



Shri Shankaracharya Institute of Professional Management & Technology

Department of Computer Science and Engineering
Class Test – II Session- Jan-June, 2023 Month-June

Sem- 6th [A B & C] Subject- Compiler Design Code- C022611(022)

Time Allowed: 2 hrs

Max Marks: 40

Note: - All questions are compulsory.

Q. N.	Questions	Marks	Levels of Bloom's taxonomy	COs
Q1	Illustrate both Synthesized and Inherited Attributes with example	[8]	Apply	CO3
Q2	Convert the following expression: $-(a+b)*(c+d)-(a+b+c)$ into (i) Quadruples (ii) Triples (iii) Indirect Triples	[8]	Apply	CO3
Q3	Consider the grammar $E \rightarrow E+T E-T T$ $T \rightarrow T*F T/F F$ $F \rightarrow (E) \text{id} \text{digit}$ Obtain the semantic rules to construct a syntax tree for the expression "a-4+c" using bottom-up approach	[8]	Evaluate	CO3
Q4	Point out the various techniques under loop optimization.	[8]	Analyze	CO4
Q5	Apply the algorithm of code generation on the expression: $a=(p+q)-((r+s)-t)$	[8]	Apply	CO5



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Department of Computer Science and Engineering

Class Test – II Session- Jan– June, 2023 Month-June

Sem- 6th [AI] Subject- Software Engineering and Project Management Code-C022612(022)

Time Allowed: 2 hrs

Max Marks: 40

Note: - All questions are Compulsory.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
Q1	Describe types of work breakdown structure. Explain different types of outsourcing relationship.	[8]	Understand	CO3
Q2	Compare scope verification and scope validation. Explain Norden's Work using Rayleigh graph.	[8]	Apply	CO3
Q3	Explain Six Sigma process using SixSigma graph. Discuss the characteristics of Six Sigma using the appropriate diagram.	[8]	Analyze	CO4
Q4	Describe the rule of seven in project management. Explain CMM and describe the uses of CMM	[8]	Understand	CO4
Q5	Suppose that a project was estimated to be 400 KLOC. Calculate effort & time for each of 3 modes of development.	[8]	Apply	CO2

Software Product Type	a	b	c	d
Organic	2.4	1.05	2.5	0.38
Semi-detached	3.0	1.12	2.5	0.35
Embedded	3.6	1.20	2.5	0.32



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Department of Computer Science and Engineering

Class Test – II Session- Jan – June, 2023 Month-June

Sem- 6th Section [B & C] Subject- Software Engineering & Project Management Code- C022612(022)

Time Allowed: 2 hrs

Max Marks: 40

Note: - Attempt all questions. All carry equal marks.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
Q1	Discuss the importance of project human resource management and explain its processes.	[8]	Understand	CO3
Q2.	Classify the different levels of SEI Capability Maturity Model.	[8]	Apply	CO4
Q4.	Discuss following in brief:- 1. Formal Technical Review 2..ISO 9001	[8]	Understand	CO4
Q3.	Define software risk. Explain various types of risk in software development.	[8]	Remember	CO5
Q5.	Suppose you are the chief executive officer (CEO) of a software development team. Which team structure would you select for your organization and why?	[8]	Analyze	CO5



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Shri Shankaracharya Institute of Professional Management & Technology, Raipur

Department of Computer Science and Engineering

Class Test – II Session- Jan-June, 2023 Month- June

Sem- 6th [A, B & C] Subject- Artificial Intelligence & Expert System Code- C022613(022)

Time Allowed: 2 hrs

Max Marks: 40

Note: - All questions are compulsory and carries equal marks..

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
Q1	Discuss components of planning with example of any planning method.	[8]	Apply	CO3
Q2	Explain blocks world problem for robotic arm with all steps.	[8]	Understand	CO3
Q3	Illustrate the ATN networks and design any one example of semantic grammar.	[8]	Apply	CO4
Q4	Describe artificial neural network model with diagram and examples of supervised learning and unsupervised learning.	[8]	Analyze	CO5
Q5	Compare between process of knowledge acquisition and expert shell	[8]	Evaluate	CO5



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Department of Computer Science and Engineering

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Department of Computer Science and Engineering

Class Test – II Session- Jan– June, 2023 Month-June

Sem- CSE 6th [A, B & C] Subject- Internet of Things(Professional Elective-II) Code-C022632(022)

Time Allowed: 2 hrs

Max Marks: 40

Note: - All questions are Compulsory.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
Q1	Discuss the applications of actuators in IoT. Differential a thermal actuator pneumatic actuators.	[8]	Understand	CO3
Q2	Differential working of servo motor and stepper motor used in IoT systems.	[8]	Apply	CO3
Q3	Implement a pseudo code to read data from IR sensor connected to auduino board and explain its working.	[8]	Analyze	CO4
Q4	Demonstrate different componenets of Raspberry Pi board along with its major characteristics.	[8]	Apply	CO4
Q5	Discuss the IaaS and SaaS Systems used in cloud computing for IoT applications.	[8]	Understand	CO5



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Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	How does a digital signature work? Briefly describe the steps that should be followed to choose a perfect digital signature.	[8]	Apply	CO4
2.	Analyze the process of Advanced Encryption Standard (AES) in detail. Mention the steps that are performed during encryption in every round.	[8]	Analyze	CO2
3.	Illustrate FIREWALL design principles in detail with proper diagram.	[8]	Understand	CO5
4.	Point out and describe why Euclidian Algorithm is used and also Write the steps of Algorithm by taking suitable example.	[8]	Apply	CO2
5.	Differentiate between MD5 and SHA1 algorithm along with the working of one process and also Differentiate between MAC and HMAC.	[8]	Understand	CO4

Time Allowed: 2 hrs Max Marks: 40
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