Marking Scheme
Strictly Confidential
(For Internal and Restricted use only)
Senior Secondary School Certificate Examination, 2025
SUBJECT NAME: ARTIFICIAL INTELLIGENCE (SUB CODE 843) (Q.P. CODE 367)

General Instructions: -

1	You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully.
2	**"Evaluation policy is a confidential policy as it is related to the confidentiality of the examinations conducted, Evaluation done and several other aspects. Its leakage to public in any manner could lead to derailment of the examination system and affect the life and future of millions of candidates. Sharing this policy/document to anyone, publishing in any magazine and printing in Newspaper/Website, etc. may invite action under various rules of the Board and IPC."**
3	Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. **However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and due marks be awarded to them. In class-XII, while evaluating two competency-based questions, please try to understand given answer and even if reply is not from marking scheme but correct competency is enumerated by the candidate, due marks should be awarded.**
4	The Marking Scheme carries only suggested value points for the answers. These are in the nature of Guidelines only and do not constitute the complete answer. The students can have their own expression and if the expression is correct, the due marks should be awarded accordingly.
5	The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. If there is any variation, the same should be zero after deliberation and discussion. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.
6	Evaluators will mark(√) wherever answer is correct. For wrong answer CROSS 'X' be marked. Evaluators will not put right (✓) while evaluating which gives an impression that answer is correct and no marks are awarded. **This is most common mistake which evaluators are committing.**
7	If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totaled up and written in the left-hand margin and encircled. This may be followed strictly.
8	If a question does not have any parts, marks must be awarded in the left-hand margin and encircled. This may also be followed strictly.

9	If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out with a note **"Extra Question"**.
10	No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
11	A full scale of marks 0 to 50 marks as given in Question Paper has to be used. Please do not hesitate to award full marks if the answer deserves it.
12	Every examiner has to necessarily do evaluation work for full working hours i.e., 8 hours every day and evaluate 20 answer books per day in main subjects and 25 answer books per day in other subjects (Details are given in Spot Guidelines).This is in view of the reduced syllabus and number of questions in question paper.
13	Ensure that you do not make the following common types of errors committed by the Examiner in the past:- ● Leaving answer or part thereof unassessed in an answer book. ● Giving more marks for an answer than assigned to it. ● Wrong totaling of marks awarded on an answer. ● Wrong transfer of marks from the inside pages of the answer book to the title page. ● Wrong question wise totaling on the title page. ● Wrong totaling of marks of the two columns on the title page. ● Wrong grand total. ● Marks in words and figures not tallying/not same. ● Wrong transfer of marks from the answer book to online award list. ● Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.) ● Half or a part of answer marked correct and the rest as wrong, but no marks awarded.
14	While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as cross (X) and awarded zero (0)Marks.
15	Any unassessed portion, non-carrying over of marks to the title page, or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.
16	The Examiners should acquaint themselves with the guidelines given in the "**Guidelines for Spot Evaluation**" before starting the actual evaluation.
17	Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words.
18	The candidates are entitled to obtain photocopy of the Answer Book on request on payment of the prescribed processing fee. All Examiners/Additional Head Examiners/Head Examiners are once again reminded that they must ensure that evaluation is carried out strictly as per value points for each answer as given in the Marking Scheme.

General Instructions :

(i) *Please read the instructions carefully.*

(ii) *This question paper consists of **21** questions in **two** Sections : **Section A** and **Section B**.*

(iii) ***Section A** has Objective type questions whereas **Section B** contains Subjective type questions.*

(iv) *Out of the given (5 + 16) = 21 questions, a candidate has to answer (5 + 10) = 15 questions in the allotted (maximum) time of 2 hours.*

(v) *All questions of a particular section must be attempted in the correct order.*

(vi) ***Section A** : Objective Type Questions (24 marks) :*

- *(a)* *This section has **5** questions.*
- *(b)* *There is no negative marking.*
- *(c)* *Do as per the instructions given.*
- *(d)* *Marks allotted are mentioned against each question/part.*

(vii) ***Section B** : Subjective Type Questions (26 marks) :*

- *(a)* *This section has **16** questions.*
- *(b)* *A candidate has to do **10** questions.*
- *(c)* *Do as per the instructions given.*
- *(d)* *Marks allotted are mentioned against each question/part.*

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MARKING SCHEME
ARTIFICIAL INTELLIGENCE

SECTION A

OBJECTIVE-TYPE QUESTIONS

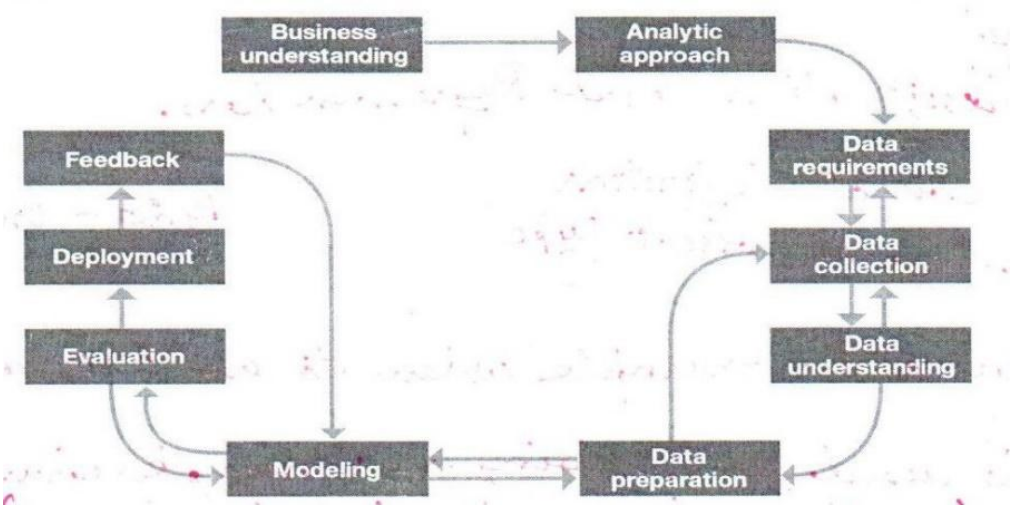
Q. No.	Answer	Marks
Q.1	Answer any **4** out of the given **6** questions on Employability Skills (4×1=4)	
i.	(B) Feedback	1
ii.	(A) Intrinsic	1
iii.	(B) Paranoid	1
iv.	By adding a password to the file.	1
v.	(A) Availability of skilled labour	1
vi	(C) Oxygen	1
Q.2	Answer any **5** out of the given **6** questions (5×1=5)	
i.	(A) Both Statement I and Statement II are correct	1
ii.	(A) Data, visuals, and narrative	1
iii.	(C) It helps to determine the accuracy of the AI model	1
iv.	(B) Data visualization	1
v.	(C) Problem definition	1
vi.	(B) It is an iterative process	1
Q. 3	Answer any **5** out of the given **6** questions (5×1=5)	
i.	(B) Data cleaning	1
ii.	(B) It supplies context, insight, and interpretation to make data meaningful	1

iii.	(A)	If the data collected is bad, the AI model will not be effective	1
iv.	(B)	It makes information more memorable and easier to retain	1
v.	(B)	Solution-based approach to problem-solving	1
vi.	(C)	Cleaning and preparing the data	1
Q.4	Answer any **5** out of the given **6** questions (5×1=5)		
i.	(D)	Requirement Analysis	1
ii.	(B)	Data storytelling	1
iii.	(C)	180	1
iv.	(C)	Data	1
v.	(D)	Alexa AI	1
vi.	(C)	(A) is true but (R) is false	1
Q.5	Answer any **5** out of the given **6** questions (5×1=5)		
i.	(C)	a – (iii), b – (i), c – (ii)	1
ii.		False	1
iii.	(B)	Apple Siri	1
iv.	(A)	Empathise, Test	1
v.		True	1
vi	(C)	Descriptive	1

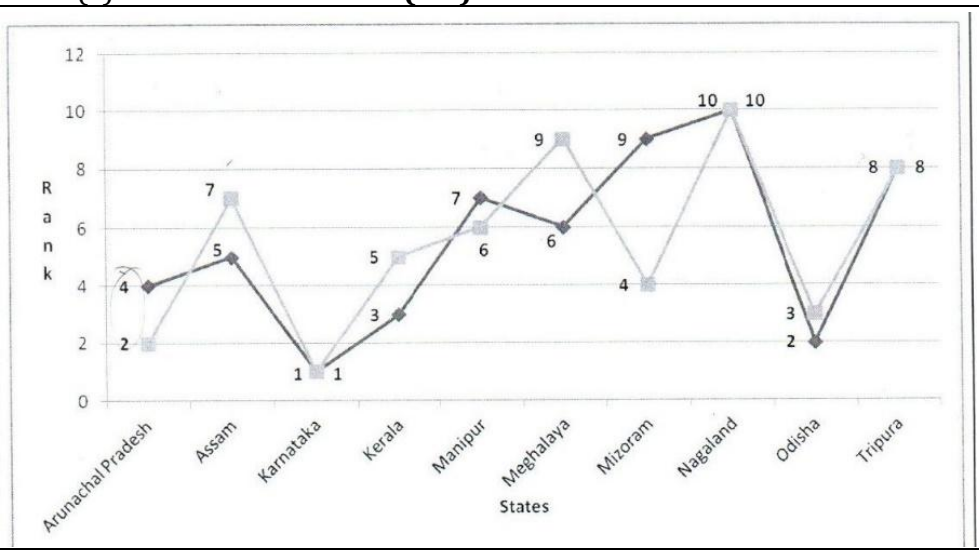
SECTION B : SUBJECTIVE-TYPE QUESTIONS

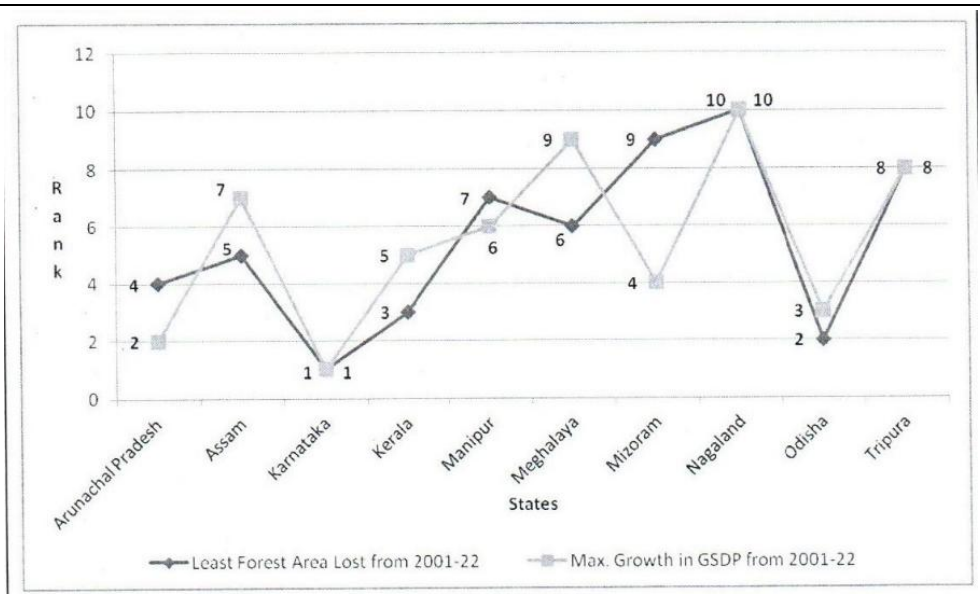
Answer any **3** out of the given **5** questions on Employability Skills in 20-30 words. (3×2=6 marks)		
Q. 6.	The stages of active listening are as follows. 1. Understanding 2. Remembering 3. Evaluation 4. Responding ($\frac{1}{2}$ mark for specifying each correct stage)	2
Q.7.	Personality traits are defined as relatively lasting patterns of thoughts, feelings, and behaviours that distinguish individuals from one another. Parameters (Any two) – Openness, consciousness, Extraversion, Agreeableness, Neuroticism (1 mark for correct definition, $\frac{1}{2}$ mark for each parameter)	2
Q.8.	1. Click File $\rightarrow$ Print. Print dialog box is displayed 2. Select number of copies 3. Select All/slides to be printed 4. Click ok. ($\frac{1}{2}$ mark for each correct step)	2
Q.9.	Qualities of a successful entrepreneur are : • Initiative • Willingness to take risks • Ability to learn from experience : • Motivation • Self-confidence • Hard work	2

	• Decision-making ability ($\frac{1}{2}$ mark for each correct quality)<Write any four>	
Q.10	(Any two) i. Reusing scrap material ii. Ensuring quality control iii. Waste exchange iv. Managing E-waste v. Use of eco-friendly material (1 mark for each correct way)	2
Answer any **4** out of the given **6** questions in 20-30 words (4×2=8 marks)		
Q.11.	In cross-validation, we run our modeling process on different subsets of the data to get multiple measures of model quality (2 marks for correct procedure)	2
Q.12	The train-test split is a technique for evaluating the performance of a machine learning algorithm. It can be used for classification or regression problems and can be used for any supervised learning algorithm. (1 mark for correct definition, $\frac{1}{2}$ mark for each correct problem)	2
Q.13.	(Any two) • Its attribute to make information more compelling • Its ability to present a window in order to take a peek in the past. • To draw lessons • To reimagine the future by affecting necessary changes. • It shapes, empowers, and connects people. (1 mark for each correct factor)	2

Q.14.	 (2 marks for drawing the correct diagram) (Deduct ½ marks -1– 2 for incorrect order or incorrect name)	2
Q.15.	These components are defined as follows : (Any two) a. Level : The average value in the series. b. Trend : The increasing or decreasing value in the series. c. Seasonality : The repeating short-term cycle in the series. d. Noise : The random variation in the series. ($\frac{1}{2}$ mark for each correct definition)	2
Q.16.	(Any two for each part) (i) Python, R, Scala (ii) Auto AI, Hyperparameter Optimization, Visual Modelling ($\frac{1}{2}$ mark for each correct example)	2
Answer any **3** out of the given **5** questions in 50-80 words (4×3=12 marks)		
Q.17.	Some easy steps that can assist in finding compelling stories in the data sets are as follows : Step 1 : Get the data and organise it. Step 2 : Visualize the data. Step 3 : Examine data relationships. Step 4 : Create a simple narrative embedded with conflict (1 mark for each correct step)	4

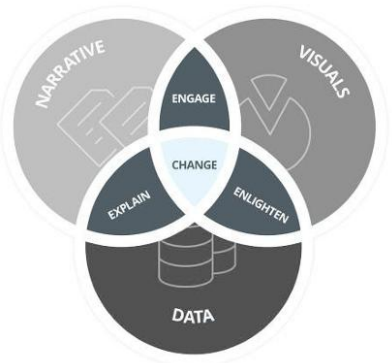
Q.18.	(a)	A loss function is a measure of how good a prediction model does in terms of being able to predict the expected outcome. Two categories: Classification and Regression Loss. (1 mark for correct definition $\frac{1}{2}$ mark for each correct type)	1 1
	(b)	MSE is used when doing regression: (i) believing that your target, conditioned on the input, is normally distributed (ii) wants large errors(Outliers) to be significantly more penalized than small ones. Example : when you want to predict future house price. The price is a continuous value, and so we want to do regression. Hence MSE can be used as loss function. (1 mark for correct explanation) (1 mark for correct example) (Any other correct example may be marked)	2
Q.19.	(a)	Scoping (Requirements analysis) The first fundamental step when starting an AI initiative is scoping and selecting the relevant use case(s) that the AI model will be built to address. This is arguably the most important part of your AI project. 1. This stage involves the planning and motivational aspects of your project. It is important to start strong if you want your artificial intelligence project to be successful. 2. In this phase, it's crucial to precisely define the strategic business objectives and desired outcomes of the project, select align all the different stakeholders' expectations, anticipate the key resources and steps, and define the success metrics. 3. Selecting the AI or machine learning use cases and being able to evaluate the return on investment (ROI) is critical to the success of any data project. (Any two valid points will be rewarded) **(1 mark for each point)**	2
	(b)	Design of Build phase, which can take from a few days to multiple months, depending on the nature of the project. The Design phase is essentially an iterative process comprising all the steps relevant to building the AI or machine learning model : data	2

	acquisition, exploration, preparation, cleaning, feature engineering, testing and running a set of models to try to predict behaviours or discover insights in the data (1 mark for each point)	
Q.20.	Selecting the right analytic approach depends on the question being asked. Once the problem to be addressed is defined, the appropriate analytic approach for the problem is selected in the context of the business requirements. This is the second stage of the data science methodology. • If the question is to determine **probabilities** of **an action**, then a **predictive model** might be used. • If the question is to **show relationships**, a **descriptive approach** may be required. • **Statistical analysis** applies to problems that require counts: if the question requires a yes/no answer then a classification approach to predicting a response would be suitable. (1 mark each for explaining each category of questions) (1 mark for a suitable example) Suggested example can be like this: (a) Sale/launch of a product (b) Stock Prices (c) Cricket Match Score **(etc)**	4
Q.21		2+2



(a) Good stories don't just emerge from data itself; they need to be unravelled from data relationships. Closer scrutiny helps uncover how each data point relates with others.

(2 Marks for the above answer also consider if the venn diagram is given/explain)



(b) Option 2 is a better data story as it is explaining what is depicted in the graph.

(1 mark for correct option and 1 mark for correct reason)