



SYED AMMAL ENGINEERING COLLEGE

(An ISO 9001: 2008 Certified Institution)

Dr. E.M. Abdullah Campus, Ramanathapuram – 623 502



DEPARTMENT OF INFORMATION TECHNOLOGY

MG6088 – SOFTWARE PROJECT MANAGEMENT

QUESTION BANK

UNIT - 1

PART A

1. Define software project management.
2. Point out the characteristics of software project?
3. List the activities covered by software project management
4. Define contract management?
5. Differentiate contract management and technical project management.
6. What are the typical issues and questions to be considered during strategic assessment?
7. Compare program managers and project managers
8. Differentiate plans, methods and methodologies.
9. What do you understand by payback period?
10. Do you agree that decision trees are helpful in risk handling? Justify.
11. How would you classify the software projects?
12. Illustrate the approaches of portfolio Management.
13. When Net Present value is calculated for a project?
14. Define project Evaluation.
15. Give the steps to identify project scope and objectives
16. What would be the ROI for the software project development if the net profit is \$60,000 for 3 years and the total investment is \$100,000? Evaluate it.
17. How would you develop cash flow forecasting life cycle?
18. Demonstrate the steps involved in identification of product and activities
19. Express the risk. How are risk identified?
20. Can you summarize the problems with software project from manager's point of view?



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PART B

1. i) Describe various activities covered by software project management.(10)
ii) Illustrate the problems associated with software project (6)
2. Discuss the different ways of categorizing software project in detail(16)
3. Illustrate the following
 - i) Setting objective of the project (8)
 - ii) Principal of project management process (8)
4. i) Explain in detail about project control cycle(8)
ii) Differentiate traditional and modern Project Management Practices (8)
5. i) Explain project portfolio management in detail(10)
ii) Write short notes on strategic programme management (6)
6. Develop the ABC college payroll system for the following
 - i) Identify project scope and objective (5)
 - ii) Identify project infrastructure (5)
 - iii) Identify project products and activities (6)
7. Describe the cash flow forecasting with different cost benefit evaluation techniques(16)
8. Discuss the following in detail
 - i) Contract Management (8)
 - ii) Software project management activities (8)
9. Illustrate the various aspects of Risk Evaluation in detail (16)
10. Explain various software development life cycle activities as outlined by ISO12207 with neat diagram(16)
11. i) List the stepwise planning activities of project plan(4)
ii) Describe the stepwise project plan with an example (12)
12. i) Summarize the important characteristics of software development projects which make these harder to manage compared to other types of projects; say for example, a building construction project. (12)
ii) What is the difference between a method and a methodology? What are the essential items that must be planned before carrying out a method or methodology? (4)
13. Explain in detail about various cost benefit analysis techniques with example(16)



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14. A public library is considering the implementation of a computer based system to help administer book loans at libraries.
- Identify the stakeholders (6)
 - List the objectives the project (6)
 - Examine and measure the success and failure of the project (4)

UNIT II - PART A

- What are the different types of prototypes?
- Distinguish object driven and product driven project.
- Illustrate the core values of Extreme programming.
- Point out the various agile approaches
- Summarize the short comings of waterfall model
- Draw the main life cycle phase of Altern process model
- Identify the pros and cons of using pair programming over programmers working alone.
- List out the aims of RAD model.
- Give the advantages and disadvantages of Incremental delivery.
- Show the MoSCoW Classification.
- What are the problems with over and under estimate?
- How will measure the effort of the project in parametric model? discuss it.
- Illustrate the major components of function point analysis.
- Point out the ways of moving data groups in COSMIC full function point model.
- Summarize the factors sensitive to system size in COCOMO II model
- Develop the function point Mark II model of transaction.
- What are the difficulties of project estimation?
- List out the different effort estimation methods.
- Express the different modes of COCOMO II model
- Analyze the major shortcoming of the SLOC measure.

PART B

- Describe the water fall model in detail with neat diagram(8)
 - Explain the spiral model in detail (8)
- Discuss the following in detail
 - Software prototyping (8)



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- ii) Different ways of categorizing prototype (8)
3.
 - i) Demonstrate the incremental delivery with neat diagram(10)
 - ii) Give the advantages and disadvantages of incremental delivery (6)
4.
 - i) Explain the Dynamic system development method in detail(12)
 - ii) Write short notes on Scrum(4)
5.
 - i) Describe the Rapid Application Development model(8)
 - ii) What is agile method? Explain it in detail(8)
6. Discuss the Extreme programming in detail with its advantages and disadvantages.(16)
7.
 - i) Explain the management of iterative process in detail(8)
 - ii) Explain why estimates are carried out at various stages of a software project(8)
8.
 - i) Describe the basis for software estimation in detail(8)
 - ii) Write short notes on
 - a. Expert judgment
 - b. Estimation by Analogy
9.
 - i) Discuss Albert function point analysis in detail(10)
 - ii) Illustrate the staffing pattern(6)
10. Demonstrate the following
 - i) Function point mark II method(8)
 - ii) COSMIC full function point method(8)
11. Explain the COCOMO II parametric productive model in detail(16)
12. Describe the top down and bottom approach of the estimation in detail (16)
13. The following details are held about previously developed software modules

Modules	Inputs	Entity Types Accessed	Outputs	Days
a	1	2	10	2.60
b	10	2	1	3.90
c	5	1	1	1.83
d	2	3	11	3.50
e	1	3	20	4.30

- i) Calculate the Simons Mark II FPs for each module.
- ii) Using the results, calculate the effort needed for the new module



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14. Develop Given the project data below

Project	inputs	outputs	entity accesses	system users	Programming language	developer days
1	210	420	40	10	x	30
2	469	1406	125	20	x	85
3	513	1283	76	18	y	108
4	660	2310	88	200	y	161
5	183	367	35	10	z	22
6	244	975	65	25	z	42
7	1600	3200	237	25	y	308
8	582	874	111	5	z	62
X	180	350	40	20	y	
Y	484	1190	69	35	y	

Note X and Y are new projects for which estimates of effort are needed

- What items are size drivers?
- What items are productivity drivers?
- What are the productivity rates for programming languages x, y and z?
- What would be the estimated effort for projects X and Y using a Mark II function point count?

UNIT III - PART A

- List the objectives of activity planning?
- Compare work breakdown structure and Product break down structure
- How is Activity-On-Arrow (AOA) related to Activity-On-Node (AON)?
- Show the various approaches would you use to identify activities?
- How will you formulate risk reduction leverage?
- How would you use hybrid approach of project scheduling? discuss it.
- What are the different ways of prioritizing the activities in resource allocations?
- Develop the changes would you make to shorten the project duration?
- How would you show a “Dangle” in an activity Network?
- Illustrate Hammock activities.
- Compare forward pass and backward pass.
- Analyze activity float.
- Define ‘Free floats’ and ‘interfering floats’?
- Compare PERT and CPM



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15. List out the categories of cost?
16. Describe how would you classify risk?
17. Analyze the factors involved in risk planning?
18. What do you understand by risk transfer? Give an example
19. What is hazard? List out the generics risks?
20. Show the estimate of PERT.

PART B

1. i) Describe the various steps involved in activity planning with its objectives (10)
ii) Write short notes on sequencing and scheduling activities (6)
2. Describe the different approaches of identifying the project activities in detail with neat diagram (16)
3. Illustrate the network planning model. Explain rules for constructing precedence network (16)
4. i) Analyze the forward pass activity in details (8)
ii) Explain the backward pass activity with neat diagram (8)
5. i) Explain the identification of the critical path in details with neat diagram. (10)
ii) Write short notes on activity float. (6)
6. Develop an Activity-On-Arrow network. Explain rules and conventions for activity on arrow network. (16)
7. Discuss different CPM forward and backward pass network in detail with neat diagram (16)
8. Define the term Risk. Discuss the issues related to managing the risk. Give examples. (16)
9. i) Illustrate the use of checklist and brain storming in Identification of risk. (8)
ii) Write short notes on categories on risk.
10. i) Explain Monte Carlo Simulation (8)
ii) Differentiate PERT and CPM (8)
11. i) Describe PERT network in detail with example (10)
ii) Using PERT evaluate the effects of uncertainty (6)
12. i) Discuss about the Cast schedule in detail (8)
ii) Discuss the factors to be considered in allocation of tasks (8)
13. i) Explain the different categories of project resources in detail (8)
ii) Write short notes on scheduling resources (8)
14. Describe an activity network using activity on node for office automation.



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UNIT IV - PART A

1. Give the advantages and disadvantages of the EVA approach.
2. List out the steps in project control.
3. List the Deciding levels of monitoring.
4. How would you classify the different ways of collecting data?
5. Discuss it. How are categories of reporting classified?
6. What is the use of check points and monitoring?
7. Show the techniques of visualizing progress?
8. Illustrate the advantages of fixed priced contracts.
9. Differentiate ball charts and slip chart
10. Compare budgeted cost of work scheduled and budgeted cost of work performed.
11. Define critical path.
12. Give the justifications for project termination
13. Explain how the details needed to carry out EVA to be collected?
14. Explain How would you rate the levels to monitor the project?
15. Evaluate the need for monitoring the cost?
16. List the different types of contracts?
17. Explain the supply processes in managing contract?
18. Summarize Open source configuration Management tools.
19. Illustrate the outcome of contract management?
20. How would you integrate the popular visual tools in monitoring and tracking the project progress?

PART B

1. Describe in details about creating the frame work for monitoring and control (16)
2. Discuss the following in detail
 - i. Collecting the data (8)
 - ii. Project termination review (8)
3. i) Illustrate the use of Gantt and timeline charts in visualizing the project progress with suitable diagrams (10)
ii) Write short notes on cost monitoring (6)
4. Explain the various ways in visualizing the progress of the project with neat diagram (16)



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5.
 - i) Explain the earned value analysis method in detail (9)
 - ii) Outline the various steps involved in change control procedure (7)
6.
 - i) Develop the procedure to get back the project to target.(10)
 - ii) Explain the process of prioritizing monitoring. Give examples. (6)
7.
 - i) Describe the purpose of software configuration management (8)
 - ii) Explain in details about configuration management process (8)
8.
 - i) Discuss types of contracts with example (8)
 - ii) Explain the stages in contract placement in detail (8)
9.
 - i) Illustrate the salient features of “Fixed price” and “ Time and material” contracts model (8)
 - ii) Write short notes on contract management (8)
10.
 - i) Explain the formal models for cost monitoring with its metrics(8)
 - ii) Explain the levels of monitoring with example (8)
11. List down the typical terms in contract and explain them in detail (16)
12.
 - i) Summarize the managing contract under ISO12207 approach(8)
 - ii) How would you rate the change control procedure? Explain in detail (8)
13.
 - i) What is a baseline in the contest of software configuration Management? How do base lines get updated to form new Base lines(6)
 - ii) How the following can be prevented while using a Configuration management tool? Explain (10)
 - a. Two team members overwriting each other’s work
 - b. Accidental deletion of work product.
 - c. Unauthorized modifications to a work product
14. Describe the following in detail
 - i) Partial completion reporting (8)
 - ii) Reb/Amber/Green (RAG) Reporting (8)

UNIT V - PART A

1. Point out the objectives of managing people and organizing teams?
2. Describe the importance causes of “stress” encountered in project
3. Classify the different motivation theory.
4. Develop the importance of objectives of organizational behavior.



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5. Describe Taylor's model.
6. Classify the different types of leadership style.
7. Develop the stages of team formation model?
8. Illustrate the methods would you use to improve motivation?
9. Will you state or interpret job enlargement and job enrichment?
10. Give the different categories of decisions
11. Define Herzberg's two factor theory.
12. Recommend some mental obstacles to good Decision making.
13. Illustrate the steps involved in selecting the right person for the job.
14. What you understand by virtual team?
15. List the basic stages of team development
16. Quote: Maslow's hierarchy of need
17. Compare personal and organizational stress.
18. Recommend the measures to enhance the job design in Oldham-Hackman model
19. Identify the advantages of the chief Programmer team.
20. How would you apply your understanding in "Egoless Programming"?

PART B

1. Describe the organizational behavior with example(16)
2. i) Discuss the factors to be considered in the Oldham-Hackman job characteristic model.(9)
ii) Give the Vroom's expectancy theory(7)
3. Demonstrate, How would you select a new staff into a project along with the recruitment process? (16)
4. i) Explain the Maslow's Hierarchy of needs with an example(8)
ii) Write short notes on Taylorist model(8)
5. Explain the following in detail
i) Stress(8)
ii) Health and safety(8)
6. i) Write short notes on some Ethical and Professional concern(8)
ii) Develop the project and functional organization structure and list out the advantages functional team format(8)
7. Describe the various models of Motivation in detail (16)



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8.
 - i) Discuss the metrics and issues involved in selecting the right person for the job(8)
 - ii) Explain the importance of working together as a team and the various aspects of team development(8)
9. Illustrate the term “Decision making” in the process of managing people and organizing teams. With an example explain the strength of a team(16)
10. Explain the following in detail
 - i) Chief programmer team(8)
 - ii) Democrating team(8)
11. Describe the Organization and Team structure in detail(16)
12.
 - i) Describe in detail about Dispersed and Virtual Team(8)
 - ii) Write short notes on Communication Genres.(8)
13.
 - i) Analyze the factors that are involved in making a team. Explain the characteristics(10)
 - ii) Explain the ways to improve the group performance (6)
14.
 - i) Discuss leadership models. Explain the functions of a leader with an example(10)
 - ii) Explain about communication plan in detail (6)