KIIT Deemed to be University
Online End Semester Examination(Spring Semester-2021)

Subject Name & Code: SPM(IT-3032) **Applicable to Courses:B.tech CSE/IT**

Full Marks=50 **Time:2 Hours**

SECTION-A(Answer All Questions. Each question carries 2 Marks)

Time:30 Minutes **(7×2=14 Marks)**

Question No	Question Type (MCQ/SAT)	Question	CO Mapping	Answer Key (For MCQ Questions only)
Q.No:1	MCQ	Q1:Many organizations are now using enterprise or project _____ management software to help manage projects. A,path B.portfolio C .institute D.office	CO1	KEY:B
	MCQ	Q2. Benefits of management might include: A. Mandatory requirement B.Improved quality of service C.Increased productivity D. All of the above	CO1	KEY:D
	MCQ	Q3. Which below is not a software project characteristics. A. Flexibility B. Conformity C. Portability D. Complexity	CO1	KEY:C
		Q4. Full form of IRR is A. Investment revise return B. Innovative rate of	CO1	KEY:D

		return C. Investment Rate of Revise D. Investment rate of return		
Q.No:2	**MCQ**	Q1: Which model is used to project risk factor A. Waterfall model B. Spiral Model C. Prototyping Model D.None of these	CO2	KEY:B
	MCQ	Q2: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	CO2	KEY:D
	MCQ	Q3:What is the major drawback of using RAD Model? A. Highly specialized & skilled developers/ Designers are required. B. Increases reusability of components C. Encourages customer/client feedback D. Increases reusability of components, Highly specialized & skilled developers/designers are required	CO2	KEY:D
	MCQ	Q4: 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	CO2	KEY:B
Q.No:3	**MCQ**	Q1:Which of the following technique overcomes drawback related to LOC? A.Project Planning Sheet B.Function Point Metric C.COCOMO D.COCOMO2	CO3	KEY: B
	MCQ	Q2:Which of the following	CO3	KEY:D

		serves as project estimation technique? A.Empirical estimation B.Heuristic technique C.Analytical estimation D.All of the above		
	MCQ	Q3:Lines of Code measures the size of project by counting A.the number of source instructions B.the comments in the code C.the header lines D.All of the above	CO3	KEY:A
	MCQ	Q4:"Larger code size does not necessarily mean better quality or higher efficiency." A.True B.False C.NA D.NA	CO3	KEY:A
Q.No:4	**MCQ**	Q1: If an activity on the critical path takes longer than expected, then: A. Activities not on the critical path will have reduced slack B. Activities not on the critical path will have additional slack C. Activities on the critical path will start showing slack D. The project is doomed	CO4	KEY:B
	MCQ	Q2:Project management is not about A. Scope management B. Cost management C. Document management D. Time management	CO4	KEY:C

	MCQ	Q3: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	CO4	KEY:A
	MCQ	Q4: 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 prototype	CO4	KEY:A
Q.No:5	**MCQ**	Q1.Cross-functional teams are A. Temporary B. Permanent C. Neither Temporary nor Permanent D. Either Temporary or Permanent	CO5	KEY:A
	MCQ	Q2:Which one not belongs to develop a team . A. Forming B. Storming C. Counselling D. Adjourning	CO5	KEY:C
	MCQ	Q3. Department structure should involve A. Functional Format B. Project Format C. Matrix Format D. All of the above	CO5	KEY:D
	MCQ	Q4.Good project management should lead to: A. Reasonable estimates of effort B.Good project control leading fewer unexpected	CO5	KEY:D

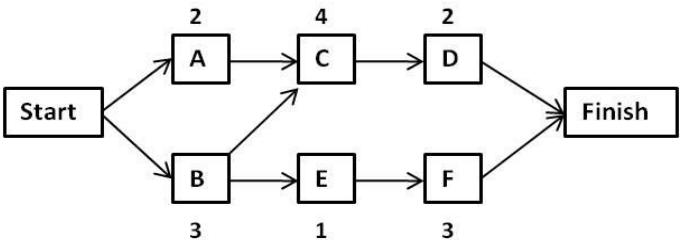
		crises C.Making clear what is expected of each team member D. All of the above		
Q.No:6	**MCQ**	Q1:Possible strategies for dealing with risk are A. Accept, Mitigate, Evade, Transfer B. Avoid, Transfer, Accept, Mitigate C. Evade, Receive, Transfer, Avoid D. Mitigate, Avoid, Evade, Transfer	CO6	KEY:B
	MCQ	Q2:Which of these is not a source of Risk A. Political Risk B. Environmental Risk C. Functional Risk D. Technology Risk	CO6	KEY:C
	MCQ	Q3: Which risk is the really want of Building an excellent product or system. A. Business B. Schedule C. Technical D. Performance	CO6	KEY:A
	MCQ	Q4:Let four risks named R1, R2, R3 and R4 have been identified with probabilities of occurrences of 0.1, 0.02, 0.03 and 0.4 respectively. The likely damages of above risks are 80,000, 70,000, 100,000 and 60,000 respectively. Which risk has the highest risk exposure? A. R1 B. R2 C. R3 D. R4	CO6	KEY:D
Q.No:7	**MCQ**	Q1:what are software quality attributes? A.Faster & Reliable B.Cheaper & Reliable C.Cheaper & faster D.All of the above	C06	KEY: A

	MCQ	Q2:AS per Boehm - Error correction complexity and criticality, the risk & uncertainty has following increasing order of expenses: A. Coding, requirement gathering, maintenance B. Maintenance, coding requirement gathering C. Requirement gathering, coding, maintenance D. Coding, maintenance, Requirement gathering	CO6	KEY:C
	MCQ	Q3.Choose the 3rd, 4th & 5th level of CMMI Model from the followings : A. Defined, Optimizing, Managed B. Managed, Defined, Optimizing C. Defined, Managed, Optimizing D. Defined, Repeatable, Optimized	CO6	KEY:C
	MCQ	Q4.Error seeding is A. Errors generated in the software because of cascading effect B. Errors generated by the integration of external service patches C. Errors generated by wears & tears of software D. Error introduced to the software knowingly	CO6	KEY:D

SECTION-B(Answer Any Three Questions. Each Question carries 12 Marks)

Time: 1 Hour and 30 Minutes **(3×12=36 Marks)**

Question No	Question	CO Mapping (Each question should be from the same CO(s))
Q.No:8	Q1.(a) Differentiate between Loc and FP with minimum 4 points. [4 marks] (b) Compute the function point value for a project with the following information domain characteristics: (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.[8 marks]	CO3
	Q2.(a) Summarize Caper's jones thumb rules.[6 marks] (b)Two software managers separately estimated a given product to be of 15,000 and 20,000 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]	
	Q3.(a) Elaborate Cocomo81 in detail.[7 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: Wi = 0.58, We = 1.66, Wo = 0.26 (industry average) [5 marks]	
Q.No:9	Q1.(a)What is Herzberg's two factor theory of motivation ? How does it contribute to an individual and team as a whole? [6 marks]	CO5

	(b)What is Vroom's expectancy theory of motivation ? Does it cater to the development velocity ? Justify.[6 marks]	
	Q2.(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]	
	Q3.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	Q1.What is software quality ? What are different software quality standards ? How to ensure product quality & process quality ?[4+4+4 marks]	CO6
	Q2. Summarize any 4 types of testing with details.[12 marks]	
	Q3. What is meant by software configuration management? Explain the two principal activities of configuration management. [4+8 marks]	
Q.No:11	Q1. Explain critical path.Solve the given problem to calculate the critical path and slack time for the each activity.[2+6+4 marks]  	CO4
	Q2. 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]

Q3.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 vey 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	3.70
FLEX	high	2.02
RESL	Very low	7.05
TEAM	Very high	1.10
PMAT	low	6.22

(i) What would be the scale factor (sf) in this case? [6 marks]
(ii) What would the estimate effort if the size of the application was estimated as in the region of 4000 lines of code?[6 marks]

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