

Assistant Surveyor

Question Bank

Easy Questions

1. The Indian trend in average AT and C losses are
 - a. Around 10 % or less
 - b. Around 25-30 %
 - c. Around 30-35 %
2. What is GIS?
 - a. A software tool for network mapping
 - b. Programming language
 - c. A database
 - d. A survey instrument
3. The three basic forms of data are-
 - a. Map Data
 - b. Attribute Data
 - c. Image Data
 - d. All of the above
4. SCADA is necessary for quality and regular power supply but it may turn out to be white elephant because
 - a. High initial cost and running cost
 - b. Would not be technically feasible due to poor maintenance of distribution system as a whole
 - c. Both of the above
5. Which of the following is a pre-requisite for effective GIS mapping?
 - a. SCADA
 - b. Asset Indexing
 - c. Consumer Indexing
 - d. a, b and c
 - e. b and c
6. Handheld GPS with resolution of ___ metre can be used to locate the substations / transformers /poles/ consumer points, etc.
7. The data of 33 KV Feeder includes the following parameters except-
 - a. Name of the Feeder
 - b. Code no. of the Feeder
 - c. Capacity of the transformer
 - d. Length of the line

8. The data of 33/11 KV Substation includes the following parameters except-
 - a. Name of the Feeder
 - b. Code no. of the Feeder
 - c. Capacity of the transformer
 - d. Voltage ratio and Current rating

9. The data of Power Transformer includes the following parameters except-
 - a. Make of the Transformer
 - b. Capacity and date of commissioning
 - c. No. of taps on the transformer
 - d. Total no. of feeder connected

10. Users apply _____ functions to generate high-quality data, perform quality analysis/quality control checks on data, and undertake modeling and analysis.

11. _____ may be defined to convert paper / scanned maps into digital form such as lines, polygons and points. In this research, HT/LT line has been represented with red and blue line respectively.

12. Which of the following objective doesn't come under DDGJY scheme?
 - a. Strengthening of sub-transmission and distribution networks
 - b. Separation of agriculture and non-agriculture feeders
 - c. Strengthening of sub-transmission and distribution networks
 - d. Metering of distribution transformers / feeders / consumers

13. Which of the following initiative isn't taken under UDAY scheme?
 - a. Improving operational efficiencies of Discoms
 - b. Reduction of cost of power
 - c. Reduction in interest cost of Discoms
 - d. Metering of distribution transformers / feeders / consumers

14. The main reason to use relational database are:-
 - a. Eliminate Duplicate Information
 - b. Assist in querying data
 - c. Simpler to manipulate data
 - d. All of the above

15. In trend analysis, the growth rate of energy corresponds to-
 - a. Year wise and cumulative growth rate of energy
 - b. Year wise growth rate of energy
 - c. Monthly and Year wise Growth rate of energy
 - d. Cumulative and monthly growth rate of energy

16. The power utilities rely on _____ platform for asset management, outage management, customer service, field operations, situational awareness, accounting, planning, and network operations.
17. The benefit of Relational files over Flat files is-
- Easier to understand
 - Reduce Data Redundancy
 - Data Integrity
 - File Size
18. The Surveying and Land Information Department is divided into three branches named as _____, _____ and _____.
19. Which step is the most crucial part of GIS process?
- Data Collection
 - Area Selection
 - Digitization
 - Process and Analyse
20. From which body does all ERCs (CERC and SERCs) takes prior approval for every decision?
- State Electricity Board (SEB)
 - Ministry of Power (MoP)
 - Power Holding Company
 - None of the above
21. The governance of power distribution regulation means
- Central government framed rules
 - Rules for making rules
 - State government framed rules
 - Court directives about rules
22. Any customer can petition to the SERCs for redressal of the grievance.
- True
 - False
23. To call fire brigade, dial
- 100
 - 101
 - 102
 - 103
24. To call ambulance, dial
- 100

- b. 101
- c. 102
- d. 103

25. The pilferage activity or theft by any consumer comes under which section of Electricity Act 2003?

- a. Section 4
- b. Section 12
- c. Section 135
- d. Section 50

26. The suspension of distribution licensee comes under which section of Electricity Act 2003?

- a. Section 14
- b. Section 12
- c. Section 4
- d. Section 43

27. Coding of asset data and identification of network equipments are deliverables of:-

- a. Consumer Indexing
- b. Asset Indexing
- c. Both of above
- d. Preparation of GIS Mapping

28. To use the software, following capabilities shall be considered:-

- a. Network Creation
- b. System analysis and Optimisation
- c. Report Preparation
- d. Asset Management
- e. a, b and c
- f. b, c and d

29. Which program deals with the strengthening of sub transmission and distribution network?

- a. DDUGJY
- b. UDAY
- c. IPDS
- d. All of the above

30. The attributes in distribution system assets mapping may be following-

- a. Type of pole
- b. Voltage rating of the feeder running on it
- c. Type of insulator installed
- d. All of the above

31. What will be the range of current if the electric shock leads to Ventricular fibrillation?

- a. 0-5 milli Amp
- b. 10-15 milli Amp
- c. 15-20 milli Amp

- d. 20-30 milli Amp
32. The _____ handheld device is commonly used instrument for Power Distribution which combines a high sensitivity GPS receiver with a field computer powered by the Windows Mobile version 6.1 operating system.
33. Which application organizes and manages all GIS information such as maps, globes, data sets, models, metadata, and services?
- ArcMap
 - ArcEditor
 - AcrGIS
 - Arc Catalog
34. ArcGIS Desktop, ArcGIS Server and ArcGIS Engine are accessible to
- Geoprocessing
 - Geodatabase logic
 - Server GIS
 - Mobile GIS
35. _____ works with GIS data layers, displaying information from a geodatabase and all supported GIS data formats. ArcGlobe has a dynamic 3D view of geographic information
36. An _____ enables field-based personnel to capture, store, update, manipulate, analyse and display geographic information directly in the field
37. With the implementation of Privatization in Delhi, the AT&C losses has been reduced from 55% to
- 20%
 - 25%
 - 30%
 - 35%
38. How many States have been depicted to unbundle SEBs?
- 21
 - 25
 - 22
 - 23
39. What should be the height of leaning a ladder for every 4 m in height?
- 5 m
 - 3 m
 - 2 m
 - 1 m
40. Which step looks over the establishment of road boundaries, land parcels and control point?
- Field Measurement
 - Land Survey
 - Construction

- d. Land Development and Analysis

Questions – Medium Level

1. Which are the following activities involved in GIS mapping?
 - a. Network Augmentation
 - b. MIS Preparation
 - c. Indexing of the Consumer
 - d. Operation and Maintenance

2. The main purpose of mapping and indexing of the consumer is-
 - a. To identify and locate all the consumers
 - b. Survey the 11 KV and LT lines
 - c. Collection of network details
 - d. Sorting and viewing electrical area or feeder/administrative area wise customer details.

3. The two types of map view offered by ArcMap are _____ and _____.

4. The tariff fixation should not consider the distribution loss of more than _____%.

5. Following are the four products in Arc GIS Software except-
 - a. Arc View
 - b. Arc Editor
 - c. Arc Workstation
 - d. Arc Editor

6. Following are the features of GIS instruments except-
 - a. Cost effective solution
 - b. Light weight and compact
 - c. High sensitivity GPS receiver
 - d. Tuned to maximise GNSS performance

7. Following are the purpose of relational database except-
 - a. Eliminate duplicate information
 - b. Assist in querying data
 - c. a and b
 - d. use a junction table to relate
 - e. b and d

8. A DBMS is literally a software system that manages a database and provides the following functions-
Data definition -> _____ -> _____ -> Transaction Management -> _____

9. Any fatal accident must be reported to electrical inspector within
- 4 hrs.
 - 24 hrs.
 - 48 hrs.
 - 1 week
10. ArcToolbox contains a comprehensive collection of geoprocessing functions except-
- Statistical Analysis
 - Raster Analysis
 - Vector analysis
 - Data Management
11. The manipulation and retrieval of data are the functions of
- Transactions Management system
 - Geo Processing System (GPS)
 - Data Base Management System (DBMS)
 - Digitised Geo Processing System (DGPS)
12. For ArcGIS software process flow, the steps involved are :-
Selection of Base Map -> Capture Data -> Interpret Data -> _____ -> Store
Computer in Data -> _____ -> Display results
13. The various data of each Power Transformer in the substation are-
- Capacity and make of the transformer
 - Current capacity of the substation
 - Pole number
 - Contracted Load
14. Following are the capabilities that is required for the software configuration are
- Network Creation
 - System Analysis
 - Report Preparation
 - All of the above
15. The basic need of GIS mapping are
- Inventory of Existing Network
 - Easy access to Network details
 - Easy access to Consumer Data
 - All of the above
16. What will be the range of current if the electric shock leads to respiratory failure?
- 0-5 milli Amp
 - 10-15 milli Amp
 - 15-20 milli Amp
 - 20-30 milli Amp

17. The regulators have team to raid the premises of the customer to book them for any electricity theft
- Yes
 - No
18. Following are the physical barrier to communication except
- Location
 - Distance
 - Work Place
 - Feedback
19. Following are the process barrier to communication except
- Location
 - Instructions
 - Channels
 - Feedback
20. Following are the components of time management except
- Track progress
 - Prioritise
 - Scrutinise
 - Multitask
21. Which of the following instrument doesn't come under the GIS toolbox
- Surveying tape
 - Gloves
 - Duct tape
 - Earth Tester
22. Which step looks over the establishment of road boundaries, land parcels and control point?
- Field Measurement
 - Land Survey
 - Construction
 - Land Development and Analysis
23. Neon tester is a protective instrument that gives alarm indication of live H.V. and L.V. lines at a distance of
- 3 m
 - 4 m
 - 5 m
 - 6 m
24. Arc GIS Desktop is a suite of integrated applications which can perform following tasks:
- Mapping
 - Geographical Analysis
 - Data Editing

- d. a and b
 - e. b and c
 - f. All of the above
25. The conductor of an overhead line including service lines, erected elsewhere than along or across any street shall not be at a height less than
- a. 3.8m
 - b. 4.2m
 - c. 4.6m
 - d. 5.2m
26. Which software is used for viewing and analysing the data that has been uploaded in the system?
- a. Arc MAP
 - b. Arc Globe
 - c. Arc View
 - d. Arc GIS
27. Arc Map and Arc Catalog comes under which category?
- a. Arc toolbox
 - b. Arc View
 - c. Arc GIS
 - d. All of the above
28. Which tariff rates are applicable to small shops, offices, hotels, guest houses, theatres etc.?
- a. Domestic
 - b. Commercial
 - c. Industrial
 - d. None of the above
29. What would you do to improve the reliability and quality of electricity service
- a. Adopting GIS based network planning and implementation
 - b. Improved system of maintenance planning and implementation
 - c. Refurbishment of existing distribution system
 - d. Comprehensive training policy to training every personnel regularly
 - e. All above
30. Better customer service is being now enforced by
- a. Electricity Act 2003
 - b. Central government
 - c. State government
 - d. CERC and SERC
 - e. All of the above

31. What should be the horizontal clearance of EHV lines from nearby buildings?
- 2.0m
 - 2.2m
 - 2.4m
 - 2.6m
32. For lines of voltage exceeding 33 kV, the clearance above ground shall not be less than
- 5.0m
 - 5.1m
 - 5.2m
 - 5.3m
33. Which category of GIS allows functionality and data to be deployed from a central environment
- Mobile GIS
 - Server GIS
 - Embedded GIS
 - Desktop GIS
34. Centralized call center to cater to all types of customer complaint helps in building confidence in the customer provided this is backed up by
- Courteous receipt of complaints
 - Keeping the complainant updated on status of the complaint
 - Disconnecting the call after hearing the complaint
 - a and b
 - b and c
35. Customer indexing helps in providing better service and faster redressal of complaints, because it helps in knowing following detail(s) about the customer?
- Physical address
 - Identification of feeder and transformer to which the customer is connected
 - Collection details
 - a and b
 - b and c
36. Methods of informing customer about future power cuts (time and duration) are
- Radio
 - TV
 - Newspapers
 - All above
37. The data of Distribution Transformer related to GIS based consumer indexing is
- 11 KV Feeder connection
 - Make of PT and Voltage Ratio
 - Name of manufacture and Date of commissioning
 - a and b
 - a and c

38. The four major activities in building and processing a Geographical Information System (GIS) are:-

- a. _____
- b. _____
- c. _____
- d. _____

39. The main function of DBMS is to _____, _____ and _____ the data from the database.

40. For HVDC lines (100 KV), the clearance above ground shall not be less than

- a. 6 m
- b. 7 m
- c. 8 m
- d. 9 m

Questions- Hard Level

1. _____ is an environment where map pages contain geographic data views as well as other map elements such as scale bars, legends, north arrows, and reference maps.
2. The _____ model is particularly useful for representing highly discrete data types such as roads, buildings, boundaries etc.
3. What is the accuracy of Juno Handheld devices?
 - a. 1 m
 - b. 2 m
 - c. 3 m
 - d. 4 m
4. _____ is the central application in ArcGIS Desktop for all map-based tasks including cartography, map analysis, and editing
5. The _____ handheld includes an integrated GPS receiver that enables to collect GPS data for incorporating into a GIS or for managing assets.
6. These parameters can be incorporated in GIS for Trend analysis-
 - a. Growth rate of energy
 - b. Share of electrical energy consumption
 - c. Energy consumption per service year
 - d. a and b
 - e. All of the above
7. What should be the range of near infrared region of remote sensing data available which can provide the clear contrast
 - a. 0.8 μm - 1.1 μm
 - b. 0.5 μm -0.8 μm
 - c. 1.0 μm – 1.3 μm
 - d. 0.3 μm – 0.7 μm
8. What should be the minimum range of camera that should be configured in all Juno Handheld devices
 - a. 10 mega pixel
 - b. 5 mega pixel
 - c. 2 mega pixel
 - d. 8 mega pixel
9. The conductor of an overhead lines (not exceeding 650 volts) including service lines erected across the street shall not be less than
 - a. 5.8 m
 - b. 6.0 m
 - c. 6.1 m

- d. 6.3 m
10. The conductor of an overhead lines (exceeding 650 volts) including service lines erected across the street shall not be less than
- a. 5.8 m
 - b. 6.0 m
 - c. 6.1 m
 - d. 6.3 m
11. The conductor of an overhead line crossing a tramway or trolley bus route (not exceeding 650 volts) using trolley wires shall not be less than
- a. 1.0 m
 - b. 1.1m
 - c. 1.3m
 - d. 1.2m
12. Which software is used for viewing and analysing the data that has been uploaded in the system?
- a. Arc MAP
 - b. Arc Globe
 - c. Arc View
 - d. Arc GIS
13. Which step looks over the establishment of road boundaries, land parcels and control point?
- a. Field Measurement
 - b. Land Survey
 - c. Construction
 - d. Land Development and Analysis
14. The power utilities rely on ArcGIS platform DISCOMs only
- a. Asset Management
 - b. Outage Management
 - c. Customer Services
 - d. a and b
 - e. b and c
15. Which of the following comes under the Meter Data Management (MDM) Software
- a. Maximum Demand Records
 - b. Load
 - c. Customer Account Information
 - d. a and b
 - e. b and c

16. Geographical data view and page layout view are two types of view offered in
- Arc Map
 - Arc Editor
 - Arc GIS
 - Arc Catalog
17. The following is function of the Arc View software-
- It provides extensive mapping, data use, and analysis along with simple editing and geoprocessing capabilities.
 - It includes advanced editing for shapefiles and geodatabases in addition to the full functionality of ArcView.
 - It is the full function, flagship GIS desktop.
 - It is a free viewer for maps authored using the other ArcGIS Desktop products
18. The approach for the creation of network in GIS mapping is-
- Create a Map -> Scanning the Network Map -> _____ ->Integrate all the components -> Add attribute/ add layers database
19. The drill for firefighting must be repeated every
- Month
 - Three months
 - Year
20. Due to electrocution, if the person is faint or pale or shows other signs of shock, lay the person down with the head slightly lower than the trunk of his or her body and the legs elevated.
- Right
 - Wrong

Viva Questions:

- What are T&D Loss and AT&C Losses? What is the basic difference between them?
- What are the key functions of Power Distribution Company?
- What are the major functions of SERC and CERC?
- What are the basic components of GIS and what is its significance?
- How data is stored in GIS and what is the major requirement of GIS mapping?
- How is GIS helpful in answering the question to store the data and retrieve the information?
- What are the types of data for GIS mapping for the final representation of data?
- What is the process of Consumer Indexing?
- What kind of data is used for Consumer Indexing in terms of network equipments?
- What are the major parameters required for the Consumer Database Development?
- What are the features and configurations of Juno Handheld devices?
- How the handheld devices connected to the system to upload the data?
- What kind of products are used in the ArcGIS software?

14. What are basic features of ArcMap and ArcCatalog?
15. What is ArcGIS and how it is significant to Geodatabase stechnology?
16. Explain the detailed planning of database creation and network model creation.
17. What is DBMS and its advantages?
18. What is the use of DGPS and its features?
19. What is the process flow of ArcGIS and the features of ArcMap?
20. How the network data is represented in ArcGIS with the symbol representation?

On Job Training Questions:

1. Conduct a site visit to show the use of Juno Handheld device used for capturing the images
2. Test the connection of Juno Handheld devices to the system to upload the data
3. Conduct a site visit to show the network details required for Consumer Indexing
4. Explain the operation of ArcGIS software and its significance
5. Explain the use of various functions operated in ArcGIS software collection.
6. Conduct an activity to prepare the network map of any area by representing network equipments with different symbols.
7. Conduct an activity to convert the data into the digital form which can be helpful in analyzing the network details
8. Conduct a session on the process of automated detection of failure of any network equipment through GIS software
9. Conduct an activity to show the creation of network by taking the details from the site
10. Perform activities that are done from the capturing of data through Handheld devices to the uploading of data in the system