Kisan' ?
(ii) What is considered as the Nobel Prize for conservation ?
(iii) Who founded the Indian Statistical Institute ?
(iv) Who gave the symbol for rupee ?
- (D) Explain the following concepts: 2x2
(i) Brain drain
(ii) Black money

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