SET CODE : B ENVIRONMENTAL SCI. - 2012 25/09/2012

1 - A	26 - C	51 - B	76 - A
2 - B	27 - B	52 - A	77 - C
3 - D	28 - B	53 - D	78 - D
4 - C	29 - B	54 - D	79 - D
5 - C	30 - D	55 - A	80 - D
6 - D	31 - B	56 - B	81 - B
7 - C	32 - C	57 - A	82 - D
8 - C	33 - B	58 - C	83 - C
9 - D	34 - C	59 - A	84 - D
10 - A	35 - D	60 - A	85 - B
11 - D	36 - B	61 - C	86 - B
12 - A	37 - C	62 - C	87 - A
13 - C	38 - C	63 - C	88 - D
14 - D	39 - C	64 - C	89 - C
15 - D	40 - A	65 - D	90 - D
16 - C	41 - A	66 - A	91 - C
17 - B	42 - B	67 - D	92 - C
18 - C	43 - B	68 - C	93 - C
19 - D	44 - A	69 - D	94 - B
20 - A	45 - D	70 - B	95 - B
21 - B	46 - D	71 - C	96 - B
22 - B	47 - C	72 - D	97 - A
23 - C	48 - D	73 - C	98 - D
24 - B	49 - B	74 - D	99 - D
25 - C	50 - D	75 - D	100 - B

SET CODE : C ENVIRONMENTAL SCI. - 2012 25/09/2012

1. Formation of Jokullhlaups takes place due to :
   (1) Volcanic eruption
   (2) Earth Quake
   (3) Flooding
   (4) Climate change

2. Richter scale is the measuring unit of :
   (1) Volcanic eruption
   (2) Earth Quake
   (3) Typhoon
   (4) Flood

3. Atmospheric disasters mainly includes :
   (1) Droughts
   (2) Floods
   (3) Cold waves
   (4) All of the above

4. Pottery items are made from mineral :
   (1) Marble
   (2) Potash
   (3) Kaolin
   (4) None of the above

5. Name the mineral used for the production of electricity :
   (1) Uranium
   (2) Thorium
   (3) Both (1) and (2)
   (4) Zinc

6. What is the correct sequence of zonation in the lentic environment ?
   (1) Profundal zone
   (2) Sub littoral zone
   (3) Both (1) and (2)
   (4) Littoral zone

7. The most important set of characteristics of the deep sea include :
   (1) Low temperature, low pressure and low oxygen level
   (2) High temperature, high pressure and high oxygen level
   (3) Low temperature, high pressure and low oxygen level
   (4) High temperature, low pressure and high oxygen level

8. A common chemical sedimentary rock is :
   (1) Slate (2) Shale (3) Limestone (4) Sandstone

9. If you are standing still at the equator, how fast are you rotating around the centre of the Earth ?

(1) 0 miles per hour
(2) 11 miles per hour
(3) 110 miles per hour
(4) 1100 miles per hour

10. World wide, the rate of plate movement overages centimeters per year :

(1) 2 to 3 (2) 4 to 5 (3) 7 to 8 (4) 10 to 12

11. Each successive trophic level has :

(1) Increased total energy
(2) Equal energy
(3) More energy
(4) Less total energy

12. Leibig's law states that growth of plant is dependent on factor, which is presented to it :

(1) Minimum (2) Maximum (3) Deficient (4) None

13. Desert covers earth land surface :

(1) One fourth (2) One fifth (3) One third (4) One second

14. How much carbon dioxide can a tree remove from the air each year ?

(1) 25 Kg (2) 35 Kg (3) 45 Kg (4) 15 Kg

15. Tree popularly known as green gold and yet is an ecological disaster :

(1) Eichhornia (2) Parthenium (3) Hydrilla (4) Eucalyptus

16. World Wetland Day is on :

(1) 6th February
(2) 10th February
(3) 2nd February
(4) 4th March

17. World Forestry Day is on :

(1) 2nd February
(2) 21st March
(3) 10th February
(4) 15th March

18. Volatile components are determined after igniting at :

(1) 400°C (2) 350°C (3) 550°C (4) 300°C

19. The microbial species responsible for anaerobic degradation is :

(1) Actinomycetes (2) Escherichia

(3) Citobacter (4) All of them

20. dB is used to represent the :

(1) Sound intensity (2) Noise level

(3) Pressure level (4) All of the above

21. Which of the following is not a critical element in all ecosystem ?

(1) Linking biological populations into food chain

(2) Conversion of heat into light energy

(3) Impact of feedback on population size

(4) Cycling of chemicals through biological population

22. There are how many types of biome ?

(1) One (2) Three (3) Five (4) Nine

23. The world's major environmental zones are :

(1) Single feature regions

(2) Multiple feature regions

(3) Based on climate

(4) Homogenous throughout

24. A failure of monsoon type precipitation in an area would be an environmental change of a type called :

(1) Periodic regular (2) Periodic but irregular

(3) Nonperiodic but regular (4) Non recurrent

25. Debang biosphere reserves is situated in the state :

(1) Assam
(2) Orissa
(3) Arunachal Pradesh
(4) Sikkim

26. Which Bird Sanctuary is also known as Salim Ali Bird Sanctuary ?

(1) Bharatpur Bird Sanctuary, Rajasthan
(2) Manjira Bird Sanctuary, Andhra Pradesh
(3) Thattekad Bird Sanctuary, Kerala
(4) Neelapattu Bird Sanctuary, Andhra Pradesh

27. Rate of storage of organic matter not used by heterotroph is termed by :

(1) Net productivity
(2) Net primary productivity
(3) Gross primary productivity
(4) Secondary productivity

28. Increase in number of fauna and decrease in number of flora would be dangerous because of enhanced percentage of :

(1) Oxygen
(2) Carbon dioxide
(3) Methane
(4) Carbon monoxide

29. B. O. D. is related to :

(1) Inorganic pollutants only
(2) Organic pollutants only
(3) Heavy metal pollutants only
(4) Detergents only

30. Ozone promotes :

(1) Oxidation of biochemicals
(2) Destruction of chlorenchyma
(3) Growth of plants
(4) Both (1) and (2)

31. Protons :

(1) are negatively charged

(2) are similar in mass to neutrons

(3) have no electric charge

(4) circle the atomic nucleus

32. Vapour phase PAHs are normally sampled on :

(1) QFF (2) GFF (3) PUF (4) All of the above

33. While writing energy balance equations we are using :

(1) Ist law of thermodynamics

(2) IInd law of thermodynamics

(3) IIIrd law of thermodynamics

(4) Entropy

34. A complete ban on leaded gasoline in the U. S. took effect in :

(1) 1995 (2) 1997 (3) 1996 (4) 1990

35. The substitutes of CFC are :

(1) HCFC-142 (2) HCFC-22

(3) $CHCIF_2$ (4) All of the above

36. The fact that unconstrained population growth follows an exponential form means that doubling time is :

(1) Stabilized (2) Shortened (3) Arithmetic (4) Lengthened

37. In the rainforest emergents are :

(1) Middle vegetation level

(2) Lowest vegetation level

(3) Tallest vegetation level

(4) Below ground level

38. The two elements which are responsible for population decrease are :

(1) Birth and emigration
(2) Death and immigration
(3) Death and emigration
(4) Birth and immigration

39. Wallace is famous for his work on :

(1) Establishing national parks
(2) Plant productivity
(3) Diversity of species
(4) Global warming

40. One possible outcome of a situation in which a rapidly growing population is fast reaching, its carrying capacity is :

(1) For the rate of growth to decline as the carrying capacity is approached
(2) For the exponential growth curve to be heightened
(3) For the carrying capacity to vary cyclically well below the population level
(4) For the population to conduct an accurate census to determine actual population size

41. Minimum dissolved oxygen prescribed for aquatic river stream to prevent killing of fish is :

(1) 4 ppm.
(2) 5 ppm.
(3) 2 ppm.
(4) 1 ppm.

42. Relationship between ppm and mg/l is :

(1) mg/l = ppm
(2) mg/l = ppm × sp. gravity
(3) mg/l = ppm/sp. gravity
(4) ppm = mg/l × sp. gravity

43. pE is :

(1) $pE = + \log (a_e)$
(2) $pE = - \log (a_{e^-})$
(3) $pE = - \log (H^+)$
(4) $pE = - \log (e^-)$

44. Common Mobile phase in Gas chromatography is :

(1) Nitrogen and Helium (2) Water and Methanol

(3) Carbon dioxide fluid (4) None of the above

45. For the analysis of Benzene, Gas chromatography detector used is :

(1) ECD (2) NPD (3) Hall (4) FID

46. Seeding is not required during BOD analysis of :

(1) Distillery effluent (2) Dying unit effluent

(3) Paper mill effluent (4) Domestic sewage

47. Molar concentration of pure water is :

(1) 56.56 mol/L (2) 565.6 mol/L

(3) 55.56 mol/L (4) 556.6 mol/L

48. Limitations of Neutron activation analysis include :

(1) Need reactor facilities

(2) Elemental analysis only

(3) No clue to oxidation state

(4) All of the above

49. Covalent bonding occurs when :

(1) Ions of opposite charge attract each other

(2) Atoms share electron

(3) Nuclei of different atoms fuse together

(4) Atoms share neutron

50. What is hybrid ?

(1) Car operating on both ethanol and gasoline

(2) Car operating on both gasoline and solar power

(3) Car operating on both gasoline and ethanol

(4) Car operating on both gasoline and electricity

51. Which one is most toxic form of mercury ?

(1) Hg^0 (2) RHg^+ (3) Hg^{2+} (4) All of the above

52. The final products of a engine exhaust after passing through catalytic convertor are :

(1) N_2, CO_2, H_2O (2) NO_2, CO_2, H_2O

(3) NO_2, CO, H_2O (4) N_2, CO, H_2O

53. Cyanide occurs in the seeds of which fruit ?

(1) Cherries (2) Apple (3) Peaches (4) All of the above

54. Jacob Hossicher spectrophotometric method is used for the analysis of which gas ?

(1) SO_2 (2) O_3 (3) CO (4) NO_2

55. Dissolved oxygen in river will be :

(1) Maximum at morning (2) Maximum at noon

(3) Maximum at evening (4) Will be same throughout the day

56. Path length of light in spectrophotometer is :

(1) 10 cm (2) 10 mm (3) 2 cm (4) 5 mm

57. Langelier Saturation index is calculated by analysis of :

(1) Alkalinity (2) Acidity

(3) pH (4) Moisture content

58. Tintometer is used for the analysis of :

(1) Dissolved solids (2) Temperature

(3) Turbidity (4) Colour

59. Biochemical effect of lead is :

(1) Disruption in Hb synthesis

(2) Decrease in live function

(3) Reduced kidney function

(4) Respiratory pigment are activated

B

60. CN^- exerts its toxic effect by :

(1) Inhibiting oxygen utilization

(2) Hyper metabolism

(3) Encouraging electron transfer to oxygen

(4) All of the above

61. Sequencing of genomes can be done by :

(1) Clone by clone sequencing

(2) Shot gun sequencing

(3) Both (1) and (2)

(4) Gene therapy

62. Biosensor component consist of :

(1) Biological

(2) Physical

(3) Both (1) and (2)

(4) Chemical

63. Genetically engineered bacteria have been used in commercial production of :

(1) Thyroxine

(2) Testosterone

(3) Human insulin

(4) Melatonin

64. Biopiracy is related to which of the following ?

(1) Traditional knowledge

(2) Biomolecules and regarding bioresources genes isolated from bioresources

(3) Bioresources

(4) All of the above

65. Which of these would you expect to be a product of biotechnology ?

(1) Modified enzyme

(2) DNA probe

(3) Protein hormone

(4) Steroid hormone

P. T. O.

66. A strain of 'golden' rice contains high content of :

(1) Vitamin A (2) Vitamin K (3) Vitamin E (4) Vitamin C

67. Which of the following is used in Biowar ?

(1) A pathogen

(2) Toxin from a pathogen

(3) A delivery system for the bioweapon agent

(4) All of the above

68. Which of the following is included in biopesticide ?

(1) Viruses and bacteria

(2) Viruses, bacteria and fungia

(3) Viruses, bacteria, fungia, protozoa and mites

(4) Viruses, bacteria, fungia and protozoa

69. Humuline is :

(1) A form of clintin

(2) A powerful antibiotic

(3) A new digestive enzyme

(4) Human insulin

70. Restriction enzyme was discovered by :

(1) Berg

(2) Smith and North

(3) Waksman

(4) Alexander Fleming

71. Which of the following techniques is used for separating DNA fragments and identification of cloned genes ?

(1) Southern blotting (2) Northern blotting

(3) Western blotting (4) None

72. Majority of the industrial enzymes are produced from :

(1) Gram positive bacteria

(2) Gram negative bacteria

(3) Mycoplasma

(4) Algae

73. Calorimetric biosensors produces a physical change :

(1) Change in mass of the biological component

(2) Light absorbed during the reaction

(3) Heat released by the reaction

(4) Production of an electrical potential

74. Acoustic wave Biosensors determine :

(1) Amount of glucose

(2) Amount of oxygen

(3) Amount of glucose oxidase

(4) Amount of antigen

75. A new strain of bacteria produced by biotechnology in alcohol industry is :

(1) Escherichia

(2) Saccharomyce cerevisae

(3) Bacillus subtilis

(4) Pseudomonas putida

76. A fragment of DNA, cut by a restriction enzymes, forms bonds with other DNA molecules that have :

(1) been fragmented by the same restriction enzyme

(2) Sticky ends

(3) Plasmid components

(4) Attached plasmid

77. DNA probe used in finger printing are :

(1) Highly sensitive electron microscope

(2) UV beams

(3) DNA segments having radioactive isotopes

(4) X-ray scanners

78. Quantitative analysis of hormone is done by :

(1) Random amplified DNA

(2) Immunodiffusion

(3) R F L P

(4) Radio immunoassay

79. Functional Genomics help in the analysis of :

(1) Expression profiling

(2) Gene function determination

(3) Protein interaction

(4) All of the above

80. Gene therapy involves :

(1) Determination of product used in diseases

(2) Isolation and cloning of gene

(3) Determine the gene for any disorder

(4) All of the above

81. Diastrophism is :

(1) Movement of mountains

(2) Movement of volcanoes

(3) Movement of solid part of earth in respect to one another

(4) Movement of organisms from one area to another

82. Most of the Earth's fresh water :

(1) Is ground water

(2) Exists in the form of water vapour in the atmosphere

(3) Is present in lakes and streams

(4) Is tied up as ice, mainly in the polar ice caps

83. The measure of how readily fluids can flow through materials is called :

(1) Potentiometric resistance
(2) Porosity
(3) Permeability
(4) Conductivity

84. The artificial nucleide present in sea water is :

(1) Fe-55 (2) Mn-54 (3) CS-137 (4) All of the above

85. The concentration of which ion is maximum in ocean water ?

(1) Na^+ (2) Cl^- (3) Mg^{2+} (4) SO_4^{2-}

86. The first genome to be sequenced was :

(1) Saccharomyces cerevisiae
(2) Haemophilus influenzae
(3) Escherichia coli
(4) Caenor habdites elegans

87. Which one of the following is the most commonly used approach for achieving cell immobilization ?

(1) Calcium alginate
(2) Ion exchange matrices
(3) Sepharose
(4) Semi-permeable membrane

88. For scaling up of a bio reactor, the following parameter is assumed to be constant :

(1) Air flow rate
(2) Diameter of the impeller
(3) Agitator speed
(4) Volumetric mass transfer coefficient

89. pDNA is used in biotechnology of :

(1) Protein synthesis
(2) Gene splicing
(3) Residual DNA
(4) Recombinant DNA

90. Two bacteria found to be very useful in genetic engineering experiments are :

(1) Nitrosomas and Klebsiella

(2) Nitrobacter and Azotobacter

(3) Rhizobium and Diplococcus

(4) Escherichia and Agrobacterium

91. The eye of a hurricane is :

(1) The centre of the storm

(2) The area with the most concentrated level of activity or intensity

(3) The inner most portion of the storm which is calm with little or no wind

(4) None of the above

92. The basic building block of silicate mineral consist of four oxygen atoms and one silicon atom linked together in the shape of a :

(1) Tetrahedron (2) Rhombohedron

(3) Dodecahedron (4) Cube

93. The compositional zone of the earth that consists of iron, magnesium, silicon and oxygen is the :

(1) Crust (2) Core (3) Mantle (4) All of the above

94. A magma that is relatively silica-poor and rich in iron and magnesium is termed as :

(1) Felsic (2) Mafic (3) Basaltic (4) Ferric

95. The elevation of a stream surface at a given point along its length is called :

(1) Crest (2) Stage (3) Grade (4) Base Level

96. A strategy for reducing flood hazards that does not alter the character of the stream is :

(1) The use of levees

(2) Channelization

(3) The creation of flood control dams and reservoirs

(4) The use of retention ponds

97. A hydrograph plots :

(1) Stream stage or discharge over time

(2) Stream stage or discharge as a function of recurrence interval

(3) Stream velocity as a function of infiltration

(4) Changes in water quality during a flood event

98. Marine mineral resources include hydrothermal ore deposits, continental shelf placer deposits and modules of :

(1) Aluminium (2) Zinc (3) Mercury (4) Manganese

99. Diamonds are mined primarily from igneous rocks known as :

(1) Staurolites (2) Kimberlites (3) Zeolites (4) Cryolites

100. The principle use of the metal in automobile emissions control systems in the U. S. is :

(1) Gold (2) Platinum (3) Zinc (4) Lead