

CS507 MID 2010 descriptive questions with answers by vuZs team

MID TERM PAPERS SUBJECTIVES

SHARED BY DIFFERENT STUDENTS

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Question no. 1

List any two tools used in TQM (2 marks)

Answer:

There are certain Graphical tools used to implement and promote TQM. For instance

- o Histogram
- o Pareto Analysis
- o Cause & Effect Diagram

Question no. 2

Define Incremental Model (2 marks)

Answer:

Incremental Models

In incremental models, software is built not written. Software is constructed step by step in the same way a building is constructed. The products is designed, implemented, integrated and tested as a series of incremental builds, where a build consists of code pieces from various modules interacting together to provide a specific functional capability and testable as a whole.

Question no. 3

What do you understand by Rational-Man Model? (5 marks)

Answer:

Rational Man Model

- In a rigorous rational model, it is presumed that the individual is rational enough to accurately rank all the alternatives.
- However, in the real world of humans, specifying all of the alternatives and consequences is impossible.
- Information systems based on this model need to be based on availability of perfect and complete information on all alternatives so as to ensure certainty.
- Real life situations need to be given room for chances which this model does not provide for.

Rational Man Model – Example

1. In a pharmaceutical drug company, the preparation and testing of life saving drug is a critical phase, and choice of a perfect alternative is inevitable. Hence the information system devised to support it should be such that it can record and monitor even the slightest variations.
2. In an ammunitions factory, the testing and quality control of various bullet, shells, missiles, bombs, etc is a sensitive issue. Since chances of error are quite high, the system from selecting and discarding should be with high sensitivity level.

Question no. 4

What are the primary issues to be considered during system development process? (5 marks)

Question no. 5

Practical example of Description Model (2 marks)
answer:

The Blond Guitar

My most valuable possession is an old, slightly warped blond guitar--the first instrument I taught myself how to play. It's nothing fancy, just a Madeira folk guitar, all scuffed and scratched and finger-printed. At the top is a bramble of copper-wound strings, each one hooked through the eye of a silver tuning key. The strings are stretched down a long, slim neck, its frets tarnished, the wood worn by years of fingers pressing chords and picking notes. The body of the Madeira is shaped like an enormous yellow pear, one that was slightly damaged in shipping. The blond wood has been chipped and gouged to gray, particularly where the pick guard fell off years ago. No, it's not a beautiful instrument, but it still lets me make music, and for that I will always treasure it.

Question no. 6

Why prototypes are used? (2 marks)

Answer:

A prototype is built to test the function of the new design before starting production of a product. Building the full design is often expensive and can be time-consuming. A prototype allows manufacturers to rapidly and inexpensively test the parts of the design that are most likely to have problems, solve those problems, and then build the full design.

Question no. 7

Objective of MRP (3 marks)

Answer:

Materials Requirement Planning (MRP)

Material procurement needs to be planned in compliance with the production Schedule.

Initially companies

used to do plan it manually through a document termed as “Material Requirement Plan”.

Material

Requirements Planning (MRP) is software based production planning and inventory control system for material procurement and scheduling.

It helps meeting three objectives:

- o Ensure materials and products are available for production and delivery to customers.

- o Maintain the lowest possible level of inventory.

- o Plan manufacturing activities, delivery schedules and purchasing activities.

MRP helps in getting the right material and physical resources together at the right place and at the right

time to meet the customer’s requirements. This helps in achieving on time delivery, High Quality, at the best price.

Question no. 8

Difference b/w Incremental & Iterative Model (3 marks)

Answer : page number 97

Incremental vs. Iterative

These sound similar, and sometimes are equated but there is a subtle difference:

- Incremental: add to the product at each phase
- Iterative: re-do the product at each phase

Example

Building a House

- Incremental: Starts with a modest house, keep adding rooms and upgrades to it.
- Iterative: The design/construction map of the house is amended and improved and repeated until all the requirements are fulfilled.

Question no. 9

Difference b/w (i) Neural network vs Expert system (ii) ESS vs DSS

Answer:

Neural network vs Expert system page # 51

Expert systems seek to model a human expert's way of solving problems. They are highly specific to seeking solutions. Neural networks do not model human intelligence. They seek to put intelligence into the hardware in the form of generalized capability to learn.

ESS vs DSS page # 51+52

ESS implies more of a war room style graphical interface that overlooks the entire enterprise. A decision support system (DSS) typically provides a spreadsheet style "what if?" analysis capability, often for only one department or one product at time.

Question no. 10

Explain System Design & Identify its steps (5 marks)

Answer:

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System Design

System Design maybe defined as “A problem solving technique that re-assembles a system’s components back into a complete system. This may involve adding, changing deleting pieces relative to the original system” or alternatively as “the process or art of defining the hardware and software architecture, components, modules, interfaces, and data for a computer system to satisfy specified requirements.”

Once the existing system is analyzed and user requirements established they need to be either incorporated

into the existing computerized system or assist in the development of a new system.

The major components of system design are:

- Designing usable and complete input
- Designing well defined and usable output with flexibility to redefine presentation of outputs in any form.
- Designing file or database
- Designing user interface (input screen as it would be seen by the user)

Define MIS (2 marks)

Answer:

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Management Information System

MIRS makes information available to relevant users by producing pre-determined and pre-designed reports required by the management. Management information system helps middle level management planning, controlling and decision making. The data stored can be used or manipulated to produce differently defined reports from pre-defined reports. It can be presented graphically or pictorially. The

reports generated by the MIS are used for analytical decision making by the management. The application software can construct projections, build scenarios, do what if analysis to enable better decision making.

Question

Define Technical feasibility (2 marks)

Answer:

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Technical Feasibility – is the available technology sufficient to support the proposed project? Can the technology be acquired or developed?

- Response times – time between request and execution
- Volume of transactions which can processed within the given time
- Capacity to hold files or records of a certain size
- Number of users supported without execution

Question

what are DSS models (3 marks)

Answer:

from site :....<http://www.tech-faq.com/decision-support-system.html>

one of the DSS models available is with the relationship of the user in mind. This model takes into consideration passive, active and cooperative DSS models.

Decision support systems that just collect data and organize it effectively are usually called passive models, they do not suggest a specific decision, and they only reveal the data. An active decision support system actually processes data and explicitly shows solutions based upon that data. While there are many systems that are able to be active, many organizations would be hard pressed to put all their faith into a computer model without any human intervention

for more consult check it<http://dssresources.com/dsstypes/mddss.html>

and the only answer by book is that :page 45

Types of DSS

DSS, may either be

- Model Driven DSS
- Data Driven DSS

10.3.1 Model Driven DSS

Model driven DSS uses following techniques

- What-If analysis

Attempt to check the impact of a change in the assumptions (input data) on the proposed solution

question

Define different types of SDLC models (5 marks)

Answer:

answer taken by <http://toostep.com/trends/types-of-sdlc-models>

Waterfall Model

This is the most common and classic of life cycle models, also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed in its entirety before the next phase can begin. At the end of each phase, a review takes place to determine if the project is on the right path and whether or not to continue or discard the project. Unlike what I mentioned in the general model, phases do not overlap in a waterfall model.

V-Shaped Model Just like the waterfall model, the V-Shaped life cycle is a sequential path of execution of processes. Each phase must be completed before the next phase begins. Testing is emphasized in this model more so than the waterfall model though. The testing procedures are developed early in the life cycle before any coding is done, during each of the phases preceding implementation. Requirements begin the life cycle model just like the waterfall model. Before development is started, a system test plan is created. The test plan focuses on meeting the functionality specified in the requirements gathering. The high-level design phase focuses on system architecture and design. An integration test plan is created in this phase as well in order to test the pieces of the software systems ability to work together. The low-level design phase is where the actual software components are designed, and unit tests are created in this phase as well. The implementation phase is, again, where all coding takes place. Once coding is complete, the path of execution continues up the right side of the V where the test plans developed earlier are now put to use.

Incremental Mode

The incremental model is an intuitive approach to the waterfall model. Multiple development cycles take place here, making the life cycle a “multi-waterfall” cycle. Cycles are divided up into smaller, more easily managed iterations. Each iteration passes through the requirements, design, implementation and testing phases.

A working version of software is produced during the first iteration, so you have working software early on during the software life cycle. Subsequent iterations build on the initial software produced during the first iteration.

Spiral Model

The spiral model is similar to the incremental model, with more emphases placed on risk analysis. The spiral model has four phases: Planning, Risk Analysis, Engineering and Evaluation. A software project repeatedly passes through these phases in iterations (called Spirals in this model). The baseline spiral, starting in the planning phase, requirements are gathered and risk is assessed. Each subsequent spirals builds on the baseline spiral. Requirements are gathered during the planning phase. In the risk analysis phase, a process is undertaken to identify risk and alternate solutions. A prototype is produced at the end of the risk analysis phase. Software is produced in the engineering phase, along with testing at the end of the phase. The evaluation phase allows the customer to evaluate the output of the project to date before the project continues to the next spiral.

In the spiral model, the angular component represents progress, and the radius of the spiral represents cost.

[question](#)

Benefits of MRP II (5 marks)

[Answer:](#)

[Benefits of MRP II page 62+63](#)

MRP II involves the entire company

- o Management business rules for strategic planning can be set, and enforced by MRP II.
- o Sales and Marketing can incorporate sales goals that fit material and capacity constraints.
- o Relationships can be developed with vendors to improve purchasing just in time.
- o Inventory shortages can be seen before they happen, with communications to customers to get approval of substitutions that will get a part that does the same thing, on schedule.

- o Accounting and finance departments get accurate costs, and predict cash flow.