KUMARAGURU college of technology
character is life

Register Number:……

M.E. DEGREE EXAMINATIONS: DEC 2015

(Regulation 2014)

Third Semester.

COMPUTER SCIENCE AND ENGINEERING

P14CSTE51: Agent based systems

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Match the following layers of Stanley robot with their components/functions: CO1 [K_2]

List I	List II
A. Sensor interface layer	i. Provides clock and file store
B. Perception Layer	ii. Robot steering
C. Planning and control layer	iii. Does translation of time-stamped data into internal models
D. Global Services layer	iv. Global positioning system

	A	B	C	D
a)	2	1	3	4
b)	3	4	2	1
c)	2	3	4	1
d)	4	3	2	1

2. _____ and ____ are the two main components of Concurrent MetateM. CO1 [K_1]

a) an interface and computational engine
b) an interface and a knowledge base
c) a keyboard and CPU
d) a compiler and inference engine

3. _____ is an example for horizontally layered agent architecture. CO2 [K_1]

a) InterRAp
b) PENGI
c) Touring Machines
d) Subsumption architecture

4. The _____ axiom states that agents that make the same contribution should get the same pay-off. CO3 [K_1]

a) dummy player b) additivity

c) pay-off evaluator d) symmetry

5. Which of the following are examples of Web-based agents? CO3 [K_1]

i. Tour guide

ii. FAQ-finder

iii. ARCHON

a) ii and iii b) i, ii and iii

c) i and ii d) i and iii

6. _____ auction is an example of open-cry descending auction. CO4 [K_1]

a) English b) Dutch

c) Vickrey d) First-price sealed bid

7. The _____ method of the Agent class allows retrieval of the local agent identifier. CO5 [K_1]

a) getID() b) getAID()

c) retrieveID() d) retrieveAID()

8. Assertion (A):The logical mode of argumentation occurs when appeals are made to feelings and attitudes. CO4 [K_1]

Reason (R): The logical mode resembles mathematical proof.

a) Both A and R are individually true and R is the correct explanation of A b) Both A and R are individually true but R is not the correct explanation of A

c) A is true but R is false d) A is false but R is true

9. _____ contains only the pre-compiled JADE Java archive (jar) files in a ready to use state. CO5 [K_1]

a) jadeBin.zip b) jadeSrc.zip

c) jadeDoc.zip d) jadeExamples.zip

10. In CDPS, the stages of problem solving are sequenced in what order? CO2 [K_1]

i. Answer synthesis
ii. Problem decomposition
iii. Subproblem solution

a) i, iii and ii b) ii , iii and i

c) ii, i and iii d) iii, i and ii

PART B (10 x 2 = 20 Marks)

11. Compare agent with expert system. CO1 [K_2]

12. Outline the features of a practical reasoning agent CO1 [K_2]

13. Distinguish between Dictatorship and Condercet winner condition. CO3 [K_2]

14.	Define social simulation. State any two of its benefits.	CO3	[K_1]
15.	What are the uses of cfp and confirm performatives in FIPA.	CO2	[K_1]
16.	State the principles of an online auction.	CO2	[K_1]
17.	Compare O-contract with M-contract.	CO4	[K_1]
18.	State the four main components of a negotiation setting and their functions.	CO4	[K_1]
19.	Develop a class to demonstrate the use of generic behavior.	CO5	[K_2]
20.	State the use of IMTP. How is it different from HTTP?	CO5	[K_2]

PART C (10 x 5 = 50 Marks)

21.	How are agents used as theorem provers?	CO1	[K_2]
22.	How does a Procedural Reasoning System work? Explain using diagram.	CO1	[K_2]
23.	How is a weighted voting game designed? Explain.	CO3	[K_2]
24.	Using diagram, relate the use of agents for distributed sensing.	CO3	[K_2]
25.	Using ContractNet, explain how task sharing and result sharing occurs in a CDPS system.	CO2	[K_2]
26.	Describe the features of any one communication language that is useful for agent interaction.	CO2	[K_2]
27.	What is preferred extension? How is it used in abstract argumentation?	CO4	[K_2]
28.	Explain how plurality is used as voting procedure while making group decisions.	CO4	[K_2]
29.	Compare the uses of JADE sniffer agent and dummy agent.	CO5	[K_2]
30.	Enumerate the features of JADE architecture using suitable diagram.	CO5	[K_3]

PART D (2 x 10 = 20 Marks)

31.	Distinguish between reactive and hybrid agents. Using the Steele's Mars explorer example, explain how reactive agents work.	CO1	[K_2]
32.	Develop a class for Computer purchase agent JADE program. Explain how this can be initialized and terminated.	CO5	[K_2]

****