

ENVIRONMENTAL SCIENCE

1. The second stage of evolution of different components of earth as described by Chamberlain denotes :
 - (a) the period of planetesimal accretion
 - (b) the actual geological period
 - (c) the period of dominant vulcanism
 - (d) none of the above
2. Which one of the following *does not* pertain to scientific concept in the origin of solar system and earth ?
 - (a) dihybrid concept
 - (b) trihybrid concept
 - (c) monistic concept
 - (d) dualistic concept
3. Laterite soils are composed of :
 - (a) little clay and much gravel of red sand stones
 - (b) organic material, much clay and iron
 - (c) large proportion of decomposed mineral grains
 - (d) none of the above
4. Regur soils occur mainly in :
 - (a) Maharashtra, Western Madhya Pradesh and Gujarat
 - (b) Tamil Nadu, Karnataka and Andhra Pradesh
 - (c) Orissa, Jharkhand and Andhra Pradesh
 - (d) None of the above
5. Soil erosion is a serious problem in :
 - (a) hills
 - (b) arid areas
 - (c) semi-arid areas
 - (d) all of the above

6. Soil erosion has been called as creeping death of soil by :
- (a) Raw
 - (b) Burges
 - (c) van der Drift
 - (d) Rama Rao
7. Exfoliation weathering is also known as :
- (a) spalling
 - (b) sheeting
 - (c) onion weathering
 - (d) isolation weathering
8. The frequency of rock falls depends on :
- (a) aridity humidity factor
 - (b) lithological and structural characteristics of rock
 - (c) both (a) and (b)
 - (d) none of the above
9. Which one of the following statements is *not* correct ?
- (a) Himalayan rivers perform intense erosional activity
 - (b) Himalayan rivers are perennial
 - (c) Himalayan rivers flow through shallow valleys
 - (d) Himalayan rivers have made spectacular gorges
10. The drainage basin of river Krishna is shared by :
- (a) Maharashtra, Karnataka and Andhara Pradesh
 - (b) Kerala, Karnataka and Tamil Nadu
 - (c) Maharashtra, Gujarat and Madhya Pradesh
 - (d) Maharashtra, Orissa and Jharkhand

11. Population growth rate by 1990's was decreasing in most of the countries and the decline was greatest in :
- (a) India
 - (b) China
 - (c) Indonesia
 - (d) USA
12. Over population is a situation when :
- (a) there is a large size of population
 - (b) resources are few
 - (c) resources are too few for the size of the population
 - (d) population in a country grows rapidly
13. In India the total in-situ reserves of Bauxite as on 1st, April 2000 are :
- (a) 1075 million tonnes
 - (b) 2050 million tonnes
 - (c) 3075 million tonnes
 - (d) 4050 million tonnes
14. Koyna hydro power project is in :
- (a) Maharashtra
 - (b) Tamil Nadu
 - (c) Karnataka
 - (d) Kerala
15. Occurrence of dry Gas has been reported in Kashmir Division by :
- (a) Oil and Natural Gas Commission
 - (b) Natural Gas Commission
 - (c) Commission for Natural Gas and Oil
 - (d) Oil and Natural Gas Committee

16. In Kashmir Division galena deposits have been reported from :
- (a) Sumbhar [Anantnag]
 - (b) Lashtial [Baramula]
 - (c) Wuyan [Srinagar]
 - (d) None of the above
17. When two solutions differ from each other by 1 pH unit it means that one solution has :
- (a) 5 times the hydrogen ion concentration of the other
 - (b) 10 times the hydrogen ion concentration of the other
 - (c) 50 times the hydrogen ion concentration of the other
 - (d) 100 times the hydrogen ion concentration of the other
18. In unpolluted region the pH of rain water is :
- (a) 6.7
 - (b) 7.0
 - (c) 5.6
 - (d) 6.5
19. Iodine requirement for an adult human is :
- (a) 50 μg
 - (b) 100 μg
 - (c) 150 μg
 - (d) 200 μg
20. Which of the following elements is *not* essential to all plants and animals ?
- (a) Sulphur
 - (b) Zinc
 - (c) Copper
 - (d) Barium

21. Who received a Nobel prize for formulating a polymeric structure for rubber in 1953 ?
- (a) Staudinger
 - (b) Strausberger
 - (c) Bohr
 - (d) Gibbs
22. Cellulose fibres :
- (a) can be made to bent and twist
 - (b) do not stretch much
 - (c) both (a) and (b)
 - (d) none of the above
23. Steroids are a class of hormones made from :
- (a) amino acids
 - (b) cholesterol
 - (c) proteins
 - (d) none of the above
24. A compound that *cannot* be synthesized by a given organism but is vital for its survival or health is :
- (a) glycogen
 - (b) protein
 - (c) vitamin
 - (d) lactose
25. Frankia is associated with :
- (a) nitrification
 - (b) denitrification
 - (c) nitrogen fixation
 - (d) ammonification

26. Sedimentary type of biogeochemical cycle is found in case of :
- (a) nitrogen
 - (b) sulphur
 - (c) carbon
 - (d) oxygen
27. Hydrological cycle is driven by evaporative power of solar radiation which is approximately.....per cent of the total radiation reaching the outer atmosphere.
- (a) 5
 - (b) 10
 - (c) 15
 - (d) 20
28. Large store of water in polar ice caps has :
- (a) little effect on hydrological cycle
 - (b) great effect on hydrological cycle
 - (c) no effect on hydrological cycle
 - (d) none of the above
29. Clinical lead poisoning occurs when blood lead levels rise to :
- (a) 25 $\mu\text{g}/\text{dl}$
 - (b) 40 $\mu\text{g}/\text{dl}$
 - (c) 60 $\mu\text{g}/\text{dl}$
 - (d) 80 $\mu\text{g}/\text{dl}$
30. To obtain the Eco mark the maximum concentration of lead in tea leaves [according to BIS] should be :
- (a) <10 ppm
 - (b) <6.5 ppm
 - (c) <3.5 ppm
 - (d) <4.8 ppm

31. A useful drug that can cause severe erosive gastritis if taken with alcohol :
- (a) paracetamol
 - (b) antihistamine
 - (c) aspirin
 - (d) none of the above
32. The antidote for paracetamol poisoning is :
- (a) penicillamine
 - (b) deferoxamine
 - (c) N-acetylcysteine
 - (d) none of the above
33. According to Cosmozoic theory, life originated from :
- (a) spores of other planets
 - (b) non-living organic matter
 - (c) special creation
 - (d) none of the above
34. Hypothesis of Panspermia was propounded by :
- (a) Preyer
 - (b) Ambarzumian
 - (c) Arrhenius
 - (d) Spallanzani
35. When amount of NADP available is low :
- (a) only pigment system I is active
 - (b) only pigment system II is active
 - (c) both pigment systems [I and II] are active
 - (d) none of the above

36. High carbon dioxide consumption point is found in :
- (a) C_3 plants
 - (b) C_4 plants
 - (c) CAM plants
 - (d) lichens
37. Rate of respiration increases :
- (a) at high CO_2 concentration
 - (b) at very high temperature
 - (c) in well hydrated plants
 - (d) in intense light
38. For two molecules of glucose, glycolysis uses and produces ATP molecules :
- (a) 4 and 8
 - (b) 2 and 4
 - (c) 2 and 8
 - (d) 2 and 2
39. Type I restriction enzymes are :
- (a) non-specific in their cleavage
 - (b) specific in their cleavage
 - (c) suitable for gene manipulation
 - (d) none of the above
40. Pomato is a novel somatic hybrid formed by the fusion of protoplasts of :
- (a) pea and tomato
 - (b) pea and potato
 - (c) tomato and potato
 - (d) carrot and potato

41. Gum is obtained from :
- (a) *Acacia sapota*
 - (b) *Bosewallia serrata*
 - (c) *Sterculia urens*
 - (d) All of the above
42. Fish and sea fishes are rich sources of minerals especially :
- (a) calcium
 - (b) potassium
 - (c) sodium
 - (d) magnesium
43. Ozone and PAN exert their biochemical effects by producing :
- (a) carbonium
 - (b) free radicals
 - (c) H^+ ion
 - (d) Ozonides
44. Acrolein, an air pollutant is a type of :
- (a) aldehyde
 - (b) ketone
 - (c) paraffin
 - (d) olefin
45. In oligotrophic lakes and water bodies, there is :
- (a) excessive growth of algae
 - (b) depletion of dissolved oxygen
 - (c) nutrient enrichment
 - (d) none of the above

46. If too much organic matter is added to water, :
- (a) all available oxygen will be used up
 - (b) fishes and other forms of aquatic life will die
 - (c) anaerobic bacteria will begin to breakdown the waste
 - (d) all of the above
47. Cork from oak tree is one of the best ecologically friendly resource as :
- (a) cork is harvested by peeling layers of trees
 - (b) removing cork helps it grow better
 - (c) cork is not harvested by cutting down the trees
 - (d) none of the above
48. Wind power, a non-polluting energy, is used in :
- (a) remote power
 - (b) hybrid system
 - (c) both (a) and (b)
 - (d) none of the above
49. In the mountains of South-west China the population of Giant Panda is as few as :
- (a) 500
 - (b) 1000
 - (c) 1500
 - (d) 1800
50. According to Final Technical Report of National Biodiversity Strategy and Action Plan, India has lost :
- (a) over 50 per cent of its forest cover and 40 per cent of its mangroves
 - (b) over 40 per cent of its forest cover and 50 per cent of its mangroves
 - (c) over 30 per cent of its forest cover and 70 per cent of its mangroves
 - (d) over 70 per cent of its forest cover and 30 per cent of its mangroves

51. The helminth parasite which inhabits the lymph vessels is :
- (a) *Ascaris*
 - (b) *Wuchereria*
 - (c) *Enterobius*
 - (d) *Ancylostoma*
52. Pyorrhoea caused by *Entamoeba gingivalis* is transmitted by :
- (a) flies
 - (b) kissing
 - (c) air
 - (d) mosquito bite
53. Madagascar and Mauritius are included in which zoogeographic region of the world ?
- (a) Neotropical region
 - (b) Neoarctic region
 - (c) Ethiopian region
 - (d) Oriental region
54. Vertical distribution of life in aquatic habitats is referred to as :
- (a) bathymetric distribution
 - (b) altitudinal distribution
 - (c) both (a) and (b)
 - (d) none of the above
55. 'Superbug' was created, to mop up all types of hydrocarbons in the oil, from different strains of :
- (a) *Bacillus*
 - (b) *Pseudomonas*
 - (c) *Clostridium*
 - (d) *Azotobacter*

56. *Thiobacillus* bacteria can accumulate which metal, for reuse from waste waters and industrial sites ?
- (a) copper
 - (b) silver
 - (c) aluminium
 - (d) none of the above
57. Square of standard deviation is termed as :
- (a) variance
 - (b) quartiles
 - (c) percentiles
 - (d) root mean square deviation
58. The statistical method which helps us to estimate or predict the unknown value of one variable from the known value of the related variable is called :
- (a) correlation
 - (b) scatter diagram
 - (c) regression
 - (d) dispersion
59. When a mean deviation is divided by the average used in finding out the mean deviation itself, the resulting quantity is described as the :
- (a) coefficient of mean deviation
 - (b) coefficient of standard deviation
 - (c) coefficient of variance
 - (d) none of the above
60. Correlation studies can be represented by :
- (a) scatter diagram
 - (b) correlation graph
 - (c) both (a) and (b)
 - (d) none of the above