

OCET 2011

Sr. No.

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Question Booklet Series : A

Important : Please consult your Admit Card / Roll No. Slip before filling your Roll Number on the Test Booklet and Answer Sheet.

Roll No.

In Figures

In Words

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O.M.R. Answer Sheet Serial No.

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Signature of the Candidate : _____

Subject : M.Sc. (Environment Science)

Time : 90 minutes

Number of Questions : 75

Maximum Marks : 75

DO NOT OPEN THE SEAL ON THE BOOKLET UNTIL ASKED TO DO SO

INSTRUCTIONS

1. Write your Roll No. on the Question Booklet and also on the OMR Answer Sheet in the space provided and nowhere else.
2. Enter the Subject and Series Code of Question Booklet on the OMR Answer Sheet. Darken the corresponding bubbles with **Black Ball Point / Black Gel pen.**
3. Do not make any identification mark on the Answer Sheet or Question Booklet.
4. To open the Question Booklet remove the paper seal (s) gently when asked to do so.
5. Please check that this Question Booklet contains **75** questions. In case of any discrepancy, inform the Assistant Superintendent within 10 minutes of the start of test.
6. Each question has four alternative answers (A, B, C, D) of which only one is correct. For each question, darken only one bubble (A or B or C or D), whichever you think is the correct answer, on the Answer Sheet with **Black Ball Point / Black Gel pen.**
7. If you do not want to answer a question, leave all the bubbles corresponding to that question blank in the Answer Sheet. No marks will be deducted in such cases.
8. Darken the bubbles in the OMR Answer Sheet according to the Serial No. of the questions given in the Question Booklet.
9. Negative marking will be adopted for evaluation i.e., 1/4th of the marks of the question will be deducted for each wrong answer. A wrong answer means incorrect answer or wrong filling of bubble.
10. For calculations, use of simple log tables is permitted. Borrowing of log tables and any other material is not allowed.
11. For rough work only the sheets marked "**Rough Work**" at the end of the Question Booklet be used.
12. The Answer Sheet is designed for **computer evaluation**. Therefore, if you do not follow the instructions given on the Answer Sheet, it may make evaluation by the computer difficult. **Any resultant loss to the candidate on the above account, i.e., not following the instructions completely, shall be of the candidate only.**
13. After the test, hand over the Question Booklet and the Answer Sheet to the Assistant Superintendent on duty.
14. In no case the Answer Sheet, the Question Booklet, or its part or any material copied/noted from this Booklet is to be taken out of the examination hall. Any candidate found doing so, would be expelled from the examination.
15. A candidate who creates disturbance of any kind or changes his/her seat or is found in possession of any paper possibly of any assistance or found giving or receiving assistance or found using any other unfair means during the examination will be expelled from the examination by the Centre Superintendent / Observer whose decision shall be final.
16. **Telecommunication equipment such as pager, cellular phone, wireless, scanner, etc., is not permitted inside the examination hall. Use of calculators is not allowed.**

1. **The UN Conference on Environment and Development in June 1992 was held in :**
(A) Stockholm, Sweden (B) Adelaide, Australia
(C) New Delhi, India (D) Rio de Janeiro, Brazil
2. **Which one of the following is not suitable for medical waste disposal ?**
(A) Autoclaving (B) Incineration
(C) Composting (D) Chemical disinfection
3. **The quality of modern life isto the demographic quotient.**
(A) Equal to (B) Inversely proportional
(C) Directly proportional (D) Has no relation
4. **A primary group whose members are roughly equal in status is known as :**
(A) Social group (B) Institutional group
(C) Educational group (D) Peer group
5. **Ecomark scheme of India was launched in :**
(A) 1990 (B) 1991
(C) 1992 (D) 1995
6. **Who amongst the following is associated with 'chipko movement' ?**
(A) S.L. Bahuguna (B) Mahatma Gandhi
(C) Medha Patkar (D) Arundhati Roy
7. **Hygrister is an instrument used to measure :**
(A) Atmospheric pressure (B) Atmospheric temperature
(C) Atmospheric humidity (D) Solar radiation
8. **Which of the following is not a water borne disease ?**
(A) Schistosomiasis (B) Gastroenteritis
(C) Typhoid (D) Parkinson disease
9. **A cut off meander filled with standing water is called :**
(A) Oxbow lake (B) Delta
(C) Estuary (D) Retention pond
10. **Minimum thickness of carry bags made of virgin plastic or recycled plastic should not be less than :**
(A) 10 microns (B) 20 microns
(C) 25 microns (D) 30 microns

11. UNFCCC stands for :

- (A) United Nations Framework Controversies on Climate Change
- (B) United Nations Framework Convention on Climate Change
- (C) United Nations Freedom Control on Climate Change
- (D) United Nations Framework Convention on Carbon Credits

12. Which one of the following is the measure of dispersion ?

- (A) Mean
- (B) Mode
- (C) Median
- (D) Standard deviation

13. The term 'skewness' refers to :

- (A) Uniform symmetry
- (B) Lack of symmetry
- (C) Distribution
- (D) Central tendency

14. As the sample size increases, the value of standard error tends to :

- (A) Decrease
- (B) Increase
- (C) Remains the same
- (D) May increase or decrease

15. Population has to be given special attention, as it is an ever-increasing problem especially in India; therefore Population Day is celebrated every year on :

- (A) June 6
- (B) July 11
- (C) August 15
- (D) September 18

16. Under which of the following Act 'noise' has been specifically included as one of the pollutant :

- (A) The Environment (Protection) Act, 1986
- (B) The Water (Prevention and Control of Pollution) Act, 1974
- (C) The Air (Prevention and Control of Pollution) Act, 1981
- (D) The Forest Act, 1980

17. The term 'sustainable development' was brought into common use by the :

- (A) UNCED, 1992
- (B) Rio Declaration
- (C) World Commission on Environment & Development, 1987
- (D) Agenda 21

18. The main component of the landfill gas :

- (A) methane & carbon dioxide
- (B) nitrogen oxides
- (C) sulphur dioxide
- (D) ammonia

19. The United Nations declared the year 2010 as International year of :
- (A) Biodiversity (B) Water Conservation
(C) Climate Change (D) Renewable Energy
20. Which property of water is linked with the moderate temperature of islands throughout the world ?
- (A) Poor conductivity (B) Vast supply of internal energy
(C) High specific heat (D) High evaporation rate
21. For which colour refractive index of the glass is maximum ?
- (A) Red (B) Blue
(C) Indigo (D) Violet
22. Potential difference between a live wire and a neutral wire is :
- (A) 220 V (B) 110 V
(C) 440 V (D) 550 V
23. Which of the following gas is not a component of biogas ?
- (A) Sulphur dioxide (B) Nitrogen
(C) Methane (D) Carbon dioxide
24. DDT molecule is :
- (A) Hydrophobic, colourless, crystalline (B) Hydrophobic, coloured, crystalline
(C) Hydrophilic, colourless, crystalline (D) Hydrophilic, coloured, liquid
25. During summer milkman usually adds to milk so that it does not turn sour.
- (A) Baking soda (B) NaCl
(C) Lemon juice (D) Benzene
26. Potato chips manufacturers fill the packets of chips withgas to prevent the chips from getting oxidized.
- (A) Sulphur dioxide (B) Nitrogen
(C) Methane (D) Carbon dioxide
27. Which of the following is a bio-remedial technique ?
- (A) Composting (B) Oxidation
(C) Reduction (D) Sedimentation
28. The eating up of metals by the action of air, moisture or a chemical on their surface is called :
- (A) Attrition (B) Abrasion
(C) Adsorption (D) Corrosion

- 29. Which of the following constitute a food chain ?**
- (A) Grass, wheat, mango (B) Grass, cow, elephant
(C) Grass, goat, human (D) Grass, fish, cow
- 30. Self regulatory mechanism in an ecosystem is called :**
- (A) Homeostasis (B) Auto regulation
(C) Entropy (D) Amplitude
- 31. Of the total amount of energy that passes from one trophic level to another, about 10% is :**
- (A) Transpired (B) Burnt in respiration
(C) Stored in body tissues (D) Lost as heat
- 32. Species that have a major impact on ecosystem is known as :**
- (A) Flag species (B) Keystone species
(C) Pioneer species (D) Crown species
- 33. Diabetic mellitus is caused due to deficiency of :**
- (A) Insulin (B) Glucagon
(C) Thyroxin (D) Prolactin
- 34. Cerebral hemispheres are the centers of :**
- (A) Reflex actions (B) Thinking and memory
(C) Posture and equilibrium (D) Vision
- 35. In which of the following multiple fission occurs ?**
- (A) Plasmodium (B) Hydra
(C) Yeast (D) Amoeba
- 36. Genetic drift operates only in :**
- (A) Smaller populations (B) Larger populations
(C) Mendelian populations (D) Island populations
- 37. Through hydrolysis complex organic molecules are broken down into :**
- (A) Carbonic acid and alcohol (B) Sugars, amino acids, fatty acids
(C) Hydrogen, CO₂, NH₃ (D) CH₄ and CO
- 38. Flow of energy in an ecosystem is :**
- (A) Cyclic (B) Uni-directional
(C) Scattered (D) Bi-directional

39. Every element has a whole spectrum of possible effects on a particular plant or animal. This dose dependency can be depicted by :
- (A) Dose threshold curve (B) Dose dependency curve
(C) Dose response curve (D) Dose balance curve
40. Wetlands where source of water is snow and are acidic and nutrient poor are called :
- (A) Swamps (B) Marshes
(C) Bogs (D) Everglades
41. Which of the following has the biggest area ?
- (A) National zoological park (B) Biosphere reserve
(C) National Park (D) Wildlife sanctuary
42. Cryo-preservation is an example ofpreservation.
- (A) in-situ (B) ex-situ
(C) Both A and B (D) Neither A nor B
43. The heliocentric theory of the solar system was evolved by :
- (A) Kant (B) Copernicus
(C) Galileo (D) Kepler
44. Which of the following contains the maximum biodiversity on the surface of the earth ?
- (A) Temperate zone (B) Torrid zone
(C) Arid zone (D) Tropical zone
45. Our earth is in the shape of :
- (A) Geoid (B) Ellipse
(C) Parabola (D) Sphere
46. Largest consumers of coal in India are :
- (A) Thermal power plants (B) Cement industries
(C) Steel industries (D) Fertilizer industries
47. Which of the following can grow on water logged soil ?
- (A) Rice (B) Wheat
(C) Maize (D) Millets
48. Between what heights is the ozone layer found in the atmosphere ?
- (A) 2—3 Km (B) 0—1 Km
(C) 19—30 Km (D) 70—80 Km

- 49. The important sinks of most atmospheric gases are :**
- (A) Oceans (B) Vegetation
(C) Buildings (D) Both A & B
- 50. Of the total fresh water available, the amount trapped in snow constitutes :**
- (A) 16% (B) 98%
(C) 80% (D) 70%
- 51. Western disturbances are associated with :**
- (A) Slow and steady rainfall (B) Torrential rainfall
(C) Rainfall in sudden bursts (D) No rainfall
- 52. Kodarma, in Jharkhand is the leading producer of which of the following ?**
- (A) Bauxite (B) Mica
(C) Iron ore (D) Copper
- 53. Which amongst the following is not true about alkaline soils ?**
- (A) are clay soils (B) have pH > 9
(C) have poor soil structure (D) are rich in NaOH
- 54. Burning of fossil fuel, paint smelters, exhaust release from automobiles are main source of :**
- (A) Mercury (B) Lead
(C) Zinc (D) Cadmium
- 55. Sphygmomanometer is used to measure :**
- (A) Blood pressure (B) Blood sugar
(C) Blood platelets (D) Bone density
- 56. Bile which helps in digestion of food is stored in :**
- (A) Lungs (B) Kidneys
(C) Gall Bladder (D) Intestines
- 57. With what would you associate the term 'cone of depression' ?**
- (A) Nitrate pollution (B) Tubewell irrigation
(C) Water logging (D) Eutrophication
- 58. The waste left after the extraction of mineral is called :**
- (A) Gangue (B) Ore
(C) Ceramic (D) Rock
- 59. Anthrax is one of the most potent biological weapons in the world and is spread by :**
- (A) *Thiobacillus* (B) *Bacillus anthracis*
(C) *Bacillus anthratum* (D) *Bacillus thuricide*

- 60. The pore spaces formed after the formation of rocks is termed as :**
- (A) Primary porosity (B) Secondary porosity
(C) Tertiary porosity (D) Temporary porosity
- 61. Which hormones regulate calcium and phosphorus levels in the body ?**
- (A) Insulin and glucagon (B) Calcitonin and parathormone
(C) Thyroxin and oxytocin (D) Oxytocin and vasopressin
- 62. The phenomenon that registers increase in temperature with increase in height in troposphere is called :**
- (A) temperature inversion (B) temperature anomaly
(C) thermal variation (D) thermal conduction
- 63. Smoke is in diesel engine emissions than petrol engine emissions.**
- (A) Less (B) More
(C) Same (D) May be more or less
- 64. The speed of sound will be maximum in :**
- (A) Vacuum (B) Wood
(C) Wool (D) Steel
- 65. Threshold of hearing is dB.**
- (A) 0 (B) 10
(C) 20 (D) 100
- 66. pH value of potable water is :**
- (A) 9.0—11.5 (B) 6.5—8.0
(C) 3.5—5.5 (D) 10.0—11.0
- 67. The amount of CO₂ present in the unpolluted air is approximately :**
- (A) 0.033% (B) 0.33%
(C) 3.3% (D) 33.3%
- 68. Vegetables grown by the roadside have higher concentration of :**
- (A) Pb (B) Hg
(C) Fe (D) Ca
- 69. COD is always :**
- (A) equal to BOD (B) lower than BOD
(C) Equal to or higher than BOD (D) 1.4 times BOD
- 70. Suspended colloidal matter in water can be measured with :**
- (A) Spectrophotometer (B) Turbidity meter
(C) Colorimeter (D) pH meter

71. Haemoglobin has the maximum affinity for absorbing which of the following ?

- (A) CO (B) NO₂
(C) SO₂ (D) O₃

72. Cracking and weakening of rubber is caused by :

- (A) SO₂ (B) NO₂
(C) H₂S (D) O₃

73. pH of natural lakes is reduced to as low as 4 because of :

- (A) CO (B) CO₂
(C) CH₄ (D) CCl₄

74. Which of the following is not an effect of deforestation ?

- (A) Scarcity of fuel and fodder (B) Climate change
(C) Population increase (D) Soil erosion

75. PPP stands for :

- (A) Polluter Pays Penalty (B) Polluter Pays Principle
(C) Polluter Pays Price (D) Polluter Pays Peanut

ROUGH WORK

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