

**AJ Institute of Engineering and Technology  
Mangaluru.**



**VTU Question Papers**

**BE III to VI Semester  
*General or MCQ*  
2022 SCHEME**

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# CBCS SCHEME

BUHK408

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Question Paper Version : A

## Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024 Universal Human Values Course

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the fifty questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

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1. The purpose of value –Education is to
    - a) Foster universal core values
    - b) Make syllabus easy
    - c) Develop values in individual
    - d) Both A and C
  2. Self exploration uses two mechanisms
    - a) Experiential validation
    - b) Reason
    - c) Logical Thinking
    - d) Theoretical concept

i) Natural Acceptance    ii) -----?
  3. Once we know what is valuable to us, these values becomes the basis, the anchor for \_\_\_\_\_
    - a) Knowledge
    - b) Actions
    - c) Society
    - d) None of these
  4. To fulfill Human Aspirations, what are necessary
    - a) Both values and skills
    - b) Values
    - c) Skills
    - d) None of these
  5. Which the following are the encompassing principles underlying the successful implementation of value education?  
A) Conviction    B) Connection    C) Critical thinking    D) Commitment  
choose the most appropriate answer from the options given below :
    - a) A, C and D only
    - b) B, C and D only
    - c) A, B and D only
    - d) None of these
  6. Value and skills should go hand in hand
    - a) True
    - b) False
    - c) Cannot tell
    - d) None of these

7. Are the content of self – exploration  
 a) Program                      b) Desire                      c) Both a and b                      d) None
8. Human life is lived at four levels individual, Family, Society and \_\_\_\_\_  
 a) Nature                      b) Nurture                      c) World                      d) Universe
9. Any course content on value education needs to be  
 a) Universal                      b) Rational                      c) Natural                      d) All of these
10. Value education enables us to  
 a) To understand our needs  
 b) Visualize our goals correctly  
 c) Indicate the direction for their fulfillment  
 d) All of the above
11. Harmony should be maintained in  
 a) Between body and life  
 b) Between self and society  
 c) Between life and environment  
 d) All of these
12. I being the  
 a) does, seer and Enjoyer                      b) doer  
 c) seer                      d) enjoyer
13. Which of the following is NOT response of the self?  
 a) Knowing                      b) Assuming                      c) Recognizing                      d) Preconditioning
14. Activities of self (I) are  
 a) Happiness                      b) Prosperity  
 c) Desire, thought and expectation                      d) None
15. The requirement of body is right utilization and nurturing  
 a) Desire                      b) Protection                      c) Thought                      d) Expectation
16. The \_\_\_\_\_ is an instrument of \_\_\_\_\_  
 a) I, Body                      b) Body, I                      c) Both a and b                      d) None
17. The activity of desire, thought and expecting together is called as  
 a) Body                      b) Health                      c) Imagination                      d) Future
18. Imaging is \_\_\_\_\_ with time  
 a) Continuous                      b) Discontinuous                      c) Random                      d) Different
19. Where there is harmony among the parts of the body it is known as  
 a) Swasthya                      b) Sanyam                      c) Prosperity                      d) None
20. Knowing means having the  
 a) Assumption                      b) Right understanding  
 c) Right feeling                      d) None
21. Harmony should be maintained in  
 a) Between body and life  
 b) Between self and society  
 c) Between life and environment  
 d) All of these

22. The foundational value in relationship is  
 a) Respect                      b) Love                      c) Trust                      d) Glory
23. Ensuring right understanding and feeling in the others is called  
 a) Care                      b) Affection                      c) Gratitude                      d) Guidance
24. Harmony in the family is the building block for harmony in the  
 a) Society                      b) Individual                      c) Friend                      d) Relative
25. The total numbers of feelings in human relationship  
 a) 5                      b) 10                      c) 9                      d) 8
26. Comprehensive human goal is right understanding prosperity, trust (fearlessness) and  
 a) Co-existence                      b) Happiness                      c) Abhay                      d) None
27. There is justice in relationship when there is  
 a) Mutual fulfillment                      b) Self regulation                      c) Freedom                      d) None
28. The extension of family is  
 a) Self                      b) Body                      c) Society                      d) Nature
29. The feeling of relatedness to all human beings is called  
 a) Love                      b) Affection                      c) Gratitude                      d) Respect
30. Acceptance of excellence in others is called  
 a) Reverence                      b) Glory                      c) Gratitude                      d) Guidance
31. All the units of nature can be classified into \_\_\_\_\_ orders  
 a) Two                      b) Three                      c) Four                      d) Six
32. Which of the following does not form an order in nature?  
 a) BIO                      b) Animal                      c) Consciousness                      d) Human
33. Which of the following statements is true,  
 a) Material units have only two kinds of activities recognizing and fulfilling  
 b) Material units have three kinds of activities assuming, recognizing and fulfilling  
 c) Material units have only four kinds of activities knowing, assuming, recognizing and fulfilling  
 d) None of the statement
34. Which of the following statement is not true?  
 a) There is inter connectedness in nature  
 b) There is recyclability and self regulation in nature  
 c) There is struggle for survival in nature  
 d) There is mutual fulfillment in nature
35. According to quantity, which of the following is true for the orders in nature  
 a) Bio order >> Physical order >> Animal order >> Human order  
 b) Animal order >> Bio order >> Physical order >> Human order  
 c) Physical order >> Bio order >> Animal order >> Human order  
 d) None of the above
36. What are the fundamental components of ecosystems?  
 a) Plants and Animals                      b) Air and water  
 c) Rocks and minerals                      d) All of these

37. The third order of nature is  
 a) Material order      b) Animal order      c) Plant order      d) Human order
38. The activities in human body are  
 a) Composition      b) Decomposition      c) Respiration      d) All of these
39. The systems in nature are  
 a) Cyclic      b) Mutually fulfilling  
 c) Both a and b      d) None of these
40. The natural characteristics/Svabhava of a human being are  
 a) Perseverance      b) Bravery      c) Generosity      d) All of these
41. The only effective way to ensure professional ethics is by developing  
 a) Knowledge      b) Ethical conduct  
 c) Ethical competence      d) Professional activities
42. How does unethical practices in various professions can be resolved  
 a) Through skills      b) Through knowledge  
 c) Through practical      d) Via right understanding
43. What provides clear guidance and policy frame work conducive to the development of an un-fragmented human society and a universal human order  
 a) Humanistic education      b) Humanistic constitution  
 c) Profession      d) Ethical Human conduct
44. The right understanding gained through self exploration also enables us to identify the definitiveness of human conduct. What is this called?  
 a) Ethical Human conduct      b) Values  
 c) Policy      d) Utility values
45. Primary step to move towards the holistic alternative is to develop the right understanding among humans and the commitment to  
 a) Do practical      b) Remain calm      c) Live accordingly      d) Teach others
46. The right understanding helps us identify the comprehensive human goal in terms of  
 a) Samadhan      b) Samridhi      c) Sah-astitva      d) All of these
47. The humanistic education will facilitate the process of self exploration which will lead to continuous  
 a) Education      b) Self evolution      c) Development      d) People friendly
48. The values of human being can be enumerated as  
 a) Nine      b) Thirty      c) Eighteen      d) Twenty four
49. Which of the following is not a characteristic of professionalism?  
 a) Kindness      b) Competency      c) Morality      d) Complacency
50. There are six characteristics of a professional style which is not a professional style?  
 a) Ethical      b) Emotional      c) Responsible      d) Intellectual.

\* \* \* \* \*





20. Use mental model is a description of \_\_\_\_\_  
 a) How the system work  
 b) Explanation of someone's thought  
 c) Something works in the real world  
 d) None of these
21. The purpose of wire framing in UI/UX design is to \_\_\_\_\_  
 a) to create a final polished design  
 b) to communicate layout and functionality  
 c) to select color schemes  
 d) to add animations
22. UX measure is \_\_\_\_\_  
 a) Usage of your interaction design  
 b) Usage of conceptual design  
 c) Usage of design thinking  
 d) Usage of ideations
23. Measuring instrument is a description of \_\_\_\_\_  
 a) Providing values for the particular UX measure  
 b) Providing values for the UX targets  
 c) Providing values for the UX metrics  
 d) Providing values for UX goals.
24. Detailed design includes \_\_\_\_\_  
 a) Visual frames  
 b) Visual clips  
 c) Visual comps  
 d) Visual wire frames
25. Bread and butter tool of interaction design is \_\_\_\_\_  
 a) Sketching  
 b) Wireframes  
 c) Detailed design  
 d) None of these
26. In which software tool is used in wireframe \_\_\_\_\_  
 a) Adobe XD  
 b) Keil  
 c) Xilinx  
 d) None of these
27. Subjective of the UX design is \_\_\_\_\_  
 a) UX metrics  
 b) UX goals  
 c) UX measure  
 d) UX target
28. Quantitative statement is \_\_\_\_\_  
 a) UX metrics  
 b) UX goals  
 c) UX measure  
 d) UX target
29. Wire frames are \_\_\_\_\_ frames  
 a) Low fidelity wire frames  
 b) High fidelity wireframes  
 c) Median fidelity wireframes  
 d) None of these
30. The drawing aspects of wireframes are user of \_\_\_\_\_ boxes  
 a) Square boxes  
 b) Parallelogram boxes  
 c) Rectangular boxes  
 d) None of these
31. A sense is a design representation is \_\_\_\_\_  
 a) Interaction design  
 b) Wire frame  
 c) Prototype  
 d) Design thinking
32. The ideas of prototyping is \_\_\_\_\_  
 a) Timeless and universal  
 b) Build and real thing  
 c) Choice and approach  
 d) all of these



33. Which prototype is demonstrating the product concept and for conveying an early product overview?  
 a) Vertical prototype  
 b) Upper prototype  
 c) Horizontal prototype  
 d) None of these
34. In which prototype combines the advantages of both horizontal and vertical, offering a good compress for system evaluation?  
 a) 'R' prototype  
 b) 'Y' prototype  
 c) 'T' prototype  
 d) 'D' prototype
35. A vertical prototype is associated with \_\_\_\_\_  
 a) User actions, in depth  
 b) Customer actions, in depth  
 c) Stake holder actions in depth  
 d) All of these
36. Prototype that are not faithful representations of the details of look, feel and behavior is \_\_\_\_\_  
 a) Vertical prototype  
 b) Local prototype  
 c) Horizontal prototype  
 d) Low fidelity prototype
37. In which prototype are more detailed representation of designs \_\_\_\_\_  
 a) High fidelity prototype  
 b) Local prototype  
 c) Horizontal prototype  
 d) Low fidelity prototype
38. Which one of the fidelity is not independent \_\_\_\_\_  
 a) Interactivity of prototype  
 b) Local prototype  
 c) Horizontal prototype  
 d) Low fidelity prototype
39. Paper prototype can act as \_\_\_\_\_  
 a) Coding blocker  
 b) View blocker  
 c) Prototype blocker  
 d) All of these
40. A 'T' prototype combines \_\_\_\_\_  
 a) Both paper and local prototype  
 b) Both horizontal and local prototype  
 c) Both low fidelity and high fidelity  
 d) None of these
41. Some of the guidelines and much of practical user performance depend on  
 a) The concepts of over satisfaction  
 b) The concepts of UX guidelines  
 c) The concepts of human working memory  
 d) All of these
42. Sensory memory is of \_\_\_\_\_  
 a) Small brief duration  
 b) Large brief duration  
 c) Very brief duration  
 d) None of these
43. The selected UX design guidelines are generally organized by the \_\_\_\_\_  
 a) UAF structure  
 b) API structure  
 c) GUI structure  
 d) All of these
44. Design examples of UX guidelines from everyday things such as  
 a) Hair dryers  
 b) Automobiles  
 c) Public doorways  
 d) All of these

45. Planning guidelines are the support \_\_\_\_\_  
a) Users                      b) Servants                      c) Public                      d) None of these
46. User actions to determine \_\_\_\_\_  
a) When tasks or steps to do                      b) What tasks or steps to do  
c) How tasks or step to do                      d) Why tasks or steps to do
47. Translation guidelines are to support \_\_\_\_\_  
a) Users                      b) Customers                      c) Peoples                      d) None of these
48. Including human memory support in the task structure \_\_\_\_\_  
a) Design simplicity                      b) Flexibility  
c) Efficiency                      d) Concurrency
49. Physical actions guidelines support users is doing physical actions including \_\_\_\_\_  
a) Typing  
b) Clicking  
c) Dragging in a GUI, scrolling on a web page  
d) All of these
50. The outcomes part of the interaction cycle is about supporting \_\_\_\_\_  
a) Users through complete and correct "backend" functionality  
b) User's interaction cycle functionality  
c) Dragging in a GUI, scrolling on a web page functionality  
d) All of these

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Question Paper Version : A

**Fifth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025  
Environmental Studies and E – Waste Management**

Time: 1 hr.]

[Max. Marks: 50

## INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
  2. Use only **Black ball point pen** for writing / darkening the circles.
  3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
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- 
1. Which of the following conceptual spheres of the environment is having the least storage capacity for matter?  
a) Atmosphere      b) Lithosphere      c) Hydrosphere      d) Biosphere
  2. The ratio between energy flows at different points in a food chain is known as  
a) Ecological capacity      b) Ecological efficiency  
c) Ecological assimilation      d) Ecological potential
  3. A predator is  
a) An animal that is fed upon another animal  
b) Animal that feeds upon both plants and animals  
c) An animal that feeds upon another animal  
d) A primary consumer
  4. Why Rann of Kutch attracts aquatic birds in monsoon season?  
a) Because desert land is converted to forest land  
b) Because desert land is converted to snow  
c) Because desert land do not convert  
d) Because desert land is converted to salt marshes
  5. Which kind of soil we can find on the surface of Thar desert?  
a) Rocky      b) Moist      c) Fertile      d) Aeolian
  6. Which of the following type of forest important for watersheds?  
a) Tropical Evergreen forests      b) Tropical Deciduous forests  
c) Tropical Montana forests      d) Grassland forest



7. Hot spots areas have  
 a) Low density of biodiversity  
 b) Only endangered plants  
 c) High density of hot springs  
 d) High density of biodiversity
8. Sustainable Development means  
 a) meeting present needs without compromising on future needs  
 b) progress of human beings  
 c) balance between human needs and the ability of earth to provide the resources  
 d) all of these
9. The term Alpha diversity refers to  
 a) Genetic diversity  
 b) Community and ecosystem diversity  
 c) Species diversity within a community or ecosystem  
 d) Diversity among the plant
10. Algae, green plants and photosynthetic bacteria are  
 a) Autotrophic  
 b) Heterotrophic  
 c) Decomposers  
 d) Consumers
11. Veld type grasslands are located at  
 a) South Africa  
 b) South America  
 c) Australia  
 d) Britain
12. Which pyramid is always upright?  
 a) Energy  
 b) Biomass  
 c) Numbers  
 d) Food chain
13. In what form is solar energy is radiated from the Sun?  
 a) Ultraviolet Radiation  
 b) Infrared Radiation  
 c) Electromagnetic waves  
 d) Transverse waves
14. What does MHD stands for in the energy field?  
 a) Magneto Hydro Dynamic  
 b) Metal Hydrogen Detox  
 c) Micro Hybrid Drive  
 d) Metering Head Differential
15. The 'Miracle Material' that can turn CO<sub>2</sub> into liquid fuel is :  
 a) Propane  
 b) Copper  
 c) Graphene  
 d) Potassium
16. A tide whose difference between high and low tide is greatest.  
 a) Diurnal tide  
 b) Neap tide  
 c) Spring tide  
 d) Ebb tide
17. Which of the turbine can be mounted vertically and horizontally.  
 a) Pelton wheel  
 b) Kaplan turbine  
 c) Gorlov turbine  
 d) Francis turbine
18. Which type of fuel is removed from the reactor core after reaching end of core life service?  
 a) Burnt fuel  
 b) Spent fuel  
 c) Engine oil  
 d) Radioactive fuel
19. What is a fuel cell?  
 a) Converts heat energy to chemical energy  
 b) Converts heat energy to electrical energy  
 c) Converts chemical energy to electrical energy  
 d) Converts kinetic energy to heat energy



20. Which one of the following is the apex organization in our country in the field of pollution control?  
 a) Water Pollution Control Board                      b) State Pollution Control Board  
 c) Central Pollution Control Board                    d) Air Pollution Control Board
21. \_\_\_\_\_ is caused by drinking water high in nitrates.  
 a) Cholera    b) Kidney problem  
 c) Liver problem    d) Methomoglobinemia
22. Bhopal gas tragedy took place in the year \_\_\_\_\_ and the gas responsible was \_\_\_\_\_.  
 a) 1964, Hydrogen fluoride                              b) 1974, Methyl chloride  
 c) 1984, methyl ISO – cyanide                        d) 1994, Methyl sulphate
23. The major chemical pollutants in photochemical smog are  
 a) NO, NO<sub>2</sub>, VOC, O<sub>3</sub>, PAN                              b) N<sub>2</sub>O, NO<sub>2</sub>, VOC, O<sub>3</sub>, PAN  
 c) NO, NO<sub>2</sub>, VOC, O<sub>2</sub>, PAN                              d) NO, N<sub>2</sub>O<sub>5</sub>, VOC, O<sub>3</sub>, PAN
24. The international protocol to protect the Ozone layer is  
 a) Vienna protocol    b) Kyoto protocol  
 c) Cartagena protocol                                      d) Montreal protocol
25. Which is the best and the worst method of plume behavior for pollution dispersion?  
 a) Lofting and fumigation                                b) Trapping and fanning  
 c) Conning and fumigation                                d) Fanning and Lofting
26. What is called for a Temporary hearing loss?  
 a) Temporary ear pain                                      b) Temporary hearing problem  
 c) Temporary threshold shift                              d) Temporary hearing shift
27. What timings loud speakers shouldn't use in public areas?  
 a) 10.00 pm to 5.00 am                                    b) 11.00 pm to 6.00 am  
 c) 1.00 am to 7.00 am                                      d) 10.00 pm to 6.00 am
28. In which section, if a person violates the noise pollution regulations, is liable for penalty according to Environmental Protection Act, 1986.  
 a) Section 12                      b) Section 15                      c) Section 18                      d) Section 19
29. 'Minamata Disease' is caused due to  
 a) Lead                              b) Arsenic                              c) Mercury                              d) Cadmium
30. The process of reducing the fluoride content from water is called as  
 a) Chlorination    b) Fluoridation  
 c) Defluoridation    d) Fanning and Lofting
31. What is the Dissolved oxygen value required for the survival of aquatic species?  
 a) 7 mg/L                              b) 8.2 mg/L                              c) 6.5 mg/L                              d) 4 mg/L
32. Which among the following is used to dump the waste collected in the cities?  
 a) Land fills                              b) Ocean                              c) River                              d) All of these







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Question Paper Version : B

**Fifth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025**  
**Environmental Studies**

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
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1. The First United National conference as Human Environment was held at Stockholm in  
a) December 1972    b) June 1972    c) June 1974    d) June 1992
2. To achieve the goal of clean environment, important strategies required are  
a) Effective laws    b) Active participation of the publics  
c) Active participation of NGO's    d) Both (a) and (b)
3. There are provisions for protection for our environment under  
a) Indian Penal Code    b) Police Act    c) Municipal Act    d) All of these
4. The Government of India enacted the Water Act in the year.  
a) 1970    b) 1974    c) 1975    d) 1980
5. The Environmental Act of India was enacted in the year.  
a) 1986    b) 1992    c) 1984    d) 1974
6. The Environmental Act, 1986 deals with  
a) Air    b) Water    c) Land    d) All of these
7. Karnataka State "Pollution Control Board" was established in the year.  
a) 1974    b) 1982    c) 1986    d) 1976
8. Which of the following is not a waste treatment method for biomedical waste?  
a) Incineration    b) Chemical disinfecting  
c) Auto claving    d) Sieving
9. The Organic material of the solid waste will decompose.  
a) By the flow of water    b) By the soil particles  
c) By the action of micro organisms    d) B Oxidation

Ver - B - 1 of 4



10. Which of the following element make e – waste hazardous in nature?  
a) Lead                      b) Glass                      c) Plastic                      d) Iron
11. Average long – term weather of an area is called  
a) Weather conditions                      b) Seasonal variations  
c) Average weather                      d) Climate
12. Climate and global air circulations are mainly affected by the properties of  
a) Water and Air                      b) Temperature                      c) Precipitation                      d) None of these
13. The  $p^H$  of acid rain is  
a) less than 5.2                      b) 5.2 – 6.2                      c) 6.2 – 7.2                      d) Above 7.2
14. Acid rain has been increasing day by day due to  
a) Urbanisation                      b) Industrialisation  
c) Increase in vehicle population                      d) None of these
15. Which is responsible for Ozone depletion?  
a) Methyl bromide                      b) CFC's  
c) Hydro chlorofluorocarbons                      d) All of these
16. The International protocol to protect the Ozone layer's  
a) Kytoto protocol                      b) Basal protocol                      c) Montreal protocol                      d) Viema protocol
17. The Ozone layer is locate upto \_\_\_\_\_ km above the earth surface.  
a) 1000                      b) 50                      c) 80                      d) 100
18. Acid rain effects on  
a) Materials                      b) Plants                      c) Soil                      d) All of these
19. High – Concentration of fluoride content in drinking water causes.  
a) Dental flurosis                      b) Bone brittling                      c) Dental caries ,                      d) Plague
20. Desired concentration of fluoride content in drinking water in mg/l is  
a) 0.7 – 1.2                      b) 0.5 – 2                      c) 2 – 5                      d) 1 – 1.75
21. Solar Energy is an example of  
a) Renewable                      b) Continuous                      c) Non – renewable                      d) None of these
22. Hydrogen energy can be tapped through  
a) Heat pumps                      b) Fuel cells                      c) Petroleum                      d) Gassifiers
23. OTEC is an energy technology that converts  
a) Energy in large tides of ocean to generate electricity  
b) Energy in ocean waves to generate electricity  
c) Energy in ocean due to thermal gradient to generate electricity  
d) Energy in the fast moving ocean currents to generate electricity.
24. Which of the following source of energy is less eco – friendly?  
a) Biogas                      b) Wind                      c) Solar                      d) Nuclear

25. O<sub>3</sub> Represents  
 a) Oxygen                      b) Planets                      c) Ozone                      d) Green house gases
26. Which of the following is an example of Water Borne Diseases  
 a) Hepatitis - A              b) Hepatitis - B              c) Hepatitis - C              d) Hepatitis - H
27. Identify the renewable source of energy from the following :  
 a) Coal                      b) Wind power              c) Uranium                      d) Oil
28. Which of the following is biotic?  
 a) Forest                      b) Iron                      c) Water                      d) None
29. World Environment Day celebrated on  
 a) 6<sup>th</sup> June                      b) 5<sup>th</sup> July                      c) 5<sup>th</sup> June                      d) 5<sup>th</sup> Jan
30. Which of the following is conventional source of Energy?  
 a) Wind Energy              b) Solar Energy              c) Bio gas                      d) None of these
31. Which of the following is a Producer?  
 a) Animals                      b) Human beings              c) Plants                      d) Fish
32. An ecosystem consists of  
 a) Biotic species                      b) Biotic species and physical factors  
 c) Only insects                      d) Only materials
33. The term Ecology was coined by  
 a) E.P. Odium                      b) A. G. Tansley                      c) Albert Einstein                      d) A.G. Haeckal
34. Which year did the concept of sustainability first appear?  
 a) 1992                      b) 1978                      c) 1980                      d) 1987
35. According to United Nations, the following are the significant issues of social progress.  
 a) Instruction                      b) Public Health                      c) Living standards                      d) All of these
36. The number of SDGS are  
 a) 10                      b) 15                      c) 17                      d) 16
37. Which one of the following is not comes under SDG's?  
 a) Zero Hunger                      b) Political activity                      c) Education                      d) Gender quality
38. Which of the following has the largest population in food chain?  
 a) Producers                      b) 1<sup>st</sup> degree consumers  
 c) 2<sup>nd</sup> degree consumers                      d) Decomposers
39. U.N era of scheduling for sustainable growth is from  
 a) 2002 - 11                      b) 2003 - 12                      c) 2004 - 13                      d) 2005 - 14
40. Which of the following is an example of Artificial Ecosystem?  
 a) Forest                      b) River                      c) Aquarium                      d) Lake

41. Temporary hardness of water is due to  
a) Chloride hardness  
b) Manganese hardness  
c) Calcium hardness  
d) Carbonate hardness
42. The green house gas is  
a)  $N_2O$   
b)  $CH_4$   
c)  $CO_2$   
d) All of these
43. Which is not a natural source of pollution?  
a) Volcanoes  
b) Forest - Fire  
c) Coal - fire  
d) Dust storms
44. Air pollution from automobiles can be controlled by providing  
a) Wet collector  
b) Scrubbers  
c) Catalytic converter  
d) All of these
45. Normal sound level of quiet speech is  
a) 120 dB  
b) 90 dB  
c) 140 dB  
d) 50 dB
46. What is the permissible range of  $pH$  for drinking water as per the Indian standard?  
a) 6 to 9  
b) 6.5 to 7.5  
c) 6 to 8.5  
d) 6.5 to 8.5
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 of these
48. What does E – Waste stand for?  
a) Environment Waste  
b) Electronic Waste  
c) Equipment Waste  
d) All of these
49. What is municipal solid waste disposal?  
a) The placement on the land  
b) The lack of waste  
c) In sanitary land fill site  
d) All of these
50. What is major cause of air pollution?  
a) Fossil fuel burning  
b) Industry emission  
c) Wild fire  
d) All of these

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Question Paper Version : A

Fourth Semester B.E./B.Tech./B.Design Degree Examination, June/July 2025

## Universal Human Values

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
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5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

1. Human values are essential for
  - a) living in harmony with self, each other and nature
  - b) making life easy
  - c) living with friends and family
  - d) making money to fulfill desires.
2. "Knowing" means having
  - a) Self exploration
  - b) right understanding
  - c) evaluation
  - d) none of these
3. Each human being is co-existence of the \_\_\_\_\_ and \_\_\_\_\_.
  - a) self, body
  - b) cost, value
  - c) mind, body
  - d) only body
4. Selecting and desiring are activities of
  - a) body
  - b) self
  - c) material
  - d) mind
5. The problems in our relationship with various entities are due to our
  - a) assumption
  - b) misunderstandings
  - c) difference
  - d) negligence
6. Value education ensures \_\_\_\_\_ and \_\_\_\_\_ in every human being.
  - a) right understanding and right feeling
  - b) right value and moral
  - c) right and wrong
  - d) right path and needs
7. Process of value education is of
  - a) Self declaration
  - b) Self exploration
  - c) Self
  - d) None of these
8. The activity of desires, thoughts and expecting together is called as
  - a) Imagination
  - b) Interaction
  - c) Conscious
  - d) None of these





24. \_\_\_\_\_ means applicable to all the human beings irrespective of caste, creed , nationalities, religion , etc for all times and regions.  
 a) Rational                      b) Universal                      c) Leading to harmony d) Consciousness
25. The first dimension of human being is \_\_\_\_  
 a) Behavior                      b) Work                      c) Thought                      d) Realization
26. Developed Nations are the live examples of ?  
 a) Prosperity                      b) Wealth                      c) Happiness                      d) Health
27. The Third dimension of human being is \_\_\_\_  
 a) Behavior                      b) Work                      c) Thought                      d) Realization
28. What is the emotional state of being happy?  
 a) Happiness                      b) Joy                      c) Pleasure                      d) All of these
29. When we set our goal in right direction with the help of right understanding, it is called \_\_\_\_  
 a) Skill domain                      b) Value domain                      c) Prosperity                      d) Development
30. Education has two domains : Value domain and skill domain. Which of the following is true?  
 a) The value domain deals with the understanding part, while skill domain deals with the learning part.  
 b) The value domain deals with learning part, while skill domain deals with the understanding part.  
 c) Value domain conflicts with skill domain  
 d) Value domain is the part of skill domain.
31. \_\_\_\_\_ means harmony within myself.  
 a) Excitement                      b) Happiness                      c) Satisfaction                      d) Pleasure
32. Prosperity can be achieved by \_\_\_\_  
 a) Relationship                      b) Physical facility only  
 c) Right understanding with physical facility d) None of these
33. Happiness is the state of \_\_\_\_  
 a) Excitement                      b) Harmony                      c) Satisfaction                      d) Pleasure
34. Continuous happiness and prosperity are the \_\_\_\_  
 a) Impractical thought                      b) Impossible desires  
 c) Basic human aspirations                      d) None of these
35. For prosperity, which of the following is not required?  
 a) Appropriate assessment of the physical needs.  
 b) Ensuring availability/production of more than required physical facility  
 c) Knowing the need of physical facilities as limited  
 d) Giving first priority to physical facilities in life.



36. The problems in our relationship with various entities are due to our  
 a) Assumptions      b) Misunderstandings      c) Difference      d) Negligence
37. Society means  
 a) Family      b) All human beings      c) Few individuals      d) None of these
38. The feeling of having more than required physical facility is \_\_\_\_  
 a) Happiness      b) Prosperity      c) Satisfaction      d) Success
39. Basic requirements for fulfillment of aspirations of every human being with their correct priority are \_\_\_\_  
 a) Right understanding, Relationship and Physical Facilities  
 b) Physical Facilities, Relationship and Right understanding.  
 c) Right understanding, Physical facilities and Relationship.  
 d) Relationship, Right understanding and Physical Facilities.
40. Human consciousness is \_\_\_\_  
 a) Giving weightage to physical facilities to the maximization of sensory pleasures to accumulation of wealth.  
 b) Giving weightage to relationship to the inherent feelings and right understanding.  
 c) Both  
 d) None of these
41. \_\_\_\_ helps the human being to transform from animal consciousness to human consciousness.  
 a) Right understanding      b) Preconditioning      c) Sensations      d) None of these
42. Our natural acceptance is to be in which category of people \_\_\_\_  
 a) Suvidha Viheen Dukhi Daridra (SVDD)  
 b) Suvidha Sampanna Dukhi Daridra (SSDD)  
 c) Suvidha Sampanna Sukhi Samridh (SSSS).  
 d) All of these
43. To which category a prosperous person belong?  
 a) SVDD      b) SSDD      c) SSSS      d) None of these
44. Right understanding with physical facilities brings \_\_\_\_  
 a) Deprivation      b) Mutual prosperity      c) Mutual fulfillment      d) None of these
45. The third basic requirement for transformation from animal consciousness to human consciousness is \_\_\_\_  
 a) Mental discipline      b) Sensory pleasure      c) All of these      d) None of these
46. Right understanding of relationship means \_\_\_\_  
 a) I am in harmony with everyone and everything.  
 b) I am in conflict with everyone and everything  
 c) I am in balance with everyone and everything  
 d) I am detached from everyone and everything.

47. The fourth basic requirement for transformation from animal consciousness to human consciousness is \_\_\_\_\_  
a) Relationship      b) Detachment      c) Right understanding      d) Sensory pleasure
48. When we are in harmony with everything and everyone, we can be in \_\_\_\_\_  
a) Conflict      b) Imbalance      c) Detachment      d) Peace
49. The human goal at the level of nature is  
a) Prosperity      b) Co – existence      c) Fearlessness      d) Right understanding
50. Self exploration is a process which help us to find out “What I am and What I really want to be”. Two mechanisms involved in self exploration are :  
a) Realization and understanding  
b) Natural and verifiable  
c) Natural acceptance and experimental validation  
d) Correctable and identifiable.

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Question Paper Version : A

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2025

UI / UX

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
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3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
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- 
1. What is a key component of usability in user experience design?  
a) Aesthetics                      b) Time on Task                      c) Cost                      d) Marketing strategy
  2. What does a requirements specification typically include?  
a) Marketing materials                      b) Design ideas and Prototypes  
c) A formal written document detailing requirements  
d) User feedback forms
  3. What does the term usability refer to when used by itself?  
a) Visual design of the interface  
b) The pragmatic and non emotional aspects of user experience  
c) Workflow activity analysis diagram  
d) Work analysis affinity diagram
  4. What does the acronym UX stand for?  
a) User experience                      b) User Xperience  
c) Ultimate experience                      d) User exchange
  5. What is the purpose of the flow model in the contextual analysis?  
a) To develop marketing materials                      b) To understand user work and needs  
c) To code the software                      d) To test the system
  6. What should a requirement statement in a requirements document typically include?  
a) Marketing objectives                      b) User testimonials  
c) A rationale statement and possibly a note                      d) A summary of design ideas

7. Which term describes a democratic process for design entailing user participation in design for work practice?  
 a) Engineering design  
 b) Participatory design  
 c) Phenomenological design  
 d) Interaction design
8. How can you document design ideas generated from requirements?  
 a) In the marketing plan  
 b) Directly on the WAAD  
 c) In financial analysis  
 d) As user testimonials
9. What does the acronym WASD stand for?  
 a) Work activity affinity diagram  
 b) Work affinity activity diagram  
 c) Work flow activity analysis diagram  
 d) Work analysis affinity diagram
10. What should be the primary outcome of contextual inquiry?  
 a) A marketing plan  
 b) An accurate picture of the users work domain  
 c) Financial analysis  
 d) Coding specifications
11. What is the primary purpose of sketching in the design process?  
 a) To finalize design specifications  
 b) To create polished artwork  
 c) To explore and communication ideas quickly  
 d) To implement the final design
12. Which phase of design thinking involves narrowing down ideas to the most feasible and effective solutions?  
 a) Ideation  
 b) Prototyping  
 c) Testing  
 d) Synthesis
13. Which tool is often used in ideation phase to generate a broad set of ideas?  
 a) Brain storming  
 b) Usability testing  
 c) Prototyping  
 d) Implementation
14. Which paradigm view design as a process that must consider the whole body and spirit not just interactions through a key board.  
 a) Engineering paradigm  
 b) Human information processing  
 c) Design thinking paradigm  
 d) Cognitive science paradigm
15. What is a wireframe in the context of web design?  
 a) Detailed color layout of a web page  
 b) Skeletal outline of a web page layout  
 c) High fidelity prototype  
 d) Marketing strategy for websites
16. Which paradigm emphasizes user experience and emotional engagement?  
 a) Human information processing paradigm  
 b) Engineering paradigm  
 c) Design thinking paradigm  
 d) Behavioral paradigm
17. Which phase of the design process is primary concerned with understanding the user's needs and context?  
 a) Implementation  
 b) Ideation  
 c) Prototyping  
 d) Research
18. In HCI, what is the purpose of Heuristics?  
 a) To generate new design ideas  
 b) To provide guidelines for usability  
 c) To implement the final design  
 d) To create visual design

19. Which technique is used together in depth understanding of user behavior and needs through observation and interviews in their natural environment.
  - a) Heuristic evaluation
  - b) Usability testing
  - c) Contextual inquiry
  - d) A/B testing
20. Which is an essential element of the engineering paradigm is HCI design?
  - a) A focus on user emotions
  - b) Iterative usability testing and evaluation
  - c) Emphasis on social context
  - d) Creation of Personas
21. What is the most difficult step in the UX life cycle process according to the text?
  - a) Ideation
  - b) Requirement analysis
  - c) Translation from requirements to design
  - d) Usability testing
22. Which tool is not mentioned as a recommendation for building wireframes?
  - a) Omni Graffle
  - b) Microsoft Visio
  - c) Adobe in design
  - d) Microsoft excel
23. Which tool is specifically mentioned for MAC users for wireframing?
  - a) Adobe in design
  - b) Microsoft Visio
  - c) Omni Graffle
  - d) Sketch
24. What is a visual comp?
  - a) Simple sketch
  - b) Pixel perfect mockup of the graphical skin
  - c) A written specification document
  - d) Usability test plan
25. Which software is not listed for wire framing?
  - a) keynote
  - b) Power point
  - c) Word
  - d) Excel
26. Which activity is parallel to producing visual comps?
  - a) Requirement analysis
  - b) User testing
  - c) Intermediate design
  - d) Ideation and sketching
27. What are visual assets as mentioned in the text?
  - a) User manuals
  - b) Visual elements with defining characteristics like CSS for websites
  - c) Coding guidelines
  - d) Business plans
28. Wireframes are described as being deliberately unfinished looking, why is this done?
  - a) To save time and money
  - b) To avoid detailed feedback
  - c) To ensure final product looks professional
  - d) To create quick and inexpensive design representations.
29. What should wireframe include when used as interaction design specifications?
  - a) Finalized code
  - b) Detailed annotations of design and widget states
  - c) High level conceptual ideas
  - d) Marketing strategies
30. What does the text suggest using for early stages of design ideation?
  - a) High – fidelity tools
  - b) Paper and pencil or a white board
  - c) Advanced wire framing S/W
  - d) Coding directly

31. What is the purpose of UX targets?
- To set goals for user experience quality
  - To increase the marketing reach of a product
  - To develop a n/w s/w features
  - To design aesthetic interfaces
32. What should be avoided when selecting benchmark task?
- Tasks that represent real user activities
  - Tasks where design has known weakness
  - Business critical tasks
  - Tasks with predefined outcomes
33. Which of the following is an objective measure in UX?
- User satisfaction survey
  - Error rate during task completion
  - Focus group discussion
  - Open ended interviews
34. What role do user satisfaction questionnaires play in UX evaluation?
- They measure objective performance data
  - They provide quantitative data on user satisfaction
  - They assess system security
  - They evaluate S/W development speed.
35. What is an example of subjective UX measure?
- Time on task
  - Error rate
  - User satisfaction rating
  - Completion rate
36. What is the significance of setting UX targets?
- To provide a benchmark for user experience quality
  - To develop new system features
  - To improve system aesthetics
  - To enhance system security
37. How can ecological validity be achieved in UX evaluation?
- By using synthetic tasks in a lab setting
  - By mimicking the user's real work environment
  - By focusing solely on aesthetic design
  - By eliminating all external variables.
38. Which of the following is a critical factor in selecting benchmark tasks?
- Frequency of task performance by users
  - Task simplicity
  - User familiarity with the task
  - Aesthetic appeal of the task
39. Which UX measure is assessed with a questionnaire?
- Time on task
  - Initial user performance
  - First impression
  - Error rate
40. What is the main purpose of UX evaluation?
- To prove the designer's skill
  - To identify and fix user experience problems
  - To enhance system security
  - To develop marketing strategies





USN

Question Paper Version : A

### Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025 Environmental Studies and E - Waste Management

Time: 1 hr.]

[Max. Marks: 50

#### INSTRUCTIONS TO THE CANDIDATES

Answer all the **fifty** questions, each question carries one mark.

2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
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1. In an ecosystem biological cycling of materials is maintained by  
a) Producer                      b) Consumer                      c) Decomposer                      d) All of these
2. The primary producers in a forest ecosystem are  
a) Chlorophyll containing trees and plants      b) Herbivores  
c) Carnivores                      d) Bacteria and other micro - organisms
3. Which of the following is the terrestrial ecosystem?  
a) Forest                      b) Grass land                      c) Desert                      d) All of these
4. Food web consists of  
a) a portion of food chain                      b) an organism position in a food chain  
c) interlocking food chain                      d) a set of similar consumers
5. The area of National Parks range between  
a) 0.61 to 7818 kms      b) 0.04 to 3162 kms      c) 0.14 to 3612 kms      d) 0.16 to 8718 kms
6. Which Indian state has its maximum area under the forest cover?  
a) Maharashtra                      b) Madhya Pradesh                      c) Arunachal Pradesh                      d) Karnataka
7. How many parts are there in forest ecosystem?  
a) Biotic type                      b) Abiotic type                      c) Both (a) & (b)                      d) None of these
8. To which of the following is Ramsor convention related?  
a) Protection of wild life                      b) Protection of environment  
c) Protection of rivers                      d) Protection of wetlands

9. Which of the following option is not included in the sustainable development parameters?  
 a) Gender inequality  
 b) Intergenerational and intragenerational equity  
 c) Growing annually  
 d) None of these
10. How many sustainable development goals are there?  
 a) 10  
 b) 12  
 c) 13  
 d) 17
11. Which of the following are biodegradable pollutants?  
 a) Plastics  
 b) Domestic sewage  
 c) Detergent  
 d) All of these
12. BOD means  
 a) Biochemical Oxygen Demand  
 b) Chemical Oxygen Demand  
 c) Biophysical oxygen Demand  
 d) All of these
13. Sound beyond which of the following level can be regarded as a pollutant.  
 a) 40 dB  
 b) 80 dB  
 c) 120 dB  
 d) 150 dB
14. Which of the following is a point source of water pollution?  
 a) Factories  
 b) Sewage treatment plants  
 c) Urban & Sub – urban lands  
 d) Both (a) & (b)
15. Pesticide causes  
 a) Eye irritation  
 b) Skin irritation  
 c) Respiratory ailment  
 d) All of these
16. Amount of waste infectious produced in hospitals.  
 a) 45 %  
 b) 65 %  
 c) 80 %  
 d) 100 %
17. Cytotoxic and expired drugs are disposed of by  
 a) Dumping  
 b) Autoclave  
 c) Incineration  
 d) All of these
18. Color code of plastic bag for disposing of microbial laboratory culture waste \_\_\_  
 a) Black  
 b) Red  
 c) Blue  
 d) White
19. All of the waste are incinerated except  
 a) Reactive chemical waste  
 b) Vaccine  
 c) Mutilated parts  
 d) Discarded drugs
20. The average composition of municipal solid waste is  
 a) 41 % organic , 40 % inert & 19 % recyclable.  
 b) 20 % organic , 60% inert & 20 % recyclable  
 c) 30 % organic , 20% inert & 50 % recyclable  
 d) 19 % organic , 41% inert & 40 % recyclable
21. Major atmospheric gas layer in stratosphere is  
 a) Hydrogen  
 b) Carbon dioxide  
 c) Ozone  
 d) Helium
22. World Environment day is on \_\_\_  
 a) 5<sup>th</sup> May  
 b) 5<sup>th</sup> June  
 c) 3<sup>rd</sup> Jan  
 d) 1<sup>st</sup> June

23. Which of the following is not a green house gas?  
 a) Hydro chlorofluorocarbons      b) Methane  
 c) CO<sub>2</sub>      d) SO<sub>2</sub>
24. Global warming could affect  
 a) Climate      b) Increase in sea level  
 c) Melting of glaciers      d) All of these
25. Primary cause of acid rain around the world is due to  
 a) Carbon dioxide      b) Sulphur dioxide      c) Carbon monoxide      d) Ozone
26. What is the main reason for the depletion of groundwater levels?  
 a) Rains are less frequent  
 b) Tree cover has reduced  
 c) Tube wells and hand pumps are used for irrigation  
 d) The course of river being changed and dams built
27. What happens when water contains 8 – 20 PPM of fluoride concentration?  
 a) Blue baby disease      b) Crippling fluorosis  
 c) Dental fluorosis      d) Mottling of teeth
28. Coral reefs of India are located in  
 a) Goa      b) Himalayan region  
 c) Andaman & Nicobar Islands      d) Uttar Pradesh
29. What is the allowable concentration of fluorides in drinking water?  
 a) 1.0 mg/L      b) 1.25 mg/L      c) 1.5 mg/L      d) 1.75 mg/L
30. Minmata disease is caused by  
 a) Lead      b) Mercury      c) Cadmium      d) Arsenic
31. When did National Disaster Management Authority form?  
 a) 2000      b) 2005      c) 2010      d) 2015
32. Scientific study of earthquake is called  
 a) Seismograph      b) Seismology      c) Both (a) & (b)      d) None of these
33. Mass killing diseases can be referred as  
 a) Biological disaster      b) Industrial disaster  
 c) War disaster      d) Flood disaster
34. South Africa is leading exporter of which mineral?  
 a) Copper      b) Diamond      c) Silver      d) Gold
35. Which one of the following is an exhaustible resource?  
 a) Coal      b) Rain precipitation      c) Air      d) Tidal energy
36. Which of the following is a non – renewable resource?  
 a) Solar energy      b) Wind energy      c) Fossil fuels      d) Hydro power



37. Which of the following is an example of sustainable use of water resources?  
 a) Overuse of ground water                      b) Building dams on rivers  
 c) Rainwater harvesting                          d) Dumping industrial waste in rivers
38. Geothermal energy is a  
 a) Heat energy                      b) Current energy                      c) Wind energy                      d) Solar energy
39. Molasses from sugar industry is used to generate  
 a) Biodiesel                      b) Hydrogen                      c) Bio-ethanol                      d) Bio - methanol
40. Nuclear power plant in Karnataka is located at  
 a) Bhadravati                      b) Sandur                      c) Raichur                      d) Kaiga
41. Wild Life Protection Act in India was passed in  
 a) 1978                      b) 1972                      c) 1986                      d) 1992
42. Environment Protection Act was enacted in year  
 a) 1986                      b) 1974                      c) 1992                      d) 1984
43. Water Protection Act was enacted in  
 a) 1974                      b) 1990                      c) 1985                      d) 2021
44. Blue baby syndrome is caused by the contamination of water due to  
 a) Phosphates                      b) Sulphur                      c) Arsenic                      d) Nitrates
45. Which toxic compound is not found in e – waste?  
 a) Mercury                      b) Cadmium                      c) Neon                      d) Lead
46. What are the health hazards caused by E – waste?  
 a) Lung cancer                      b) DNA damage                      c) Brain                      d) All of these
47. The Kyoto protocol was adopted at the  
 a) 3<sup>rd</sup> conference of UNFCCC in 1977  
 b) Convention on the trans boundary effects of industrial accidents  
 c) UNFCCC in 1992  
 d) Convention on Biological diversity
48. The primary cause of acid rain around the world is due to  
 a) Carbon dioxide                      b) Sulphur dioxide                      c) Carbon monoxide                      d) Ozone
49. The carbon “credit is permit” representing the right to emit.  
 a) One tonne of CO<sub>2</sub>                      b) 10 tonnes of CO<sub>2</sub>  
 c) 5 tonnes of CO<sub>2</sub>                      d) 15 tonnes of CO<sub>2</sub>
50. Fossil fuels are converted into energy by  
 a) Burning                      b) Cooling                      c) Sublimation                      d) Melting

\* \* \* \* \*

Ver – A – 4 of 4



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Question Paper Version : A

### Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025 Environmental Studies

[Time: 1 hr.]

[Max. Marks: 50]

#### INSTRUCTIONS TO THE CANDIDATES

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1. The Primary objective of Paris Agreement is
  - a) To eliminate green house gas emissions
  - b) To limit global temperature rise to well below 2°C
  - c) To reduce pollution from Industrial Sectors
  - d) To encourage nuclear energy adoption
2. The concept of "Circular Economy" focuses on
  - a) Reducing Industrial production to conserve energy
  - b) Recycling and Reuse materials to minimize waste
  - c) Increasing Resource extraction
  - d) Expanding Manufacturing Capacity
3. The main purpose of Green Climate Fund
  - a) To support fossil fuel extraction projects
  - b) To assist developing countries in climate change mitigation and adaption efforts
  - c) To promote economic growth
  - d) All of these
4. Identify the Country below, which legally recognize the rights of Nature in its Constitution.
  - a) India
  - b) Ecuador
  - c) Canada
  - d) Australia
5. The "Carbon footprint" in Environmental Science refers to
  - a) Amount of CO<sub>2</sub> emitted by human activities
  - b) The percentage of Land covered by forests
  - c) Land required for ecosystem
  - d) Natural emission of methane from Wetlands

Ver - A - 1 of 5



6. The term "Biodiversity" refer to  
 a) Variety of ecosystems on Earth                      b) Genetic variation within a single species  
 c) Total number of species within an ecosystem  
 d) All of these
7. Which of the following is a major threat to biodiversity?  
 a) Climate change    b) Pollution  
 c) Habitat destruction                                        d) All of these
8. In recent years significant growth of energy source is \_\_\_\_  
 a) Wind energy            b) Solar energy            c) Hydropower            d) All of these
9. "Earth Hour" movement refers to \_\_\_\_  
 a) To encourage suitable farming practices  
 b) To raise awareness about environmental issues  
 c) To promote the use of renewable energy  
 d) To reduce global emissions
10. Which of the following is listed as invasive species?  
 a) Polar bears in Arctic                                      b) European rabbits in Australia  
 c) Redwood trees in California                            d) Grey Wolves in North America
11. The International body responsible for negotiating global climate action under the UNFCC.  
 a) WHO    b) WTO    c) COP    d) UNDP
12. The carbon cycle involves the movement of carbon between the atmosphere , oceans and \_\_\_\_  
 a) Plants    b) Rocks    c) Forests    d) Animals
13. The primary concern of "Sustainable Development" is  
 a) Maximizing economy  
 b) Meeting present needs without compromising future generations  
 c) Expanding urban areas  
 d) Increasing global trade
14. What is the largest source of Methane emissions globally?  
 a) Agriculture    b) Wetlands    c) Forest fires    d) Natural gas
15. The Primary source of ocean pollution is \_\_\_\_  
 a) Plastic waste            b) Oil spills    c) CO<sub>2</sub> emission    d) Over fishing
16. Which International agreement is focused on reducing the use of Ozone depleting substances?  
 a) Basel convention    b) Montreal protocol  
 c) Paris Agreement    d) Kyoto protocol
17. The Primary reason for the increasing rate for species extinction  
 a) Natural disaster    b) Human activities in climate change  
 c) Evolutionary process                                        d) Increase disease outbreak

18. The Great Pacific Garbage patch is composed of  
 a) Organic waste      b) Rubber      c) Plastic waste      d) Glass debris
19. What is the Leading cause of deforestation Worldwide?  
 a) Natural disasters      b) Agriculture and Cattle ranching  
 c) Urbanization      d) Mining Activities
20. The term GreenWashing refers to  
 a) Process of reducing environment      b) False claim of company  
 c) Practice of planting trees      d) Recycling waste products
21. Example of Non – renewable resource  
 a) Water      b) Wind      c) Coal      d) Biomass
22. The “ecological footprint” is measure of  
 a) Total land required for Human life  
 b) Amount of Renewable energy used by Humans  
 c) Impact of Human activities on environment  
 d) Biodiversity within a region
23. Which of following is an example of ecosystem restoration?  
 a) Building new dam      b) Planting native species  
 c) Expanding urban areas      d) Harvesting Timer
24. Which of following gases contribute the most global warming?  
 a) Methane      b) Nitrous oxide      c) CO<sub>2</sub>      d) Ozone
25. Which of following is NOT a green house gas?  
 a) CO<sub>2</sub>      b) Nitrous oxide      c) Oxygen      d) Methane
26. What is the main function of Ozone Layer?  
 a) Regulate Global Temperature      b) Protects earth from UV  
 c) To produce oxygen for atmosphere      d) Reduce carbon emission
27. Which of the following best describes the term “Sustainable agriculture”?  
 a) Farming practice that increase crop yields  
 b) Agriculture using resources and reduce environmental impact  
 c) Farming practice with chemical pesticides  
 d) Urban farming practice.
28. Which of following Countries established the First National Green Tribunal to deal environment disputes.  
 a) India      b) United States      c) Germany      d) Australia
29. What is the largest source of Methane emissions globally?  
 a) None of these      b) Natural gas      c) Wetland      d) Forest fires



30. Identify the correct statements w.r.t Earth hour.  
 i) Initiative of UNEP & UNESCO  
 ii) Switch off the lights for one hour on certain day every year.  
 iii) To raise awareness about climate change  
 a) ii only                      b) ii & iii only                      c) iii only                      d) All of these
31. Which of the following is NOT a source OF water pollution?  
 a) Industrial effluents                      b) Agricultural runoff  
 c) Dye industry                      d) Wind turbines
32. The primary health impact of nitrate contamination in drinking water is  
 a) Kidney damage                      b) Blue baby syndrome  
 c) Respiratory diseases                      d) Neurological disorder
33. The UNIT of measurement of sound intensity is  
 a) Joule                      b) Hertz                      c) Decibel                      d) Tesla
34. Which of the following is NOT a preventive measure for noise pollution?  
 a) Use of Noise barriers                      b) Planting trees  
 c) Limiting vehicle use                      d) Increasing urban traffic
35. Prolonged exposure to Noise pollution primarily leads to  
 a) Hearing loss                      b) Vision impairment  
 c) Skin disorder                      d) All of these
36. What was the primary cause of the 1952 Great Smog of London?  
 a) Volcanic activity                      b) Combustion of coal in cold weather  
 c) Automobile emissions                      d) Industrial chemicals
37. Which air pollutant is most strongly associated with respiratory diseases like asthma?  
 a) Ozone                      b) Nitrogen gas                      c) Argon                      d) Helium
38. What is the main objective of Water Act, 1974?  
 a) To conserve biodiversity                      b) To prevent and control water pollution  
 c) To regulate ground water                      d) To promote Industrial development
39. Under the Water Act, who has the Authority to establish standards for water quality?  
 a) Pollution control boards                      b) Ministry of Urban Development  
 c) Forest developments                      d) Environmental NGO's
40. The Air Act, 1981 was enacted to address.  
 a) Noise pollution                      b) Emission from Industry and vehicles  
 c) Deforestation                      d) Plastic Waste Management
41. The Air Act emphasizes which type of zones for pollution control.  
 a) Green zones                      b) Protected areas  
 c) Pollution control areas                      d) Noise – Sensitive zone
42. Environment Protection Act was introduced in response to  
 a) Bhopal Gas Tragedy                      b) Plastic pollution  
 c) Industrial expansion                      d) All of these



43. Environmental Protection Act 1986, is an Umbrella Act covering.
- a) Only water & Air Pollution                      b) All Environmental issues  
c) Noise pollution only                                d) Forest conservation
44. Who is responsible for ensuring proper solid waste management in urban areas?
- a) Local Municipal Authorities                      b) Pollution control board  
c) State Government                                    d) Central Government
45. What is minimum segregation required for solid waste?
- a) Organic and inorganic                            b) Wet, dry and hazardous  
c) Paper, Plastic and glass                            d) Metal & Biodegradable
46. E – waste Management rules focus on
- a) Banning electronic imports                      b) Extended producer responsibility  
c) Reducing electricity consumption              d) None of these
47. What is minimum collection target under EPR for producer of e – waste?
- a) 30 %    b) 50 %    c) 70 %    d) 100 %
48. Which of the following is classified as e – waste?
- a) Paper waste    b) Lead acid battery                                    c) Mobile phones    d) None of these
49. Biomedical waste must be disposed within
- a) 24 hours    b) 48 hours    c) 72 hours    d) 96 hours
50. The Biomedical Waste Management Rules categorize waste into how many color coded categories?
- a) 2    b) 4    c) 6    d) 8

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# CBCS SCHEME

BCV657D

USN

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Question Paper Version : A

## Sixth Semester B.E./B.Tech. Degree Examination, June/July 2025 Quality Control and Quality Assurance

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
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1. Who is known for the "Zero Defects" concept in Quality management?  
a) W. Edwards Deming                      b) Philip B. Crosby  
c) Joseph Juran                              d) Walter Showhart
  2. What does "PDCA" in the PDCA cycle stands for?  
a) Plan, Develop, Control, Act              b) Plan, Do, Check, Act  
c) Process, Design, Control, Audit        d) Prevent, Detect, Correct, Apply
  3. Which of the following is not a cost associated with quality?  
a) Prevention cost                              b) Appraised cost  
c) Inspection cost                              d) External failure cost
  4. What is the main focus of Quality Assurance (QA)?  
a) Detecting and fixing defects              b) Ensuring defects do not occur  
c) Reducing the cost of materials        d) Speeding up production
  5. Which tools is commonly used in Quality control to monitor process?  
a) Pareto chart                      b) Control chart                      c) Fish bone diagram                      d) Histogram
  6. In Total Quality Management (TQM), customer satisfaction is achieved through :  
a) Lowering production costs  
b) Continuous improvement and employee involvement  
c) Eliminating the need for inspections  
d) Faster production time







30. In a normal distribution, approximately what percentage of data falls within  $\pm 1$  standard deviation if the mean.  
 a) 50 %                      b) 68 %                      c) 90 %                      d) 99 %
31. Which of the following is a major cause of errors in concrete construction?  
 a) Inadequate curing                      b) Use of high – quality materials  
 c) Proper mix design                      d) Accurate measurement of materials
32. As per IS 456 : 2000, what is the minimum frequency of testing cement for fineness?  
 a) Every 1000 bags                      b) Every 50 tonnes  
 c) Every batch received                      d) Once a year
33. Which is code provides guidelines for the acceptance and rejection of cement?  
 a) IS 456                      b) IS 4031                      c) IS 269                      d) IS 383
34. The standard test for determining the compressive strength of cement is conducted at how many days.  
 a) 1, 3 and 7 days                      b) 3, 7 and 28 days                      c) 7, 14 and 21 days                      d) 14, 21 and 28 days
35. Which test is NOT commonly conducted on fine aggregate (sand)?  
 a) Sieve analysis                      b) Water absorption test  
 c) Elongation index test                      d) Silt content test
36. According to IS 383, the maximum permissible silt content in fine aggregate for concrete is?  
 a) 2 %                      b) 5 %                      c) 10 %                      d) 15 %
37. As per IS 456 : 2000, the compressive strength of M20 grade concrete at 28 days should be atleast  
 a) 10 MPa                      b) 15 MPa                      c) 20 MPa                      d) 25 MPa
38. Which test is used to determine the workability of fresh concrete?  
 a) Compressive strength test                      b) Slump test  
 c) Soundness test                      d) Los Angeles abrasion test
39. The frequency of testing cement for setting time in construction project should be :  
 a) Once per 100 tonnes                      b) Once per 50 tonnes  
 c) Once per 10 tonnes                      d) Every batch received
40. Which of the following tests is NOT performed on steel reinforcement bars?  
 a) Tensile strength test                      b) Bend test  
 c) Impact test                      d) Soundness test
41. At which stage of construction is feasibility and viability of the project assessed?  
 a) Conceptual design                      b) Preliminary design  
 c) Detailed design                      d) Construction
42. Which quality assessment test is used to measure the surface hardness of concrete?  
 a) Ultrasonic Pulse Velocity (USPV) Test                      b) Slump Test  
 c) Rebound Hammer Test                      d) Compressive Strength Test



43. Which IS Code provides guidelines for NDT of concrete?  
a) IS 456                      b) IS 516                      c) IS 13311                      d) IS 1786
44. The Rebound Hammer Test gives unreliable results of the concrete surface is :  
a) Dry and clean              b) Smooth and flat              c) Rough and wet              d) Newly cast
45. The Ultrasonic Pulse Velocity (USPV) test is primarily used to assess :  
a) Compressive strength of concrete              b) Surface hardness  
c) Density and homogeneity of concrete              d) Water absorption on bricks
46. Which of the following factors affects USPV test results?  
a) Concrete density                      b) Surface moisture  
c) Reinforcement presence                      d) All of these
47. If USPV test results indicates velocity between 3 km/sec and 3.5 km/sec, the concrete quality is classified as :  
a) Excellent              b) Good                      c) Medium                      d) Doubtful
48. At which stage construction are the final quality checks and documentation completed?  
a) Conceptual design                      b) Detailed design  
c) Handover                      d) Preliminary design
49. What is the minimum recommended age of concrete for conducting USPV test?  
a) 3 days                      b) 7 days                      c) 14 days                      d) 28 days
50. According to IS 13311, what is the standard angle at which a rebound hammer should be held during testing?  
a) 30°                      b) 45°                      c) 60°                      d) 90°

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# CBCS SCHEME - Make-Up Exam

BUHK408

USN

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Question Paper Version : A

## Fourth Semester B.E./B.Tech. Degree Examination, June/July 2025 Universal Human Values Course

Time: 1 hr

Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

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- 
1. What is the state of linking and a holistic and all in compassing state of the mind that creates inner harmony  
a) Prosperity                      b) Happiness                      c) Innateness                      d) Self-organized
  2. What are the basic desires of every human being for which they are working?  
a) Physical facilities                      b) Realization and understanding  
c) Happiness and prosperity                      d) Continuous happiness and prosperity
  3. Identify the solution which helps human being to transform from animal consciousness to human consciousness.  
a) Right understanding                      b) Realization  
c) Value education                      d) Physical facilities
  4. To harmony, we must work at four levels of living. Identify second level of living.  
a) Self                      b) Family                      c) Nature                      d) Society
  5. Self – exploration uses two mechanisms  
a) Natural acceptance and experiential validation  
b) Right understanding and self exploration  
c) Self – investigation and self exploration  
d) Natural acceptance and self-investigation
  6. Samridhi means  
a) Happiness                      b) Self-exploration                      c) Prosperity                      d) Health
  7. What is the main components of our program to understand and live in harmony at all levels of living?  
a) Relationship                      b) Right understanding  
c) Self-exploration                      d) Physical facilities



8. Value education is becoming important for students now a days because value education helps students to correctly identify our
  - a) Values
  - b) Key to Success
  - c) Aspirations
  - d) Needs
9. What is our participation at different levels in the larger order?
  - a) Value
  - b) Work
  - c) Behavior
  - d) Realization
10. Continuous happiness and prosperity are the
  - a) Impractical thoughts
  - b) Impossible desire
  - c) Basic human aspirations
  - d) None of these
11. \_\_\_\_ is the basic unit of any society
  - a) Group
  - b) Individual
  - c) Nature
  - d) Society
12. The self is central to human existence and \_\_\_\_ is central to the existence
  - a) Co-existence
  - b) Nature
  - c) Struggle
  - d) Society
13. What is the ability to do or perform?
  - a) Value
  - b) Competence
  - c) Skill
  - d) Physical
14. What is the reason for the problems in our relationship with various entities?
  - a) Assumptions
  - b) Misunderstanding
  - c) Differentiation
  - d) All the these
15. In I (Self), recognizing and fulfillment depends on what?
  - a) Value
  - b) Relation
  - c) Assuming
  - d) None of these
16. What is assuming without knowing?
  - a) Knowing
  - b) Assuming
  - c) Preconditioning
  - d) Relationship
17. Imagination is combination of which factor?
  - a) Desire and thought
  - b) Desire, thought and expectation
  - c) Expectation and thought
  - d) None of these
18. What is the entity that has the activity and recognizing and fulfillment only can be called as?
  - a) Material entity
  - b) Pranic
  - c) Value
  - d) Right understanding
19. Working only for physical facility is
  - a) Living with human consciousness
  - b) Living with animal consciousness
  - c) Transformation from animal to human consciousness
  - d) Transformation from human to animal consciousness
20. Right feeling and right thought deals with
  - a) Self
  - b) Self and body
  - c) Body
  - d) Physical facility
21. Total to understand are-consciousness (Self), Material (body) and \_\_\_\_
  - a) Space
  - b) Units
  - c) Imagination
  - d) Feelings
22. Which feelings are naturally acceptable
  - a) Struggle for existence
  - b) Survival for fittest
  - c) Be the best
  - d) Relationship, harmony and co-existence
23. Ultimately there are only few \_\_\_\_ things to see/know/understand
  - a) 9
  - b) 7
  - c) 3
  - d) 1



24. Innateness of human order is  
 a) Existence  
 c) Will to live  
 b) Existence and growth  
 d) Will to live with continuous happiness
25. Acceptance of excellence in others is called \_\_\_\_\_  
 a) Gratitude  
 b) Reverence  
 c) Glory  
 d) None of these
26. Evaluating for more than what it is  
 a) Under evaluation  
 c) Over evaluation  
 b) Right evaluation  
 d) Otherwise evaluation
27. \_\_\_\_\_ is to have the clarity that other wants to make me happy and prosperous  
 a) Affection  
 b) Trust  
 c) Care  
 d) Glory
28. \_\_\_\_\_ is the commitment, preparation and practice of living the harmony  
 a) Self regulation  
 b) Work  
 c) Preservation  
 d) Sanskar
29. The Second order of nature  
 a) Animal order  
 b) Biorder  
 c) Plant order  
 d) Human order
30. The ability to fulfill the aspirations is called \_\_\_\_\_  
 a) Trust  
 b) Competence  
 c) Respect  
 d) Affection
31. All the units of nature can be classified into \_\_\_\_\_  
 a) 2  
 b) 3  
 c) 4  
 d) 6
32. Which of the following does not form an order in nature  
 a) Bio  
 b) Animal  
 c) Consciousness  
 d) Human
33. According to Quantity which of the following is true for the order in nature  
 a) Bio-Physical-Animal-Human  
 c) Physical-Bio-Animal-Human  
 b) Animal-Bio-Physical-Human  
 d) Physical-Animal-Bio-Human
34. What is the name given to conformance of animal order?  
 a) Constitution conformance  
 c) Breed conformance  
 b) Seed conformance  
 d) Sanskar conformance
35. Which is the only predominant activity in animals?  
 a) Taste/selection  
 b) Composition  
 c) Growth  
 d) Existence
36. Comprehensive human goal at the level of family is  
 a) Prosperity  
 b) Fearlessness  
 c) Co-existence  
 d) Right understanding
37. All the units are \_\_\_\_\_ in \_\_\_\_\_  
 a) Conscious, Material  
 c) Recognizes, Fulfills  
 b) Submerged, Space  
 d) Covered, Space
38. As the outcome of submergence plant order expresses  
 a) Interaction  
 b) Pulsation  
 c) Sensitivity  
 d) Know ability
39. There is \_\_\_\_\_ among all the orders  
 a) Recyclability  
 b) Justice  
 c) Interconnectedness  
 d) Conformance





# CBCS SCHEME - Make-Up Exam

BCS456C

USN

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Question Paper Version : A

**Fourth Semester B.E./B.Tech. Degree Examination, June/July 2025**  
**UI/UX**

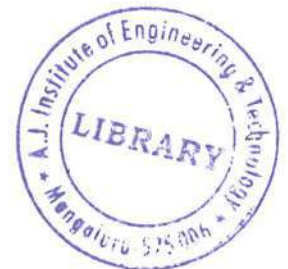
Time: 1 hr.

Max. Marks: 50

## INSTRUCTIONS TO THE CANDIDATES

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1. Which of the following relates directly to emotional design?  
a) Network latency  
b) Color scheme  
c) System architecture  
d) Algorithm design
  2. Which phase is primarily focused on collecting user requirements?  
a) Deployment  
b) Requirement extraction  
c) Debugging  
d) Coding
  3. Why is emotional impact important in user experience design?  
a) It effects the products backend performance  
b) It enhances user engagement and satisfaction  
c) It reduces hardware costs  
d) It support software testing
  4. What role does user experience play in a business case?  
a) Reduces need for marketing  
b) Increase long-term user retention and ROI  
c) Minimizes code complexity  
d) Eliminates competitor analysis
  5. What does 'user need' refer to in UX design?  
a) A backend system requirement  
b) The personal goals and problem of a user  
c) Product license agreement  
d) Color preferences of developers



6. A UX designer creates personas after surveying users. What stage is this?
  - a) Testing
  - b) UI implementation
  - c) Requirement extraction
  - d) Product marketing
7. Which method would you apply to collect user requirements effectively?
  - a) Binary search
  - b) Contextual inquiry
  - c) Memory allocation
  - d) API testing
8. Applying emotional design means :
  - a) Matching server specifications
  - b) Incorporating feelings and mood into the interface
  - c) Adding popups randomly
  - d) Focusing on back-end performance
9. How do user needs differ from formal requirements?
  - a) Needs are structural documents
  - b) Needs are informal goals ; requirements are derived from them formally
  - c) Requirements are feelings
  - d) Needs are system specifications
10. Analyze the importance of integrating emotional impact in a business case.
  - a) It delays project timelines
  - b) It confuses the development team
  - c) It builds strong emotional bonds with users, leading to long-term retention
  - d) It improves backend performance
11. What is primary goal of design thinking?
  - a) To reduce server load
  - b) To solve problems with a user-centered approach
  - c) To create backend systems
  - d) To test code
12. Which of the following is used to represent a fictional user type?
  - a) Wireframe
  - b) Storyboard
  - c) User Persona
  - d) Mockup
13. How does sketching help in design thinking?
  - a) Reduces memory usage
  - b) Encourages visual brain storming of ideas
  - c) Increase load time
  - d) Helps in data encryption
14. Design perspective in UX include consideration of ;
  - a) Only system performance
  - b) User goals, contexts and limitations
  - c) API responses
  - d) Database tables
15. How do mental models affect user experience?
  - a) They determine the backend logic
  - b) They influence how users expect the interface to behave
  - c) They improve SQL queries
  - d) The define memory models



16. A designer creates 3 personas based on user research. This is an example of applying
- a) Backend scripting
  - b) Design perspectives
  - c) User-centered ideation
  - d) Data base modeling
17. Which technique would you apply to quickly generate many creative ideas?
- a) Sketching
  - b) Ideation
  - c) Storyboarding
  - d) Prototyping
18. Sketching UI screens on paper before software implementation is an example of :
- a) Final deployment
  - b) Conceptual design
  - c) Prototyping
  - d) Coding
19. Why should designers analyze mental models?
- a) To optimize code
  - b) To align system behaviour with user expectations
  - c) To improve Hardware
  - d) To increase memory size
20. Analyzing a storyboard helps identify
- a) Security bugs
  - b) User interaction patterns and gaps
  - c) Server speed
  - d) Coding errors
21. What is a wireframe in UX design?
- a) Backend code
  - b) Database schema
  - c) A skeletal layout of a user interface
  - d) A final product version
22. Which of the following is a UX metric?
- a) Download speed
  - b) Task completion rate
  - c) Cache memory
  - d) Code complexity
23. How are UX goals connected to business goals?
- a) They delay projects
  - b) They align product outcomes with user satisfaction and business value
  - c) They are only about UI aesthetics
  - d) They are unrelated
24. What does a detailed design include?
- a) High level sketches
  - b) Complete specification of UI elements and behaviour
  - c) Database dump
  - d) Network routing
25. What is the purpose of UX measures?
- a) To track server load
  - b) To evaluate user behaviour and satisfaction
  - c) To count product licenses
  - d) To increase page load time
26. How can a UX designer evaluate if users are completing tasks efficiently?
- a) Monitor API speed
  - b) Conduct usability tests with task completion rate metrics
  - c) Measure bandwidth
  - d) Survey backend logs



27. Applying UX metrics helps to
- Test system RAM
  - Analyze code
  - Improve and refine UX design based on data
  - Debug frontend code
28. A product manager wants to measure user satisfaction. Which tool should be applied?
- Firewall
  - Heuristic evaluation
  - Survey (or) Net promoter score (NPS)
  - Load balancer
29. Analyzing survey feedback helps UX designers to :
- Optimize backend
  - Understand emotional and usability pain points
  - Change login process
  - Fix RAM issues
30. What could be a problem if UX goals are not clearly defined?
- Faster testing
  - Confused users and inconsistent product experience
  - Improved memory usage
  - Simplified database joins
31. What is a paper prototype?
- A printed software code
  - A low-fidelity design on paper
  - A digital prototype
  - A database schema
32. Fidelity is prototyping refers to ;
- Internet speed
  - Degree of exactness of the prototype to final product
  - Code quality
  - User testing frequency
33. How does high-fidelity prototyping differ from low-fidelity?
- High-fidelity is faster
  - High-fidelity closely resembles the final product
  - High-fidelity is done on paper
  - High-fidelity skips user testing
34. What is a challenge in connecting SE and UX?
- They use the same programming languages
  - Achieving strong collaboration and shared goals
  - Both focus only on visuals
  - They don't used collaboration
35. Which best describes a foundation for successful SE-UX development?
- Ignoring design principles
  - Strong collaboration and shared goals
  - Isolated testing environments
  - Backend only focus



36. When building a prototype to test core features, which aspect is being focused on?  
a) Breadth                      b) Depth                      c) Speed                      d) Complexity
37. How can SE and UX teams improve integration?  
a) Work Independently  
b) Avoid documentation  
c) Conduct regular design-development sync meetings  
d) Skip prototyping
38. If a designer wants quick feedback on layout ideas, what should they use?  
a) SQL editor                      b) Paper prototype                      c) Video rendering                      d) Skip prototyping
39. Analyzing SE and UX collaboration shows that failures often arise due to ;  
a) Shared understanding  
b) Lack of communication between teams  
c) Speed of implementation  
d) No. of wireframes
40. How does analyzing prototype feedback benefit development?  
a) Delays the project  
b) Informs interface improvements before coding  
c) Increase server space  
d) Leads to database creation
41. Which factors affect user memory in UX design?  
a) Hard disk size  
b) Human memory limitations  
c) CPU speed  
d) Cache memory
42. What is the final step in Norman's interaction model?  
a) Physical action                      b) Outcome                      c) Assessment                      d) Translation
43. How do UX guidelines assist designers?  
a) By restricting creativity  
b) By offering standard principles that improve usability  
c) By reducing budget  
d) By speeding up server response
44. What is 'translation' in UX context?  
a) Coding a language translator  
b) Turning user goals into interface actions  
c) Converting database schema  
d) Optimizing SQL queries
45. What role does 'assessment' play in UX design?  
a) Encrypts data  
b) Helps user evaluate if the outcome matched intention  
c) Runs unit tests  
d) Generates wireframes



46. If users forget how to use a feature, what guideline should be improved?
- a) Security policy
  - b) Memory load reduction
  - c) Data retrieval
  - d) Storage compression
47. Which UX principle helps users plan and execute tasks easily?
- a) Dark mode toggle
  - b) Clear navigation and visual hierarchy
  - c) RAM upgrade
  - d) Cloud storage
48. How would you apply the 'planning' phase in interface design?
- a) Provide tool tips and suggestions before user input
  - b) Hide options
  - c) Disable actions
  - d) Encrypt fields
49. If an interface has too many options, what can be concluded?
- a) It's user friendly
  - b) It may overwhelm users and violate UX guidelines
  - c) It improves speed
  - d) It enables SEO
50. What might be the result of poor outcome feedback in UX?
- a) Increased bandwidth
  - b) User frustration and repeated actions
  - c) Shorter response times
  - d) Clearer navigation

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# CBCS SCHEME

BCS456C

USN

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Question Paper Version : A

Fourth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026

**UI / UX**

Time: 1 hr.

Max. Marks: 50

## INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

- 
1. Usability is primarily concerned with,  
a) Aesthetics  
b) Functionality  
c) Ease of use  
d) Branding
  2. In usability testing, which group of people are primarily involved?  
a) Developers  
b) Stake holders  
c) End users  
d) Marketing team,
  3. When a human user and a computer system in broad sense, get together to accomplish something. It is called as,  
a) Software testing  
b) HCI – Human Computer Interaction  
c) Software development  
d) Graphics Design
  4. The best user experience requires a balance of,  
a) Functionality  
b) Usability  
c) Aesthetics  
d) All of these
  5. \_\_\_\_\_ is referred as what user feels internally including the effects of usability, usefulness and emotional impact?  
a) User experience  
b) User interface  
c) User design  
d) User expertise
  6. What does UX stand for?  
a) Universal experience  
b) User experience  
c) User expertise  
d) Universal expertise
  7. What does UI stand for?  
a) User interaction  
b) User Interface  
c) Universal interface  
d) User impact

Ver-A 1 of 6



8. What does usability refer to in UX design?
- The visual design of the product
  - The ease of use and effectiveness of the product
  - The use of animations and transitions
  - The color scheme used in the product
9. Which method for requirement extraction involves observing and interviewing users when they are in work?
- Interviews
  - Surveys
  - Contextual inquiry
  - Card sorting
10. What is the purpose of formal requirement extraction in UI/UX design?
- To eliminate user feedback
  - To document user needs and system functionalities
  - To prioritize aesthetics over functionality
  - To restrict the scope of the project
11. Emotional impact in user experience design refers to,
- How user feels when they interact with a product or service
  - Gathering feedback
  - Creating empathy map
  - Conduct user research
12. User personas are created during which phase of design process,
- Design stage
  - Discover stage
  - Development stage
  - None of these
13. What is Design Thinking?
- It is approach to create an experience that includes emotional impact, aesthetics and social and value oriented interaction.
  - It is an approach to for collecting user requirements
  - Design of buttons and navigation bars
  - It is unnecessary in UI/UX design
14. What is the primary focus of interaction design requirement?
- Enhancing visual appeal
  - Identifying user needs and goals
  - Maximizing technical complexity
  - Minimizing user engagement
15. Which of the following is NOT a common method for requirement extraction in UI/UX design?
- Interviews
  - Brainstroming
  - Surveys
  - Guesswork
16. What is the purpose of creating personas as in requirement extraction?
- to exclude user preferences
  - To represent different user groups and their characteristics
  - To prioritize aestyhetics over functionality
  - To minimize stakeholder involvement



17. Ideation means,  
 a) To rapidly change  
 b) It is a collaborative group process for forming ideas for design  
 c) Creating 3D model of design  
 d) Understanding culture of the organization
18. \_\_\_\_\_ is rapid creation of free-hand drawings expressing preliminary design ideas.  
 a) Imagination  
 b) Creativity  
 c) Sketching  
 d) Ideation
19. A \_\_\_\_\_ is a conversation between the sketcher or designer and the artifact.  
 a) Ideation  
 b) Design  
 c) UI tool  
 d) Sketch
20. \_\_\_\_\_ is about how the system or product works within its external environment.  
 a) Ecological design perspective  
 b) Interaction design perspective  
 c) Emotional design perspective  
 d) Iterative design perspective
21. What is a users mental model?  
 a) It is a description of how the system works, as held by the user  
 b) It is a description of how the system works, as held by the developer  
 c) It is a description of how the system works, as held by the tester  
 d) It is a description of how the system works, as held by the marketer
22. A \_\_\_\_\_ is a sequence of visual “frames” illustrating the interplay between a user and an envisioned system.  
 a) Brainstroming  
 b) Prototyping  
 c) Storyboard  
 d) Wireframing.
23. What is the purpose of wireframing in UI/UX design?  
 a) To create a final polished design  
 b) To communicate layout and functionality  
 c) To select color schemes  
 d) To add animations
24. A \_\_\_\_\_ is a representative task in which user participants are observed for their performance and behavior and take qualitative and quantitative data.  
 a) Conceptual design  
 b) Horizontal task  
 c) Vertical task  
 d) Benchmark task
25. Design thinking typically helps in,  
 a) Innovation  
 b) Data analytics  
 c) Financial planning  
 d) Operational efficiency
26. Which tool used for wireframing?  
 a) Microsoft visio  
 b) Adobe InDesign  
 c) OmniGraffle  
 d) All of these
27. Lunacy, Framer, Penpot, Figma are the tools used by,  
 a) End users  
 b) UI designers  
 c) Developers  
 d) Testers



28. In UX measure, the \_\_\_\_\_ typically refers to performance during more constant user over a longer period of time.
- a) Initial performance
  - b) Long term performance
  - c) Refinability
  - d) Learnability
29. In UX measure, \_\_\_\_\_ means how well users will retain what they have learned over some period of time.
- a) Learnability
  - b) Retainability
  - c) Initial performance
  - d) Long term user satisfaction
30. Which of the following is an example of usability metric?
- a) Number of likes on social media post
  - b) Conversion rate of an e-commerce website
  - c) Number of colours used in the design
  - d) Length of the company slogan
31. \_\_\_\_\_ is an iterative and incremental method of managing development and design.
- a) Acyclic model
  - b) Agile methodology
  - c) Cyclic methodology
  - d) All of these
32. A \_\_\_\_\_ is used to evaluate design alternatives for particular isolated interaction details, such as behavior of an individual function or icon.
- a) Depth prototype
  - b) Breadth prototype
  - c) Local prototype
  - d) Common prototype
33. \_\_\_\_\_ are more detailed representation of design, including details of appearance and interaction behavior.
- a) High-fidelity prototype
  - b) Low-fidelity prototype
  - c) Medium-fidelity prototype
  - d) Local prototype
34. \_\_\_\_\_ is very broad in the features it incorporates, but offers less depth in its coverage of functionality?
- a) A horizontal prototype
  - b) A vertical prototype
  - c) A High prototype
  - d) A low prototype
35. Materials required for paper prototyping,
- a) Blank plastic material, pens
  - b) Marking pens, pencils, scissors
  - c) Plain copier-type paper, rulers
  - d) All of these
36. A successful project requires both SE and UX roles to communicate?
- a) Above statement is true
  - b) Above statement is false
  - c) Above statement is not related to user interface design
  - d) Project can be successful without communication
37. What does accessibility in UX design refer to?
- a) The ability to access the internet
  - b) The ease of accessing the product or service
  - c) Ensuring that the product is available in multiple languages
  - d) Making the product usable for all, including people with disabilities



38. Which of the following is golden rule for interface design?  
a) Place the user in control  
b) Reduce the user's memory load  
c) Make the interface consistent  
d) All of the mentioned
39. Which is correct sequence in SE lifecycle?  
a) Analyze → Design → Implement → Test  
b) Design → Analyze → Implement → Test  
c) Implement → Test → Design → Analyze  
d) Design → Test → Analyze → Design
40. Which is correct sequence in UX lifecycle?  
a) Prototype → Analyze → Design → Evaluate prototype  
b) Design → Prototype → Analyze → Evaluate prototype  
c) Evaluate Prototype → Design → Analyze → Prototype  
d) Analyze → Design → Prototype → Evaluate prototype
41. UX design guidelines focuses on,  
a) How to create and employ windows  
b) How to create button, menus  
c) how to create icons, radio buttons  
d) All of these are true
42. What is short term memory?  
a) Concerned with in HCI and has duration of about 30 secs  
b) Concerned with in HCI and has duration of about 30 mins  
c) Concerned with in HCI and has duration of about 60 mins  
d) Concerned with in HCI and has duration of about 120 mins
43. Information stored in short-term memory can be transferred to long term memory by,  
a) Learning  
b) Visualizing  
c) Communicating  
d) Listening
44. The ultimate goal of design thinking is to help you design better,  
a) Services  
b) Products  
c) Experiences  
d) All of these
45. Structure of interaction cycle in UX design involves,  
a) Planning → Translation → Physical action → Outcome  
b) Research → Analysis → Test → Design  
c) Analysis → Test → Design  
d) Physical action → Planning
46. Keep users aware of task progress or include progress indicators, what has been done and what is left to do?  
a) It is a good design practice  
b) It is a bad design practice  
c) Progress indicator are not needed in UI  
d) Progress indicators consumes lots of space in display screen
47. Collecting \_\_\_\_\_ is an important portion of testing a prototype in the test stage of design thinking.  
a) Pictures  
b) Money  
c) Feedback  
d) Emails





48. Translation includes,  
a) Existence                      b) Presentation                      c) Task structure                      d) All of these
49. Help users determine, what to do to get started?  
a) It is a UX guideline                      b) It is not a UX guideline  
c) It is a requirement of a designer                      d) None of these
50. Use of precise wording in labels, menu titles, menu choices, icons, data fields are necessary in UI/UX design.  
a) Statement is true  
b) Statement is false  
c) Menu choices, icons are not related to UI  
d) User can use any wording or language in UI design, complexity of wording is not a worry.

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USN

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Question Paper Version : A

**Fifth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026  
Environmental Studies and E – Waste Management**

Time: 1 hr.

Max. Marks: 50

**INSTRUCTIONS TO THE CANDIDATES**



1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
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1. Which of the following conceptual spheres of the environment is having the least storage capacity of matter?
 

a) Atmosphere	b) Lithosphere	c) Hydrosphere	d) Biosphere
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  2. In an eco-system, the flow of energy is
 

a) Bidirectional	b) Cyclic	c) Unidirectional	d) Multi Directional
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  3. Which of the following is not a prominent Chemical responsible for a good habitat?
 

a) Oxygen	b) Carbondioxide	c) SO <sub>2</sub>	d) Nutrients
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  4. In complex eco-systems, the degree of species Diversity is
 

a) Poor	b) Medium	c) High	d) None of these
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  5. World Environment day is on
 

a) 5 <sup>th</sup> May	b) 5 <sup>th</sup> June	c) 18 <sup>th</sup> July	d) 14 <sup>th</sup> August
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  6. Abiotic component includes
 

a) Soil	b) Temperature	c) Water	d) All of these
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  7. The sequence of eating and being eaten in an ecosystem is
 

a) Food chain	b) Carbon cycle	c) Water cycle	d) Anthropoco system
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  8. The organisms which directly feed on producer called
 

a) Herbivores	b) Carnivores	c) Ominivores	d) Decomposer
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  9. In an eco-system biological cycling of materials is maintains by
 

a) Producer	b) Consumer	c) Decomposer	d) All of these
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10. Which pyramid is always upright  
 a) Energy                      b) Biomass                      c) Numbers                      d) Food chain
11. Blue baby syndrome is caused by contamination of water due to  
 a) Phosphates                      b) Sulphur                      c) Arsenic                      d) Nitrates
12. Major source of Flouride is  
 a) River water                      b) Ground water                      c) Food products                      d) Tooth paste
13. Out of the following Nutrients in Fertilizer which one causes minimum water pollution  
 a) Nitrogen                      b) Phosphorous                      c) Pottasium                      d) Organic matter
14. Excess fluorides in drinking water is likely to cause  
 a) Blue babies                      b) Fluorosis  
 c) Taste and odour                      d) Intestinal irritation
15. Disinfection of water is used to remove  
 a) Bacteria                      b) Odour                      c) Turbidity                      d) Colour
16. Brackish water is found in  
 a) Estuaries                      b) Salt lake                      c) Polar Ice caps                      d) Both a) and b)
17. Which one of the following is not a renewable energy?  
 a) Fossil Fuels                      b) Solar energy                      c) Wind energy                      d) Tidal wave energy
18. Natural gas consists mainly of  
 a) Ethane                      b) Propane                      c) Butane                      d) Methane
19. Which of the following is considered as an alternate promising Fuel?  
 a) CNG                      b) Kerosene                      c) Coal                      d) Petrol
20. Bio mass consists of  
 a) Lignin                      b) Hermicellulose                      c) Cellulose                      d) All of these
21. Nuclear power is being produced from  
 a) Carbon - 14                      b) Uranium  
 c) Petroleum combustion                      d) Natural gas
22. Direct conversion of solar energy is attained by  
 a) Solar Photo voltaic system                      b) Solar diesel hybrid system  
 c) Solar thermal system                      d) Solar air heater
23. Pollutant waste water discharged from industries is known as  
 a) Effluent                      b) Sludge                      c) Pathogens                      d) Contaminant
24. Aanaerobiosis makes water  
 a) Clear                      b) Mudy                      c) Red                      d) Brownish or blackish
25. Which of the following is causes Entriphication  
 a) Nitrates                      b) Phosphates                      c) Heavy metals                      d) Both a) and b)
26. The word pollution is derived from the latin word  
 a) Pollute                      b) Pollutant                      c) Pollure                      d) Play- tant

27. Which of the following are non-bio degradable?  
 a) Plastics                      b) Domestic sewage                      c) detergent                      d) a) and c)
28. Which of the following is secondary air pollutant?  
 a) Carbon monoxide    b) Ozone                      c) Sulphur dioxide                      d) Carbon dioxide
29. Minamata Disease is caused due to  
 a) Lead                      b) Arsenic                      c) Mercury                      d) Cadmium
30. Increase in asthma attacks has been linked to high level of  
 a) Nitrogen                      b) Oxygen                      c) Air-borne particles                      d) All of these
31. Which of the following is an air pollutant?  
 a) Carbon                      b) Oxygen                      c) Nitrogen                      d) Particulate matter
32. Demography is the study of  
 a) Animals behaviour                      b) Population growth  
 c) River                      d) None of these
33. The urban solid waste is known as  
 a) Garbage                      b) Rubbish                      c) Refuge                      d) Silt
34. Activated sludge process is  
 a) Anaerobic method                      b) Aerobic method  
 c) Both a) and b)                      d) Land filling
35. Which toxic component not found in e-waste  
 a) Mercury                      b) Cadmium                      c) Neon                      d) Lead
36. Disposal of Bio-medical waste is by  
 a) Autoclave and land filling                      b) Incineration  
 c) Both a) and b)                      d) Landfilling
37. What does e-waste stands for  
 a) Environment waste                      b) Equipment waste  
 c) Electronic waste                      d) None of these
38. Which country produces maximum e-waste per year  
 a) India                      b) USA                      c) China                      d) France
39. What is the hazardous pollutant released in LED's?  
 a) Barium                      b) Arsenic                      c) Cobalt                      d) Cadmium
40. Under the E-Waste Management Rules 2016, who is responsible for the collection of e-waste from end-users  
 a) Retailer                      b) Manufacturers                      c) Bulk consumers                      d) Informal cycles
41. What percentage of e-waste is typically recycled Globally?  
 a) 10%                      b) 20%                      c) 40%                      d) 60%
42. What is the first step in the e-waste recycling process?  
 a) Shredding                      b) Sorting                      c) Melting                      d) Crushing





# CBCS SCHEME

BESK508

USN

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Question Paper Version : A

## Fifth Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026 Environmental Studies

Time: 1 hr.

Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the **fifty** questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
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1. The word Ecology is proposed by  
a) Ernst Haeckel  
b) Helena Curtis  
c) Charles Southwick  
d) Charle's Darwin
2. In a grass → deer → tiger, food chain, the biomass of grass is 1 ton. The tiger biomass will be  
a) 100 kg  
b) 10 kg  
c) 150 kg  
d) 1 kg
3. Increase in fauna and decrease in flora would be harmful due to increase in  
a) Diseases  
b) CO<sub>2</sub>  
c) O<sub>2</sub>  
d) Radioactive pollution
4. Most stable ecosystem is  
a) Forest  
b) Desert  
c) Ocean  
d) Mountain
5. Which one of the following is an abiotic component of the ecosystem?  
a) Bacteria  
b) Plants  
c) Humus  
d) Fungi
6. Under nourished population is more in  
a) Asia and pacific  
b) Europe  
c) Australia  
d) South America
7. Phytoplankton in an aquatic ecosystem can be considered as a  
a) Macro-consumer  
b) Consumer  
c) Producer  
d) Organism



BESK508

8. The word environment is derived from  
a) Greek language  
b) French language  
c) English language  
d) Spanish language
9. Which ecological pyramid is always straight?  
a) Pyramid of biomass  
b) Pyramid of numbers  
c) Pyramid of energy  
d) Both (a) and (b)
10. The World Food Summit (1996) is pledged to reduce the number of hungry people to  
a) 500 million  
b) 400 million  
c) 250 million  
d) 100 million
11. One joule of energy is equivalent to  
a) 0.2389 calories  
b) 23.89 calories  
c) 238.9 calories  
d) 2.389 calories
12. Which of the following is used as moderator in nuclear reactor?  
a) Graphite  
b) Helium gas  
c) Heavy water  
d) All of these
13. Biomass consists of  
a) Lignin  
b) Cellulose  
c) Hemicellulose  
d) All of these
14. Hydrogen can be produced commercially by  
a) Cracking of ammonia  
b) Electrolysis of water  
c) Both (a) and (b)  
d) Gasification
15. One gram of  $^{235}\text{U}$  can give electrical energy equivalent to  
a) 100 MW  
b) 1000 KW  
c) 1 MW  
d) 1000 MW
16. Deforestation generally decreases  
a) Rainfall  
b) Draught  
c) Soil erosion  
d) Global warming
17. Forests are effective sinks of  
a)  $\text{O}_2$   
b)  $\text{CO}_2$   
c)  $\text{NO}$   
d) All of these
18. Percentage of fresh water available on the earth is  
a) 2.8%  
b) 0.1%  
c) 10.6%  
d) 12.15%
19. Forest and wild life are  
a) Non renewable resources  
b) Renewable resources  
c) On exhaustible  
d) None of these
20. Mineral is  
a) Organic matter  
b) Synthetic compound  
c) Naturally occurring in organic substance  
d) None of these

21. Acid rain is caused by increase in the atmospheric concentration of  
 a) Ozone and dust  
 b) SO<sub>2</sub> and NO<sub>2</sub>  
 c) SO<sub>3</sub> and CO  
 d) CO<sub>2</sub> and CO
22. Main components of smog are  
 a) Unsaturated hydrocarbons  
 b) NO<sub>x</sub>  
 c) Sulphur compound  
 d) All of these
23. Dysentery spread due to  
 a) Food adulteration  
 b) Humid weather  
 c) Water pollution  
 d) Air pollution
24. Which is the most valuable recyclable component of a circuit board?  
 a) Copper  
 b) Silver  
 c) Gold  
 d) Platinum
25. The liquid waste water from baths and kitchen is called  
 a) Sullage  
 b) Domestic sewage  
 c) Storm water  
 d) Run-off
26. Bio medical waste may be disposed off by \_\_\_\_\_  
 a) Incineration  
 b) Autoclaving and land filling  
 c) Both (a) and (b)  
 d) None of these
27. Noise is  
 a) Load sound  
 b) Unwanted sound  
 c) Constant sound  
 d) Sound of high frequency
28. The process of decomposing organic waste in the presence of air is called \_\_\_\_\_  
 a) Reduction  
 b) Oxidation  
 c) Incineration  
 d) Pulverizing
29. Afforestation is necessary for  
 a) Soil conservation  
 b) Soil erosion  
 c) Well control  
 d) Low humidity
30. Biomedical waste should be treated within  
 a) 48 hrs  
 b) 12 hrs  
 c) 56 hrs  
 d) 32 hrs
31. Global warming is an  
 a) Ocean phenomenon  
 b) Atmospheric phenomenon  
 c) Soil phenomenon  
 d) None of these
32. Earth day is held every year on  
 a) 5<sup>th</sup> June  
 b) 23<sup>rd</sup> November  
 c) 22<sup>nd</sup> April  
 d) 26<sup>th</sup> January
33. Formation of hole in ozone layer is maximum over  
 a) India  
 b) Antarctica  
 c) Europe  
 d) Africa



34. International protocol to protect the ozone layer is  
 a) Kyoto protocol  
 b) Montreal protocol  
 c) Vienna protocol  
 d) Basel protocol
35. Excess fluoride in drinking water is likely to cause  
 a) Blue babies  
 b) Fluorosis  
 c) Taste and odour  
 d) None of these
36. Which of the following is not an ideal solution for tackling water crisis?  
 a) Drilling large number of deep bore wells  
 b) Population growth control  
 c) Water conservation in irrigation  
 d) Water pollution control
37. The average thickness of the ozone layer in stratosphere is  
 a) 1000 DU  
 b) 100 DU  
 c) 50 DU  
 d) 230 DU
38. Increasing skin cancer and high mutation rate are the result of  
 a) Ozone layer depletion  
 b) Acid rain  
 c) CO<sub>2</sub>  
 d) CO
39. Bhopal gas tragedy occurred due to the leakage of  
 a) SO<sub>2</sub>  
 b) CH<sub>4</sub>  
 c) Fly ash  
 d) Methyl ISO cyanate
40. Environmental pollution is a  
 a) State problem  
 b) Global problem  
 c) Countries problem  
 d) Regional problem
41. Environmental protection is the fundamental duties of citizen of India under the article  
 a) 51 – A (g)  
 b) 48 – A  
 c) 47  
 d) 21
42. The Environmental Protection Act of India was enacted in the year  
 a) 1986  
 b) 1992  
 c) 1984  
 d) 1974
43. The Government of India enacted the water (prevention and control of pollution) Act in the year  
 a) 1972  
 b) 1974  
 c) 1977  
 d) 1978
44. Which of the following is an NGO?  
 a) Narmada Bachao Andolan  
 b) Bombay Natural History Society  
 c) Centre for science and Environment  
 d) All of these
45. In which year the Hon. Supreme Court of India directed to made environmental education as a compulsory subject at all levels of education?  
 a) 2003  
 b) 1997  
 c) 2002  
 d) 1986

