

MVJ COLLEGE OF ENGINEERING-BANGALORE

Fifth semester B.E. Degree (Autonomous) Examinations, Feb/Mar-2022

USN

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MVJ19ENV59

Environmental Studies Common to all Branches

Duration: 3 Hrs.

Maximum Marks :100

Note:

- Answer all Questions
- Each questions carries equal marks

| Q.No. | | Marks |
|-------|---|-------|
| 1 | Decreased soil fertility through rapid leaching of the essential mineral nutrients is due to _____ a) Reforestation c) Over exploitation b) Deforestation d) Recycling of forest products | 1 |
| 2 | Which part of plant contains nitrogen fixing bacteria? a) Roots c) Leaves b) Stems d) All of the above | 1 |
| 3 | The natural place of an organism or community is known as _____ a) Niche c) Habitat b) Biome d) Habit | 1 |
| 4 | Which is the renewable exhaustible natural energy resource? a) Coal c) Kerosene b) Petroleum d) Biomass | 1 |
| 5 | Which of the following requires maximum energy? a) Secondary consumer c) Primary consumer b) Decomposer d) Primary producer | 1 |
| 6 | Ecosystem is smallest unit of _____ a) Ionosphere c) Biosphere b) Lithosphere d) Mesosphere | 1 |
| 7 | The importance of ecosystem lies in a) Flow of energy c) Both a and b b) Cycling of materials d) None of the options | 1 |
| 8 | The source of energy in an ecosystem is a) Decomposition of animals and plants by bacteria b) Photosynthesis by plants | 1 |

- c) Fermentation by sugar ~~d) Sunlight~~
- 9 Biological equilibrium occurs among the
- a) Producers and consumers b) Producers and decomposers
- ~~c) producers consumers and~~ d) Producers themselves 1
- Decomposers
- 10 A plant, being eaten by a herbivore which in turn is eaten by a carnivore, makes
- ~~a) Food chain~~ b) Web of food
- c) Omnivores d) None of the options 1
- 11 The planktonic forms of plants are _____
- ~~a) Autotrophs~~ b) Heterotrophs
- c) Chemotrophs d) Insectivorous types 1
- 12 The organisms at the base of food chain are _____
- a) Herbivores ~~b) Photosynthetic plants~~
- c) Saprophytic plants d) Carnivores 1
- 13 In abiotic components of an ecosystem which of the following occurs
- ~~a) Flow of energy~~ b) Cycling of materials
- c) Consumers d) Flow of energy and cycling of material 1
- 14 In natural ecosystem, decomposers include
- ~~a) Only bacteria and fungi~~ b) only microscopic animals
- c) the above two types of d) only the above two types of organisms
- organisms plus macroscopic 1
- animals
- 15 Generally the food chain has how many trophic levels?
- a) 1 b) 2
- ~~c) 4 or more~~ d) 3 1
- 16 Which of the following word is related to Homo sapiens?
- a) Herbivores b) Carnivores
- c) Autotroph ~~d) Omnivore~~ 1
- 17 Which is the most stable ecosystem?
- ~~a) Ocean~~ b) Desert
- c) Forest d) Mountain 1
- 18 Pyramid of energy in pond ecosystem is always _____
- a) Inverted b) Linear
- ~~c) Upright Only~~ d) Irregular 1

- 19 The snakes are included under
 a) Saprophytes
☒ c) Secondary trophic level
 b) Primary consumer
 d) None of the options
 1
- 20 In an aquatic environment microscopic plants and animals are collectively known as
 a) Commensals
☒ c) Planktons
 b) Herbivores
 d) Fauna and flora
 1
- 21 Wind and Hydrogen energy are examples of
 a) Primary sources
☒ b) Primary and secondary sources respectively
 c) Secondary sources
 d) Tertiary sources
 1
- 22 The range of solar cell efficiency is
 a) 5-10%
☒ b) 10-15%
 c) 15-20%
 d) None of the options
 1
- 23 The solar heater function is to convert the solar energy in to _____
 a) Radiation
☒ c) Thermal energy
 b) Electrical energy
 d) None of the options
 1
- 24 What type of working fluids do closed cycle ocean thermal energy conversion(OTEC) systems use?
☒ a) Low boiling point fluids at atmospheric pressure
 b) High boiling point fluids at atmospheric pressure
 c) Low boiling point fluids at 100 bar
 d) High boiling point fluids at 100 bar
 1
- 25 Which of the following are major environmental issues involved in mining?
 a) Air pollution
 b) Water pollution
☒ d) All the options
 c) Soil degradation
 1
- 26 Which of the following is not a man-made hazard?
 a) Leakage of Toxic waste
 b) Wars and Civil Strife
☒ c) Drought
 d) Environmental pollution
 1
- 27 Vulnerability analysis comes in which part of the Disaster Management Cycle
☒ a) Mitigation
 b) Preparedness
 c) Response
 d) Recovery
 1
- 28 The Richter scale expresses an earthquakes
☒ a) Magnitude
 b) Location
 c) Duration
 d) Depth
 1

- 29 The point of the earth's surface directly above the point where an earthquake occurs is called the _____
 a) Focus ☐ b) ~~Epicenter~~ ☒
 c) Fracture ☐ d) Fault ☐ 1
- 30 Disaster Management includes
 a) Mitigation ☐ b) Reconstruction ☐
 c) Rehabilitation ☐ d) ~~All the options~~ ☒ 1
- 31 The first Airport that was powered by Solar Energy _____
 a) Bangalore ☐ b) ~~Cochin~~ ☒
 c) London ☐ d) Frankfurt ☐ 1
- 32 Generally the number on Richter Scale ranges between _____
 a) 0 and 6 ☐ b) ~~0 and 9~~ ☒
 c) 1 and 5 ☐ d) 1 and 12 ☐ 1
- 33 Which of the following is NOT a form of precipitation _____
 a) Sleet ☐ b) ~~Fog~~ ☒
 c) Hail ☐ d) Rain ☐ 1
- 34 The process by which a cloud droplet first forms is
 a) ~~Condensation~~ ☒ b) Evaporation ☐
 c) Precipitation ☐ d) Collision and Coalescence ☐ 1
- 35 The most commonly used chemicals in the cloud seeding is ____
 a) ~~Silver Iodide~~ ☒ b) Sodium Chloride ☐
 c) Dry Ice ☐ d) All the options ☐ 1
- 36 What is the main problem in using hydrogen as fuel for vehicles?
 a) Capital intensive ☐ b) ~~Storage~~ ☒
 c) Fuel cell technology is not well established ☐ d) Cars will become heavy ☐ 1
- 37 The source of energy used for satellites is _____
 a) ~~Solar Cells~~ ☒ b) Edison Cells ☐

- 40 Open cycle OTEC uses _____ surface water directly to make electricity
 a) Hot ☒ b) Warm
 c) Cold ☐ d) Icy 1
- 41 Which of the following is a secondary pollutant?
 a) Carbon monoxide ☒ b) Ozone
 c) Carbon dioxide ☐ d) Sulfur dioxide 1
- 42 The water pollution in rivers is measured by _____
 a) Amount of dissolved Chlorine ☐ b) Amount of dissolved Ozone
 c) Amount of dissolved Nitrogen ☒ d) Amount of dissolved Oxygen 1
- 43 Air pollution from automobiles can be controlled by fitting?
 a) Electrostatic precipitator ☐ b) Wet collector
☒ c) Catalytic converter ☐ d) All the options 1
- 44 Which of the following is a non-point source of water pollution?
 a) Factories ☐ b) Sewage treatment plants
☒ c) Urban and suburban lands ☐ d) All the options 1
- 45 Which of the following is an air pollutant?
 a) Nitrogen ☒ b) Carbon monoxide
 c) Carbon dioxide ☐ d) Oxygen 1
- 46 Biomedical waste can be disposed off by _____
 a) Incineration ☐ b) Autoclaving and land filling
☒ c) Both a and b ☐ d) None of the options 1
- 47 Which of the following is a major cause of soil pollution?
 a) Accidents involving the vehicles that are transporting waste material ☐ b) Pesticides and chemical fertilizers from agricultural lands.
 c) Improper solid waste disposal ☒ d) All the options 1
- 48 When the solid waste consists of large amounts of organic matter and if the moisture content is high, which of the methods of treatment will be ideal?
 a) Incineration ☐ b) Palletizing
 c) Recycle ☒ d) Composting 1
- 49 Excess fluorides in drinking water are likely to cause
 a) Color ☒ b) Taste
 c) Hardness ☐ d) All the options 1
- 50 Which of the following statements about carbon monoxide is true?
☒ a) It is the result of incomplete combustion of fossil fuels ☐ b) It is a foul-smelling gas
 c) It is harmless to human beings ☐ d) All the options 1

- 51 Any substance causing nuisance is ____

 - Pollution
 - Noise
 - ☒ Pollutant
 - All the options

52 Sulphur dioxide is a ____

 - ☒ Primary pollutant
 - Secondary pollutant
 - Both a and b
 - Liquid

53 Sound is measured in

 - metre/second
 - Hertz
 - ☒ Decibel
 - N/m

54 Source of pollution occupying an extensive area ____

 - Point source
 - Line source
 - ☒ Diffuse source
 - All the above

55 The umbrella Act for the protection and improvement of environment

 - The Air Act
 - ☒ Environmental Pollution Act
 - Water Pollution Act
 - Water Pollution CESS Act

56 The main contributors of acid rain are

 - Sulphur oxides and carbon oxides
 - ☒ Nitrogen oxides and Sulphur oxides
 - Carbon dioxide and carbon monoxide
 - Nitrogen oxides and carbon oxides

57 The pH of normal rainwater is ____

 - Basic
 - ☒ Acidic
 - Alkaline
 - Neutral

58 The main cause of damage to Taj Mahal is ____

 - Water pollution
 - Soil pollution
 - ☒ Acid rain
 - Fog

59 Below which of the following pH is rain regarded as 'acid rain'?

 - 7
 - 7.3
 - ☒ 5.6
 - 6

60 Which of the following is not the consequence of ozone layer depletion?

 - Increased ultraviolet rays
 - Malignant melanoma-Another form of skin cancer
 - Cyanobacteria are sensitive to UV radiation and would be affected by its increase.
 - ☒ Tides

- MVJ19ENV59

- 81 The Forest (Conservation) Act was enacted in the year
 a) 1986 b) 1974
☒ c) 1980 d) 1972 1
- 82 The Air (Prevention and Control of Pollution) Act was enacted in the year ____
☒ a) 1981 b) 1996
 c) 2000 d) 1974 1
- 83 Environmental protection is the responsibility of ____
 a) Govt. of India b) NGOs
 c) Individual ☒ d) All 1
- 84 ISO 14000 standards deal with ____
 a) Pollution Management b) Risk management
☒ c) Environmental Management d) None of the above. 1
- 85 An International Conference on Environmental Education was held in December 1982 at ____
 a) Kyoto b) Vienna
☒ c) New-Delhi d) London 1
- 86 The objectives of Integrated Child Development Services (ICDS) are :
 a) Immunization b) Health check up and referral services
 c) Pre-school and non-formal education ☒ d) All the options 1
- 87 The leader of Chipko movement is :
☒ a) Sunderlal Bahuguna b) Medha Patkar
 c) Vandana Shiva d) Suresh Heblikar 1
- 88 Which of the following animals is endangered species of India?
☒ a) Black buck b) Elephant
 c) Fox d) Giraffe 1
- 89 Which State is having highest women literacy rate in India?
 a) Karnataka b) Punjab
 c) Rajasthan ☒ d) Kerala 1
- 90 The Tiger Conservation Project was started in ____
☒ a) 1973 b) 1984
 c) 1999 d) 2004 1
- 91 Earth Day is observed on: ____
 a) 1st December b) 5th June
☒ c) 22nd April d) 1st January 1

- 92 An important NGO involved in Global environmental protection is ____
 a) UNICEF b) Green Peace
 c) WHO d) CPCB 1
- 93 The Water (Prevention & Control of Pollution) Act was enacted in the year ____
 a) 1986 b) 1974
 c) 1994 d) 2006 1
- 94 Silent Valley movement succeeded in ____
 a) Waste management in sea coast b) Canceling the state government Hydel project and saving the Lion- Tailed Monkeys
 c) Promoting marine fishery business in Kerala d) None of the above 1
- 95 Environmental education is targeted to ____
 a) General public b) Professional social groups
 c) Technicians & Scientists d) All the options 1
- 96 The total percentage of non-renewable energy sources available is ____
 a) 18 b) 82
 c) 30 d) 6 1
- 97 The type of mass movement characterized by a slow and gradual down slope movement is known as ____
 a) Rock fill b) Mud flow
 c) Creep d) Erosion 1
- 98 Solar radiations consist of ____
 a) Infra-red region b) Visible region
 c) Both a and b d) None of the options 1
- 99 The maximum average permissible noise levels during daytime hours as per environment protection act in India is ____
 a) 30 dB b) 45 dB
 c) 50 dB d) 55 dB 1
- 100 Nuclear power plant in Karnataka is located at ____
 a) Bhadravathi b) Sandur
 c) Kaiga d) Raichur 1

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Scheme And Solutions For Semester End Examination- Feb/Mar 2022

| Course / Branch: <u>Common to all branches.</u> | | Sem: <u>V Sem</u> |
|---|--|--|
| Course: <u>Environmental Studies</u> | | |
| Course Code: <u>MVJ19ENV59</u> | | Duration of the Paper: 3 Hrs. Maximum Marks: 100 |
| Q.No. | SCHEME AND SOLUTIONS | Marks |
| ① | (b) Deformation <u>2 @ 20</u> | Each question carries one mark. |
| ② | (a) Roots | |
| ③ | (c) habitat | |
| ④ | (d) Biomass | |
| ⑤ | (a) Primary Producers | |
| ⑥ | (c) Biosphere | |
| ⑦ | (b) Cycling of materials | |
| ⑧ | (d) Sunlight | |
| ⑨ | (c) Producers, Consumers & Decomposers | |
| ⑩ | (a) Food Chain | |
| ⑪ | (a) Autotrophs | |
| ⑫ | (b) Photosynthetic plants | |
| ⑬ | (a) Flow of energy | |
| ⑭ | (a) Only bacteria & fungi | |
| ⑮ | (c) Four. | |
| ⑯ | (d) Omnivore | |
| ⑰ | (a) Ocean | |
| ⑱ | (c) Upright Only | |
| ⑲ | (c) Secondary trophic level | |

| Q.No. | SCHEME AND SOLUTIONS | Marks |
|-------|--|-------|
| 20 | (c) Planktons | |
| 21 | (b) Primary & Secondary sources respectively | |
| 22 | (b) 10-15% | |
| 23 | (c) Thermal energy | |
| 24 | (a) Low boiling fluids at atmospheric pressure | |
| 25 | (d) All the options | |
| 26 | (c) Drought | |
| 27 | (a) Mitigation | |
| 28 | (a) Magnitude | |
| 29 | (b) Epicentre | |
| 30 | (d) All the options | |
| 31 | (b) Cochin | |
| 32 | (b) 0-9 | |
| 33 | (b) Fog | |
| 34 | (a) Condensation | |
| 35 | (a) Silver Iodide | |
| 36 | (b) Storage | |
| 37 | (a) Solar Cells | |
| 38 | (a) Electro magnetic waves | |
| 39 | (c) Temp Diff | |
| 40 | (b) Warm | |
| 41 | (b) Ozone | |
| 42 | (d) Amount of dissolved Oxygen | |
| 43 | (c) Catalytic Convertor | |
| 44 | (c) Urban & sub urban plants | |
| 45 | (b) Carbon Monoxide | |

| Q.No. | SCHEME AND SOLUTIONS | Marks |
|-------|---|-------|
| 46 | (c) Both a & b | |
| 47 | (d) All the Options | |
| 48 | (d) Composting | |
| 49 | (b) Taste | |
| 50 | (a) It is the result of incomplete combustion of fossil fuels | |
| 51 | (c) Pollutant | |
| 52 | (a) Primary pollutant | |
| 53 | (c) Discrete | |
| 54 | (c) Diffused source | |
| 55 | (b) Environmental Pollution act | |
| 56 | (b) Nitrogen oxide & sulphur oxide | |
| 57 | (b) Acidic | |
| 58 | (c) Acid Rain | |
| 59 | (c) S.G | |
| 60 | (d) Tides | |
| 61 | (b) Freon | |
| 62 | (d) Ozone layer depletion | |
| 63 | (d) All the options | |
| 64 | (a) Sun is closer to planet earth | |
| 65 | (b) Stratosphere | |
| 66 | (a) Mitigation | |
| 67 | (b) Ability of certain atmospheric gasses to trap heat | |
| 68 | (d) Acetylene | |
| 69 | (d) All the options | |
| 70 | (a) 1 | |

| Q.No. | SCHEME AND SOLUTIONS | Marks |
|-------|------------------------------|-------|
| 71 | (b) Crippling fluorosis | |
| 72 | (d) All the above | |
| 73 | (a) Fluorosis | |
| 74 | (a) or (b) | |
| 75 | (d) All the options | |
| 76 | (a) Tiwari Commite | |
| 77 | (b) Rio de Janeiro | |
| 78 | (b) Green Peace | |
| 79 | (c) Environmental Management | |
| 80 | (a) Naomada Bachao Andolan | |
| 81 | (c) 1980 | |
| 82 | (a) 1981 | |
| 83 | (a) All | |
| 84 | (c) Environmental Management | |
| 85 | (c) New Delhi | |
| 86 | (d) All the options | |
| 87 | (a) Sunder Lal Bahuguna | |
| 88 | (a) Black Buck | |
| 89 | (d) Kerala | |
| 90 | (a) 1973 | |
| 91 | (c) 22nd April | |
| 92 | (b) Green Peace (Any Option) | |
| 93 | (b) 1974 | |

| Q.No. | SCHEME AND SOLUTIONS | Marks |
|-------|---|------------|
| (94) | (b) Concealing the state govt. Hidden project | <u>100</u> |
| (95) | (d) All the options | |
| (96) | (b) 82 | |
| (97) | (b) Mud flow | |
| (98) | (c) Both a & b | |
| (99) | (b) ASDD | |
| (100) | (c) Kycba | |

Signature of the Faculty

[Signature]

[Signature]
28/2/2022
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