

ELEMENTARY SURVEY QUESTIONS

1. Give reasons for each of the following
 - a. Ranging pole are painted metal materials
 - b. Field notebook is very important in chain survey
 - c. Back ward bearing are taken during prismatic compass survey
 - d. Booker is highly needed in survey
 - e. Plane table survey is not suitable in rainy condition
 - f. Chain survey is not suitable to be conducted in high temperature
 - g. Wind becomes an obstacle when chaining
2. Moses is good land surveyor, he was told to carry out chain survey so as to determine the linear measurement of the school compound at Kagu Secondary School.
 - a. Identify two instruments that were used to measure short distance
 - b. Describe two instruments that were used to set out angles
 - c. Which instrument was used for recording measurements?
 - d. Mention an instrument that was used for measuring long distance than those you have mentioned in (a) above
3. Give the meaning of the following terms
 - a. Back sight
 - b. Fore sight
 - c. Intermediate sight
 - d. Changing point
 - e. Height of collimation
 - f. Bench mark
4. Chigange is a good cartographer; he intends to produce a contour map of Geita.
 - a. Which method of survey would you advise him to use?
 - b. Briefly explain five significance of the method that you would advise him to use
5. Differentiate chain survey from leveling (give six differences)
6. Give out the uses of the following instruments used in chain survey
 - a. Pegs
 - b. Chain
 - c. Tape
 - d. Ranging pole
 - e. Field note book
 - f. An optical square
 - g. Arrows
 - h. Cross staff
7. Explain five importance of chain survey in our daily life

8. There was a land conflict between villagers of Nyawilimilwa and the head master of Nyawilimilwa secondary school. The village executive officer decided to invite survey experts to determine the distance of the school compound.
 - a. Which method of survey was employed by surveyors
 - b. Describe four instruments used in the method you have mentioned in (a) above
 - c. Explain three procedures that were followed in surveying
9. Form three students at Kassa charity secondary school were planning to conduct survey around the school compound; they prepared themselves before starting actual surveying so as to ensure that surveying activity is carried out accurately. Briefly explain seven pre-survey activities they considered
10. What is plane table survey? Analyze five importance of plane table survey.
11. Describe five good booking methods used in chain survey
12. Explain the best steps required in order to conduct accurate chain survey
13. a. what is leveling
 - c. mention two types of leveling survey
 - d. describe two methods of leveling survey
 - e. describe five instruments used in leveling survey
14. Describe four advantages and four disadvantages of chain survey
15. With the aid of diagram explain three types of obstacle in chain survey
16. a. what is chain survey
 - b. outline four principles of conducting chain survey
17. Describe six necessary precautions in using chain survey instruments
18. With the aid of diagram explain how you can avoid pond obstacle when chaining
19. Most of schools in Tanzania are not surveyed; therefore they have no good policy of land use. As a surveyor conduct a survey at your school area by using the following guidelines
 - a. Suggest any technique of survey that you will prefer to use during your survey
 - b. List and explain five instruments that you will use
 - c. From the survey you have conducted, identify two merits that your school will get
 - d. From your survey list any two obstacles that you have faced during actual survey
20. With examples write short notes on the following terms
 - a. Reconnaissance
 - b. Errors in chain survey
 - c. Obstacles in chain survey
21. Explain five differences between plane survey from geodetic survey
22. A surveyor was measuring the area of a golf course, but in the process he encountered an obstacle which is pond.
 - a. Identify and explain the method of survey used by a surveyor
 - b. List any three equipments used in the surveying method in (a) above
 - c. Briefly outline three disadvantages of surveying method used in (a) above
23. a. what is error in chain survey
 - b. Briefly explain five sources of error in chain survey

24. Explain and give two importance for each for the following concepts used in survey
 - a. Open traverse
 - b. Crossed traverse
 - c. Prismatic compass
25. a. what is prismatic compass survey
 - b. outline five source of error in prismatic compass survey
 - c. outline three measures that can be used to reduce accumulation of errors in prismatic compass survey
26. The ministry of education, science and technology advised all heads of schools in Tanzania to construct football grounds. The head master at Kagu secondary school decided to implement this by employing surveyors and within two months later modern football ground was constructed in spite of errors and obstacles that emerged during the surveying process
 - a. Identify and explain the meaning of survey method used
 - b. Briefly explain five source of errors in the method used in (a) above
 - c. Outline five measures that can be used to reduce accumulation of errors in the method used in (a) above
27. Give reasons for the following questions
 - a. Why it is not advised to wear bangles when carrying out prismatic compass survey?
 - b. Why survey team is advised to avoid obstacles when they meet them before proceeding with surveying process?
 - c. Why it is impossible to carry out plane table survey without having spirit level?
 - d. Why survey can't be carried out by a single person?
 - e. What is the function of tripod stand in leveling survey?
 - f. Why surveyors are advised to use short chain as possible as they can when chaining?
28. Analyze four importance of booking in survey
29. With example explain three procedures of conducting survey with their importance.
30. Write short notes on the following terms used in survey
 - a. Booking
 - b. Field note book
 - c. Engineering survey
 - d. Cadastral survey
 - e. Reconnaissance
 - f. Surveying
 - g. Accidental errors
 - h. Systematic error
 - i. Traversing
 - j. Topographical survey
31. Describe procedures of conducting plane table survey
32. Outline five precautions to be taken when using prismatic compass
33. What would you do when preparing chain survey? Describe three importance of surveying

34. Obstacles are so common in chain survey due to the presence of various features on the earth's Surface. By using diagrams explain four (4) methods used to overcome obstacles in chain survey
35. The methods of surveying are classified according to the main instruments used. Briefly describe the main instruments used in each method of survey.
36. Mention essential instruments used in plane table survey
37. Chigange visited at Lwemo secondary school, he found form three students measuring backward bearing and forward bearing between two points. He asked them which method of survey they applied, all of them said that they don't know. As an expert in survey
 - a. What was the method of survey used?
 - b. Mention three application of the method of survey used
 - c. Describe any three (3) instruments that were used by form three students.
38. Form four students at Senga Secondary school were carrying out survey in an area where the School laboratory would be built so as to enhance improvement of science subjects. You as a geographer
 - a. Suggest three (3) stages in which form four students should follow when conducting survey
 - b. Describe five equipments which form four students would use during surveying.
39. Majura is a land surveyor, he was told to conduct survey but before he started any activity he decided to visit the area to be surveyed. He found the area having iron minerals. From his experience he said that one method of survey was not suitable to be used in the area. As a competent student in survey
 - a. Name the method of survey that was not suitable to be used in the area
 - b. Briefly give out reason why the method was not suitable?
 - c. Outline four demerits of using the method you have named in (a) above.
40. Tama and Mtesigwa are form three students from one among the schools here in Geita. They were ordered to find the level of the football ground using the knowledge they had in geography
 - a. State the technique of land survey they have to use
 - b. Provide three pre- survey activities they had to do before starting an activity
 - c. Explain three instruments they were supposed to use
41. In a certain school, students were asked by the headmaster to construct a football pitch that could be used during the friendly match with a nearby school. The students decided to apply surveying knowledge they acquired in geography hence they opted for the use of leveling
 - a. Describe any three instruments which could be used
 - b. Explain three procedures they followed during levelling.
42. Classify obstacles in chain survey. Suppose A and B were two points on the line approaching an obstacle which you cannot see through, how would you conduct a chain survey across it.
43. Explain four significance of conducting leveling survey
44. With examples describe methods of land survey

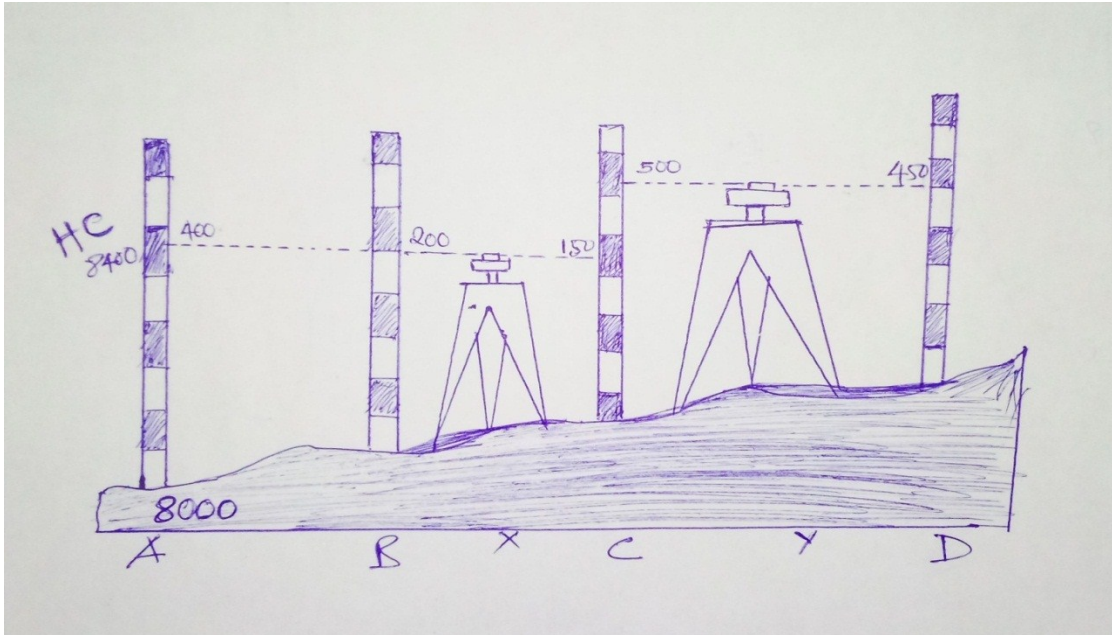
45. Geography teacher at Kagu Secondary School, when he was teaching survey to form three students he said that misuse of equipments when surveying influence the occurrence of errors. Therefore he advised us to be aware when using them. As a student with enough knowledge in geography outline six (6) necessary precautions to be taken when using chain survey instrument.
46. Mr. Chigange is a geography teacher at Kassa Charity Secondary school, he told form three students to prepare equipment so that they can carry out a survey. The following instruments were prepared for an activity Tape, field note book, pegs, cross staff, ranging poles and arrows. As a surveyor
- Which method of survey carried out?
 - From the listed equipments, identify equipments used for measuring distance
 - Describe equipment that was used for storing field information
 - What instruments were used for setting out angles?
 - Describe the instruments that were used for marking position on the ground.
47. Form three students visited surveyor's office in Mwanza for further learning. When they were in the office they observed many equipments used in survey some of them were Tripod stand, pegs, surveyor level, field notebook, ranging poles, surveyor band, prismatic compass, cross staff, tapes, spirit level, alidade, drawing sheet, levelling staff, plane table, arrows and plumb bob.
- Mention all equipments listed above used for measuring linear distance
 - Describe three equipments listed above that can be used in leveling survey
 - Describe three equipments that can be used at once in prismatic compass survey, plane table survey and leveling survey.
48. Form three students at Nyawilimilwa secondary school observed different obstacles in the field when they were chaining, the obstacles varied in size examples of obstacles observed were House, pond, hill and a river. They said that all types of obstacles were there. As an expert in survey
- What is chain obstacle?
 - Mention example of chain obstacle observed by students in the field
 - Identify technique that can be used to overcome it.
 - With the aid of diagram show the methods that can be used to overcome such obstacle mentioned in (b) above
49. Explain importance of the following equipments used in survey
- Spirit level
 - Tripod stand
 - Arrows
 - Plane table
 - Prismatic compass
 - Surveyor band
 - Field note book
 - An alidade

50. Survey is a geography topic taught in form three, although some students are not interested with it. Imagine you are a surveyor educate the students and other people on the target of including elementary survey as one of the topic in form three. Give five points
51. With the aid of diagram explain two types of field note book used in survey
52. Elementary survey has many terms of different meaning, as a competent in survey give out the meaning of the following terms
 - a. Ranging
 - b. Local attraction
 - c. Chaining
 - d. Chainage
 - e. Off set
 - f. Sketching
53. Explain general procedures of making chain survey
54. Errors in prismatic compass survey are caused by local attractions that prevent magnetic needle pointing magnetic pole. As a competent student in survey
 - a. Outline four avoidable substances that lead to the occurrence of error
 - b. Outline two avoidable substance that does not come under local attraction
 - c. Apart from local attraction, mention any other two sources of error in prismatic compass survey
 - d. Suggest three ways that can be used to avoid errors in prismatic compass survey
55. Although survey is very important in our daily life, but sometimes have disadvantages. With examples describe six (6) limitation of survey
56. Briefly, explain importance of visiting the area to be surveyed before actual survey
57. Form three students at Igundu secondary school were told to measure the distance of their school compound, but they ended up with wrong linear measurement. By using knowledge you have acquired in survey
 - a. Describe instruments that were used for measuring linear distance
 - b. What do you think were three (3) sources of errors in taking linear measurements
 - c. Suggest three (3) ways that can be applied to overcome errors when measuring distance
58. Suppose you are a surveyor in kigoma region and you have tasked by the regional commissioner to carry out chain survey. Outline five (5) things that you will prepare before actual survey
59. Briefly, describe six (6) principles of selecting a good chain survey station or line
60. Fatuma said that “leveling is the toughest method of survey”. Oppose this statement by outlining five (5) points
61. Explain
 - a. Why survey is called a science and an art?
 - b. Function of pin in prismatic compass survey
 - c. Importance of forward bearing in prismatic compass survey
 - d. Why isn't easy to carry out leveling without having spirit level?
 - e. Why survey is impossible without survey team?

62. Survey has different methods like chain, prismatic compass, plane table and leveling survey. These methods are named according to the main instrument used. As a competent student in survey briefly, explain six (6) characteristics of chain survey
63. Briefly, explain five (5) characteristics of prismatic compass survey
64. Each method of survey differs from one another by their distinct features. Briefly describe features of leveling survey
65. "plane table survey has its own qualities" justify this statement by giving out five (5) points
66. Explain five (5) factors that direct surveyors when selecting surveying instruments.
67. With examples, explain how weather condition affects surveying process
68. Survey is very important profession like other professions, but "no money no survey". Justify the quoted statement by giving out five points
69. Briefly , explain three (3) procedures that should be adopted after fixing the prismatic compass on the tripod stand for measuring bearing of a line
70. Examine five (5) importance of the second stage of conducting survey
71. Describe procedures of leveling
72. Outline five (5) personal errors in plane table survey
73. "Competent surveyors are born and not made ". Refute this statement by giving out five characteristics of a good surveyor
74. With examples, explain five characteristics of survey.
75. Outline the guidelines to be considered when selecting chain station
76. Identify the components of field note book
77. Briefly, explain how chain survey is useful in our communities. Give five points
78. Chain survey is not carried out everywhere on the earth's surface, this is caused by selectivity of the method; briefly identify the areas where chain survey is not recommended to be carried out.
79. Describe how chain survey is applicable in our daily life
80. Identify six (6) principles of selecting a good site where chain survey can be conducted successfully
81. Outline five (5) limitations of survey
82. Give the meaning of the following terms
 - a. Survey station
 - b. Chain survey
 - c. Offsets
 - d. Tie line
83. Explain branches of land survey
84. There was an idea of distributing Geita into several district councils, they finally agreed to invite the survey team which will work to establish the boundary of the councils
 - a. Which type of survey was applied?
 - b. Suggest three instruments that will be used
 - c. Explain four advantages of applying type of survey you have mentioned in (a) above

85. Form four students at Mkono Vision Secondary School were tasked by the head master to conduct chain survey around the school compound to determine the school boundary.
- Mention two usefulness of chain survey
 - Suggest three types of errors which were likely to occur
 - Suggest three categories of errors they encountered
 - Suggest three ways they would have used to avoid errors in their activity.
86. Tanzania and Malawi had a boundary conflict especially in lake Nyasa, for the sake of compromise they decided to find survey expert to measure and locate respective boundary
- Which type of survey was conducted?
 - Name the branch of survey used
 - Name four main land survey methods which can be used by surveyors to conduct such survey
87. Explain reasons for the following
- Red and white color paint on ranging poles
 - Red piece of cloth on the arrows
 - Where is the datum for Tanzania
88. Show the type or method of survey used to
- Locate boundary in town
 - Measure natural and man-made features
 - Determine heights on the earth's surface
 - Determine linear distance on the ground
89. The head master of your school is looking for an expert who can construct a football pitch for his students. You as an expert
- Identify type of land survey which is suitable and give reasons why?
 - Illustrate any four (4) instruments you will use
90. Explain the main source of mistakes in chain survey
91. Distinguish plane table survey from prismatic compass survey
92. Suppose you want to carry out a field survey around the school compound and you are planning to opt the use of the method that involves taking linear measurement of an area
- What is the main survey technique that will be used
 - Describe importance of such technique used in (a) above
93. Mr. Kinyonga is planning to establish a secondary school at Nyawilimilwa in an area which is not planned for the location of different school infrastructure and he realized that on the land some areas were not flat
- Identify two methods of survey that he may use in planning and mention two importance for each
 - Describe two tools for each of the method
 - Name two methods that will help to overcome obstacles when carrying out survey

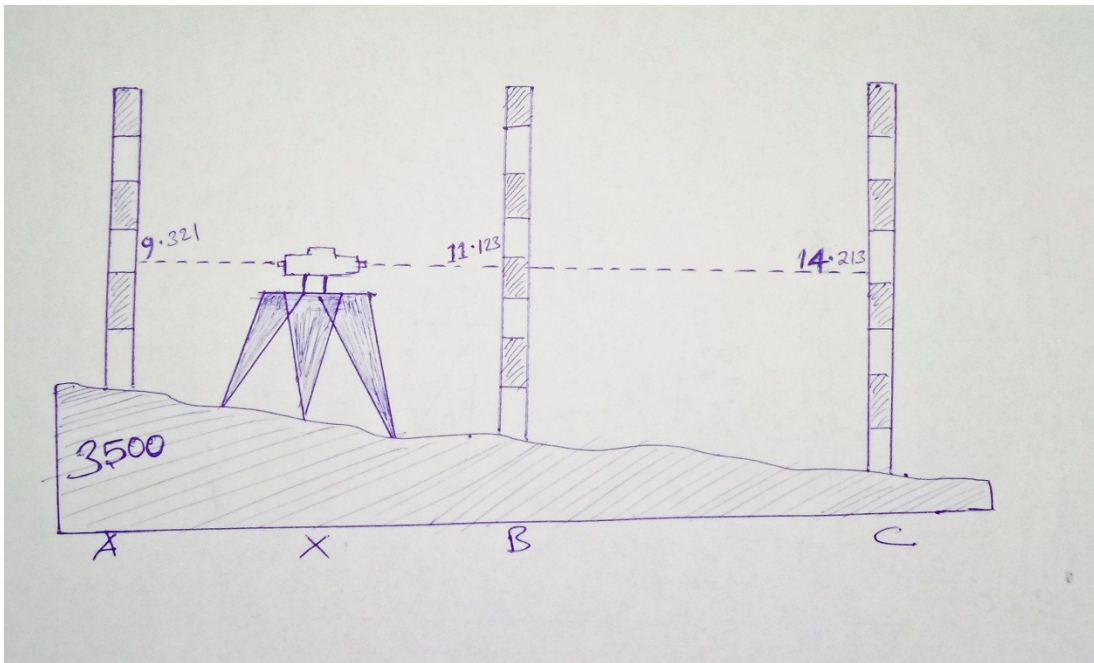
94. Imagine you are a village chairman at kagu village and you are expert in land issues; however you have been asked by Kagu ward executive officer, as an expert of land matters to address on how to level the stepped area. Then
- Describe instruments that you will use
 - Name two (2) methods that can be used in leveling the stepped area above
95. Study the following diagram then the question that follow



- Identify the method of survey used above
 - Name the type of the method of survey you have named in (a) above
 - Identify the actual names of the instruments used above and state their function
 - Calculate the height of collimation for point B, C and D
 - How the readings taken at point A, B, C and D called?
 - Mention four (4) source of errors in the method used in (a) above
 - Propose three (3) ways of eliminating error in the method of survey shown above
96. Mwanza city council is planning to invite survey team to help them in determining the actual distance of railway line from Buhongwa to Kamanga station. The team is expecting to use chain tape survey
- Explain two duties of chairperson (a leader) when conducting survey
 - Explain three (3) instruments that will be used to measure linear distance of railway line
 - Mention other two people that make up a survey team apart from a leader and state their functions
97. Imagine you have been appointed by district executive director of Geita district council to conduct land survey in one of the streets within a district as a survey team
- Name the technique of land survey to be used
 - Guess three (3) personal discrepancies likely to occur during surveying process
 - A part from a leader list down other individuals who will comprise a survey team

98. Nyawilimilwa ward is planning to invite a survey team to determine the length of road from Bugulula to Ntinachi, the team decided to use chain survey
- Enumerate six (6) equipment the team will use in survey
 - Suppose the team come across a compound during chaining, show how the team will overcome the obstacle
99. Ndaki purchased a piece of land at Kisesa street and he notice that there is a mound in his piece of land
- Which activity should be done before he starts to construct a house in his piece of land
 - Explain two (2) importance of an activity carried in (a) above
 - Suggest two types of the process used
 - Suggest two methods of the process used in (a) above
100. Mzee Masele and his village mates of Nkome are planning to conduct a prismatic compass survey
- Explain four (4) important preparation required before conducting prismatic compass survey
 - Identify the main four (4) instruments that will be used
 - Identify three source of misclosure which may happen in their activity
 - Explain five (5) precautions should be taken when conducting prismatic compass survey
101. Using a diagram, demonstrate how to conduct chain survey in an area with small hill which cannot be walked around easily
102. The director of Dodoma city council wants to develop a contoured map of Mtumba area to provide valuable information about the nature of terrain. This information is very important for selection of sites, determination of catchment of drainage basin to find intervisibility between stations, to determine storage capacity of reservoir and to locate notes such as highways. The director has approached you as a distinguished and renowned competent student in land survey
- With two reasons, advise the director on the suitable method of survey to be used in his project
 - Mention two (2) methods used in the survey method
 - Mention three disadvantages of the survey method
103. As a competent student in survey explain
- Why do you need pegs in survey
 - Explain the term “call back” as used in survey
 - Why plumb bob is needed in survey?

104. Mr. Jokel wanted to determine the height of mountain and different measurements were taken as shown below



- Name the instruments used and their functions
 - Find the height of point A, B and C
 - Identify five importance of an activity shown above
105. During surveying process, surveyors met with different obstacles one of the obstacle observed was a pond. Sa a competent student in survey
- With the aid of diagram explain how the obstacle observed can be avoided
 - Classify type of obstacle the surveyors observed (pond)
 - Explain why it is advised to overcome obstacles instead of ignoring them and proceeding with taking measurements.