Question 1: Audit & QA

You have been asked to conduct an audit of the QA system in a client company, outline and discuss the key elements of the audit you will conduct. Explain the QA precautionary actions you may take if some aspects of the audit are not to ISO9001 standards

Definition of IS audit: review and provide feedback, assurances and suggestions.

Why Audit: address 3 areas:

- Availability: Available for the business at all the times, protected against all types of losses & disasters
- Confidentiality: (Security) The info. In system will be disclosed to those who need it.
- Integrity: The system always accurate and reliable, timely. Ensure that no unauthorized modifications.

Scope of Audit: An audit may vary in how much is covered. (Can depend on the client sometimes)
It is important to cover all the elements, but do not need to be done in one assignment.

- Physical and environment
- System Admin
- Application software
- Network security
- Business continuity
- Data integrity

Risk Based approach: Risk can affect each system differently.

1) Conduct an inventory of IS and categorise them
2) Identify the critical functions
3) Asses the risks and rating them
4) Rank system and decide audit plan(priority, resource, schedule)

Audit process:

1) Preparation
2) Formal kick off
3) Audit in progress
4) Formal findings presentation (Report)
5) Follow up on corrective Actions
6) Extra (Certification)

Quality assurance (QA): process-centered approach to ensuring that a company or organization is providing the best possible products or services.

QA is related to **quality control**: focuses on the end result

Quality assurance: focuses on enhancing and improving the process that is used to create the end result, rather than result than result itself. Emphasize catching defects before they get into final product.

QA standards are a set of standards that a company chooses to implement to show to their customers they are committed to deliver quality products and service.

ISO9000 is also the most recognised standard used, international standard, guarantee that a company delivers quality products and services.

Why QA standard (certification):

- Customers require it
- Powerful marketing tool
- Reap improvements as a result of meeting the standards.

Advantages of a quality system:

- Companies strive for a total quality system because quality is what the customer demands
- Ensure that products and services provided meet customer requirement
- Ensure consistency in the day to day operations
- Ensure that processes are repeatable and predictable
- Allow the company to create and retain satisfied customers
- Improve the efficiency, reduce operating cost and minimize unproductive time.

So, if some aspects are not conformance to ISO9000, I may have to set it as high priority when conduct audit.

Question 2: Discuss an IT (- & +)

Discuss an Information Technology (IT) in business. Explain the IT, its benefits, its uses, the difference it has made to the world, and the impact. What negative impact has this had if any to the users, discuss both positives and negatives (5 marks)

Augmented reality (AR) is the technology to create a "next generation, reality-based interface". Like most technologies that eventually reach a mass market, AR is moving from laboratories around world into various industries and personal markets.

Many mobile manufactures increasingly adopt AR technology on their products, such as Nokia Lumia phones bring the city-lens app that gives dynamic information through the phone's camera display. In addition, emerging products like Google Glass and Oculus Rift's 3D virtual reality headset are drawing attention. With the assistance of AR, the wearable technologies will launch a revolution in the near future.

There are **three basic aspects of AR system** proposed by Azuma:

- Combines real and virtual objects in a real environment;
- Register (aligns) real and virtual objects with each other;
- Runs interactively, in three dimensions, and in real time.

Visual display: Video see-through; Optical see-through; Projective

Display Positioning: Head-worn; Hand-held; Spatial

Application domain:

- **Medical application**

  Medical domain could benefit from the assistance of AR as well. Doctors and nurses could get important information overlays on their glasses in the real time. It will help them take related actions immediately to their patients. Also it should be very precise in surgery. Hence AR could simulate the view of realistic surgery to help surgeons familiar with process.

- **Entertainment**

  AR has applied in game platform for a while, and it still has substantial room for improvement. For instance, mobile users could fight virtual enemies in a real environment that enhance the realistic experience.

Limitation/ challenges

Although AR could bring many benefits to the commercial fields, it still faces technical challenges regarding for high resolution, luminance, contrast and field of view. Besides, just like the wearable AR equipment, costs, weight, power usage and size also need to be addressed. For instance, Google glass is considered a representative product by using AR technology, however, its high cost around 1500 dollars and low performances limited by size would constraint its market acceptance. Moreover, privacy is a common problem that needs to be considered. For instance, people's information including name, address and age might be displayed by using AR without consent could be a serious issue. In addition, overload information could distract users that caused miss important things in the real environment.

Question 3: NZ Police case study Lecture 5

NZ police case study. Discuss what went wrong in this case study (5 marks),
How would you have done things differently?

Case review: Long period (7years)

1) Initial estimate 30.1 Million (3 phases)
2) Add new user requirements
3) Change operation system
4) 12 months behind, project manager resigns
5) Cost estimate increased, is 4 times than original estimate
6) Hardware supplier pulled out
7) Project cancelled (cost 100 million)

Four most common Problems:

- Incomplete (not specific enough) project requirement
- Unrealistic schedules
- Insufficient resource planning
- Poor communications

Triple Constraint: Scope Time Cost.

Project Planning: six key steps

1. Determine a work breakdown structure (WBS) identifying all the activities involved
2. Identify dependencies between activities
3. Estimate the effort required for each activity
4. Allocate resources to each activity and hence determine its duration
5. Level resource usage over the duration of the project
6. Arrive at a budget for the project and compare with the budget available.

Explanation:

1 WBS: is a *deliverable-oriented* grouping of project elements that organizes and defines the total *scope* of the project.

Include 3 elements:

- Deliverable (a unit of output that is delivered);
- Activity (a major work category);
- Task (a small unit of work that makes up an activity)

It is important, and involves some judgment, to arrive at the right level of 'granularity' for the work breakdown. If the tasks are too big or too all inclusive then it is impossible to allocate resources properly. If the work breakdown is too fine, then management of the project is made unnecessarily complicated. According to Charles C. Martin, "The lowest level of subdivided work should be small enough to permit adequate control and visibility without creating an unwieldy administrative burden". Based on the size and duration of the project, it is usual for an activity to last for no less than one day and no longer than 30 days. If planning needs to be more precise then an activity can be decomposed into smaller discrete activities for which responsibility can be assigned.

2 Determining dependencies:

In order to translate a work breakdown structure into a work schedule we need to determine which activities must be completed before others may begin. Such activities are called predecessors. It is important to identify predecessors completely and accurately because they can have a marked effect on the overall duration of the project and how flexibly the project can be managed. The project manager must have a thorough understanding of the project, the nature of each activity and what is involved.

3 Estimating Project Effort

Estimating duration for each activity in the work breakdown structure is a difficult task. It is usually based on previous experience of attempting similar tasks. If a similar project has not previously been attempted (for example building the 'sails' on the Sydney Opera House), then effort estimation is even more difficult. The following sections describe briefly the *four* most common approaches to project effort estimation.

4 Resource Allocations:

Usually there is an overall time constraint on a project, that is a desired finishing date. Clearly, the time taken for a particular task will depend on the level of resources allocated to it, but it is not always possible to shorten a task by simply adding more resource, In general the following relationships exist between project SIZE, EFFORT, RESOURCES, DURATION and COST.

5 Resources Levelling:

Resource levelling is the process of scheduling activities in such a way that the total resource required does not exceed the resource available, and that the demand for resources is smoothed out over the duration of the project avoiding peaks and troughs in demand.

6 Budgeting:

The budget for a project is sometimes an arbitrary figure, but it must be constantly revised to take into account the realities of the project once the project plan is drawn up. Project management is concerned with completing the project without exceeding the budget. Unforseen problems may mean that the budget has to be revised, in which case the sponsor of the project will need to be consulted.

Question 4: Develop a proposal for a new IT project. Discuss the key element.(lect 5 & lect6)

You have been asked by your manager at work to develop a proposal for a new IT project idea. Discuss the key elements that he will require for submission to the investment committee to ensure funding is made available, i.e. what resources, technology, timing, budgets, etc. will be required (5 marks)

SIMILAR TO OUR GROUP ASSIGNEMNT

Again, the "Triple Constraints" is the best result that the manager wanted.

Four steps in Project planning:

- **I. Determine WBS**(deliverable- oriented grouping of project elements that organizes and define the total scope of the project)
  - Detailed enough------small unit of works
- **II. Estimated amount of effort required**
  - Effort: the amount of human resource consumed.
  - Resources: personnel committed (or Materials or equipment expended in the completion of a task or activity
  - Duration: time taken to complete a task
  - Cost (cost= resources * rate)
  - **5 steps** to project estimation:
    - ✓ **size** [lines of code, function points],
    - ✓ **effort**[person hours, days, weeks or months],
    - ✓ **resources** [how many engineers or programmers],
    - ✓ **duration** [20 person-hours; 3 people; duration=20/3=6.3hours],
    - ✓ **cost** [person-hours * cost/hour])
  - **4 common + 2 other approaches** to project estimation
    - ✓ **Sum of the parts**
    - ✓ **Expert judgement:** need experts use their experience to estimate effort required (rather subjective)
    - ✓ **Estimation by Analogy** (Compare present project to similar project(s) already undertaken)
    - ✓ **Algorithmic cost models**: use empirical model to predict
    - ✓ **(1) Component matrix (lec 06)**
    - ✓ **(2) Function point analysis (lec 06)**
- **III. Determine the dependencies** (Which task(s) must be completed before this activity or task can begin)
- **IV. Devise project schedule**

Also, I need to consider a well-organized risk management system to support that our project team can handle the risks very well.

Finally, a reasonable Return and Investment (ROI) analysis is needed.

Question 5: Change management & ADKAR model (lect02, 08-1wk08a_ADKAR)

You are Senior Manager of Change in the "Best IT Company Pty Ltd", you have been asked by your manager to implement a change program using the ADKAR model.
Discuss the key aspects of this project and how you would go about it (5 marks).

ADKAR Model: The five building blocks for success change

- Awareness: of need to change, the nature of change
- Desire: to support the change, participate and engage
- Knowledge: on how to change, how to implement new skills and behaviours
- Ability: to implement the change, to demonstrate performance
- Reinforcement: to sustain the change, to build a culture and competence around changes

Change management: Change management is the "people side" of a projects an important to IT Talent retention and attrition.
Compare with project management, it is the people side of how to move from current state to future state.
Generally speaking is where you are today and where you want to be.
Despite of the ADKAR model, we still need to take care of the Psychology of change like the senders' mentality and receivers' orientation. Also, not everyone changes at the same pace.

Question 6: Estimate Project Cost & Resource Estimation(lect06)

You have been given a project scope for a new ERP system and are required to estimate a project costing. Describe the approach you will take, what elements of the project you need to cost the project, and possible resources required (5 marks)

Similar to question 4

There are **four elements of project estimation** need to be addressed:

EFFORT, RESOURCES, DURATION, COST

Flow chart: size ➔ effort ➔ resources ➔ duration ➔ cost

6 Approaches to estimate project costs:

- Expert judgement:
  - Estimate the project based on the previous experience of similar projects (cheap, take little time and effort, can be successful if the expert has directly experience of similar system.)
- Sum of the parts (more simple):
  - Make use of WBS
  - Total = Sum of individual parts

  (Depend on hours of the resources working and the hourly salary to calculate the resources consumption.)
- Estimation by analogy:
  - Compare the current project to similar project that already undertaken
  - Estimate how many time bigger or smaller
- Component matrix
  - Application decomposed into components
  - Each components classified as simple, medium & High
- Algorithmic cost models
- Function point analysis (historical data)

The element you will need to cost:

- Resource cost: Salary + bonus
- Hardware: Working station, Server etc.
- Software: office, database …
- Maintenance fee
- Buffer: 10% of total cost
- Crashing cost (lect07)

Question 7: Risk management & Measures

You are a senior IT Project Manager at IBM and are working on a project for Telstra.
Describe the possible risks and what you will do to ensure the project is on track and all risks are mitigated, describe what measures you would take to ensure timely delivery of the project. (5 marks)

Risk: is the probability that an uncertain event or condition will negatively impact project performance or success

Risk Management Process involves:

- Identifying Risks
- Assessing risks
- Planning risk response
- Track and controlling risks

Possible risks (what could go wrong):

- Time overrun on particular tasks: Time buffer, crashing.
- Staff illness: Substitutions, overtime work
- Change of marketing strategy:
- Technology failure: outsourcing
- Late delivery
- Failure to meet specifications
- Budget overrun: add reserve to budget

Ways of dealing with risk:

- **Avoiding risk**: change the project plan to eliminate the risk or condition
  Examples: use older well-tried software or technology, rather than 'bleeding' edge
  Locate power station away from fault line and the coast
- **Mitigating Risk**: Reduce the likelihood an adverse event will occur, reducing impact of adverse event.
  Examples: ensure good staff conditions;
  Employ multiple employees who can cover for each other;
  Build some slack into the project schedule;
  Have several projects on the go concurrently;
  Have disaster recovery plan in place
- **Transferring Risk**: pay a premium to pass the risk to another party
  Examples: take out insurance
  Impose penalties on contractors for late delivery
  Outsource critical elements of the project
- **Sharing Risk**: allocating risk to different parties (e.g. joint ventures, distributed tasks)
- **Accepting Risk**: making a conscious decision to accept the risk

Question 8: Australian Computer Society pros and factors influence you

As an IT professional you may be interested in joining the Australian Computer Society, outline the benefits of joining the ACS, what factors will influence you joining this organisation (5 marks)

Benefits of membership of ACS:

- Opportunities to "network" with other professionals in the area
- Careers services (job hunting, resume writing, interviews)
- Publications & Library
- Continuous professional development
- Achieving Certified status
- Lower fees (60 for student, 430 full member)

Factors that influenced:

ACS is a community that have a series of standard that will help professionals keep competitive and keep professional skills …….. (Link the pros of ACS and explain why it is good to join the organisations)

Certified professional (CP) benefits of ACS:

- Brings an added competitive edge and professional readiness
- International recognition global acknowledgement of certified professional as the benchmark for professionalism
- Strengthening of employment and marketability
- Greater job mobility
- <no fees for members who apply CP status>

When ACS member breaches the code of ethics, ACS could apply following sanctions:

- Admonition
- Reprimand
- Fine
- Suspension
- Expulsion
- Specified professional development
- Withdrawal of certification

Question 9: Ethics & Whistle blower (lect 10a, lect11, week11 tutorial)

As an IT project engineer, ethics in your professional is of utmost importance. However, you know that in your company, many of the IT engineers are incorrectly using unauthorised software from a large supplier, would you ignore it this malpractice, or what steps would you and should take? (5 marks)

No, as an IT professional I will not ignore this problem. Used unauthorised software is a big issue of ethic. It may be even not legal. For instance, if the IT engineers are widely using unauthorised Microsoft Office, because the document of file is not support by Microsoft, it may even cause the loss of important document.

If I observe a case of criminal or unethical practice:

1. Ensure that such practices are brought to attention of those with appropriate authority
2. Try normal channels initially, if that fails:
    a. Make objections known promptly
    b. Focus on issues in tactful low-key manner
    c. Be accurate, keep formal records
    d. Seek legal advice
    e. Check with ACS

Question 10: Decision support process

You are running a very successful IT software company. One day you receive a call from a client for help on a new project. What decision support process will you use, what methods and information will you call on to help you both understand and then provide this client with a quote to win the contract? (5 marks)

The main decision making cycle:

1. Intelligence
   a) Environment scanning
   b) Report & queries
   c) Comparisons
   d) Benchmarks
2. Design
   a) Creativity
   b) Finding alternatives
   c) Analyzing solutions
3. Choice
   a) Compare and select the best solution
4. Implementation

Methods or information:

1. Classification of models
   1. Physical
      - Iconic(象征性的)
      - Schematic(原理图)
   2. Symbolic
      - Verbal description
      - Financial statement
      - Specification
   3. Math.
      - Equation or formula
      - Representation problem space at various degrees of abstraction(抽象概念)

Answer this question need some example like if you are conduction an online-sales system, you might require the financial statement of the company, the cash flow that helps you understand the situation that why the company need the system. Or the benchmark that if this will helps the online sales system.

**** What if analysis**

Question 11: KPI (Key Performance Indicator) - L07-21 and L12A-53

As the Senior IT project Manager you are required to provide the key performance measures and an update to your executive team and client before they provide further project funding. Explain what KPI's you will focus on to ensure client sign of for the next phase of the project. (5 marks)

Key performance indicator (KPI): is a metric that is tied to a target; provide a high-level snapshot of the organization; Provide information on controllable factors appropriate for informed decision-making.

KPIs should be:

- **Relevant:** Relate to some important aspect of business
- **Indicative:** reflect success or failure of business
- **Measurable:** can be expressed quantitatively
- **Predictive:** able to predict the future of a particular trend
- **Understood:** known relationship to performance

KPI include:

- Useful Values:
  - 3 major values
    - PV (Planned Value)
    - AC (Actual Cost)
    - EV (Earned Value)
  - CV (0 or "+": good [on track]; "-": bad [budget over spent])
  - SV (same to CV; "-": bad [behind schedule])
  - **CPI (Cost performance index) = EV/AC (>1 indicate good)**
  - **SPI (Schedule performance index) = EV/PV (>1 indicate good)**
  - Useful forecasts
    - EAC (Estimated cost at completion) = Original budget/CPI
    - ETC (Estimated Time at completion) = Original TIME/SPI
- Customer satisfaction
- Employee satisfaction
- Value of new business
- ROI (return on investment)
- Net profit before tax
- Net cash flow
- Health and safety record
- Manufacturing capacity and operational efficiency

Dashboard to present KPI: easy to read, often single page, real-time user interface, showing a graphical presentation of current status (snapshot) and historical trends of an organization's KPI, informed decisions to be made at a glance. <Based on information visualization: visually analyse data and display interesting relationships among huge data, provide efficient way to access useful data>

Benefits: facilitate recognition of problems before they lead to other problems, offer opportunity for early corrective action; help avoid: increasing costs, decreasing value of benefits, missed deadlines, schedule slippage <more intuitional for customers to recognize the current status rather than boring huge date analysis>

Difficulties KPI encountered:

- Lack of agreement among stakeholders
- Not understood by stakeholders
- Not trusted by stakeholders
- Can affect team behavior
- Team members believe that they are being spied on by management

Question 12: Business Intelligence ---------- L12B-6

You are asked by your manager to source a new Business Intelligence software package, outline the key elements that you would look for when sourcing this new package for your company?

Business Intelligence: A set of methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information used to enable more effective strategic, tactical, and operational insights and decision-making.

<**BI System**: A set of integrated tools, technologies and programmed products used to collect, integrate, analyse, and make data>

Based on 4 components of BI:

- Data warehouse (allow end users to perform extensive analysis more efficiently)
- Analytic tools (manipulating, mining and analysing data)
- Business performance indicators (monitoring and analysing performance)
- User Interface <dashboard?>

Key elements of BI

- **Data warehouse (gathering)**: A data warehouse is a collection of relevant business data that is organized and validated so that it can be analyzed to support business decision making.
  DW is considered the core component of a business intelligence system.
- **ETL tools (gathering, searching)**: are responsible for extraction of data, transform data from many different formats into common format (including cleansing – quality) and load that data into a data warehouse. <can do low level analysis and transformation>
- **OLAP techniques (analysing, delivery)** : provides advanced tools for decision making;
  Analyse complex data in real time, allows user access, analysis and modelling of business problems and sharing of information that is stored in data warehouses;
  Provide project manager to analyse data from multiple perspectives and explore it discover hidden information; Incorporate data mining.
- **Data mining (analysing, delivery)**: designed to identify relationships and rules within a data warehouse; could be used to predict an outcome of a decision and can also describe reality.

Key elements another view:

- Suitability of dimensions as defined
- Can the BI system provide appropriate data
- The frequency of update
- Cost and efficiency

BI system in any organisation is intended to provide information for:

- Make decisions
- Forecasting demand for goods & services
- Optimising operational decisions
- Effective human resource management

Question 13: Conduct BI system for CRM system ---------- Lecture12B ➔ Question 12

You have been asked by your manager to conduct a Business Intelligence exercise for the new CRM system to be implemented. Describe what you would do to ensure your management has adequate information to make a decision. (5 marks)

Two factors to answer this question:
1. Conduct BI for the new CRM system
2. How to gather adequate information to make decision

CRM: Customer relationship system (to **understand**)
Can be used for:

- Marketing: track and measure campaigns over multiple channels, such as email, search, social media, telephone and direct mail;
- Customer service and support: create, assign and manage requests made by customer
- Social media: build up customer relationship, integrate social media sites like twitter, LinkedIn and Facebook to track and communicate with customers sharing their opinions and experiences with a company, products and services.

Unstructured data (to **understand)**:
Most of all business information exists as unstructured data. (Webpages, News, reports, letters, e-mails, surveys, marketing material, research)

In order to have adequate information to make a decision:

- 1st search, gather data

Use BI to search and gather data from many different sources, then format, validated and organized in order to be analysed (using ETL tools and data warehouse)

Example: company could use social media sites, emails, service web site and online-survey to gather customers' requirements and demands that are most of unstructured data. By using BI to filter useless information, transfer data to common format and organize to store in data warehouse waiting for analyse.

- 2nd analyse, deliver data

Use BI to analyse and deliver useful information to make decision.

Example: use data mining and OLAP techniques to explore interesting relationships among the huge data and find hidden information or problems, and then visually present these relationships by using user interface to manager, stakeholder and sponsors in real time to make decisions.

Question 14: Risks and Contingency Plan ➔ question 7

You are the project manager for the Mobile banking app. With "Your new Bank". The project is failing with major risks of technology not working, and expected time to complete slipping. Describe the project to your senior executives, and explain your contingency plans need to be executed. (5 marks)

Understand the ways to deal with risks:

Example:

- Assess the risk priority; if it's possible then delay the complete time to provide more time to fix the technology problem.
- Call technical supports from third party
- Use outsources to develop new one to instead the failed part or use older technique to instead old

In many cases it is not cost effective to start by developing a contingency plan, the better response is to allocate a certain amount of resources to mitigate a risk.

Contingency plan could be considered as how deal with the risks.

Possible answer:

- Crashing the tasks on the critical paths
- Use more advanced technology
- Stuff overtime working
- Outsourcing IT Talent

Other supports:

Identify cause (07 A%B)
Notify management
Plan remedial strategy
Revise budget
Revise project schedule
Communicate the state of affairs

Not

gnore it
Try to hide it
Keep on keeping on
Try to play 'catch up'

Question 15: Testing plan ----- L08

You are the test manager for a large banking integration project. Describe the process of testing you would incorporate, explain your strategy. (5 marks)

Understand testing during development:

- Component Test:
  - To ensure that each component behaves 'correctly'.
  - Uses white-box testing to check each program function fully.
- Integration Test:
  - To test interaction between related components
  - Focuses on interfaces between components.
- System Test:
  - To ensure that the user requirements have been met.
  - Focuses on usual business processes, and normal workflow.
- Performance Test:
  - To test system performance under maximum expected load.
  - Simulates key processes under maximum load
- Soak Test and stress test:
  - To ensure that system is stable over extended period.
  - Load increased until system fails. Checks effects of over-load
- Acceptance Test:
  - Compares system functionality against agreed-on user requirements
  - Carried out by client using scenarios, supervised by developer

Two cases review:
Nectar case (bad):

- functionality of system had been tested, but not under load; <load test>
- performance testing had not anticipated the level of user load; <load test>
- nobody knew that the system would fail completely under pressure <pressure test>

Tesco case (good):

- Testing to be carried out off line (not impact live system)
- Determine the target load from historical data
- Performance testing: simulate the maximum expected load in terms of number of users; simulate the maximum expected load in terms of resulting system load
- Test infrastructure: Hired large services for 1 month, set up in service centre, resemble actual system
- Further testing:
  - Load test: behaviour of system at given load levels ➔ showed that system would be capable of handling volumes
  - Soak test: load maintained for extended periods ➔ revealed no unexpected behaviours
  - Stress test: takes application to functional limits ➔ demonstrated that system would cope with up to 1….0 concurrent users

In this case, this is based on the bank integration project, the major aspect is that need to consider the user load (more users than single bank),

Question 16: Project management ----- L07

Easy question, plz refer to question 7.

Question 17: Presentation on the progress of CRM system

Refer to the group presentation. Cover the topics that all you want to mention.

Example: Project scope, project time, cost, budget, WBS, how far did the project arrived, the risk management, KPI analysis etc.

Question 18: System integration techniques & V-model

We are dealing with the large bank merge project. So, the most important part of testing is integration testing.

Bank merges test strategy:

1. How can secure the transfer large amount of client data to new entity
2. Ensure continuity of business and create positive experiences
3. Test each small part individually before integrates them.
4. Risk-based approach: analyse each requirement and give them a risk rating, high risks got the high priority
5. Test NFR (non-functional requirement) early and not wait until all functional requirement finished.

V-model:

- Verification: Are we doing the job right
  - ✓ Check the conformance and consistency with the specification.
  - ✓ Process oriented
- Validation: Are we doing the right job.
  - ✓ Check the specification is what the user actually wanted
  - ✓ Product oriented
- Implication of V-model
  - ✓ Testing is considered early in the development life cycle
  - ✓ System design is continuously checked

Question 19: Human Resource Management

This question mainly examines the communication and team work of the project.

If I was a project direct and found such problem. The first and very important thing is to find out the cause of the problem. According to the question, the engineer is bad at time management. So, it is very important to help him make a time schedule for his tasks and also talks to him about the importance of his task.

Question 20: Sourcing IT talent ----- L02A-7

The skill of test is a very complicated skill and it is very hard assess. Firstly, the person must show potential that he has good test skills.

It is very important that the tester must have previous experience that he done the similar project before.