Question 1. BPM - 5 Marks
Identify Business Process Model for Online Agriculture Store – (Goal, Inputs, Resources, Outputs, Activities, Value created to the end Customer)
Solution:
1. Goal: To build an application who gives facility to farmers for buying agriculture goods from anywhere throughout location.
2. Inputs: Products of Farming and companies of farm products.
3. Resources: Mobile Phone, Internet facility, Computer Systems, Farming Products like Pesticides, Seeds etc.
4. Outputs: By using Application Farmers can buy products from anywhere like from village or town also because most of farmers belongs to village.
5. Activities:
A. Farmers needs awareness about this system.
B. Farmers should be able to register with their full information details with ID proofs.
C. Farmer should have their own smartphone for access of portals.
D. After all these buying scenario they should pay by online mode through portals.
E. By using mobile phone farmers should able to read SMS or mail through portal for order tracking and information.
F. After at last delivery at destination as per mentioned by farmers using mobile application or any web-based application.
6. Value for Customer: At last farmer is able to buy from portal and it should usable for their farm for better growth of crops.

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
Solution:
SWOT Analysis for Project is SWOT stands for Strength, Weakness, Opportunity and Threats
Strengths: Company is able to give good experience people for project
The budget of Project is INR 2 Cr.
They have already trained professionals to fulfil all project requirements.
Weakness: Time duration of project is 18 months very less time.
Company team is handling project for first time they are new to this agriculture domain.
Inadequate Funding not proper funding from project sponsor sometimes.
Opportunities: This project is done by any company
Also In less time also and less budget other companies are ready.
This project gives solution to all farmers from everywhere.
Its such a nice project useful to fulfil all requirements of farmers.
Threats: Awareness is needed to all farmers very important point.
Because if awareness is not there then farmers not able to use online product store.
Also it is a big challenge to deliver to rural areas which is valley of farmers.

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.
Solution:
Hardware: laptop/desktop, printer, scanner, phone, projector
Software: Strong broadband connection, Java and other necessary applications, Cloud storage.
Trained resources: Java developers, DB administrator, Business analysts, testers, network administrator.
Project Budget: INR 2 Crore.
Project Duration: 18 months.

Question 4 – Gap Analysis - 5 Marks
AS IS: Farmers are struggling to get the pesticides easily, they had to travel to the city bearing travelling expense and not able to get good dealer in city, due to which they endup buying bad products at high prices. Still many required products or equipments are not available in the market.
TO BE: Farmers will be able search all kind of agricultural product in just one click across the globe and can make payment instantly via online payment method. Which is really hasselfree, in compare to go to bank and withdraw money. Added benefit is purchased product will be delivered at there door step at 0 delivery charges. This is Gap analysis for above case study.

Question 5- Risk Analysis - 10 Marks
More budget can be required to maintain the continuity of the project without any obstacle Old uneducated farmers can oppose the digitization and may influence the young farmers to not support Following are the
BA Risks: Improper information at requirement gathering The period of project development Choosing improper elicitation technique Relevant climate study for crops Change requests given by stakeholder in the last phase Multilanguage input for the farmers Coding and Java developer coordination are important Easy payment gateway as well proper connection with delivery channel partner
Projects Risks: Farmers are not used to digital thing Low Internet speed of internet in remote areas, where farmers live Old farmers prefer to buy from the store only farmers return the product, saying not needed, in case of COD Multiple-time return or exchange of products.
Internal risk. High operating expense, technical issue. External risk- competition from external e com website, change in govt policies that affect e com industry.
The Risk factor is very crucial factor for every BA in every industry it is duty of every BA to handle all possible risks and going towards success.
This is above all types of Risk Factors.

Question 6 – Stakeholder Analysis (RACI Matrix) - 8 Marks
A RACI chart, also called a RACI matrix, is a type of responsibility assignment matrix (RAM) in project management. In practice, it's a simple spreadsheet or table that lists all stakeholders on a project and their level involvement in each task, denoted with the letters R, A, C or I.

1. Mr. Henry: Project Sponsor- I-Responsible for UAT
2. Peter,Kevin,Ben-Key Stakeholders- C-Req. Gathering
3. Mr. Karthik- Delivery Head-R-Implementation
4. Mr. Vandaman- Project Manager- RG,RA,Dev,testing,implementaion and UAT - R,A,C,I
5. Ms. Juhie-Sr Java Developer-Development-A, Testing-I and Impl-I
6. Teyson,Lucie,Bravo and Tucker-Java Developer-RG-A and Dev-R
7. Mr Jason and Ms. Alekya- Testers-Testing-R
8. Sourabh Bhattacharya- Business Analyst-RG,RA-R|Dev-C|Testing-I|Impl-R|and UAT-C.

Question 7 – Business Case Document - 8 Marks
Following points are to be covered:
Why is this project initiated? What are the current problems?
GAP analysis What are the resources required ?
14 -15 people How much organizational change is required to adopt this technology? A percentage.. how much change can be done With this project how many problems could be solved ?
Time frame to recover ROI How to identify stakeholders?
Via RACI we can identify Executive Summary: The whole purpose of this project is to help farmers to buy agricultural products on just one click. To have them a hassle free experience and to save there time, as they will search the required products from N number of sellers across the country and will be able to place the order in seconds , also the product will be delivered at there door step. All these activities will be done, right from there home. They wont have to step out of the home.
Challenges : budget could be increased along with the time frame, as this project is demanding in terms of resources. lack of domain knowledge and lack of education of stakeholders could be dangerous in gathering requirement properly and implementing them correctly.
Present circumstances:Farmers are facing difficulties in procuring fertilizers and pesticides, due to the unavailability of products on time, which leads to bad crops.
Solution: With the help of the APP, farmers will get all the varieties of the agricultural project on one platform, it will save a lot of time, and orders will be delivered to their doorstep.
Requirements:Balsmiq, Visio, Java, Azure, Power BI In the this business case documents. MR. Karthik needs to analyze the things like- A business case is a package of information , analysis and recommendations. A business case is prepared by Sr BA,Business Architect & Pre-sales team.
A business case also helps in identifying key stakeholders who are affected by the problem. 14-15 people of dedicated team is required. To complete this project we need PM , BA, Software developers, testers, technical team, DB. Changes:there are chances of 40% -50% changes to be happened in organizational policies, as this project is quiet demanding. Unpredictable changes can be asked at any times. As we cant expect stability.
Time frame: As project is for 18 months. This app would be beneficial for all the farmers, fertilizers and pesticides companies. This time frame for return on investment is possibly after 1 year.

Stakeholder identification: the best way to identify the stakeholders is to prepare RACI matrix based on the functionality of the every individual.

Question 8 – Four SDLC Methodologies - 8 Marks

There are four methodologies they are following as follows:

1. Sequential - The Sequential model is a linear stack of layers that can be created using the Keras library1 In this method, entire project is delivered at the end of the deadline. Client cant use the application in the midway. This method begins with at the system level and progresses through, analysis , design, coding, testing and support.

2. Iterative : In this method APP is delivered in the modules. Each module is delivered per year in a given frequency of time. Client can start using the part of the application after delivery. Iterative changes result from repeated cycles of change with each cycle contributing to the outcome. The whole process is divided into a particular number of iterations and during each of them developers build a limited number of features.

3. Evolutionary: The overall frame of the module is submitted to the stakeholders. Client freezes on the given module. Slowly the IT team starts adding functionality to the modules. Business analyst gives the look and feel of the project to the stakeholders.

4. Agile: Agile is the most popular method to use. In this methodology, project is getting delivered from the beginning. Clients start using the APP immediately. Continuous support goes on. Change request is possible at each phases during the delivery.

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

Waterfall: This is the most common lifecycle mode and is also known as liner sequential model. It is ver yeasy and simple to use. In this model, each phase is entirely completed, before that we cant move to next phase. Once each phase is completed, review will be done to decide, whether to continue with the project or not. This is just to make sure that the project is on the right path or not. This method is different a bit as each phase is input for the next phase.

RUP : Rational unified process. In this method long term application is developed. It allows to track the the defects of the project at very early stage. Since it has multiple phases , it requires more budget and resources to execute the same. It also frames step by step explanation describing how specific explanation goals are to be achieved.

Spiral : It emphasizes on risk analysis. The spiral model is a risk driven process model generator for software projects It has four phases. Planning, risk analysis , engineering and evaluation. And these process repeats. In planning phase, requirements are gathered during the planning phase . In risk analysis phase a process is undertaken to identify risk and alternate solutions. A prototype is produced at the end of the risk and alternate solutions. Finally software is produced in the engineering phase. Along with the testing at the end of the phase. In this method angular component represents progress and radius of the spiral component represents cost.

Agile: Agile is the most popular method to use. In this methodology, project is getting delivered from the beginning. Clients start using the APP immediately.

Continuous support goes on. Change request is possible at each phases during the delivery. It involves customer retention, since there are no documentation.

Question 10 – Waterfall Vs V-Model - 5 Marks

Aspect	V-model	Waterfall-model
Testing approach	Sequential testing after development	Testing runs parallel with development
Flexibility	Less flexible to changes	More adaptable to changes
Complexity	Simple structure	More complex due to parallel processes
Risk management	Risks identified later	Early risk detection
Suitable for	Projects with well-defined requirements	Projects requiring iterative development

Question 11 – Justify your choice - 3 Marks

As a Business Analyst Waterfall Model is beneficial because It have Parallel Approach for testing phase and issue is captured early as compared to V-model. for new team members and stakeholders, prevented scope creep due to fixed requirements upfront, and easier budget and timeline predictability for projects with stable requirements.

Question 12 – Gantt Chart - 5 Marks

Gantt Chart Overview

The chart includes the following phases:

RG (Requirement Gathering)

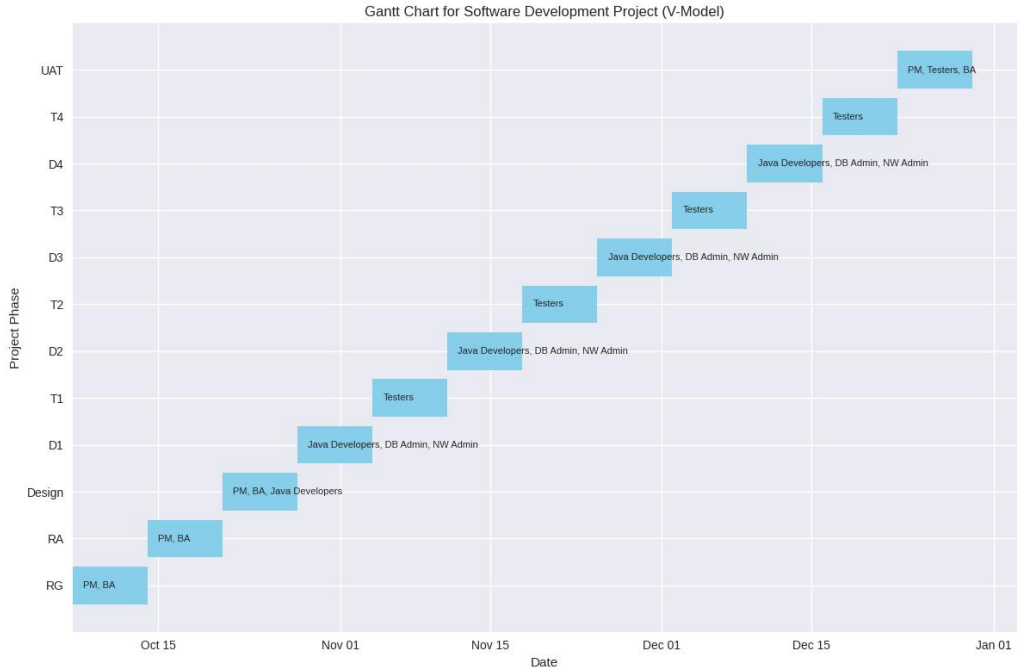
RA (Requirement Analysis)

Design

D1–D4 (Development)

T1–T4 (Testing)

UAT (User Acceptance Testing)



Question 13 – Fixed Bid Vs Billing - 5 Marks

Fixed Bid Model : In this model, the vendor commits to a set amount of money for a project with defined deliverables. These are usually domestic projects when a company has specific elements in their project, such as predetermined data, a fixed scope, or a strict budget1. The fixed bid project is charged as a single, flat fee, irrespective of hours spent. This model features predefined project requirements, fixed time frames, and a fixed budget. As the name implies, this model is about freezing your project requirements and specifications together with the costs before development begins. For any extra work that was not specified in the documentation, client must pay extra. The fixed bid model can be beneficial for companies that have a clear understanding of their project requirements and are looking for cost predictability.

Billing Model : In this model project is billed based on the number of hours worked, at the hourly, daily, or monthly fixed billing rates assigned for that project. This model is used when there is no restriction on budget, it can be increased, based on the work required by the team.

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

Design Timesheet of a BA

Day	Task	Hours	Deliverable
1	Stakeholder interviews	4	Interview notes
2	Requirement gathering	6	Requirement document draft
3	Process mapping	5	As-is process flow
4	Gap analysis	4	Gap analysis report

Day	Task	Hours	Deliverable
5	Solution brainstorming	3	Solution options
6	Finalize requirements	6	BRD (Business Requirement Document)
7	Review with stakeholders	2	Signed-off BRD

Development Timesheet of a BA

Day	Task	Hours	Deliverable
1	Support dev team with clarifications	3	Clarification log
2	Update requirement traceability matrix	2	RTM
3	Attend sprint planning	2	Sprint backlog
4	Review user stories	4	Refined user stories
5	Validate design alignment	3	Design review notes
6	Coordinate with UI/UX team	2	UI wireframes
7	Track development progress	2	Status report

Testing Timesheet of a BA

Day	Task	Hours	Deliverable
1	Prepare test scenarios	4	Test scenario document
2	Review test cases	3	Approved test cases
3	Support QA team	2	Clarification log
4	Perform functional testing	4	Test results
5	Log defects	2	Defect report
6	Retest after fixes	3	Updated test results
7	Final test sign-off	2	Test summary report

UAT Timesheet of a BA

Day	Task	Hours	Deliverable
1	Prepare UAT plan	3	UAT strategy document
2	Create UAT scripts	4	UAT test cases
3	Coordinate UAT execution	3	Execution tracker
4	Capture UAT feedback	2	Feedback log
5	Log UAT defects	2	UAT defect report
6	Retest and validate fixes	3	Updated UAT results
7	Final UAT sign-off	2	UAT completion report

Deployment & Implementation Timesheet of a BA

Day	Task	Hours	Deliverable

Day	Task	Hours	Deliverable
1	Prepare deployment checklist	3	Checklist document
2	Coordinate go-live activities	4	Go-live plan
3	Monitor deployment	3	Deployment log
4	Post-deployment validation	3	Validation report
5	Conduct training sessions	4	Training materials
6	Support transition to operations	2	Handover document
7	Final implementation review	2	Implementation summary