

Date:11-03-2022

Registration number:

**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU-27**

**B.Sc. ENVIRONMENTAL SCIENCE - I SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 21 (conducted in FEBRUARY 2022)**

**ES 121 - Divisions of the Environment**

**TIME: 3 HOURS MAX MARKS: 100**

This question paper comprises of **4** parts and **5** printed pages.

Instruction: Draw diagrams wherever necessary

**PART – A**

1. **Choose the most appropriate answer from the options provided**

**20q X 1m = 20m**

1. The primary meteorological parameter is
2. Relative humidity
3. Atmospheric pressure
4. Temperature
5. Precipitation
6. The instrument used to measure wind speed is
7. Anemometer
8. Hygrometer
9. Wind vane
10. Barometer
11. The atmospheric layer in which maximum weather activity takes place is the
12. Mesosphere
13. Stratosphere
14. Troposphere
15. Lithospher
16. The average atmospheric lapse rate is
17. 6.5 C/km
18. 2.5 C/km
19. 11.5 C/km
20. 7.5 C/km
21. The unit of measurement of ozone is
22. Percentage (%)
23. Parts Per Million (PPM)
24. Dalton’s Unit (DU)
25. Dobson’s Unit (DU)
26. Factor that does not affect insolation is
27. Angle of incidence of sun rays
28. Rotation of earth on its axis
29. Thickness of ozone layer
30. Transparency of atmosphere
31. Hydrologic cycle
32. plays a role in distributing atmospheric heat
33. moves water between the atmosphere and lithosphere, without any heat transfer
34. derives its energy from the lithosphere alone
35. does not include the biosphere
36. The property of water that enables it to remove wastes from living organisms and transport nutrients is
37. high and universal dissolving power
38. high freezing and boiling point
39. low melting point
40. high surface tension
41. A cirrus cloud is a
42. cloud of vertical development
43. low cloud
44. middle cloud
45. high cloud
46. The chemical that is commonly used in cloud seeding is
47. Silver nitrate
48. Silver iodide
49. Sodium iodide
50. Arsenic iodide
51. Limnology excludes waters with salinity more than
52. (> 03% or 30 g per litre)
53. (> 0.3% or 3 g per litre)
54. (> 0.03% or 0.3 g per litre)
55. (> 0.003% or 0.03 g per litre)
56. Classification of lakes based on primary productivity considers
57. seasonal flow patterns
58. available water volume
59. available non-nutrient sediments
60. available nutrients in the water body
61. Oligotrophic waterbodies have
62. high biodiversity
63. high accumulation of biomass
64. low biodiversity
65. low accumulation of nutrients
66. Thermocline is the region between
67. epilimnion and hypolimnion
68. epilimnion and metalimnion
69. limnetic and littoral zone
70. pelagic and abyssal zone
71. Cold monomictic lakes
72. are not influenced by temperature, for mixing
73. show mixing in winter
74. show mixing in summer
75. always have temperatures above 4°C
76. Aestival ponds
77. are always frozen
78. freeze in winter
79. freeze in summer
80. freeze during night
81. Lakes
82. have vegetation on their periphery
83. have a clean swept shore line
84. are always seasonal
85. have no floral diversity
86. A confined aquifer is
87. not enclosed by any impervious bed
88. always interacting with the water table
89. recharged after every rain
90. overlain by a relatively impervious layer
91. The large portion of the continental crust is composed of the igneous rock called
92. Gabbro
93. Granite
94. Basalt
95. Dolerite
96. Granite is
97. a sedimentary rock
98. a metamorphic rock
99. an igneous rock
100. a fossiliferous rock

**PART – B**

**Answer any ten of the following 10q X 2m = 20m**

1. What are the aims of environmental education?
2. Define Cryosphere.
3. List the forms of precipitation.
4. What is Earth’s Albedo?
5. Define a monsoon climate.
6. What is a discontinuity? Mention an example.
7. What are clouds of vertical development? Cite an example.
8. What is a neutral estuary?
9. Compare ocean currents and tides.
10. What is a well? Mention its types.
11. What is a sedimentary rock? Cite an example.
12. What is an endogenic process? Mention an example.
13. List any four types of soil.

**PART – C**

**Write explanatory notes on any five of the following 5q X 6m = 30m**

1. Evolution of atmosphere
2. El nino
3. Collision-Coalescence process
4. Stream profile
5. Acidification of sea waters
6. Volcanic products
7. Soil profile

**PART – D**

**Answer all the questions 3q X 10m = 30m**

1. Describe the thermal stratification of the atmosphere.

**OR**

Discuss the role of stratospheric ozone, its depletion and recovery.

1. Provide a detailed classification of lakes.

**OR**

Present a detailed classification of the clouds.

1. Give an account of the internal structure of the Earth.

**OR**

Explain the formation and types of intrusive and extrusive igneous rocks.