COEPD – Traditional Development

Capstone Project1 – Part -1/3 – 100 Marks - Pass 60 % 14 Questions

Instructions to follow:

1. Copy paste (either image, diagram or text) is not entertained. If done, the document will not be evaluated.
2. After submission of the answers of this prep exam, You should be prepared to attend viva and justify your answers in the prep exams. If in Viva, participant is NOT justifying the answers, Viva will be repeated until Candidates justify 60% correctness.
3. Mentor calls are scheduled only if the participant have submitted their task at least for one time. (should apply their knowledge in this task first)
4. For attempting prep exams participant should be thorough on the topics using their references.
5. Please format the document properly (Always have a question no., question and answer).
6. Have a consistent format (Font name: Arial/ Calibri -Font size 12, Font Color: Black ).
7. Few Questions are related to the case study, check Questions thoroughly before you answer.
8. Answers should be elaborated in detail(\*not as per the allotted marks).
9. Please focus on learning and applying the knowledge as this knowledge will be helpful in contributing at your BA job.

Online Agriculture Products Store

Mr. Henry, after being successful as a businessman and has become one of the wealthiest persons in the city. Now, Mr. Henry wants to help others to fulfil their dreams. One day, Mr. Henry went to meet his childhood friends Peter, Kevin and Ben. They live in a remote village and do farming. Mr. Henry asked his friends if they are facing any difficulties in their day-to-day work.

Peter told Mr. Henry that he is facing difficulties in procuring fertilizers which are very important for farm. Kevin said that he is also facing the same problem in-case of buying seeds for farming certain crops. Ben raised his concern on lack of pesticides which could help in greatly reducing pests in crops.

After listening to all his friends’ problems, Mr. Henry thought that this is a crucial problem faced not only by his friends but also by so many other farmers. So, Mr. Henry decided to make an online agriculture product store to facilitate remote area farmers to buy agriculture products. Through this Online Web / mobile Application, Farmers and Companies (Fertilizers, seeds and pesticides manufacturing Companies) can communicate directly with each other.

The main purpose to build this online store is to facilitate farmers to buy seeds, pesticides, and fertilizers from anywhere through internet connectivity. Since new users are involved, Application should be user friendly.

This new application should be able to accept the product (fertilizers, seeds, pesticides) details from the manufacturers and should be able to display them to the Farmers. Farmers will browse through these products and select the products what they need and request to buy them and deliver them to farmers location.

Mr. Henry has given this project through his Company SOONY. In SOONY Company, Mr Pandu is Financial Head and Mr Dooku is Project Coordinator. Mr. Henry , Mr Pandu , and Mr Dooku formed one Committee and gave this project to APT IT SOLUTIONS company for Budget 2 Crores INR and

18 months Duration under CSR initiative. Peter, Kevin and Ben are helping the Committee and can be considered as Stakeholders share requirements for the Project.

Mr Karthik is the Delivery Head in APT IT SOLUTIONS company and he reached out to Mr Henry through his connects and Bagged this project. APT IT SOLUTIONS company have Talent pool Available for this Project. Mr Vandanam is project Manager, Ms. Juhi is Senior Java Developer, Mr Teyson, Ms Lucie, Mr Tucker, Mr Bravo are Java Developers. Network Admin is Mr Mike and DB Admin is John. Mr Jason and Ms Alekya are the Tester. And you joined this team as a BA.

Question 1 – BPM - 5 Marks

Identify Business Process Model for Online Agriculture Store – (Goal, Inputs, Resources, Outputs, Activities, Value created to the end Customer)

1 Goal – 1 Earn Profit

 2 Easily online availability of manufacturers products to the farmers.

 3 Farmers and companies can easily communicate to reach other.

2 Inputs – 1 Agriculture Products

 3 Resources – 1 Software development team to develop web or mobile application.

 2 Web and Mobile application for buying and selling Agriculture products.

 3 Internet Connectivity.

 4 Output – 1 This application should accept all the product details from manufacturer and it should

 display to all farmers.

 5 Activity – Once application is developed all the companies and farmers should fill all the required

 login details. After that all companies should show their products on application so farmers can

 check and buy the product. Once product is selected farmer has to add delivery address and make

 online payment .

 6 Value created to the end customer – 1 Customer satisfaction.

 2 Create directly online communication between farmers and manufacturer.

Question 2 – SWOT - 5 Marks

Mr Karthik is doing SWOT analysis before he accepts this project. What Aspects he Should consider as Strengths, as Weaknesses, as Opportunity and as Threats.

1 Strength - 1 All experienced technical and management team is full time available for this project.

 2 Already developed such kind of online applications in the company.

2 Weakness - 1 Time management. (Multiple projects going on the same time.)

 2) Lack in supply chain management.

 3 Resource management. Keep right person to right position is important.

 4) Inventory Management

3 Opportunity - 1 Get chance to work new agriculture domain.

 2 Good budget for this project.

 3 Expansion of business

4 Threats - 1 No of competitors are interested for this project.

 2 match the budget with other competitors.

 3 Security of the project.

 4 Keep change in farmers requirement.

Question 3 – Feasibility study - 5 Marks

Mr Karthik is trying to do feasibility study on doing this project in Technology (Java), Please help him with points (HW SW Trained Resources Budget Time frame) to consider in feasibility Study.

Feasibility Study - It means assessment of practicality of proposed plan or method.

For feasibility study karthik has to think on below things

1 Hardware – Laptop or PC, Strong network infrastructure

2 Software – New versions of Windows or Linux, Java , payment gateway ,security and API’S

3 Resources – Project management team, Business Analyst, Software Developers, testers

4 Budget – Coast required such as software development cost, hardware cost .

5 Time frame –Time frame is given 18 months But it can be change based on resource and no of features.

Question 4 – Gap Analysis - 5 Marks

Mr Karthik must submit Gap Analysis to Mr Henry to convince to initiate this project. What points (compare AS-IS existing process with TO-BE future Process) to showcase in the GAP Analysis.

Current State –

 Dependencies on external vendors for product supply.

 Lack of experience in online agriculture product selling experience.

 Operation expenses and product delivery expenses is high.

 Low no of technical resources also have new technical skill gap.

Desire State –

 Improved operational efficiency and profitability through coast reduction.

 Expansion into new domain such as Agriculture product selling.

 Continues focus on to emerging new technology and make resources technically up to date.

 Investment in supply chain process .

Question 5 – Risk Analysis - 10 Marks dsgfagfsdzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz

List down different risk factors that may be involved (BA Risks And process/Project Risks)

 BA Risk –

1. In proper requirement gathering.
2. Regularly changes in the requirement.
3. Resource Planning and Technical skill gap.
4. Lack of domain knowledge.
5. Relationship with stakeholder .

 Project Risk –

1. Cost is running out of budget.
2. Continues change in the requirement.
3. After complete project features are not working correctly.
4. Technical issues after project delivery
5. Communication gap between project manager and client.

Question 6 – Stakeholder Analysis (RACI Matrix) - 8 Marks

 Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take

 Decision and who are the influencers.

|  |  |  |
| --- | --- | --- |
| RACI | Name Of the Responsible | Designation |
|  | Mr Dooku | Project Coordinator  |
| Responsiable | Ms Juhi | Senior Java Developer |
|  | MR Teyson, Ms Lucie, Mr Tucker, Mr Bravo | Java Developers |
|  |  |  |
|  |  |  |
| Accountable |  Mr Vandanam |  Project Manager |
|  |  Mr Digvijay |  Business Analyst |
|  |   |  |
|  |  |  |
|  |  |  |
| Consulted | Mr Mike |  Network Admin |
|  |  John |  DB Admin |
|  |  |  |
|  |  |  |
| Informed | Mr Mike | Sponsor |
|  | Mr Karthik | Delivery Head |

Question 7 – Business Case Document - 8 Marks

 Help Mr Karthik to prepare a business case document

1. Why this project initiated ?

The main purpose of initiated this project is to make bridge or communication between manufacturer

Companies and farmers. It will help to both companies and farmers to meet their goal. Farmers can easily

Search multiple products from single place and manufacturer also reach to multiple farmers for selling their

Products.

1. What are the current problems ?

Peter ,Kevin and Ben facing difficulties in their day-to-day work. They are facing problems such as

procuring fertilizers, buying seeds for farming certain crops and lack of pesticides.

1. With this project How many problems could be solved?

With help of this project farmers can analyze multiple manufacturers product from one place.

Farmers can check and compare price of different products. After buying product farmers can easily get

Order to the home so transportation charge will be less. Manufacturer companies also get no of

Requirement from farmers by sitting one place also their products will have online marketing platform.

Payment process will be easy.

1. What are the resource required to complete this project?

To develop Online Agriculture Products Store application we required multiple resources such as

Project manager, Delivery head, Software developer, Tester, Business Analyst, DB admin.

Question 8 – Four SDLC Methodologies - 8 Marks

The Committee of Mr. Henry , Mr Pandu , and Mr Dooku and Mr Karthik are having a discussion on

 Project Development Approach.

 Mr Karthik explained to Mr. Henry about SDLC. And four methodologies like Sequential Iterative E1and Agile. Please share your thoughts and clarity on Methodologies

1. Sequential –

 In waterfall model every phase must be completed before starting new phase. We ensure at

 the end of the phase that weather project is on right track or not and we review it. Once

 review completed then only next step will start. These methodologies do not allow previous

 going back to the previous page once they are completed.

 Stages of Waterfall Model-

 Requirement Gathering , Requirement Analysis, Design, Development, Testing .

1. Iterative –

 This model is created by rational software corporation. The base of RUP model is set of building blocks. It describes what is to be produced and this model work on small elements. The necessary skill required and step by step explanation that how specific development goal to be achived

1. Evolutionary –This model is majorly focus on risk analysis. In this model requirements are gathered during planning phase . In the risk analysis phase all the process is done to identify risk and solution as well. The prototype is produced at the end of the risk analysis phase and testing is done at the end of the phase.
2. Agile –

We use agile when faster delivery is required . It use customer retention so no documentation is required. This model is cut down multiple parts from starting phase to ending phase. This model is not supported to scalability and extendibility. This model satisfy customer by providing continues delivery of software

Question 9 – Waterfall RUP Spiral and Scrum Models – 8 Marks

They discussed models in SDLC like waterfall RUP Spiral and Scrum . You put forth your understanding on these models

When the APT IT SOLUTIONS company got the project to make this online agriculture product store, there is a difference of opinion between a couple of SMEs and the project team regarding which methodology would be more suitable for this project. SMEs are stressing on using the V model and the project team is leaning more onto the side of waterfall model. As a business analyst, which methodology do you think would be better for this project?

1. Waterfall Model –

In waterfall model each phase completed before starting new phase. All the testing and review activity done before starting new phase. The Waterfall Model is a traditional software development lifecycle methodology that follows a linear and sequential approach. This model keeps clear documentation at each phase.

1. RUP Model –

This model follows iterative and incremental approach. It was developed by Rational Software and later acquire by IBM. Requirements are captured through use cases to ensure functional clarity.

Identifies and mitigates risks in early stages.

1. Spiral Model –

The Spiral Model is a risk-driven, iterative software development model that combines elements of both Waterfall and Prototype models. Spiral model us in large, high risk and complex project.This model Identify potential risks, analyze them, and develop mitigation strategies.

1. Scrum Model -

This model used when faster delivery is required. This model works in different sprints.This model is used from starting phase to ending phase. This model is very ease to use and this model is used for ongoing projects. This model is continues until final product is complete.

As Business Analyst I would like to use waterfall model. Because waterfall model is used for small projects. This model finish first phase and then start new phase . All testing and review activity is done at the end of the project . so waterfall model is best option for online agriculture product store.

Question 10 – Waterfall Vs V-Model - 5 Marks

Write down the differences between waterfall model and V model. As a BA

|  |  |
| --- | --- |
| Waterfall Model |  V Model |
| Testing activities start at later stage  | Testing activities start with first stage. |
| This model is liner and sequential  | This model extension of the Waterfall Model, |
| Easy to manage and clear documentation  | Early defect detection |
| Best for small projects | Best for complex projects |

Question 11 – Justify your choice - 3 Marks

As Business analyst I would choose waterfall model for this project because waterfall model suits for the small projects. In this model every process is reviewed well. All testing activity done at the end of the phase. Waterfall model is cost effective.

The Committee of Mr. Henry, Mr Pandu, and Mr Dooku discussed with Mr Karthik and finalised on the V Model approach (RG, RA, Design, D1, T1, D2, T2, D3, T3, D4, T4 and UAT)

Question 12 – Gantt Chart - 5 Marks

Mr Vandanam is mapped as a PM to this project. He studies this Project and Prepares a Gantt chart with V Model (RG, RA, Design, D1, T1, D2, T2, D3, T3, D4, T4 and UAT) as development process and the Resources are PM, BA, Java Developers, testers, DB Admin, NW Admin.



Question 13 – Fixed Bid Vs Billing - 5 Marks

 Explain the difference between Fixed Bid and Billing projects.

 A fix bid project in which service providers agrees to deliver specific scope of work at fixed price. This model works best for **well defined projects** with clear requirements and minimal expected changes.

 In Billing project service provider bills the client for actual time and material expanded on the project. The scope of work is changes as per the requirement. This model is best for projects where the scope is not fully defined .

Question 14 – Preparer Timesheets of a BA in various stages of SDLC - 20 marks

1. Timesheet of BA



1. Development Timesheet of a BA.



1. Testing timesheet of BA



1. UAT Timesheet of BA



1. Deployment and implementation Timesheet of BA

