CICS Interview Questions

SITES

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**QUESTIONS AND THEIR EXPLANATION**

**Q. What is CWA in CICS?**

**ANS.**

CWA is the acronym for common work area. **It is a temporary storage area which any transaction can access**. There is only one CWA for the entire system.

LINKAGE SECTION

01 CWA-AREA.

05 CWA-CONTENT PIC X(N)

PROCEDURE DIVISION.

EXEC CICS ADDRESS

CWA (ADDRESS OF CWA-AREA)

END-EXEC

**Q. What’s the CICS command used to access the current date and time?**

Ans - ASKTIME command is used to access current date and time.

**Q. How do you dynamically set the CURSOR position to a specific field?**

ANS. MOVE -1 to FIELD + L field. Mention CURSOR option in the SEND command.

**Q. Which command is used to release a record on which exclusive control is gained?**

ANS. EXEC CICS UNLOCK END-EXEC.

**Q. What are the attribute values of Skipper and Stopper fields?**

ANS. For Skipper field, use ASKIP and for stopper field use PROT.

**Q. How do you set the MDT option to ‘ON’ status, even if data is not entered?**

ANS. Mention FSET option in DFHMDF—(field definition) or set it dynamically in the program using FIELD+A attribute field. WE can use **DFHBMSCA** fields to dynamically set the attributes

**Q. Which CICS service transaction is used to gain accessibility to CICS** control tables?

ANS. CEDA transaction is used to gain accessibility to control tables.

**Q. Into which table is the terminal id registered?**

ANS. Terminal Control Table.

**Q. What is a mapset?**

ANS. Mapset is a collection of maps which are linked edited together to form a load module. It should have a PPT entry. It can have names from 1 to 7 chars.

**Q. What is the function of the CICS translator?**

ANS. The CICS translator converts the EXEC CICS commands into call statements for a specific programming language.

**Q. Define the field with IC in the BMS map.**

Use CURSOR(30)

**Q. How do you protect a field from being overlaid? and what is the attribute used.**

The solution is to use **STOPPER** field...

STOPPER is an unlabelled 1-byte field with the protect

attribute. therefore, u can define the stopper field as

follows:

DFHMDF POS=( XX , XX ) , ATTRB=PROT, LENGTH=1

u can place the stopper field an unprotected field

**Q. What are the differences between an EXEC CICS XCTL and an EXEC CICS LINK command?**

ANS. The XCTL command transfers the control to an application program at the same logical level and it does not expect the control back, while the LINK command passes the control to an application program at the next logical level and expects the control back.

**Q. What is EIB? How it can be used?**

ANS. CICS automatically provides some system-related information to each task in a form of EXEC Interface Block (EIB), which is unique to the CICS command level. We can use all the fields of EIB in our application programs right away.

**Q. What information can be obtained from the EIBRCODE?**

ANS. The EIBRCODE tells the application program if the last CICS command was executed successfully or not.

**Q. What is the effect of including the TRANSID in the EXEC CICS RETURN command?**

ANS. The next time the end-user presses an attention key, CICS will start the transaction specified in the TRANSID option.

**Q. What is the function of the EXEC CICS HANDLE CONDITION command?**

ANS. To specify the paragraph or program label to which the control is to be passed if the “handle condition” occurs.

**Q. What is the difference between the INTO and the SET option in the EXEC CICS RECEIVE MAP command?**

**ANS**. The INTO option moves the information in the TIOA into the reserved specified area, while the SET option simply returns the address of the TIOA to the specified BLL cell or “address-of” a linkage section.

**Q. What is the function of DFHMDF BMS macro?**

ANS. The DFHMDF macro defines fields, literal, and characteristics of a field.

**Q. What is the difference between getting the system time with EIBTIME and ASKTIME command?**

ANS. The ASKTIME command is used to request the current date and time. Whereas, the EIBTIME field has the value at the task initiation time.

**Q. What is the function of the Terminal Control Table?**

ANS. The TCT defines the characteristics of each terminal with which CICS can communicate.

**Q. What is a deadlock?**

ANS. A deadlock occurs when a task is waiting for a resource held by another task which, in turn, is waiting for a resources held by the first task.

**Q. Explain the term Multi Region Operation.**

Ans. MRO is the mechanism by which different CICS address spaces with in the same CPU can communicate and share resources.

**Q. What is meant by program re-entrance?**

ANS. A program is considered re-entrant if more than one task can execute the code without interfering with the other tasks execution.

**Q. What is the meaning and use of the EIBAID field?**

ANS. EIBAID is a key field in the execute interface block; it indicates which attention key the user pressed to initiate the task.

**Q. What is BMS?**

ANS. BMS stands for Basic Map Support. It allows you to code assembler level programs to define screens.

**Q. How do you use extended attributes?**

Define EXTATT=YES and the correct terminal type.

extended attributes are like new colours for the font

**Q. What are the 3 working storage fields used for every field on the map?**

Length, attribute and input/output field.

**How do you make your BMS maps case sensitive?**

Use ASIS

**What is effect on RECEIVE MAP when**

PF key is pressed? Data transmission may happen,

PA key is pressed? Data transmission will not happen.

**Q. What are SEND MAP MAPONLY & SEND MAP DATAONLY?**

MAPONLY - to send the map alone, without any data. Eg: used for sending Menu screens.

DATAONLY - to send data alone, without sending the screen layout again. Eg: used for refreshing the screen data.

**Q. What is the difference between a PF key & a PA key?**

PF keys wake up the task and transmit modified data, PA keys only wake up the task.

**Q. Name the macros used to define the following:**

MAP MAPSET FIELD

ANS

MAPSET - DFHMSD

MAP - DFHMDI

Field- DFHMDF

**Q. Can you use OCCURS in a BMS map? If you do, what are the issues related with its use?**

Yes.

You can use BMS Macros to define an array of fields with the same name. However, using Assembler Macros, you can only specify a horizontal array. To do this you use the ?OCCURS=? parameter on the DFHMDF macro.  
  
If you want to specify a Vertical array then you must specify each field in the array separately using BMS Macros and then edit the generated symbolic map (Copybook).

EG:

**Use OCCURS=2 in DFHMDF**

**Q. Can you define multiple maps in a BMS mapset?**

Yes.

**Q. How is the storage determined in the symbolic map, if you have multiple maps?**

Storage for maps redefine the first. This means largest map has to be the first.

**Q. What is the meaning of BMS length of field = 0?**

Data was not entered in the field

**Q. Can you simply check if length = 0 for checking if a field was modified?**

No, not if ERASE EOF was used.

**Q. What do you do if you do not want characters entered by the user to be folded to uppercase?**

Use ASIS option on RECEIVE.

**Q. What does the BUFFER option in RECEIVE mean?**

Brings the entire DataStream from the terminal buffer.

**Q. What are the steps you go through to a create a BMS executable?**

Assemble to create CSECT and Link

**Q. When you compile a CICS program, the (pre)compiler puts an extra chunk of code. Where does it get included and that is it called? What is its length? -**

DFHEIBLK, DFHCOMMAREA.

**Q. all the CICS tables and explain their contents.**

PPT SIT

PCT JCT

FCT SNT

DCT SRT

RCT TCT

**Q. I have written a CICS program. What tables should I setup to run this program?**

PPT, PCT, (FCT, DCT, RCT (if needed)).

**Q. In which table would you make an entry for a BMS map?**

PPT

**Q. What is the content of the PPT entry?**

Length, Source, Use count, Lang, Res count DFHRPL number

**Q. For a CICS-DB2 program, how is the plan referenced?**

Uses a RCT table.

**Q. How is dynamic memory allocated within a CICS application program?**

Use a GETMAIN

**Q. What are the restrictions while using GETMAIN and FREEMAIN?**

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**Q. What is the use of a TDQ, TSQ?**

Temporary data stores.

**Q. How do you read from a TSQ?**

Temp storage read command

EXEC CICS

READQ TS

QUEUE (QNAME)

INTO (RDATA)

ITEM(10)

END-EXEC

**Q. If I create a TSQ from one transaction, can I read it from another transaction?**

Yes. As long as they run in the same region.

**Q. What are extra partition & intra partition TDQs?**

Extra partition TDQs are datasets used for communication by CICS and other CICS/Batch regions. Intrapartition TDQs are queues for communication within regn.

**Q. What is trigger level in the context of TDQs?**

For intrapartition TDQs specify the # records at which ATI happens. not applicable for extra partition TDQs.

**Q. How do you fire a batch job from a CICS txn ?**

Define an extrapartition TDQ as an internal reader and write the JCL to it. Terminate the JCL with /\*EOF.

**Q. What is ATI? What kind of TDQ can be used?**

Automatic Task Initiation. Intra partition TDQ.

**Q. Do you require a table entry for a TSQ?**

If recovery is needed.

**Q. Is there any entry for TSQs in CICS tables?**

Yes in the DFHTST.

**Q. What is the use of DCT?**

Destination Control Table used to define TDQs

**Q. What is ENQ, DEQ?**

Task control commands to make resources serially reusable.

**Q. I have TSQ with 15 items. I want to delete the 10th item. How do I do that?**

ANS

Deleting a record is not possibl ein TSQ and TDQ. Rewrite wth Spaces.

MOVE LOW-VALUES TO VAR02.

EXEC CICS WRITEQ TS

QUEUE('QNAME1')

FROM(VAR02)

REWRITE

ITEM(10)

END-EXEC.

**Q. Can you issue SQL COMMIT from a CICS program?**

Yes.

**Q. What is the other way of terminating a transaction?**

EXEC CICS SYNCPOINT. Assuming it is a LUW. This will not end the Xn.

**Q. What is an ASRA abend?**

Any data exception problem SOC7, SOC4 etc.

**Q. What is an AEY9 abend?**

DB2/IDMS not up.

**Q. What are the situations under which NEWCOPY is required?**

When a program has been used in CICS at least once and then changed and recompiled.

**What is 2 phase commit?**

SYNCPOINT IN COBOL – DB2 environment is called two phase commit as the changes made in the resources that are directly under control of CICS are committed in the first phase and the changes made to DB2 environment are committed in the second phase

**Q. What is EXEC CICS RETRIEVE?**

Used by START tasks to get the parameters passed to them.

**Q. Name some important fields in the EIB block?**

EIBRESP, EIBCALEN, EIBRRCDE, EIBTASK, EIBDATE, EIBTIME

**Q. Can you use DYNAMIC calls in CICS?**

Yes, the called routine must be defined in PPT and the calling program must use CALL identifier.