



FOR KUET EXAM PREPARATION

KUET 2023

Question Paper · M.Sc. Geoinformatics

EXAM	YEAR	TYPE	SUBJECT
KUET	2023	Question Paper	M.Sc. Geoinformatics

Sr. No.

ENTRANCE TEST-2023**SCHOOL OF ENVIRONMENTAL AND EARTH SCIENCES****GEOINFORMATICS****Total Questions : 60****Question Booklet Series****A****Time Allowed : 70 Minutes****Roll No. :**

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Instructions for Candidates :

1. Write your Entrance Test Roll Number in the space provided at the top of this page of Question Booklet and fill up the necessary information in the spaces provided on the OMR Answer Sheet.
2. OMR Answer Sheet has an Original Copy and a Candidate's Copy glued beneath it at the top. While making entries in the Original Copy, candidate should ensure that the two copies are aligned properly so that the entries made in the Original Copy against each item are exactly copied in the Candidate's Copy.
3. All entries in the OMR Answer Sheet, including answers to questions, are to be recorded in the Original Copy only.
4. Choose the correct / most appropriate response for each question among the options A, B, C and D and darken the circle of the appropriate response completely. The incomplete darkened circle is not correctly read by the OMR Scanner and no complaint to this effect shall be entertained.
5. Use only blue/black ball point pen to darken the circle of correct/most appropriate response. In no case gel/ink pen or pencil should be used.
6. Do not darken more than one circle of options for any question. A question with more than one darkened response shall be considered wrong.
7. There will be '**Negative Marking**' for wrong answers. Each wrong answer will lead to the deduction of 0.25 marks from the total score of the candidate.
8. Only those candidates who would obtain positive score in Entrance Test Examination shall be eligible for admission.
9. Do not make any stray mark on the OMR sheet.
10. Calculators and mobiles shall not be permitted inside the examination hall.
11. Rough work, if any, should be done on the blank sheets provided with the question booklet.
12. OMR Answer Sheet must be handled carefully and it should not be folded or mutilated in which case it will not be evaluated.
13. Ensure that your OMR Answer Sheet has been signed by the Invigilator and the candidate himself/herself.
14. At the end of the examination, hand over the OMR Answer Sheet to the invigilator who will first tear off the original OMR sheet in presence of the Candidate and hand over the Candidate's Copy to the candidate.

SM-29552-A

1**[Turn over**

1. $(10101)_2 + (1101)_2 =$
 - (A) $(110010)_2$
 - (B) $(110101)_2$
 - (C) $(100010)_2$
 - (D) $(101100)_2$
2. SSD stands for :
 - (A) Solid Storage Drive
 - (B) Serial Storage Drive
 - (C) Solid Static Drive
 - (D) Solid State Drive
3. Which one is not a GIS programming language ?
 - (A) Fedora
 - (B) Java
 - (C) C++
 - (D) Python
4. _____ is a network of devices that have embedded hardware and software to communicate (connect and exchange data) with other devices on the same network.
 - (A) Internet of Things
 - (B) Virtual Private Network
 - (C) Telnet
 - (D) Ping
5. The boundary surface between the earth's mantle and core is called :
 - (A) Gutenberg discontinuity
 - (B) Mohorovicic discontinuity
 - (C) Lehmann discontinuity
 - (D) Conrad discontinuity
6. It is believed by some geologists that Dal Lake is the remnant of a Pleistocene oligotrophic lake. Pleistocene Epoch began around :
 - (A) 1.8 million years ago
 - (B) 2.58 million years ago
 - (C) 3.6 million years ago
 - (D) 5.33 million years ago
7. Playa is a landform associated with :
 - (A) Glaciers
 - (B) Deserts
 - (C) River basin
 - (D) Coasts
8. An overturned fold in which the axial surface is more or less horizontal, is called :
 - (A) Recumbent fold
 - (B) Chevron fold
 - (C) Isoclinal fold
 - (D) Ptygmatic fold
9. Headquarters of the National Bureau of Soil Survey & Land Use Planning is located in :
 - (A) Hyderabad
 - (B) Srinagar
 - (C) Nagpur
 - (D) Lucknow
10. Exfoliation is a result of :
 - (A) Metamorphism
 - (B) Physical Weathering
 - (C) Chemical Weathering
 - (D) Splash Erosion

11. The basis of Land Capability Classification is :
 - (A) Existing fertility and productivity
 - (B) The potential for agricultural and other uses
 - (C) Capacity to resist soil erosion
 - (D) All of these
12. Which factor is not important for soil formation ?
 - (A) Time
 - (B) Parent material
 - (C) Gravity
 - (D) Climate
13. The visible portion of EMR lies between :
 - (A) 0.2 and 0.5 micrometers
 - (B) 0.4 and 0.7 micrometers
 - (C) 0.6 and 0.9 micrometers
 - (D) None of the above
14. Which one is an Indian Remote Sensing Satellite ?
 - (A) Formosat
 - (B) Envisat
 - (C) Radarsat
 - (D) Cartosat
15. GIS is :
 - (A) A container of maps in digital form
 - (B) A computerized tool for solving geographic problems
 - (C) A spatial decision support system
 - (D) All of the above
16. In a topographic map, a few contours are almost superimposed over one another. It indicates :
 - (A) Gentle slope
 - (B) Cliff
 - (C) Spur
 - (D) None of these
17. Pong Reservoir is built on which river ?
 - (A) Beas
 - (B) Sutlej
 - (C) Myntdu
 - (D) Kopili
18. Evapotranspiration may be measured by :
 - (A) Pyranometer
 - (B) Hypsometer
 - (C) Hygrometer
 - (D) Lysimeter
19. Hydropower potential estimation is not dependent on :
 - (A) Head
 - (B) Reservoir Volume
 - (C) Gravity
 - (D) Steam flow
20. Steeply rising ground slopes marking the outer limits of a floodplain are called :
 - (A) Bluff
 - (B) Levee
 - (C) Backswamp
 - (D) Neck
21. A rapidly descending mass, usually of snow, down a mountainside is called :
 - (A) Subsidence
 - (B) Rock slide
 - (C) Debris slide
 - (D) Avalanche

22. The 13th Goal of the United Nations Department of Economics and Social Affairs is focused on :
- Clean Water and Sanitation
 - Climate Change
 - Affordable and Clean Energy
 - Sustainable Cities and Communities
23. The Kyoto Protocol was adopted in Kyoto, Japan, on :
- 14 June 1992
 - 22 April 2016
 - 11 December 1997
 - 18 March 2015
24. As per the Central Pollution Control Board, Ministry of Environment, Forests and Climate Change, the threshold of Very Poor to Severe National Air Quality Index (AQI) value is :
- 400
 - 350
 - 300
 - 250
25. Which Wildlife Sanctuary is not located in Jammu and Kashmir ?
- Jasrota
 - Overa Aru
 - Kibber
 - Hirapora
26. Metrorail Network Map is an ideal example of :
- Chloropleth
 - Isopleth
 - Cartogram
 - Heat map
27. On a 1:50,000 toposheet, the distance between two villages is found to be 2 cm. What is their ground distance ?
- 1000 m
 - 10 km
 - 25 km
 - 10 m
28. Geological Survey of India has recently reported Lithium and Gold deposits in which district of Jammu & Kashmir ?
- Rajouri
 - Ramban
 - Reasi
 - Kulgam
29. An individual's collection of genes is called :
- Genotype
 - Phenotype
 - Trait
 - Allele
30. Male reproductive part of a flower is called :
- Zygote
 - Sepal
 - Pistil
 - Stamen
31. Net Primary Productivity of an ecosystem is measured by :
- Biomass production during photosynthesis
 - Gross primary productivity minus respiration losses
 - Formation of new organic matter by consumers
 - None of the above

32. The movement of materials from the leaves to other tissues of the plant is called :
 (A) Tropic movement
 (B) Guttation
 (C) Transpiration
 (D) Translocation
33. The small intestine of a human has three parts. The middle part is called :
 (A) Duodenum
 (B) Jejunum
 (C) Ileum
 (D) Colon
34. The transition between forest and grassland biomes is called :
 (A) Tundra
 (B) Savanna
 (C) Taiga
 (D) None of these
35. Which one is not an endocrine gland ?
 (A) Mucous
 (B) Pituitary
 (C) Adrenal
 (D) Pancreas
36. Alfred Russel Wallace divided the earth into how many biogeographic realms based on the distribution of animals and plants ?
 (A) 4
 (B) 5
 (C) 6
 (D) 7
37. Which law describes the orbits of planets around the sun ?
 (A) Newton's law
 (B) Faraday's law
 (C) Kepler's law
 (D) Kirchoff's Law
38. The first law of thermodynamics is the principle of :
 (A) Conservation of mass
 (B) Conservation of energy
 (C) Conservation of charge
 (D) None of the above
39. Light travels :
 (A) Fastest in vacuum
 (B) Fastest in water
 (C) Fastest in air
 (D) Independent of the medium
40. Which one is not a magnetic material ?
 (A) Iron
 (B) Nickel
 (C) Cobalt
 (D) Zinc
41. Isotopes of an element have :
 (A) Different chemical and physical properties
 (B) Similar chemical and physical properties
 (C) Similar chemical but different physical properties
 (D) Similar physical but different chemical properties
42. pH value less than 7 indicates that the solution is :
 (A) Acidic
 (B) Basic
 (C) Neutral
 (D) Hypotonic

43. Which law states that the volume of an ideal gas at constant pressure is directly proportional to its absolute temperature ?
 (A) Joule's law
 (B) Avogadro's law
 (C) Boyle's law
 (D) Charles's law
44. Removal of oxygen from a compound is an example of :
 (A) Oxidation
 (B) Reduction
 (C) Oxygenation
 (D) None of the above
45. The main aim of social forestry is :
 (A) To utilize the wasteland
 (B) To meet the requirement of fuel wood and fodder
 (C) To create an ecological balance
 (D) None of these
46. In a food chain, the third trophic level is always occupied by :
 (A) Carnivores
 (B) Herbivores
 (C) Producers
 (D) Decomposers
47. Which biogeochemical cycle is the slowest ?
 (A) Carbon
 (B) Nitrogen
 (C) Phosphorus
 (D) Sulphur
48. Which glacier in Kashmir is locally named 'Gwash Brani' - Goddess of Light ?
 (A) Thajwas
 (B) Nehnar
 (C) Kolahoi
 (D) Panjtarni
49. Most of the weather phenomena take place in the :
 (A) Mesosphere
 (B) Troposphere
 (C) Stratosphere
 (D) Ionosphere
50. The solar energy received at the earth's surface is called :
 (A) Energy budget
 (B) Diffusion
 (C) Albedo
 (D) Insolation
51. Which among the following is not a renewable source of energy ?
 (A) Solar energy
 (B) Biomass energy
 (C) Hydro-power
 (D) Geothermal energy
52. Which one is a reliable tool for studying paleoclimates ?
 (A) Tree-ring reconstruction
 (B) Ice-core study
 (C) Coral reefs
 (D) All of these

53. In a negatively skewed distribution :
- Mean $>$ Mode $>$ Median
 - Mode $<$ Median $>$ Mean
 - Mode $>$ Median $>$ Mean
 - Mean $>$ Median $>$ Mode
54. Sample is regarded as a subset of :
- Data
 - Set
 - Distribution
 - Population
55. What among the following is not part of a regression equation ?
- Intercept
 - Slope
 - Coefficient of variation
 - Error term
56. A scatterplot represents the relationship between :
- Cause and effects
 - Cause and problem
 - Effects and output
 - Production and productivity
57. The value of Permutation($n, n-1$) is :
- n
 - $n!$
 - $2n$
 - $2n!$
58. The polynomial equation $x(x + 1) + 8 = (x + 2)(x - 2)$ is :
- Linear equation
 - Quadratic equation
 - Cubic equation
 - Bi-quadratic equation
59. If a matrix P is of order 3×4 and a matrix Q is of order 4×3 , then the order of QP is :
- 4×3
 - 3×4
 - 3×3
 - 4×4
60. Which of the following statement is not correct ?
- $\log_{10}(1) = 0$
 - $\log_{10}(10) = 1$
 - $\log(2+3) = \log(2 \times 3)$
 - $\log(1+2+3) = \log 1 + \log 2 + \log 3$

ROUGH WORK**SM-29552–A****8**
■**25**