Code: 20A30502

R20

B.Tech III Year I Semester (R20) Supplementary Examinations August 2023

SOFTWARE ENGINEERING FOR AI

(Common to CSE (AI) and CSE (AI&ML))

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a)	What are the two types of software products in new domains? What is meant by software crisis?	2M
(b)	Write an example for ill-defined problem definition.	2M
(c)	What is called malleable software?	2M
(d)	What are the operational requirements of Kowalski?	2M
(e)	Define self-adaptive software.	2M
(f)	Write about Explanation Based Learning (EBL).	2M
(g)	Mention some machine learning problems related to practical software.	2M
(h)	Define expert system as AI software.	2M
(i)	Define Self-reflective software.	2M
(j)	Define overengineering software.	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2 Explain in detail about conventional software-system design and its Program Design Language in consideration to software engineering process. 10M

OR

3 Describe briefly about SAV and SAT methodology of software engineering. 10M

4 Explain in detail about RUDE cycle and its importance. 10M

OR

5 Write about POLITE methodology in detail for the Knowledge Based Systems (KBS). 10M

6 Write about the concept of reverse engineering and reusable software in detail. 10M

OR

7 Describe about the problem of decompiling and its consequence of controlled modification. 10M

8 Explain the methodological framework for multisession inductive software engineering in detail. 10M

OR

9 What are the stages involved in the evolution of expert systems? Explain in detail about 'Control flow in expert systems' development. 10M

10 What is the update on Software Development Support for AI Programs? And explain in detail about Classification of development environments. 10M

OR

11 Write about the taxonomy of software development concepts in ESDE-P. 10M

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Code: 20A30502a

R20

B.Tech III Year I Semester (R20) Supplementary Examinations August 2023

SOFTWARE ENGINEERING FOR AI

(Artificial Intelligence & Data Science)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

*****

1 Answer the following: (10 X 02 = 20 Marks)

(a)	Define Software engineering. What is called computer and software systems?	2M
(b)	What is called the Prototype? How a software engineer builds it?	2M
(c)	Mention the fundamental elements of all incremental system development procedures.	2M
(d)	Write The second law of program evolution.	2M
(e)	Define Reverse engineering.	2M
(f)	What is called reusable software?	2M
(g)	What are inductive generalization techniques?	2M
(h)	Define data-defined problems.	2M
(i)	What is Constraint logic programming?	2M
(j)	What is called software diversity? What approach is implements software diversity?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2 Mention the differences of AI problems and conventional software problems. Explain briefly about ill-defined specification. 10M

OR

3 Describe the steps involved in building the prototype according to Floyd. 10M

4 What is called “the question of hacking”? Describe about code-and-fix model. 10M

OR

5 Explain all the conventional paradigms of software development. 10M

6 Explain the DRACO approach of software reusability? Briefly describe about Potts theory of design knowledge. 10M

OR

7 Given that there are some not unreasonable reasons why we might want self-adaptive software systems, what does this new need entail. Explain this view point clearly. 10M

8 How expert systems are build and engineered explain it in detail? 10M

OR

9 Explain in detail about the lessons of expert systems for engineering of AI software. 10M

10 Explain in detail about Barstow and Shrobe tripartite classification. 10M

OR

11 What is meant by over engineering software? Explain different approaches undertaking the process of over engineering software. 10M

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Code: 20A30502a

R20

B.Tech III Year I Semester (R20) Regular & Supplementary Examinations January 2024

SOFTWARE ENGINEERING FOR AI

(Artificial Intelligence & Data Science)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Differentiate between building and software.	2M
	(b)	Define software power.	2M
	(c)	What is malleable software?	2M
	(d)	What is hacking?	2M
	(e)	What is reverse engineering?	2M
	(f)	What is step-wise abstraction?	2M
	(g)	Differentiate between AI and expert systems.	2M
	(h)	Explain the success story of expert systems.	2M
	(i)	What is stupid assistance?	2M
	(j)	What is self-reflective software?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	Explain about SAV methodology in detail.	10M
	OR	
3	Explain about software systems in new types of domains.	10M
4	Explain about various conventional paradigms.	10M
	OR	
5	Explain about the RUDE cycle in detail.	10M
6	Explain about self adaptive software in detail.	10M
	OR	
7	Discuss about the threat of increased software problems in detail.	10M
8	Explain about expert systems in detail.	10M
	OR	
9	Discuss the lessons of expert systems for engineering AI software.	10M
10	Explain about the engineering tool box in detail.	10M
	OR	
11	Explain about reduction of effective complexity in detail.	10M

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