**Marking Scheme- CLASS X AI PREBOARD**

**SECTION A – Objective Type (24 Marks)**

**Each question = 1 mark.**

| Q No. | Answer | Marks |
|---|---|---|
| 1 (i) | Feedback | 1 |
| 1 (ii) | Stress Management | 1 |
| 1 (iii) | Trojan Horse | 1 |
| 1 (iv) | Tracking | 1 |
| 1 (v) | Entrepreneurship | 1 |
| 1 (vi) | Ecological Imbalance | 1 |
| 2 (i) | Utilitarianism | 1 |
| 2 (ii) | Sentence Segmentation | 1 |
| 2 (iii) | Computer Vision | 1 |
| 2 (iv) | Accuracy | 1 |
| 2 (v) | NLP | 1 |
| 2 (vi) | Deep Learning | 1 |
| 3 (i) | Voice assistant (AI application) | 1 |
| 3 (ii) | Surveys & Interviews | 1 |
| 3 (iii) | All of the above | 1 |
| 3 (iv) | True Positive | 1 |
| 3 (v) | Recall | 1 |
| 3 (vi) | Classification & Regression | 1 |
| 4 (i) | Ability of systems to learn patterns from data | 1 |
| 4 (ii) | Detecting tumours from medical scans | 1 |
| 4 (iii) | Script-bot | 1 |

| Q No. | Answer | Marks |
|---|---|---|
| 4 (iv) | Tokenisation | 1 |
| 4 (v) | Check accuracy and performance | 1 |
| 4 (vi) | Computer Vision | 1 |
| 5 (i) | ML | 1 |
| 5 (ii) | Confusion Matrix | 1 |
| 5 (iii) | Automatic Summarisation | 1 |
| 5 (iv) | Evaluation | 1 |
| 5 (v) | Smallest unit of image | 1 |
| 5 (vi) | Spam Filter | 1 |

**SECTION B – Subjective Type (26 Marks)**

**Employability Skills (6 Marks, Q 6–10)**

Each = 2 marks.

| Q No. | Expected Answer | Marks |
|---|---|---|
| 6 | Any two best communication practices – e.g. active listening, clarity of message | 2 |
| 7 | Any four stress-management activities – meditation, exercise, hobbies, time management | 2 |
| 8 | Trojan Horse | 2 |
| 9 | Any four entrepreneur qualities – creativity, risk-taking, leadership, initiative | 2 |
| 10 | Any two human activities causing environmental damage – deforestation, pollution | 2 |

**AI Questions (8 Marks, Q 11–16)**

Each = 2 marks.

| Q No. | Expected Answer | Marks |
|---|---|---|
| 11 | Principle violated – Justice (because AI treats patients unequally) | 2 |
| 12 | **Document vectors:**<br>S1 [1,1,1,1,1,1,1,0,0,0,0];<br>S2 [0,1,0,1,0,0,0,1,1,1,1] | 2 |
| 13 | Uses Neural Network to analyse camera inputs and decide actions (stop/move) | 2 |
| 14 | Domain – Natural Language Processing (NLP) | 2 |
| 15 | Pixel = smallest unit of image; higher resolution = clearer image | 2 |
| 16 | Recall – important for rainfall prediction (to avoid missing rain events) | 2 |

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**Long Answer Questions (12 Marks, Q 17–21)**

Each = 4 marks.

| Q No. | Key Points | Marks |
|---|---|---|
| 17 | (i) Bioethics – best for healthcare (1)<br>(ii) Value-based focus on morality vs Sector-based on industry (2)<br>(iii) Utility example – AI allocating resources for maximum benefit (1) | 4=(1+2+1) |
| 18 | 4W Canvas – Who, What, When, Why of Fraud Detection project<br>(1 mark each point) | 4 |
| 19 | Techniques – Stemming & Lemmatization Differences (2) Examples (2) | 4 |
| 20 | (i) Classification<br>(ii) Regression<br>(iii) Supervised Learning<br>(iv) Difference – labels vs continuous values | 1+1+1+1 |

| Q No. | Key Points | | Marks |
|---|---|---|---|
| 21 | (i) | Confusion Matrix (1) | 4 |
| | (ii) | Accuracy = (90+180)/300 = 0.9<br>Precision = 90/110 = 0.82<br>Recall = 90/100 = 0.9<br>F1 = 0.86 (2) | |
| | (iii) | Suitable for screening (1) | |