GPRS Interview Questions And Answers Guide.

Global Guideline.
http://www.globalguideline.com/
GPRS Interview Questions And Answers

Question # 1
What is GPRS (General Packet Radio Service)?

Answer:-
General Packet Radio Service is used mostly in Europe and Asia. GPRS is used most commonly for cell phones. In Canada, Rogers and Fido are using GPRS. You can send and receive emails using GPRS and browse the Internet. General Packet Radio Service is a radio technology for GSM networks that adds packet-switching protocols, shorter set-up time for ISP connections, it also offers the possibility to charge by amount of data sent rather than connect time. It is a new nonvoice value added service that allows information to be sent and received across a mobile telephone network. GPRS is NOT related to GPS (Global Positioning System), a similar acronym that is often used in mobile contexts. Allowing information to be transmitted more quickly, immediately and efficiently across the mobile network, GPRS may well be a relatively less costly mobile data service. GPRS can provide instant connections subject to radio coverage. No dial-up modem connection is necessary.

Question # 2
What is Packet switching?

Answer:-
Packet switching is a digital networking communications method that groups all transmitted data, irrespective of content, type, or structure, into suitably sized blocks, called packets. Packet switching features delivery of variable bit rate data streams (sequences of packets) over a shared network. When traversing network adapters, switches, routers and other network nodes, packets are buffered and queued, resulting in variable delay and throughput depending on the traffic load in the network.

Question # 3
What is Mobile phone?

Answer:-
A mobile phone is an electronic device used for mobile telecommunications over a cellular network of base stations known as cell sites. Mobile phones differ from cordless telephones, which only offer telephone service within limited range through a single base station attached to a fixed line, for example within a home or an office. Low-end mobile phones are often referred to as feature phones, whereas high-end mobile phones that offer more advanced computing ability are referred to as smartphones.

Question # 4
What is GSM (Global System for Mobile Communications)?

Answer:-
GSM (Global System for Mobile Communications) is the most popular standard for mobile telephony systems in the world. The GSM Association, its promoting industry trade organization of mobile phone carriers and manufacturers, estimates that 80% of the global mobile market uses the standard. GSM is used by over 3 billion people across more than 212 countries and territories

Question # 5
Explain Time division multiple access?

Answer:-
Time division multiple access (TDMA) is a channel access method for shared medium networks. It allows several users to share the same frequency channel by dividing the signal into different time slots. The users transmit in rapid succession, one after the other, each using his own time slot. This allows multiple stations to share the same transmission medium (e.g. radio frequency channel) while using only a part of its channel capacity.

Question # 6
What is Cellular digital packet data?
GPRS Interview Questions And Answers

Answer:-
Cellular Digital Packet Data (CDPD) was a wide-area mobile data service which used unused bandwidth normally used by AMPS mobile phones between 800 and 900 MHz to transfer data. Speeds up to 19.2 kbit/s were possible. The service was discontinued in conjunction with the retirement of the parent AMPS service; it has been functionally replaced by faster services such as 1xRTT, EV-DO, and UMTS/HSPA.

Read More Answers.

Question # 7
Explain i-mode?

Answer:-
NTT DoCoMos i-mode is a mobile internet (as opposed to wireless internet) service popular in Japan. Unlike Wireless Application Protocol or WAP, i-mode encompasses a wider variety of internet standards, including web access, email and the packet switched network that delivers the data. i-mode users have access to various services such as email, sports results, weather forecast, games, financial services and ticket booking. Content is provided by specialized services, typically from the mobile carrier, which allows them to have tighter control over billing.

Read More Answers.

Question # 8
What is Dual Transfer Mode?

Answer:-
Dual Transfer Mode (DTM) is a protocol based on the GSM standard that allows simultaneous transfer of Circuit switched (CS) voice and Packet switched (PS) data over the same radio channel (ARFCN). DTM is a 3GPP baseline R99 feature.

Read More Answers.

Question # 9
What is Access Point Name?

Answer:-
Access point name (APN) identifies an IP packet data network (PDN), that a mobile data user wants to communicate with. In addition to identifying a PDN, an APN may also be used to define the type of service, (eg connection to wireless application protocol (WAP) server, multimedia messaging service (MMS)), that is provided by the PDN. APN is used in 3GPP data access networks, e.g. general packet radio service (GPRS), evolved packet core (EPC).

Read More Answers.

Question # 10
What is GPRS Core Network?

Answer:-
The General Packet Radio Service (GPRS) system is used by GSM mobile phones, the most common mobile phone system in the world, for transmitting IP packets. The GPRS core network is the centralized part of the GPRS system. It also provides support for WCDMA based 3G networks. The GPRS core network is an integrated part of the GSM network switching subsystem.

Read More Answers.

Question # 11
What is Base transceiver station (BTS)?

Answer:-
A base transceiver station (BTS) or cell site is a piece of equipment that facilitates wireless communication between user equipment (UE) and a network. UEs are devices like mobile phones (handsets), WLL phones, computers with wireless internet connectivity, WiFi and WiMAX gadgets etc. The network can be that of any of the wireless communication technologies like GSM, CDMA, WLL, WAN, WiFi, WiMAX etc. BTS is also referred to as the radio base station (RBS), node B (in 3G Networks) or, simply, the base station (BS). For discussion of the LTE standard the abbreviation eNB for enhanced node B is widely used.

Read More Answers.

Question # 12
Which kind of signals are transferred in GPRS?

Answer:-
* GPRS uses 2.5 generation of GSM signals
* The radio interface is the same that of GSM
* GPRS uses 900 / 1800 Mhz, frequency band and GMSK modulation
* The bit rates are EGPRS, similar to EDGE
* Separate hardware and ports need to be added and availed.

Read More Answers.

Question # 13
Explain how GPRS terminals classified?

Answer:-
* The GPRS services are classified into 12 service classes as per the duration of the time slots occupied / frame.
* Usually 5 time slots per frame are occupied including transmission time slots and reception time slots
* Increase in the number of occupied time slots certainly causes the increase in the entire duration of the occupied time slots, so that increased amount of data transmission and receipt are enabled
* All the 12 service classes are further classified into higher and lower classes as per the relative duration of time slots
* Higher speed data communication can be transmitted with high-class GPRS service by setting high transmission power and setting the duration of the time slots
Question # 14
Explain multiple access coding scheme in GPRS?

Answer:-
* Multiple access scheme is used in GPRS based on the FDD and TDMA
* One pair of up-link and down-link frequency channels are assigned to a user during a session
* The Multiple Access Coding Scheme is combined with statistical multiplexing [packet mode communication], that allows several uses to share the same frequency channel
* Down-link uses first-come first-served packet scheduling and up-link uses a scheme that is similar to reservation ALOHA.
* Slotted ALOHA is utilized for reservation inquiries in a contention phase, followed by transferring data by utilizing dynamic TDMA with first-come, first-served scheduling.

Question # 15
Explain channel encoding scheme in GPRS?

Answer:-
* Channel Encoding Scheme is based on a convolution code at various code rates and GMSK modulation
* The table below summarizes the options:

<table>
<thead>
<tr>
<th>Coding Scheme</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS-1</td>
<td>8.0</td>
</tr>
<tr>
<td>CS-2</td>
<td>12.0</td>
</tr>
<tr>
<td>CS-3</td>
<td>14.4</td>
</tr>
<tr>
<td>CS-4</td>
<td>20.0</td>
</tr>
</tbody>
</table>
* The least robust and fastest coding scheme is CS-4 and is available near a Base Transceiver Station
* The most robust coding scheme is CS-1 and is used in case of mobile station is further away from a BTS
* A speed of 20.0 Kbit/s/time slots can be achieved with CS-4 and has 25% normal cell coverage
* A speed of 8.0 Kbit/s/time slots can be achieved with CS-1 and has 98% of normal coverage

Question # 16
Explain multislot class in GPRS?

Answer:-
* Speed of data transfer available in the Uplink and Downlink directions is determined by Multislot Class.
* The speed varies between 1 and 45 for allocating by the network to allocate radio channels in the uplink and downlink channels.
* The representation of multi slot class is 5+2, for example, where the first number is the number of down link time slots and the second number is the number of up link time slots that are allocated to use by a mobile station.

Question # 17
Tell me what gross data rate does GPRS provide?

Answer:-
* GPRS provide gross data rate of 22.80 KBPS / time slot
* Voice uses only 13 KBPS/time slot and the rest is consumed by Error Correction Code
* Error connection code is utilized for detecting and correcting the transmission errors
* As voice is compressed, the usage of Error connection code is mandatory

Question # 18
How does GPRS architecture differ from GSM?

Answer:-
The following depicts the architectural differences between GPRS and GSM:
* Mobile Station: New mobile station is needed for accessing GPRS services. They are backward compatible with GSM for voice calls
* Base Transceiver Station: Software upgrade and new hardware, Packet Control Unit are needed for GPRS.
* GPRS Support Nodes: Installation of new core network elements, known as serving GPRS support node, and gateway GPRS support node are needed to deploy GPRS
* Databases: Requires software upgrade to handle new models and functions to handle databases involved in the network

Question # 19
Tell me what signals are transferred in GPRS?

Answer:-
GPRS uses 2.5 generation of GSM signals
The radio interface is the same that of GSM.
Question # 20
Can you please explain the difference between GSM and GPRS?

Answer:-
**GSM:**
* Uses one among 7 slots
* Connecting resources to each unit from remote location to the back office is done through a direct dial up
* Circuit switched mode of operations
* Dedicated channel all the way to the destination is provided to the customer

**GPRS:**
* Uses as many as 4+1 time slots
* Does not claim any resources until some data is sent. The information is divided into packets
* Packet switched mode of operations
* One or more dedicated channels are assigned by the operator specifically for shared use

Read More Answers.

Question # 21
Is GPRS is always on connectivity?

Answer:-
GPRS is an always-on service. There is no need to dial up like you have to on a home PC for instance. This feature is not unique to GPRS but is an important standard that will no doubt be a key feature for migration to 3G. It makes services instantaneously available to a device.

Read More Answers.

Question # 22
What is the Speed of GPRS?

Answer:-
GPRS is packet switched. Higher connection speeds are attainable at around 56-118 kbps, a vast improvement on circuit switched networks of 9.6 kbps. By combining standard GSM time slots theoretical speeds of 171.2 kbps are attainable. However in the very short term, speeds of 20-50 kbps are more realistic

Read More Answers.

Question # 23
What is SGSN in GPRS?

Answer:-
The Serving GPRS Support Node, or SGSN for short, takes care of some important tasks, including routing, handover and IP address assignment. The SGSN has a logical connection to the GPRS device. As an example, if you where in a car travelling up the M1 on a long journey and were browsing the Internet on a GPRS device, you will pass through many different cells. One job of the SGSN is to make sure the connection is not interrupted as you make your journey passing from cell to cell. The SGSN works out which BSC to “route” your connection through.

If the user moves into a segment of the network that is managed by a different SGSN it will perform a hand-off to the new SGSN, this is done extremely quickly and generally the user will not notice this has happened. Any packets that are lost during this process are re-transmitted. The SGSN converts mobile data into IP and is connected to the GGSN via a tunneling protocol.

Read More Answers.

Question # 24
What is Fixed IP addressing in GPRS?

Answer:-
Fixed IP addresses for mobile devices are not widely used due to shortages of Ipv4 addresses (see below). This information is stored in the HLR.

Read More Answers.

Question # 25
What is dynamic IP addressing in GPRS?

Answer:-
The second means of addressing is dynamic addressing. This is where a mobile device does not have its own IP address stored in the HLR. Instead the IP address is assigned to the GGSN domain. The method is also a type of dynamic IP addressing in which the IP address is assigned by RADIUS servers normally situated inside an IP network outside the mobile network, an example of this being when you dial up to an ISP from your home PC.

Read More Answers.

Question # 26
How does the SGSN know which GGSN to direct you to?

Answer:-
A mobile device is programmed with one or more Access Point Names which are commonly referred to as the APN's. An APN consists of a fully qualified DNS name e.g. globalguideline.com When a GPRS device wants to talk to globalguideline.com, the SGSN does a DNS look up and resolves the name to the correct GGSN. You could have multiple APN's programmed into your phone so you are not limited to a single service or GGSN.

Read More Answers.

Question # 27
Explain GPRS handset classes?
Answer:-
GPRS devices are not as straightforward as you may think. There are in fact 3 different classes of device.
Class A:
Class A terminals have 2 transceivers which allow them to send / receive data and voice at the same time. This class of device takes full advantage of GPRS and GSM. You can be taking a call and receiving data all at the same time.
Class B:
Class B devices can send / receive data or voice but not both at the same time. Generally if you are using GPRS and you receive a voice call you will get an option to answer the call or carry on.
Class C:
This device only allows one means of connectivity. An example would be a GPRS PCMCIA card in a laptop.

Question # 28
What is GPRS QoS?

Answer:-
Just because GPRS uses many of the components of a standard GSM network it would be foolhardy to assume that the same standards should apply. Things to be taken into account include provider general network architecture, radio interface and throughput. Here are some of the key elements briefly explained.

Question # 29
What is radio Interface in GPRS?

Answer:-
The Telecommunications Standard Institute has defined 3 new coding schemes for Radio Interface. When the GPRS device talks to the base station they can use 1 of the 4 schemes. The schemes are CS - 1 through CS - 3 where CS - 1 is the same as standard GSM. In simple terms CS - 1 is highly redundant but because of this is slow, 2 and 3 have less redundancy, whilst 4 has the least - removing all forward error control - but is capable of maximum throughput. If radio quality is bad then coding scheme 1 is used, as the quality improves less error control is needed.

Question # 30
What is Precedence Class in GPRS?

Answer:-
An application can be assigned a Precedence Class 1, 2 or 3. If an application has a higher precedence (1) than another (3) then its traffic will be given a higher priority.

Question # 31
What is delay class in GPRS?

Answer:-
Applications can request predictive delay classes which guarantee an average and 95- percentile delay. There are 4 classes, 1 being the fastest.

Question # 32
What is GPRS reliability class?

Answer:-
Applications can request differing levels of reliability for its data depending on its tolerance to data loss.

Question # 33
What is GPRS throughput class?

Answer:-
Applications can choose different profiles for throughput. There are 2 distinctions in class, peak and mean. Peak throughput class is used mainly for bursty transmissions with a variable in octets per second describing the throughput required for burst of specified size. Mean is the average data transfer rate over a period of time measured in octets per hour.
Mobile Technologies Most Popular Interview Topics.

1: 3G Frequently Asked Interview Questions and Answers Guide.
2: iPhone Frequently Asked Interview Questions and Answers Guide.
3: GPS Frequently Asked Interview Questions and Answers Guide.
4: Wireless Communication Frequently Asked Interview Questions and Answers Guide.
5: Android Frequently Asked Interview Questions and Answers Guide.
6: MMS Frequently Asked Interview Questions and Answers Guide.
7: Blackberry Frequently Asked Interview Questions and Answers Guide.
8: Android Software Engineer Frequently Asked Interview Questions and Answers Guide.
About Global Guideline.

Global Guideline is a platform to develop your own skills with thousands of job interview questions and web tutorials for fresher's and experienced candidates. These interview questions and web tutorials will help you strengthen your technical skills, prepare for the interviews and quickly revise the concepts. Global Guideline invite you to unlock your potentials with thousands of Interview Questions with Answers or begin a tutorial right away, such as HTML, XML, XSLT, Cascading Style Sheet (CSS), Search Engine Optimization (SEO), JavaScript, Structure Query Language (SQL), Database Articles, Web Hosting Guide and much more. Learn the most common technologies Interview Questions and Answers. We will help you to explore the resources of the World Wide Web and develop your own skills from the basics to the advanced. Here you will learn anything quite easily and you will really enjoy while learning. Global Guideline will help you to become a professional and Expert, well prepared for the future.

* This PDF was generated from http://www.GlobalGuideline.com at January 29th, 2017

* If any answer or question is incorrect or inappropriate or you have correct answer or you found any problem in this document then don't hesitate feel free and e-mail us we will fix it.

You can follow us on FaceBook for latest Jobs, Updates and other interviews material. www.facebook.com/InterviewQuestionsAnswers

Follow us on Twitter for latest Jobs and interview preparation guides http://twitter.com/InterviewGuide

Best Of Luck.

Global Guideline Team
http://www.globalguideline.com
Support@globalguideline.com