**2020/TDC(CBCS)/ODD/SEM/
BVOCGE–301T/445**

**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

B.Voc (Information Technology)

(3rd Semester)

Course No. : BVOCGE–301T

Full Marks : 70
Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer the following as directed (any *twenty*) :

1×20=20

1. Carbon monoxide (CO) is an example of primary air pollutant.

(State True or False)

2. The source of air pollutant can be both natural and man-made.

(State True or False)

(*Turn Over*)

(2)

3. The most important air pollutant is _____ gas.

(Fill in the blank)

4. Write the full form of SPM.

5. Name the most abundant greenhouse gas in the atmosphere.

6. Carbon dioxide is not related to the formation of photochemical smog.

(State True or False)

7. The phenomena of air pollutants cause damage to leaf chlorophyll is called _____.

(Fill in the blank)

8. Abscission or dropping of leaves in plants is caused by which air pollutant?

9. Groundwater is 30% more available compared to surface water like streams, lakes and estuaries.

(State True or False)

10. The longest polluted river in India is _____.

(Fill in the blank)

11. Name the heavy metal responsible for Minamata disease.

(3)

12. The groundwater in West Bengal and Bangladesh is severely contaminated by toxic heavy metal arsenic.

(State True or False)

13. What is the full form of COD?

14. DO is an essential component of which ecosystem?

15. Which of the following is a physical property of water body?

(a) pH

(b) COD

(c) Conductivity

(d) Turbidity

16. Blue baby syndrome is caused due to the presence of excess _____ in drinking water.

(Fill in the blank)

17. Fly ash is an example of land pollutants.

(State True or False)

18. What is the full form of DDT?

19. What is the main cause of land degradation?

20. India is the second largest producer of coal.

(State True or False)

(4)

21. Which type of coal mining causes acid mine drainage?

22. Green manure plants belonged to the family _____.

(Fill in the blank)

23. Can chemical fertilizer be included in organic farming?

24. The flowers of *Chrysanthemum cinerariaefolium* contain a naturally produced pesticide called _____.

(Fill in the blank)

25. What is the unit of sound?

26. The degree of hearing loss depends both on the duration and the intensity of noise.

(State True or False)

27. Which of the following causes cancer in thyroid gland?

   (a)   U-235

   (b)   U-238

   (c)   I-132

   (d)   C-12

(Choose the correct option)

(5)

28. A major ionizing radiation is _____.

(Fill in the blank)

29. Which State of India is a major generator of e-waste?

30. The nodal agency for management of e-waste in India is _____.

(Fill in the blank)

31. Landfills are de facto choice for waste management.

(State True or False)

32. Are municipal solid wastes non-hazardous in nature?

33. What is the first step in EIA?

34. Name the Act that makes EIA mandatory for big projects in India.

35. Which kind of projects having adverse environmental impacts requires full EIA?

36. The Air (Prevention and Control of Pollution) Act was enacted in the year _____.

(Fill in the blank)

37. Ecomark certification in India is issued by _____.

(Fill in the blank)

38. What is ISO 14000 standard meant for?

39. The symbol of Ecomark in India is _____.

(Fill in the blank)

40. The Central Pollution Control Board (CPCB) India, statutory organization, was constituted in September 1974 under which Act?

SECTION—B

Answer any *five* of the following questions : 2×5=10

41. Define secondary air pollutants. Give one example.

42. Name two acids which form acid rain.

43. What is biological oxygen demand (BOD)?

44. What do you understand by bio-magnification?

45. Define REDD according to UN-REDD Programme.

46. Define desertification.

47. What are solid wastes?

48. Define ionizing radiation.

49. Why are Ecomark labels given to a product?

50. Define the purpose of public hearing in the EIA process.

SECTION—C

Answer any *five* of the following questions : 8×5=40

51. Describe the impact of air pollution on human and environment.

52. Describe the process of formation of ozone hole.

53. Explain the impact of oil pollution on the marine environment.

54. Describe the process of wastewater treatment.

55. Elucidate the environmental consequences of 'rat-hole' mining.

56. Write about the impact of soil salinity in the agroecosystems of India.

57. Describe the process of solid waste recycling.

(8)

58. Describe the causes and impacts of radioactive pollution.

59. Describe the major steps undertaken in EIA process in India.

60. Write the salient features of the Environmental (Protection) Act, 1986.

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**TDC (CBCS) Odd Semester Exam., 2020
held in March, 2021**

B.Voc (Information Technology)

(3rd Semester)

Course No. : BVOCGE–302T

(Data Structure)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer *any* **five** questions

1. Define data structure. Why data structure is required? Show the classification of data structure with diagram. Write the advantages of data structure. 2+5+3+4=14

2. *(a)* What is an array? How array is represented in computer memory? 2+6=8

   (b) Write short notes on the following : 3×2=6
      (i) Multidimensional array
      (ii) Two-dimensional array

(Turn Over)

(2)

3. What is queue? What are the features and applications of queue? How is a queue implemented? 2+6+6=14

4. (a) Define the following : 2×3=6

   (i) Infix notation

   (ii) Prefix notation

   (iii) Postfix notation

   (b) Transform an arithmetic infix expression

   $$Q : ((A + B) * (C - D) + E) / (F + G)$$

   into its equivalent postfix expression. 8

5. What is binary tree? How many types of binary trees are there? Explain all the types with example. 2+2+10=14

6. What is free traversal in data structure? How many types of free traversals are there? Explain all the types. 2+2+10=14

7. Write an algorithm for binary search. Show the steps to search the element 54 from the following elements stored in an array : 7+7=14

   10, 14, 18, 28, 40, 45, 54, 62

8. Write an algorithm for merge sort. Show the steps to sort the numbers using merge sort algorithm. 7+7=14

(3)

9. (a) Define the following graph terminologies : 1×7=7

   (i) Vertex

   (ii) Edge

   (iii) Directed graph

   (iv) Undirected graph

   (v) Adjacent edge

   (vi) Degree

   (vii) Incident

   (b) Explain two common ways to represent a graph data structure. 7

10. What is hashing data structure? What are the benefits of hashing? Explain different types of hashing. 3+3+8=14

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