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FOR KUET EXAM PREPARATION

KUET 2022 Question Paper · M.Sc. Geoinformatics

EXAM	YEAR	TYPE	SUBJECT
KUET	2022	Question Paper	M.Sc. Geoinformatics

Sr. No. 070

ENTRANCE TEST-2022

SCHOOL OF ENVIRONMENTAL AND EARTH SCIENCES

GEO-INFORMATICS

Total Questions : 60
Time Allowed : 70 Minutes

Question Booklet Series B

Roll No. : | | | | | | |

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.

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1. Which of the following UNS SDGs focuses on sustainable cities and communities ?
   (A) Goal 9
   (B) Goal 10
   (C) Goal 11
   (D) Goal 12
2. How many nation-states have signed UNFCCC ?
   (A) 145
   (B) 155
   (C) 165
   (D) 175
3. Disaster Management Act was passed by Rajya Sabha in :
   (A) 2005
   (B) 2006
   (C) 2007
   (D) 2008
4. Which of the following Acts was passed by the Indian Parliament in wake of the Bhopal Gas Tragedy ?
   (A) Environmental Protection Act
   (B) Disaster Management Act
   (C) Air (Prevention and Control of Pollution) Act
   (D) Water Pollution Act
5. Which one of the following is the largest National Park ?
   (A) Kazinag National Park
   (B) Dachigam National Park
   (C) Hemis National Park
   (D) Desert National Park
6. The largest glacier in Kashmir Valley is :
   (A) Kolahoi
   (B) Thajiwas
   (C) Nehnar
   (D) Shishram
7. The largest wetland of UT of J&K is :
   (A) Wular
   (B) Hokersar
   (C) Shallabug
   (D) Mansar
8. Map scale is :
   (A) The ratio between a distance on a map and the corresponding distance on the ground
   (B) The ratio between a distance on the ground and the corresponding distance on a map
   (C) The ratio between a distance on the ground and the corresponding distance on a GPS
   (D) All of these
9. Eutrophication of lake ecosystems is due to :
   (A) High DO and bacteria
   (B) Nitrogen and phosphorous
   (C) Chromium and mercury
   (D) Lead and hydrogen sulphide
10. Which of the following regions has the highest biodiversity ?
    (A) Tundra
    (B) Taiga
    (C) Mangroves
    (D) Tropical rain-forest

11. The final stable community in an ecological succession is called :
    (A) Seral community
    (B) Final community
    (C) Ultimate community
    (D) Climax community

12. The process of weakening the seed coat to break the dormancy is called :
    (A) Vernalisation
    (B) Scarification
    (C) Stratification
    (D) None of the above

13. Which of the following is a state bird of UT of J&K ?
    (A) Kalij Pheasant
    (B) Black-necked crane
    (C) Paradise flycatcher
    (D) Himalayan vulture

14. Which of the following natural regions is known as the 'Land of Big Games' ?
    (A) Temperate grassland
    (B) Tropical monsoon region
    (C) Tropical savannah region
    (D) Tundra

15. Permafrost is found in which of the following biomes ?
    (A) Tundra
    (B) Taiga
    (C) Grassland
    (D) Forest

16. Which of the following prevents the entry of food into the windpipe ?
    (A) Trachea
    (B) Larynx
    (C) Epiglottis
    (D) Pharynx

17. Which of the following waves have the shortest wavelength ?
    (A) Cosmic rays
    (B) X-rays
    (C) Microwaves
    (D) Radiowaves

18. The speed of light in vacuum is approximately :
    (A) 300000 km/s
    (B) 300000 m/s
    (C) 300000 mi/s
    (D) 300000 cm/s

19. When a cricket ball is thrown up vertically, the force of gravity acting on it :
    (A) Is opposite to the direction of motion of the ball
    (B) Is in the same direction of motion as the ball
    (C) Increases as it rises up
    (D) None of the above

20. What happens when light travels from air to glass ?
    (A) It bends towards the normal
    (B) It bends away from the normal
    (C) It becomes parallel to the normal
    (D) There is no change

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21. The density of water is maximum at :

(A) 0°C

(B) 1°C

(C) 2°C

(D) 4°C

22. Who was the first to propose the Atomic Theory ?

(A) J.J. Thomson

(B) John Dalton

(C) Neils Bohr

(D) T.A. Edison

23. Which of the following given elements is the most electropositive ?

(A) S

(B) Cl

(C) Mg

(D) Al

24. The equation of state for an ideal gas is represented as :

(A) PV=R/T

(B) P/V=RT

(C) P/V=nRT

(D) PV=nRT

25. Carbon is a common component of :

(A) Limestone

(B) All organisms

(C) Volcanic gases

(D) All of the above

26. How does the concentration of carbon dioxide in the atmosphere affect climate ?

(A) As carbon dioxide concentration increases, temperatures decreases

(B) As carbon dioxide concentration increases, temperatures increases

(C) Carbon dioxide concentrations do not affect climate

(D) As carbon dioxide concentrations increase, temperatures become more random

27. Which process releases nitrogen gas (N_2) back into the atmosphere ?

(A) Denitrification

(B) Nitrogen fixation

(C) Decay

(D) Nitrification

28. Phosphorus does NOT travel through which of the following spheres ?

(A) Lithosphere

(B) Atmosphere

(C) Biosphere

(D) Geosphere

29. Although direct measurements of atmospheric carbon dioxide have only been taken consistently since the 1950s, scientists have been able to retrieve data from the proxies that include :

(A) Ice cores from ice sheets

(B) Sediment cores from the ocean

(C) Tree rings

(D) All of the above

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30. The height of the troposphere is approximately :
(A) 80 km
(B) 50 km
(C) 12 km
(D) 120 km

31. The lowest layer of the atmosphere is :
(A) Troposphere
(B) Stratosphere
(C) Ionosphere
(D) Thermosphere

32. Which of the following is a primary air pollutant ?
(A) Ozone
(B) Formaldehyde
(C) Photochemical smog
(D) Hydrocarbons

33. The median of 2,6,6,8,4,2,7,9 values is :
(A) 4
(B) 5
(C) 6
(D) 7

34. The average of the three numbers is 21. If two of the numbers are 4 and 12, what is the remaining number ?
(A) 37
(B) 47
(C) 57
(D) 67

35. The fishbowl draw is a method of drawing :
(A) Independent sample
(B) Structured sample
(C) Non-random sample
(D) Random sample

36. For a perfectly homogenous population, the minimum required sample size is :
(A) 1
(B) 2
(C) Whole population
(D) Infinite

37. The sum of the first 200 natural numbers is :
(A) 19100
(B) 20100
(C) 21100
(D) 22100

38. If $A = \begin{bmatrix} -1 & 4 \\ 5 & 8 \end{bmatrix}$, the trace of matrix A is :
(A) 6
(B) 7
(C) 8
(D) 9

39. What is the order of matrix $A = \begin{bmatrix} 3 & 5 \\ 7 & 9 \end{bmatrix}$?
(A) 2×3
(B) 2×2
(C) 3×3
(D) 4×4

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40. The main key difference between AND gate and OR gate is that :

(A) AND gate gives a true output only when all the inputs are true whereas the OR gate gives a true output when at least one of the inputs is true

(B) AND gate gives a true output only when one of the inputs is true whereas the OR gate gives a true output when all the inputs are true

(C) Both (A) and (B)

(D) None of the above

41. The decimal equivalent of 101010 is :

(A) 38

(B) 40

(C) 42

(D) 44

42. The binary equivalent of 323 :

(A) 101000111

(B) 101000010

(C) 101000001

(D) 101000011

43. The full form of HTTP is :

(A) HyperText Transfer Package

(B) HyperTransfer Text Package

(C) HyperText Transfer Protocol

(D) HyperText Transfer Practice

44. The location of a resource on the internet is given by :

(A) URL

(B) Email

(C) IP

(D) Protocol

45. Which of the following is the longest glacier outside the polar regions ?

(A) Fedchenko Glacier

(B) Siachin Glacier

(C) Gangotri Glacier

(D) Hispar Glacier

46. Mohorovičić discontinuity marks the boundary between :

(A) Crust and Mantle

(B) Mantle and Core

(C) Inner and Outer Core

(D) None

47. Continental drift theory was proposed by :

(A) Alfred Wegener

(B) Thomas Alva Edison

(C) Arthur Holmes

(D) Eduard Suess

48. Holocene is the name given to the geological epoch that began :

(A) 5,650 years BP

(B) 11,650 years BP

(C) 15,650 years BP

(D) 20,650 years BP

49. Gully erosion is an advanced stage of :

(A) Rill erosion

(B) Splash erosion

(C) Sheet erosion

(D) Wind erosion

50. Which of the following soil conservation methods is generally implemented in the coastal and dry regions ?
(A) Contour ploughing
(B) Terrace farming
(C) Mulching
(D) Shelter belts

51. Which of the following is the first stage of water erosion ?
(A) Rill erosion
(B) Sheet erosion
(C) Gully erosion
(D) Splash erosion

52. *Karewas* are found in :
(A) West Bengal
(B) Rajasthan
(C) Nagaland
(D) Jammu and Kashmir

53. A handheld camera with the flash turned on during dim light is an example of :
(A) Active sensor
(B) Passive sensor
(C) Proactive sensor
(D) None

54. GIS allows the user to perform :
(A) Store data
(B) Edit data
(C) Create searches
(D) All of the above

55. GIS was coined by :
(A) Roger Tomlinson
(B) Roger James
(C) Richard Frost
(D) None of the above

56. On a topographic map, the closer the contour lines the :
(A) Steeper the slope
(B) Flatter the land surface
(C) Gentler the slope
(D) Lower the elevation

57. The graph showing discharge versus time represents :
(A) Hydrograph
(B) Pluviograph
(C) Environmental flow
(D) None of the above

58. Hydrograph will peak faster in :
(A) Forested land
(B) Agricultural land
(C) Urbanized land
(D) All of the above

59. Pluviograph is an instrument used for measuring :
(A) Snow
(B) Hail
(C) Precipitation
(D) Sleet

60. Pyranometer is an instrument used for measuring :
(A) Lunar radiation
(B) Solar radiation
(C) Terrestrial radiation
(D) None of the above

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