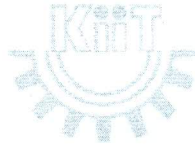


Invigilator's Signature and Date



Set-1

KIIT DEEMED TO BE UNIVERSITY
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| Name | |
| Date of Exam | |

SOFTWARE PROJECT MANAGEMENT (IT3032)
6th Semester B.Tech

SECTION-A

(Answer All Questions)

Time: 30 Minutes

Full Marks = $2 \times 7 = 14$ Marks

| Question No | Question | Write the correct option here. |
|-------------|---|--------------------------------|
| Q.No:1 | Which below is not a software project characteristics? A. Flexibility B. Complexity C. Portability D. Conformity | |
| Q.No:2 | Which model is used for low risk factor in a project? A. Waterfall model B. Spiral Model C. Prototyping Model D. None of these | |
| Q.No:3 | Which of the following technique overcomes drawback related to LOC? A. Function Point Metric B. Project Planning Sheet C. COCOMO D. COCOMO2 | |
| Q.No:4 | A determination of economic feasibility of the project always requires a thorough A. Cost/benefit analysis B. Work breakdown structure (WBS) C. System scope document D. Proof of concept | |

| | | |
|--------|---|--|
| Q.No:5 | <p>Cross-functional teams are</p> <p>A. Permanent</p> <p>B. Temporary</p> <p>C. Neither Temporary nor Permanent</p> <p>D. Either Temporary or Permanent</p> | |
| Q.No:6 | <p>Possible strategies for dealing with risk are</p> <p>A. Accept, Mitigate, Evade, Transfer</p> <p>B. Avoid, Transfer, Accept, Mitigate</p> <p>C. Evade, Receive, Transfer, Avoid</p> <p>D. Mitigate, Avoid, Evade, Transfer</p> | |
| Q.No:7 | <p>What are software quality attributes?</p> <p>A. Faster & Reliable</p> <p>B. Cheaper & Reliable</p> <p>C. Cheaper & faster</p> <p>D. All of the above</p> | |

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SOFTWARE PROJECT MANAGEMENT (IT3032)
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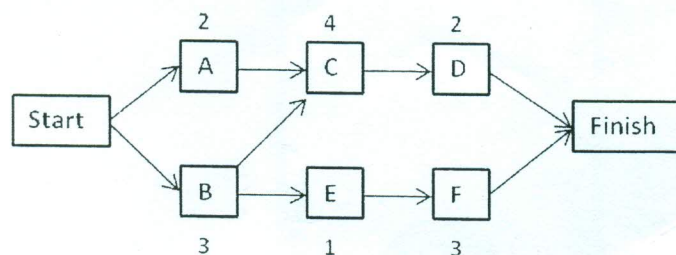
SECTION-B

(Answer Any Three Questions.)

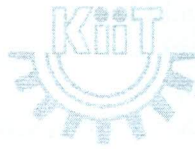
Time: 1 Hour and 30 Minutes

Full Marks = $12 \times 3 = 36$ Marks

- Q.No:8 (a) Summarize Basic Cocomo Model in details. [8 marks]
- (b) A cash receipt transaction in an accounts subsystem accesses two entity types INVOICE and CASH-RECEIPT.
The data inputs are:
Invoice no
Date received
Cash received
- If an INVOICE record is not found for the invoice no then an error message is issued. If the invoice no is found then a CASH-RECEIPT record is created. The error message is the only output of the transaction. Calculate the unadjusted function points, using industry average weightings, for this transaction.
Note: $W_i = 0.58$, $W_e = 1.66$, $W_o = 0.26$ (industry average) [4 marks]
- Q.No:9 (a) What is Herzberg's two factor theory of motivation? How does it contribute to an individual and team as a whole? [6 marks]
- (b) What is Vroom's expectancy theory of motivation? Does it cater to the development velocity? Justify. [6 marks]
- Q.No:10 What is software quality? What are different software quality standards? How to ensure product quality & process quality? [12 marks]
- Q.No:11 Explain critical path. Solve the given problem to calculate the critical path and slack time for the each activity. [12 marks]



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| Date of Exam | |

SOFTWARE PROJECT MANAGEMENT (IT3032)
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SECTION-A
(Answer All Questions)

Time: 30 Minutes

Full Marks = $2 \times 7 = 14$ Marks

| Question No | Question | Write the correct option here. |
|-------------|---|--------------------------------|
| Q.No:1 | Benefits of management might include: A. Improved quality of service B. Risk reduction C. Economies D. All of the above | |
| Q.No:2 | Which one of the following models is not suitable for accommodating any change? A. Build & Fix Model B. Prototyping Model C. RAD Model D. Waterfall Model | |
| Q.No:3 | Lines of Code measures the size of project by counting A. The comments in the code B. The number of source instructions C. The header lines D. All of the above | |
| Q.No:4 | Project management is not about A. Scope management B. Cost management C. Time management D. Document management | |

| | | |
|--------|---|--|
| Q.No:5 | <p>Good project management should lead to:</p> <p>A. Good project control leading fewer unexpected crises</p> <p>B. Reasonable estimates of effort</p> <p>C. Making clear what is expected from each team member</p> <p>D. All of the above</p> | |
| Q.No:6 | <p>Which of these is not a source of Risk</p> <p>A. Political Risk</p> <p>B. Environmental Risk</p> <p>C. Functional Risk</p> <p>D. Technology Risk</p> | |
| Q.No:7 | <p>As per Boehm - Errorcorrection complexity and criticality, the risk & uncertainty has following increasing order of expenses:</p> <p>A. Coding, requirement gathering, maintenance</p> <p>B. Maintenance, coding requirement gathering</p> <p>C. Requirement gathering, coding, maintenance</p> <p>D. Coding, maintenance, Requirement gathering</p> | |

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SECTION-B

(Answer Any Three Questions.)

Time: 1 Hour and 30 Minutes

Full Marks = $12 \times 3 = 36$ Marks

- Q.No:8 (a) Elaborate Caper's jones thumb rules. [6 marks]
(b) Two software managers separately estimated a given product to be of 20,000 and 25,000 lines of code respectively. Bring out the effort and schedule time implications of their estimation using COCOMO. For the effort estimation, use a coefficient value of 3.2 and exponent value of 1.05. For the schedule time estimation, the similar values are 2.5 and 0.38 respectively. Assume all adjustment multipliers to be equal to unity. [6 marks]
- Q.No:9 (a) What is mixed control team structure in software development? How does it influence the large project progress? Explain with an example. [6 marks]
(b) What is a cross functional team? How does it impel the software development? Explain with a suitable example. [6 marks]
- Q.No:10 Summarize any 4 types of testing with details. [12 marks]
- Q.No:11 Product manager has planned a list of activities culminating in the inaugurate launch of the new products.

| Activity | pert 3 time estimates days | | | Immediate Predecessor (s) |
|----------|----------------------------|----|----|---------------------------|
| | P | M | O | |
| a | 20 | 10 | 5 | — |
| b | 12 | 7 | 5 | — |
| c | 12 | 10 | 8 | a |
| d | 40 | 20 | 6 | c |
| e | 90 | 60 | 30 | d |
| f | 14 | 10 | 7 | d |
| g | 50 | 30 | 20 | c |
| h | 12 | 10 | 8 | e, f, g |
| i | 6 | 4 | 3 | b |
| j | 1 | 1 | 1 | h, i |

What is the probability that product manager will be able to complete the language launch within 80 days-time? [12 marks]

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SOFTWARE PROJECT MANAGEMENT (IT3032)
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SECTION-A

(Answer All Questions)

Time: 30 Minutes

Full Marks = $2 \times 7 = 14$ Marks

| Question No | Question | Write the correct option here. |
|-------------|--|--------------------------------|
| Q.No:1 | Many organizations are now using enterprise or project _____ management software to help manage projects. A. Path B. Portfolio C. Institute D. Office | |
| Q.No:2 | Which activity is undertaken once the development activities start? A. Project Planning B. Project Monitoring and Control C. Project size estimation D. Project cost estimation | |
| Q.No:3 | Which of the following serves as project estimation technique? A. Empirical estimation B. Heuristic technique C. Analytical estimation D. All of the above | |
| Q.No:4 | The PERT technique gives most weightage to: A. the most likely estimate obtained B. the most optimistic estimate obtained C. all the estimates obtained have equal weights D. the most pessimistic estimate obtained | |

| | | |
|--------|--|--|
| Q.No:5 | Department structure should involve A. Functional Format B. Project Format C. Matrix Format D. All of the above | |
| Q.No:6 | Which risk is the really want of Building an excellent product or system. A. Business B. Schedule C. Technical D. Performance | |
| Q.No:7 | Choose the 3 rd , 4 th & 5 th level of CMMI Model from the followings : A. Defined, Optimizing, Managed B. Managed, Defined, Optimizing C. Defined, Managed, Optimizing D. Defined, Repeatable, Optimized | |

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SOFTWARE PROJECT MANAGEMENT (IT3032)
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SECTION-B

(Answer Any Three Questions.)

Time: 1 Hour and 30 Minutes

Full Marks = 12 × 3 = 36 Marks

Q.No:8 (a) Compute the function point value for a project with the following information domain characteristics: [8 marks]

- (1) No. of user inputs = 30
- (2) No. of user outputs = 20
- (3) No. of user inquiries = 08
- (4) No. of files = 7
- (5) No. of external interfaces = 6

Assume all complexity adjustment values are moderate and 14 algorithms have been counted.

(b) Explain 4 shortcomings of LOC. [4 marks]

Q.No:9 Contract Management has been one of the most important activity in Software Project Management. Give examples of different situations where each of the contract type is found to be suitable. Justify the same. [12 marks]

Q.No:10 What do you mean by risk? Explain the Boehm's top 10 development risks. [12 marks]

Q.No:11 (a) A new project has 'average' novelty for the software supplier that is going to execute it and thus given a nominal rating on this account for precedentedness. Development flexibility is high, requirements may change radically and so risk resolution exponent is rated very low. The development team are all located in the same office and this leads to team cohesion being rated as very high, but the software house as a whole tends to be very informal in its standards and procedures and the process maturity driver has therefore been given a rating of 'low'.

| FACTOR | RATING | VALUE |
|--------|-----------|-------|
| PREC | nominal | 3.71 |
| FLEX | high | 2.03 |
| RESL | Very low | 7.06 |
| TEAM | Very high | 1.11 |
| PMAT | low | 6.23 |

(i) What would be the scale factor (sf) in this case? [4 marks]

(ii) What would the estimate effort if the size of the application was estimated as in the region of 3000 lines of code? [4 marks]

(b) The nominal effort and duration of a project is estimated to be 2000 pm and 30 months. The project cost is negotiated to be \$300.000. This needs the product to be developed and delivered in 24 months time. What is the new cost that should be negotiated? [4 marks]
