Total No. of Pages : 02

Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Total No. of Questions : 18

B.Tech.(CSE) (2011 Onwards E-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

Paper ID : [A2989]

Max. Marks : 60

Time : 3 Hrs.

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Write briefly :

1. Software Configuration Management
2. Risk Management
3. Test Automation
4. Cash flow forecasting
5. Change control
6. Software Reliability
7. Earned Value
8. PERT
9. CMMI
10. Project Scheduling

SECTION-B

11. What is cost estimation? What are different factors that affect the cost?

12. Explain Oldman-Hackman job characteristic model. Elaborate with example.

13. What are different processes involved in software configuration management? Explain.

14. How Risk Management is important in software project management? Explain its nature and types.

15. What is the role of organization and team structures in quality assurance of software? Explain.

SECTION-C

16. What are various parameters in Earned Value Analysis? How it helps in monitoring and control of any software project?

17. a) What are the various activities involved in software project management? Explain.

    b) What are different types of contract? Explain contract management.

18. Compare CMMI and ISO models for software quality in detail. How can they control quality of the software?

Total No. of Pages : 02

Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Total No. of Questions : 09

B.Tech.(IT) (2011 Onwards) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTIT-702

Paper ID : [A3050]

Max. Marks : 60

Time : 3 Hrs.

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

Q1) Answer briefly :

a) Define software engineering.

b) Define three P's in Software Project Management.

c) What are technical reviews?

d) What is ISO?

e) What is validation?

f) What is COCOMO?

g) What is Software Configuration Management?

h) What is total quality management?

i) What is Verification?

j) What is Risk Identification?

SECTION-B

Q2) Explain how a software development effort is initiated and finally terminated in the spiral model.

Q3) Explain change management in software configuration management.

Q4) What are different types of risks that a project might suffer from?

Q5) Discuss the principles of Total Quality Management.

Q6) What is project planning? When does the project planning start and end in the software life cycle?

SECTION-C

Q7) What are the different categories software development projects according to the COCOMO estimation model? Give examples of software product development projects belonging to each of these categories.

Q8) Compare various SDLC models. Why spiral model is known as meta model?

Q9) What are the major phases of the waterfall model of software development? Which phase consumes the maximum effort for developing a typical software product?

Total No. of Pages:

Roll No.

Total No. of Questions: 09

B.Tech. (IT) (2011 Onwards) (Sem. – 7, 8)

SOFTWARE PROJECT MANAGEMENT

M Code: 71980

Subject Code: BTIT-702

Paper ID: [A3050]

Max. Marks: 60

Time: 3 Hrs.

INSTRUCTIONS TO CANDIDATES:

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION A

1. Write briefly:

   a) What are Checkpoints?

   b) How are the project, process and product related to each other? Explain.

   c) Concept of Planning.

   d) List various characteristics of SPM.

   e) Explain Stress and its causes.

   f) Explain about the various Activity Plan Networks associated with SPM.

   g) Write about the Brainstorming Techniques.

   h) Name different costs involved in Activity planning of a project.

   i) Define Work Breakdown Structure.

   j) What is Change Control?

SECTION B

2. What are Activity networks? Explain how do the Forward networks and Backward Networks different from each other by citing the relevant difference between these two.
3. Give detailed overview of PERT and GANTT charts with a suitable example. Discuss their merits and demerits over each other.
4. Explain about the Change Control and the procedural methodology used in it for SPM.
5. Project a detailed overview of Risk Evaluation and hence explain how does the Decision Trees help in Risk handling?
6. Elaborate the statement "Project Monitoring plays vital role in controlling risk of a project".

SECTION C

7. Explain various steps involved in SDLC based upon their applications along with its merits and demerits.
8. Give detailed overview about the role of an organisation in building the TEAM structure by focusing upon its merits and demerits.
9. Write short notes upon:
   a) Cost Monitoring.
   b) Motivational Theories.

Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Total No. of Questions: 09

B.Tech. (CSE) (2011 Onwards Elective-II) (Sem. – 7, 8)

SOFTWARE PROJECT MANAGEMENT

M Code: 71899

Subject Code: BTCS-907

Paper ID: [A2989]

Max. Marks: 60

Time: 3 Hrs.

INSTRUCTIONS TO CANDIDATES:

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION A

1. Answer the following questions

a) Explain why keeping all members of a group informed about progress and technical decisions in a project can improve group cohesiveness?

b) Explain COCOMO model.

c) Describe a software application area in which software safety and hazard analysis would be a major concern.

d) What are the various factors associated with cost estimation of a project?

e) Define ISO 9000 quality standard.

f) Explain Putnam's equation.

g) What is the importance of Monte Carlo simulation technique in risk management?

h) Is quality and reliability related concepts but are fundamentally different? Justify your answer with an example.

i) Differentiate between "known risks" and "predictable risks".

j) What is the difference between a macroscopic schedule and a detailed schedule?

SECTION B

2. Describe Software quality dilemma in your own words.
3. Quality and reliability are related concepts but are fundamentally different in a number of ways. Discuss the differences.
4. What is the difference between an SCM audit and a technical review? Can their function be folded into one review? What are the pros and cons?
5. A formal technical review is effective only if everyone has prepared in advance. How do you recognize a review participant who has not prepared? What do you do if you're the review leader?
6. You are an engineer involved in the development of a financial system. During installation, you discover that this system will make a significant number of people redundant. The people in the environment deny you access to essential information to complete the system installation. To what extent should you, as a systems engineer, become involved in this? Is it your professional responsibility to complete the installation as contracted? Should you simply abandon the work until the procuring organization has sorted out the problem?

SECTION C

7. a) What options do we have when defining the structure of a software team? Explain in detail.

   b) Use the COCOMO II model to estimate the effort required to build software for a simple ATM that produces 12 screens, 10 reports, and will require approximately 80 software components. Assume average complexity and average developer/environment maturity. Use the application composition model with object points.

8. Give at least three examples in which black-box testing might give the impression that "everything's OK," while white-box tests might uncover an error. Give at least three examples in which white-box testing might give the impression that "everything's OK," while black-box tests might uncover an error.

9. Assume you are a software project manager and that you've been asked to compute earned value statistics for a small software project. The project has 56 planned work tasks that are estimated to require 582 person-days to complete. At the time that you've been asked to do the earned value analysis, 12 tasks have been completed. However, the project schedule indicates that 15 tasks should have been completed. The following scheduling data (in person-days) are available:

Task	Planned Effort	Actual Effort
1.	12.0	12.5
2.	15.0	11.0
3.	13.0	17.0
4.	8.0	9.5
5.	9.5	9.0
6.	18.0	19.0
7.	10.0	10.0
8.	4.0	4.5
9.	12.0	10.0
10.	6.0	6.5
11.	5.0	4.0
12.	14.0	14.5
13.	16.0	-
14.	6.0	-
15.	8.0	-

Compute the SPI, schedule variance, percent scheduled for cor
and cost variance for the project.

Roll No. [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE) (2012 to 2017 E-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

M.Code : 71899

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
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3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Write briefly :

1) Write any one software process model.

2) Define COCOMO2 model.

3) What is meant by cost flow forecasting?

4) Define monte carlo simulation.

5) What is Project Sequencing?

6) What is software Quality Assurance Plan?

7) Discuss significance of Network planning.

8) Discuss Hackman & Oldham's Job Characteristics Model.

9) What are the benefits of test automation?

10) Write a short note on Software Reliability.

SECTION-B

11) What are the steps in cost-benefit analysis? Discuss the cost-benefit evaluation techniques.

12) Define following :

    a. Types of Risk Management

    b. Schedule compression

13) Illustrate the PERT method for identifying the critical path of project.

14) Distinguish between CMMI and ISO models.

15) What are the criteria for selecting the right person for the Job?

SECTION-C

16) Write in detail the monitoring and control of software project management cycle.

17) Discuss common aspects of Contract Management. What are the types of Contracts and its stages?

18) Explain different approaches for Project Management. Give the overview of any one tool for Project Management.

Roll No. [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(IT) (2012 to 2017) (Sem.–7)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTIT-702

M.Code : 71980

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
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SECTION-A

1. **Answer briefly :**

   a. Software Risk

   b. Project Characteristics

   c. CMMI

   d. Project Stakeholders

   e. Strategic planning in Software Project Management

   f. Contract Management

   g. Project Breakdown Structure

   h. Test Automation

   i. ISO/IEC 12207

   j. Change control

SECTION-B

2. What are the various factors considered for organizing software team? How do the Project manager assign task to individuals?

3. What is the role of stress, health and safety in software project management?

4. What are the different factors that cause changes in software? How do change control works?

5. How Risk Management is important in software project management? Explain its nature and types.

6. What are the various processes involved in Software Project Management?

SECTION-C

7. Compare CMMI and ISO models for software quality in detail. How do they help to control the quality of the software?

8. Describe various organizational and management issues for a software product.

9. a. Expiain Project closing process.

   b. What are the various methods of Requirement Identification and collection?

Roll No. [ ]

Total No. of Questions : 18

Total No. of Pages : 02

B.Tech.(CSE) (2011 Onwards E-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

M.Code : 71899

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Write briefly :

1) COCOMO2

2) PERT and CPM

3) Software Project Management

4) Test Automation

5) ISO

6) Explain the use of Gantt Charts in Scheduling with an example.

7) What options do we have when defining the structure of a software team? Explain in detail.

8) Explain the Nominal Group Technique and its use.

9) Discuss various effects of schedule compression.

10) Discuss the importance of ethics in a project.

SECTION-B

11) Give the difference between product-oriented deliverables and project-oriented deliverables.

12) Explain the steps required to build a Work Breakdown Structure.

13) Describe five software application areas in which software safety and hazard analysis would be a major concern. Also, discuss how each can be tackled?

14) What do you mean by critical path analysis? Explain with the help of suitable example.

15) What factors need to be considered to organize any software team? How to assign the right task to the right person?

SECTION-C

16) What is the project budget? Explain different steps in cost estimation. What are the different types of cost need to be considered in cost estimation?

17) As a training manager, you are responsible for the initial programming language training of a new graduate intake to your company whose business is the development of defense aerospace systems. The principal programming language used is Ada, which was designed for defense systems programming. The trainees may be computer science graduates, engineers or physical scientists. Some but not all of the trainees have previous programming experience; none have previous experience in Ada. Explain how you would structure the programming training for this group of graduates.

18) What are the various types of contracts? Discuss various stages in contract placement. Explain contract management with the help of examples.

Roll No. [ ] Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(IT) (2011 Onwards) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTIT-702

Paper ID : 71980

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Q1) Answer briefly :

a. Who are project management stakeholders?

b. Discuss project schedule.

c. What is term task in project management?

d. Discuss work breakdown structure in project management.

e. Write the role of Project team.

f. What is the process of estimating the cost of a project?

g. How do we manage project quality?

h. What is risk monitoring?

i. What is Project Control cycle?

j. Discuss the impact of good leader.

SECTION-B

Q2 Explain the process of identifying requirements in planning of project.

Q3 How organizational influences affects the Project development cycle?

Q4 State the goals of acquiring and developing the project team to complete a project.

Q5 Which are the potential risks during planning of project?

Q6 How would you integrate change management and project management?

SECTION-C

Q7 Explain Project Management Phases and Processes. Discuss the project initiating process.

Q8 Discuss steps for project monitoring and control in project management.

Q9 What is Project closing? How to close a project successfully in Project Management?

Roll No. [ ]

Total No. of Questions : 18

Total No. of Pages : 02

B.Tech. (IT) (2012 to 2017) (Sem.–7)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTIT-702

M.Code : 71980

Time : 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Answer briefly :

1. Define Project Stakeholders.
2. What do you mean by project scheduling?
3. Discuss project milestone.
4. What is term activity in project management?
5. Define breakdown structure.
6. Discuss role of Project leader.
7. What is risk control?
8. How do we perform quality control?
9. Why is risk monitoring important?
10. Why estimation of cost is important in Project?

SECTION-B

11. Write the steps to identify requirements in planning of project.
12. What is the importance of risk management in software project management?
13. How would you manage a team efficiently to complete the project?
14. Discuss how quality assurance is done while managing the project.
15. What are the main objectives of integrated change control?

SECTION-C

16. Explain various factors that affects the project schedule by taking an example.
17. What is the process of estimating the cost of a project? Explain using any case study.
18. Why is project closing important? Which knowledge areas are involved in project closing?

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Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech. (CSE) (Sem.–6)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-614-18

M.Code : 79255

Date of Examination : 02-01-23

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Define the following terms :

a) Feasibility Assessment

b) Critical path

c) Risk identification

d) Putnam equation

e) Hazard Identification

f) Gantt Chart

g) Cash flow forecasting

h) Software Reliability

i) Black Box Testing

j) Software Reliability.

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SECTION-B

2. Explain the need of planning & monitoring in SPM.

3. What are various non-functional requirements?

4. Explain cost evaluation Techniques.

5. What are the various types of risks that need to identify in Software development?

6. What are different processes involved in software configuration management? Explain.

SECTION-C

7. Explain PERT and Monte Carlo Simulation techniques.

8. What is the role of organization and team structures in quality assurance of software? Explain.

9. Compare and explain CMMI and ISO models.

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Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 18

B.Tech. (CSE) (Sem.–6)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-614-18

M.Code : 79255

Date of Examination : 09-07-22

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
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SECTION-A

1. Define the scope of Software Project Management.
2. Write difference between Software development and other types of project development.
3. What do you mean by forward pass?
4. Define Risk Estimation.
5. What is Capers Jones estimation rule of thumb?
6. Define ISO 9000 quality standard.
7. Differentiate between “known risks” and “predictable risks”.
8. What is the difference between a macroscopic schedule and a detailed schedule?
9. What is critical path analysis?
10. What is project termination review?

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SECTION-B

11. Explain the stages of software project development.

12. Explain various objectives of activity planning.

13. Write various categories of factors need to be consider in Risk identification.

14. Explain COCOMO in detail.

15. What is the need of Prioritizing monitoring?

SECTION-C

16. What are various parameters in Earned Value Analysis? How it helps in monitoring and control of any software project?

17. Illustrate the PERT method for identifying the critical path of project.

18. Compare and explain CMMI and ISO models.

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NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

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B.Tech. (Computer Science & Engineering) (Sem.–7)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

M.Code : 71899

Date of Examination : 23-12-22

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a. Earned Value Analysis

b. CMMI

c. Types of Project Hazards

d. Importance of SCM

e. Advantages of COCOMO 2 over traditional costing methods.

f. Difference between contract management and technical project management.

g. What are the different parameters for measuring the quality of a software project?

h. Role(s) of leader in project management.

i. Factors of motivation for people involved in project.

j. PERT.

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SECTION-B

2. What is need of planning in a software project? List and explain activities involved within stepwise planning?

3. Define contract. Differentiate between contract management & technical management. What are the advantages of contract management?

4. Outline the need for risk evaluation of a software project. Highlight different types of risks.

5. How cost-benefit analysis may affect the project planning? Illustrate.

6. Discuss usage of Oldman-Hackman job characteristics model.

SECTION-C

7. Explain following :

   a. Monte Carlo Simulation Techniques for Project Management.

   b. Staffing pattern for Project Planning.

8. Compare and contrast ISO and CMMI models for software quality. How quality can be controlled with these models?

9. How the earned value analysis after completion of Project is done?-Elaborate with an example.

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B.Tech. (CSE) (2012 to 2017 E-II) (Sem.–7)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

M.Code : 71899

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

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SECTION-A

Write briefly :

1. Contract Management
2. Risk Management
3. Test Automation
4. Cash flow forecasting
5. Change control
6. Visualizing Process
7. Earned Value
8. Hazard Analysis
9. CMMI
10. Project Scheduling

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SECTION-B

11. What is cost estimation? What are different factors that affect the cost?

12. Explain Oldman-Hackman job characteristic model. Elaborate with example.

13. Explain Contract Management in detail. Also give details about its types.

14. How Risk Management is important in software project management? Explain its nature and types.

15. What is the role of organization and team structures in quality assurance of software? Explain.

SECTION-C

16. What are various parameters in Earned Value Analysis? How it helps in monitoring and control of any software project?

17. a) What are the various activities involved in software project management? Explain.

    b) Discuss in detail about team structure.

18. How Software Configuration Management helps in Change management? What are the various processes of Software configuration management?

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B.Tech.(CSE) (2011 Onwards E-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

M.Code : 71899

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

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3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Write briefly :

1) COCOMO2

2) PERT and CPM

3) Software Project Management

4) Test Automation

5) ISO

6) Explain the use of Gantt Charts in Scheduling with an example.

7) What options do we have when defining the structure of a software team? Explain in detail.

8) Explain the Nominal Group Technique and its use.

9) Discuss various effects of schedule compression.

10) Discuss the importance of ethics in a project.

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SECTION-B

11) Give the difference between product-oriented deliverables and project-oriented deliverables.

12) Explain the steps required to build a Work Breakdown Structure.

13) Describe five software application areas in which software safety and hazard analysis would be a major concern. Also, discuss how each can be tackled?

14) What do you mean by critical path analysis? Explain with the help of suitable example.

15) What factors need to be considered to organize any software team? How to assign the right task to the right person?

SECTION-C

16) What is the project budget? Explain different steps in cost estimation. What are the different types of cost need to be considered in cost estimation?

17) As a training manager, you are responsible for the initial programming language training of a new graduate intake to your company whose business is the development of defense aerospace systems. The principal programming language used is Ada, which was designed for defense systems programming. The trainees may be computer science graduates, engineers or physical scientists. Some but not all of the trainees have previous programming experience; none have previous experience in Ada. Explain how you would structure the programming training for this group of graduates.

18) What are the various types of contracts? Discuss various stages in contract placement. Explain contract management with the help of examples.

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NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

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Total No. of Questions: 09

B.Tech. (CSE) (2011 Onwards Elective-II) (Sem. – 7, 8)

SOFTWARE PROJECT MANAGEMENT

M Code: 71899

Subject Code: BTCS-907

Paper ID: [A2989]

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION A

1. Answer the following questions

   a) Explain why keeping all members of a group informed about progress and technical decisions in a project can improve group cohesiveness?

   b) Explain COCOMO model.

   c) Describe a software application area in which software safety and hazard analysis would be a major concern.

   d) What are the various factors associated with cost estimation of a project?

   e) Define ISO 9000 quality standard.

   f) Explain Putnam's equation.

   g) What is the importance of Monte Carlo simulation technique in risk management?

   h) Is quality and reliability related concepts but are fundamentally different? Justify your answer with an example.

   i) Differentiate between "known risks" and "predictable risks".

   j) What is the difference between a macroscopic schedule and a detailed schedule?

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2. Describe Software quality dilemma in your own words.

3. Quality and reliability are related concepts but are fundamentally different in a number of ways. Discuss the differences.

4. What is the difference between an SCM audit and a technical review? Can their function be folded into one review? What are the pros and cons?

5. A formal technical review is effective only if everyone has prepared in advance. How do you recognize a review participant who has not prepared? What do you do if you're the review leader?

6. You are an engineer involved in the development of a financial system. During installation, you discover that this system will make a significant number of people redundant. The people in the environment deny you access to essential information to complete the system installation. To what extent should you, as a systems engineer, become involved in this? Is it your professional responsibility to complete the installation as contracted? Should you simply abandon the work until the procuring organization has sorted out the problem?

SECTION C

7. a) What options do we have when defining the structure of a software team? Explain in detail.

   b) Use the COCOMO II model to estimate the effort required to build software for a simple ATM that produces 12 screens, 10 reports, and will require approximately 80 software components. Assume average complexity and average developer/environment maturity. Use the application composition model with object points.

8. Give at least three examples in which black-box testing might give the impression that "everything's OK," while white-box tests might uncover an error. Give at least three examples in which white-box testing might give the impression that "everything's OK," while black-box tests might uncover an error.

9. Assume you are a software project manager and that you've been asked to compute earned value statistics for a small software project. The project has 56 planned work tasks that are estimated to require 582 person-days to complete. At the time that you've been asked to do the earned value analysis, 12 tasks have been completed. However, the project schedule indicates that 15 tasks should have been completed. The following scheduling data (in person-days) are available:

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Task	Planned Effort	Actual Effort
1.	12.0	12.5
2.	15.0	11.0
3.	13.0	17.0
4.	8.0	9.5
5.	9.5	9.0
6.	18.0	19.0
7.	10.0	10.0
8.	4.0	4.5
9.	12.0	10.0
10.	6.0	6.5
11.	5.0	4.0
12.	14.0	14.5
13.	16.0	-
14.	6.0	-
15.	8.0	-

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Compute the SPI, schedule variance, percent scheduled for completion, percent complete, CPI, and cost variance for the project.

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Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 18

B.Tech.(CSE) (2011 Onwards E-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

Paper ID : [A2989]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Write briefly :

1. Software Configuration Management
2. Risk Management
3. Test Automation
4. Cash flow forecasting
5. Change control
6. Software Reliability
7. Earned Value
8. PERT
9. CMMI
10. Project Scheduling

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SECTION-B

11. What is cost estimation? What are different factors that affect the cost?

12. Explain Oldman-Hackman job characteristic model. Elaborate with example.

13. What are different processes involved in software configuration management? Explain.

14. How Risk Management is important in software project management? Explain its nature and types.

15. What is the role of organization and team structures in quality assurance of software? Explain.

SECTION-C

16. What are various parameters in Earned Value Analysis? How it helps in monitoring and control of any software project?

17. a) What are the various activities involved in software project management? Explain.

    b) What are different types of contract? Explain contract management.

18. Compare CMMI and ISO models for software quality in detail. How can they control quality of the software?

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Roll No. | | | | | | | | | | | | |

Total No. of Questions: 09 **Total No. of Pages: 02**

B. Tech. (CSE) (Sem. 7, 8)
SOFTWARE PROJECT MANAGEMENT
Subject Code: BTCS-907
Paper ID: A2989

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATES:

1. **Section A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **Section B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **Section C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION A

1.

a) What is contrast management?

b) Discuss the use of COCOMO2 model?

c) What is meant by project costing?

d) Define Putnam's equation?

e) What is critical path analysis?

f) What is project termination review?

g) Discuss significance of Network planning?

h) How to select the right person for the Job?

i) Write a short note on test automation?

j) Define Software Reliability?

SECTION B

2. Explain the different activities in Software Project Management?

3. Define following

a) Cost Benefit Evaluation Technique

b) Hazard Analysis

4. Illustrate the Program Evaluation Review Technique method for calculating the amount of time to finish a project?

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5. How the CMMI model is used to improve the quality in software engineering and other disciplines?

6. What are the goals of Software Configuration Management?

SECTION C

7. What is Risk Management? Discuss various Risk Management types?

8. How the earned value analysis after completion of Project is done?

9. Explain different approaches for completion of Project? Give the overview of working in groups and using term structure?

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Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech.(CSE) (2011 Onwards Elective-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

Paper ID : [A2989]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

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SECTION-A

1. Discuss the following in brief :

a) What factors should be taken into account when selecting staff to work on a software development project?

b) Describe the difference between risk components and risk drivers.

c) Explain CMMI model.

d) Define ISO 9000 quality standard.

e) Can a program be correct and still not exhibit good quality? Explain.

f) What is the purpose of using Putnam's equation? Explain.

g) Explain Monte Carlo simulation technique.

h) Explain the role of change control authority in change control process.

i) Explain the difference between error and a defect.

j) List the types of contracts.

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SECTION-B

2. Can a program be correct and still not reliable? Explain.

3. You have been given the responsibility for improving the quality of software across your organization. What is the first thing that you should do? What's next?

4. What are the four elements that exist when an effective SCM system is implemented? Discuss each briefly.

5. Is there ever a case where a software project milestone is not tied to a review? If so, provide one or more examples.

6. What are the steps to identifying roles? What are the steps to matching people to roles?

SECTION-C

7. a. What options do we have when defining the structure of a software team? Explain in detail.

   b. Use the COCOMO II model to estimate the effort required to build software for a simple ATM that produces 12 screens, 10 reports, and will require approximately 80 software components. Assume average complexity and average developer/environment maturity. Use the application composition model with object points.

8. As a training manager, you are responsible for the initial programming language training of a new graduate intake to your company whose business is the development of defense aerospace systems. The principal programming language used is Ada, which was designed for defense systems programming. The trainees may be computer science graduates, engineers or physical scientists. Some but not all of the trainees have previous programming experience; none have previous experience in Ada. Explain how you would structure the programming training for this group of graduates.

9. Describe five software application areas in which software safety and hazard analysis would be a major concern.

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Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech.(CSE) (2011 Onwards Elective-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

Paper ID : [A2989]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a. Contract Management

b. Project Scheduling

c. PERT

d. Visualizing Process

e. Organizational Behavior

f. Change Control

g. Hazard Analysis

h. Software Testing

i. Risk Evaluation

j. Project Planning

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SECTION-B

2. What are the activities involved in Project scheduling? Explain.

3. Explain Contract Management in detail. Also give details about its types.

4. What is the role of Project monitoring and control? Explain its components.

5. Explain various steps involved in stepwise project planning.

6. Discuss Leadership characteristics. What are the factors for selecting right person for the job?

SECTION-C

7. What are different cost estimation techniques? Explain COCOMO model and its variants with examples.

8. a) What are the various Project Management tools? Elaborate.

   b) Discuss in detail about team structure.

9. How Software Configuration Management helps in Change management? What are the various processes of Software configuration management?

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Total No. of Questions : 09

B.Tech.(CSE) (2011 Batch Elective-II) (Sem.–7,8)

SOFTWARE PROJECT MANAGEMENT

Subject Code : BTCS-907

Paper ID : [A2989]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

   a) Stepwise planning

   b) Cash Flow forecasting

   c) Hazard analysis

   d) Software configuration items

   e) Formal technical review

   f) Software contract

   g) Progress visualization

   h) Decision making

   i) Software reliability

   j) Understanding behaviour

SECTION-B

2. What factors need to be considered to organize any software team? How to assign the right task to right person?

3. How risk evaluation takes place in project management? Discuss risk planning and control with the help of suitable example.

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4. What are the causes for software change? How change control takes place?

5. What do you mean by critical path analysis? Explain with the help of suitable example.

6. Compare and contrast the ISO and CMMI approach to Software quality.

SECTION C

7. What measures are used in Earned Value Analysis? Calculate the progress indicators for the following project at one-month interval from January 1 through June 1. Also comment on the progress of the project.

Work Task	Estimated Effort (programmer-days)	Actual Effort (programmer-days)	Estimated Completion Date (mm/dd)	Actual Date Completed (mm/dd)
1	30	37	1/1	2/1
2	25	24	2/15	2/15
3	30	41	3/1	3/15
4	50	47	4/15	4/1
5	60	63	5/1	4/15
6	35	31	5/15	6/1
7	55	58	6/1	6/1
8	30	28	6/15	6/15
9	45	43	7/1	7/15
10	25	29	8/1	8/15
11	45	49	8/15	9/1

8. What are various types of contracts? Discuss various stages in any contract placement. Also discuss various aspects of contract management with the help of suitable example.

9. Explain the following :

   a) Test Automation

   b) Monte Carlo Simulation Techniques for Project Management

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Total No. of Pages: 01
Total No. of Questions: 09

B. Tech. (Sem.-7TH)

SOFTWARE PROJECT MANAGEMENT

Subject Code: BTCS 907
Paper ID: [A2989]

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTION TO CANDIDATES:-

1. *Section A is compulsory.*
2. *Attempt any four questions from Section B.*
3. *Attempt any two questions from Section C.*

Section A

1. Discuss the following in brief: **(2 X 10 = 20)**
   a) Stepwise planning
   b) Cash Flow Forecasting
   c) Hazard Analysis
   d) Change Control
   e) Project termination review
   f) Cost Monitoring
   g) Understanding Behaviour
   h) Team Structures
   i) Test Automation
   j) Software Reliability

Section B

2. Discuss various effects of schedule compression. (05)
3. What is the difference between project sequencing and project scheduling activities? (05)
4. Discuss Oldman - Hackman job characteristics Model with the help of suitable example. (05)
5. What do you mean by stress, health and safety in software project management? (05)
6. How the right person is selected for the job in software team? Discuss. (05) **(4X5=20)**

Section C

7. Explain Monte Carlo Simulation techniques with the help of suitable example(s). How are they beneficial in project management? (10)
8. What are various types of contracts? Discuss various stages in contract placement. Explain contract management with the help of example. (10)
9. Compare and contrast ISO and CMMI models for software quality. How quality can be controlled with these models? (10)

(10X2=20)

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