| r |               | -  |
|---|---------------|----|
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## No. of Printed Pages: 2

SARDAR PATEL UNIVERSITY
SYBCA Examination October / November - 2018

|       |                        | US03EBC           | A02 : Artificial Intelligent           |                            |          |
|-------|------------------------|-------------------|--|----------------------------|----------|
| Date: | 02/11/2018, Friday     | ·//T              | ime: 02:00 to 04:00 PM                 | Total Mark                 | s : 70   |
| Q.1   | l Multiple choice qu   | estions.          |  |                            |          |
| 1     |                        |                   | 100,000,00                             |                            | [10]     |
|       | a. Mundane task        |                   | ormal tack                             |                            |          |
|       | c. Expert task         |                   | one of these                           |                            |          |
|       |                        |                   | ni search,                             | 9. What is bidirection     |          |
| 2.    | esparchers.            | is an interactive | e program was built, that ca           | rries on a dialogue in     |          |
|       | English on any topi    | ic and acted as   | a psychotherapist asking qu            | uestions to patients.      |          |
|       | a. DENDRAL             | b. B/             | ACKGAMMON                              | A STANFORM STANFORM SELECT |          |
|       | c. MYCIN               | d. EL             | LIZA                                   |                            | (A)E.D   |
| 3.    | Informing facts for    | nt hateler aklei  |  |                            |          |
| , J.  | a. Reasoning           | existing data is  | s also known as                        |                            |          |
|       | a. Neasoning           | b. Retrieving     | g c. Learning                          | d. Acquisition             |          |
| 4.    | in cybernetics in      | each rule co      | ntains two confidence estir            | Write a note on Allend     |          |
|       | a. MYCIN               |                   | intains two confidence estir<br>ENDRAL | nates.                     |          |
|       | c. R1 '                |                   | ROSPECTOR                              |                            |          |
|       |                        |                   | Explain.                               |                            | (A)4.O   |
| [85.  |                        | use symbolic re   | presentations for knowled              | Write a note on lonowing   |          |
|       | a. Expert system       |                   |  |                            |          |
|       | c. Inference engine    | d. Kn             | pert shell<br>owledge base             |                            | (A)A.(A) |
|       |                        |                   | ? Write a note on Experi si            | What is an Expert shell    |          |
| 6.    | Predicate logic is als | so known as       |  |                            |          |
|       | a. Predicate calculu   |                   | b. First-order predicate le            | Write a note on medic      | CD       |
|       | c. First-order predic  | ate calculus      | d. All of the above                    |                            |          |
| [01]  |                        |                   |  |                            |          |
| 7.    |                        |                   | simultaneous searches.                 | Write a note on Robot      |          |
|       | a. Breadth-first sear  |                   | pth-first search                       |                            |          |
|       | c. Bidirectional sear  | chd. Interactive  | e deepening depth-first sea            | rch                        | 1        |
| 8.    | An assembly line is    | overele of        | ogic                                   | Write a note on Fuzzy      | Q.6(A)   |
| [2]   | a. Manipulator         | b. Mobile         | type of robot                          | S OSTO TO STOR BEST WIN    | (a)a,0   |
|       | a. Manipulator         | p. Mobile         | c. Hybrid                              | d. All of these            |          |
| 9.    | i                      | nvolves interpre  | eting sights, sounds, smells,          | and touch                  |          |
|       | a. Logic               | b. Vision         | c. Perception                          | d. Planning                |          |
|       |                        | M                 | 3. · Grooption                         | a. Hammig                  |          |
| 10.   | Α                      | can be regarde    | ed as a label applied to a lin         | guistic concent which      |          |
|       | has no precise boun    | dary              |  | O Comopt wind!             |          |
|       | a. Fuzzy Logic         | b. Fuzzy set      | c. Crisp set                           | d. None of these           |          |
|       |                        | A ul              |  | 4.00                       | - 2      |

| Q.2    | Write short answer of any ten  | [20]  |
|--------|--|-------|
|        | 1. List any two definitions of AI.   |       |
|        | 2. State the Physical symbol system definition.  |       |
|        | 3. Write a note on Neuroscience field related to Al.   | 19160 |
| 07.13  | 4. Explain the network representation scheme.  |       |
|        | 5. Explain MYCIN's representation and using of domain knowledge.   | .0    |
|        | 6. What is an Inference engine?  |       |
|        | 7. State any 2 problems with FOPC.   |       |
|        | 8. What is Breadth-first search.   |       |
|        | 9. What is bidirectional search.   |       |
|        | 10. State any 2 reasons why game playing was appealing for AI researchers.   |       |
|        | 11. State any two problems with Robots.  |       |
|        | 12. What is Fuzzy sets   |       |
|        |  | e     |
| Q.3(A) | What is Al? Explain in Brief.  | [4]   |
| Q.3(B) | Write a note on AI and Economics & psychology fields related to AI.  | [6]   |
|        | OR OR  | 101   |
| Q.3(A) | Write a note on Al Problem.  | [4]   |
| Q.3(B) | Write a note on AI and computer engineering & control theory and cybernetics   | [6]   |
|        | fields related to Al   | լսյ   |
|        |  |       |
| Q.4(A) | What is Expert system? Explain.  | [5]   |
| Q.4(B) | Write a note on knowledge representation.  | [5]   |
|        | esseymant sepresentations or thousand  | [၁]   |
| Q.4(A) | Write a note on representing and using hearts of   | [5]   |
| Q.4(B) | What is an Expert shell? Write a note on Expert shell.   |       |
|        | The state of the s | [5]   |
| Q.5    | Write a note on predicate logic  | [10]  |
|        | Write a note on predicate logic.  OR   | [10]  |
| Q.5    | Explain different kind of search strategies.   | -[40] |
| 4,5    | amplant affect that of search strategies.  | [10]  |
| Q.6(A) | Write a note on Robotics.  | Te1   |
| Q.6(B) | d. Dieder in St. Deer Ed. O. Deptin-tires search   | [5]   |
| 4.0(5) | OR'  | [5]   |
| Q.6(A) | Write a note on Furnillaria  | res   |
| Q.6(B) | Write a note on crisp sets   | [5]   |
| 4.0(0) | a. Mampulator b Mobile c. Hybrid d. All of these   | [5]   |
|        | ~ × ~  |       |
|        | involves in impreting sights, sounds, smalls, and touch.   |       |
|        | a. Logis. d. Percept in digeneral d. Percept in d. Percept in  |       |