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.

Mr. Henry’s Company (Soony) (budget 2cr) (Duration 18 Month)

1. Mr. pandu is a financial head.
2. Mr. dooku is a Project coordinator.
3. Mr. Henry, Mr. Pandu, Mr. Dooku all are committee members.

APT IT Solution

1) Peter, Kevin, Ben are Stakeholders.

2)Mr. Kartik Is a delivery head.

3) Mr. Vandanam is project Manager.

4) Ms. Juhi is Senior Java Developer.

5) Mr. Teyson, Ms. Lucie, Mr. Tucker, Mr. Bravo are Java Developers.

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Question 1 – BPM - 5 Marks

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

**Answer**

Goal: - To bridge the gap between the Buyers and Sellers.

Inputs: -Customer data, marketing campaigns, Trained employees.

Resources: - Warehouse, Software, Office Space.

Outputs: - sales Revenue, Efficiency.

Activities: - Excellence customer service, Partner with Leading Brands.

Value: - wide range, customer satisfaction.

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.

**Answer**

**Strengths**  **Weaknesses**

1. Branding is very necessary for the product 1) Price should be minimal for every customer if it
2. Lunch in Market. high then product selling is low.
3. Access the product to market.
4. Build the trust for consumers for the

products.

**Opportunity**  **Threats**

1)Expansion of new product categories. 1) Economic downturn.

2)Expansion on market. 2)change in customer spending habits.

3) All the product (fertilizers, seeds, pesticides) are

Available.

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.

**Answer**

1. **Technology: -** Based on database server, java, payment gateway, security and API’s
2. **Hardware: -** Based on Storage, backup system, network infrastructure
3. **Software: -** Based on shopping cart software, content management system andpayment gateway software
4. **Resources: -** Projectmanagement team, BA, software dev elopers.
5. **Budget: -** Various cost involved such as development cost, hardware cost.
6. **Time frame: -** Based on resources, 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

**AS-IS (Current state): -**

 The process of identifying, evaluating, and documenting the business needs and requirements for a

new software application. refers to the current state of a business process or system, essentially

meaning it describes how things are currently operating before any new application is implemented.

**TO-BE (Desire state): -**

the process of defining and documenting the desired future state of a business application, outlining

how it should function once developed, including its features, functionalities, and processes, essentially

creating a blueprint for the ideal application to meet specific business needs and objectives.



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

Help Mr Karthik to prepare a business case document

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

Question 8 – Four SDLC Methodologies - 8 Marks

Question 7 – Business Case Document - 8 Marks

Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take Decisions and Who are the influencers

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

Question 5 – Risk Analysis - 10 Marks

Project Development Approach.

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

**Ans: SDLC Methodologies: -**

* Sequential waterfall.
* Iterative – RUP
* Evolutionary- Spiral
* Agile- Scrum

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?

**Ans: -**

**Waterfall**

20Write down the differences between waterfall model and V model.

Question 11 – Justify your choice - 3 Marks

Question 10 – Waterfall Vs V-Model - 5 Marks

As a BA, state your reason for choosing one model for this project

**Ans: -** (1) Best suitable for small projects.

(2) Every process is reviewed well.

Question 12 – Gantt Chart - 5 Marks

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)

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.

**Ans: -**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Process | Jan-March | April-June | July-Sept | Oct-Dec | Jan-March | April-June |
| Requirement gathering |  |  |  |  |  |  |
| Requirement Analysis |  |  |  |  |  |  |
| Design1 |  |  |  |  |  |  |
| Testing1 |  |  |  |  |  |  |
| Design2 |  |  |  |  |  |  |
| Testing2 |  |  |  |  |  |  |
| Design3 |  |  |  |  |  |  |
| Testing3 |  |  |  |  |  |  |
| Design4 |  |  |  |  |  |  |
| Testing4 |  |  |  |  |  |  |
| UAT |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Progress |  |  |  |  |  |  |
| Achivment |  |  |  |  |  |  |

Question 13 – Fixed Bid Vs Billing - 5 Marks

Explain the difference between Fixed Bid and Billing projects

**Ans: -** A fixed bid project is a type of billing project where the price is set in advance, while a billing project can be based on time or materials.

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

* Design Timesheet of a BA
* Development Timesheet of a BA
* Testing Timesheet of a BA
* UAT Timesheet of a BA
* Deployment n Implementation Timesheet of a BA

**Requirement Gathering & Analysis Phase**

|  |
| --- |
|  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Requirement Gathering & Analysis Phase | | | |  |  |
| **SL NO** | **Task** | **Actionable Items** | **Start Time** | **End Time** | **Duration** |
| 1 | Identify stakeholder meeting | meeting to list down the stakeholder | 10:00AM | 11:00AM | 1 Hour |
| 2 | Client interaction | Azoom call to update the client on the MOM | 11:00AM | 1:00AM | 2 Hour |
| 3 | Finetuning the inputs for BRD document | SME discussion in person call | 2:00AM | 3:00AM | 1 Hour |
| 4 | Requirements sorting | working on the template | 3:30AM | 4:30AM | 1 Hour |
| 5 | Team meeting | Discussion on the day inputs | 4:30AM | 7:00AM | 2.5 Hour |
|  |  |  |  |  | 7:5 Hour |

Question 10 – Waterfall Vs V-Model - 5 Marks

20write down the differences between waterfall model and V model.

| **Waterfall model** | **V-model** |
| --- | --- |
| The cost of Waterfall model is low. | V-model is expensive. |
| Simplicity of Waterfall model is simple. | Simplicity of V-model is Intermediate. |
| Flexibility of Waterfall model is Rigid. | Flexibility of V-model is Little flexible. |
| There is no way to return to the earlier phase. | There is no such constraint in V-model. |
| Waterfall model is a sequential execution process. | It is also a sequential execution process. |
| Waterfall model’s steps move in a linear way. | V-model’s steps don’t move in linear way. |
| Re-usability of Waterfall model is Limited. | V-model can be Re-use for some extent. |
| User involvement in Waterfall model is only in beginning. | User involvement in V-model is also only in beginning. |
| In Waterfall model testing activities start after the development activities are over. | In V-model testing activities start with the first stage. |
| Guarantee of success through Waterfall model is low. | Guarantee of success through V-model is high. |
| Waterfall model is a continuous process. | V-model is a simultaneous process. |
| Software made using Waterfall model, the number of defects is less in comparison of software made using V-model. | Software made using V-model, the number of defects are greater in comparison of software made using Waterfall model. |
| Requirement specification in Waterfall model is necessary in beginning. | Requirement specification in V-model is also necessary in beginning. |
| Less customer involvement. | More customer involvement as compared to waterfall model. |
| It is not possible to test a software during its development. | There is possibility to test a software during its development. |
| Identification of defects is done in the testing phase. | Identification of defects can be done from the beginning. |
| Debugging is done after the last phase. | Debugging can be done in between phases. |
| Waterfall model is less used now-a-days in software engineering. | V-model is widely used in software engineering. |

Question 5 – Risk Analysis - 10 Marks

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

Ans: - **Internal Risk: -**

* Internal risk depends on external vendors for product supply and inventory management.
* High operational expenses due to investment in technology and market.
* Technical issue and system down time that can affected the experience.

**External Risk: -**

* Internal competition from other online and open market for farming product.
* Change in govt. regulation and policies that affect the e-commerce industries.

**BA Risk: -**

* Incomplete requirement.
* Domain.
* Change in requirement.

**Project based Risk: -**

* Scope risk.
* Stakeholder risk.

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

Perform stakeholder analysis (RACI Matrix) to find out the key stakeholders who can take Decisions and Who are the influencers?

**ANS:** - RACI Matrix is stands for Responsible, Accountable, Consulted, and Informed. It's a project management tool that helps define roles and responsibilities for a project team.

communication, it improves decision-making, it ensures accountability for tasks or deliverables, it helps organizations decide what each person is doing, and it helps produce desired outcomes.

**Examples of RACI matrix roles (in this project):**

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Question 7 – Business Case Document - 8 Marks

Help Mr Karthik to prepare a business case document?

**Ans:**

* Why are the project initiates?
* What is the current problem?
* With this project how many problems could be solved?
* What is the resource required?
* How many organizations change is required to adopt this technology?
* What is the time from to recover ROI?
* How to identify stakeholders?