

This question paper contains 2 printed pages]

HA—24—2026

FACULTY OF HUMANITIES

B.A. (NEP) (Third Semester) EXAMINATION

APRIL/MAY, 2026

COMPULSORY ENGLISH

HENGAC-1201

(Comprehension and Grammar-I)

(Tuesday, 7-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :— (i) All questions carry equal marks.

(ii) Question No. 1 is compulsory.

(iii) Solve any *two* questions from Q. 2 to Q. 5.

1. Attempt the following short notes :

10

(a) Ratnam

(b) Teacher Samuel

(c) Central Idea in The Road Not Taken

(d) Helping Verbs

P.T.O.

2. Discuss Mr. Ratnam's Trick to test the honesty of his new salesman in your own words. 10
3. 'Background Casually' is a close self-analysis of the person who feels himself in an alien world'. Discuss. 10
4. Describe Swami Vivekananda's boat journey in your own words. 10
5. Discuss simple present, simple past and simple future tense with suitable examples. 10

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HA—03—2026

FACULTY OF ARTS

B.A. (NEP) (Third Semester) EXAMINATION

APRIL/MAY, 2026

MARATHI (MIL)

Paper III (AECMAR-1201)

(मराठी साहित्य)

(Saturday, 4-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :— (i) प्रश्न पहिला अनिवार्य आहे.

(ii) प्रश्न क्रमांक 2 ते प्रश्न क्र. 5 यापैकी कोणतेही दोन प्रश्न सोडवा.

(iii) सर्व प्रश्नांना समान गुण आहेत.

1. पुढील टिपा थोडक्यात लिहा :

10

(i) 'नवा शिपाई' मधील समतेचा विचार

(ii) 'मेखमारो' मधील रखमाजी

(iii) यशोधरा

(iv) लोकशाहीचे भवितव्य.

P.T.O.

2. प्रज्ञा दया पवार यांनी सावित्रीबाईंच्या विचार आणि कार्याचे महत्व कशाप्रकारे सांगितले आहे, ते लिहा. 10
3. 'मरीआईचा गाडा' ही कथा वैज्ञानिक दृष्टिकोन रुजविणारी आहे' स्पष्ट करा. 10
4. म. जोतीराव फुले यांच्या बहुआयामी व्यक्तिमत्वाचे भावचित्र 'मनातले जोतीराव' या लेखाधारे विशद करा. 10
5. शहीद भगतसिंहांचे वडिलांना लिहिलेल्या पत्रातील विचार थोडक्यात लिहा. 10

This question paper contains 2 printed pages]

NEPJX—301—2026

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (Second Year) (Third Semester) EXAMINATION

APRIL/MAY, 2026

(NEP-2020)

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Paper—SAMLCT-1201

(Data Analytics with Python)

(Thursday, 9-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :— (i) Question paper consists of 5 questions, each of 10 marks.

(ii) Question No. 1 is compulsory.

(iii) Solve any *two* from Q. No. 2 to Q. No. 5.

1. Attempt the following (2.5 marks each) :

10

(a) Define data analytics. Explain its need and application.

(b) What is Exception Handling ? Explain with example.

(c) Explain Pandas Series and Data Frame with example.

(d) What is Data Visualization ? Mention any *three* libraries used for visualization.

P.T.O.

2. Attempt the following questions : 10
- (a) Explain Spyder, Jupyter Notebook and Google Colab. When should we use them ?
 - (b) Write a Python program to create a class Student with attributes name and marks. Add a method to calculate grade and display the result.
3. Attempt the following questions : 10
- (a) Explain NumPy array creation and array operation methods with examples.
 - (b) Write a note on Matplotlib : Plotting Line, Bar, Histogram with example.
4. Attempt the following questions : 10
- (a) Explain Plotly and Dashboard with plotly with example.
 - (b) Write an example of Data Aggregation, Grouping, and Sorting.
5. Attempt the following questions : 10
- (a) Describe Data Collection, Wrangling, and Pre-processing.
 - (b) Write a program to perform simple linear regression (study hours vs marks) using scikit-learn and plot the regression line.

This question paper contains **2** printed pages]

NEPJX—302—2026

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (Second Year) (Third Semester) EXAMINATION

APRIL/MAY, 2026

(NEP-2020)

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Paper—SAMLCT-1202

(Analyzing Data with Power BI)

(Saturday, 11-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :- (i) Question No. 1 is compulsory.

(ii) From Q. No. 2 to Q. No. 5 solve any 2 questions.

(iii) Figures to the right indicate full marks.

(iv) Assume suitable data, if necessary.

(v) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt the following (**2.5** marks each) :

10

(a) What is Power BI and why is it important ?

(b) What is a Data Model in Power BI ?

(c) What is DIVIDE DAX function ?

(d) Explain Table and Matrix visuals.

P.T.O.

2. Attempt the following (5 marks each) : 10
- (a) Explain relationship in Data Modeling with an example.
 - (b) Write a short note on Filters and Drill-through in Power BI.
3. Attempt the following (5 marks each) : 10
- (a) What is Power BI Service ?
 - (b) Explain Dashboard in Power BI.
4. Attempt the following (5 marks each) : 10
- (a) Explain Conditional Formatting in Power BI with an example.
 - (b) Explain calculated column in Power BI.
5. Attempt the following (5 marks each) : 10
- (a) Explain Time intelligence function in Power BI.
 - (b) What is Row-Level Security (RLS) ?

This question paper contains **3** printed pages]

NEPJX—303—2026

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (Second Year) (Third Semester) EXAMINATION

APRIL/MAY, 2026

(NEP Pattern)

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Paper—SAMLMT-1201

(Mathematics of AI and ML)

(Wednesday, 15-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

- N.B. :—*
- (i) Question No. **1** is compulsory.
 - (ii) From Q. No. **2** to Q. No. **5** solve any **2** questions.
 - (iii) Figures to the right indicate full marks.
 - (iv) Assume suitable data, if necessary.
 - (v) Use of any electronic media such as mobile phone, digital dairy and electronic calculator is not permitted.

1. Attempt the following (**2.5** marks each) : 10
- (a) Explain Power Set.
 - (b) Form the table for Connectives, Symbol and Name corresponding to logical connective.
 - (c) Define Domain, range and Co-domain with example.
 - (d) Explain Bipartite Graph with example.

P.T.O.

2. Attempt the following (5 marks each) : 10

(a) Explain set and its types.

(b) If $A = \{1, 4, 7, 10\}$, $B = \{2, 4, 6, 7, 11\}$, $C = \{3, 5, 8, 9, 12\}$ and $U = \{X / X \in N : 1 \leq X \leq 12\}$, then find :

(i) $A \cup B$

(ii) $B \cap C$

(iii) $A - B$

(iv) $(B \cap C)'$

(v) $A \cap (B \cup C)$.

3. Attempt the following (5 marks each) : 10

(a) Using truth tables examine whether each of the following statements is tautology, contradiction or contingency :

(i) $(P \wedge Q) \wedge (\sim P \vee \sim Q)$

(ii) $[(P \vee Q) \vee R] \leftrightarrow [P \vee (Q \vee R)]$

(iii) $[P \rightarrow (\sim Q \vee R)] \leftrightarrow \sim[P \rightarrow (Q \rightarrow R)]$.

(b) Write the truth tables for any five logical connectives.

4. Attempt the following (5 marks each) : 10

(a) Explain Function and its type.

(b) Let $A = \{1, 2, 3, 4\}$, $B = \{4, 5, 6\}$, $C = \{5, 6\}$, verify :

(i) $A \times (B \cap C) = (A \times B) \cap (A \times C)$

(ii) $A \times (B \cup C) = (A \times B) \cup (A \times C)$.

5. Attempt the following (5 marks each) : 10

(a) Explain Degree of Vertex.

(b) Write a note on walk, path and circuit.

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HA—16—2026

FACULTY OF HUMANITIES

B.A. (NEP) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

ENGLISH (Compl.)

(Comprehension and Grammar-II)

(Monday, 6-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :— (i) All questions carry equal marks.

(ii) Question No. 1 is compulsory.

(iii) Solve any *two* questions from Question Nos. 2 to 5.

1. Write short notes on :

10

(a) Character sketch of Ali

(b) The quarrel between Malasha and Akoulya

(c) Concept of equality in 'The Mountain and the Squirrel'.

(d) Uses of 'would'.

P.T.O.

2. Discuss the theme of loneliness and grief in the story 'Letter' by Dhumketu. 10
3. Justify the title 'Little Girls Wiser than Men'. 10
4. 'There will come soft Rains' describe the dangers of technology obsessed society. Discuss. 10
5. Explain with suitable examples the uses of modal auxiliaries 'can', 'could', 'may' and 'might'. 10

This question paper contains 2 printed pages]

HA—1004—2026

FACULTY OF ARTS/COMMERCE/SCIENCE

B.A./B.Com./B.Sc. (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

VALUE EDUCATION

VECEVS-1251

(Environmental Studies)

(Compulsory)

(Thursday, 2-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :- (i) All questions carry equal marks.

सर्व प्रश्नांना समान गुण आहेत.

(ii) Question No. 1 is compulsory.

प्रश्न क्रमांक 1 अनिवार्य आहे.

(iii) Solve any two questions from Q. No. 2 to Q. No. 5.

प्रश्न क्र. 2 ते प्रश्न क्र. 5 कोणतेही दोन प्रश्न सोडवा.

1. Write short notes on the following (2.5 marks each) :

10

खालील प्रश्नांवर थोडक्यात टिपा लिहा (प्रत्येकी 2.5 गुण) :

(a) Flood

पूर

(b) Soil erosion

जमिनीची धूप

P.T.O.

- (c) Food web
अन्नजाळे
- (d) Deforestation.
जंगलतोड.
2. Explain the renewable and non-renewable resources with suitable examples. 10
क्षयक्षम व अक्षयक्षम साधनसंपत्ती म्हणजे काय ? उदाहरणासह स्पष्ट करा.
3. Define environment. Discuss the need for public awareness in environmental protection. 10
पर्यावरणाची व्याख्या लिहा. पर्यावरणाच्या संरक्षणात जनजागृतीची गरज यावर चर्चा करा.
4. What is water pollution ? Describe the causes and effects of water pollution. 10
जल प्रदूषण म्हणजे काय ? जल प्रदूषणाची कारणे व परिणाम विशद करा.
5. Discuss in detail energy flow in ecosystem. 10
परिसंस्थेतील उर्जाप्रवाह याची सविस्तर चर्चा करा.

This question paper contains 2 printed pages]

HA—26—2026

FACULTY OF HUMANITIES

B.A./B.Com./B.Sc. (NEP) (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

HINDI (MIL)

Paper-IV—HHINMIL-1251

(गद्य विविधा भाग-2)

(Wednesday, 8-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :— (i) प्रश्न क्रमांक 1 अनिवार्य है।

(ii) प्रश्न क्रमांक 2 से 5 में से किन्हीं दो प्रश्नों के उत्तर लिखिए।

(iii) सभी प्रश्नों के अंक समान हैं।

1. टिप्पणियाँ लिखिए (प्रति टिप्पणी 2½ अंक) :

10

(अ) राकेश अचल का व्यक्तित्व कृतित्व

(ब) रेडियो नाटक विधा का परिचय

(क) 'पत्थरबाबू' कहानी का उद्देश्य

(ड) 'अठतल्ले से गिर गए खेत बाबु' कहानी का रतन

P.T.O.

निम्नलिखित में से किन्हीं दो (2) प्रश्नों के दीर्घोत्तरीय उत्तर लिखिए :

2. 'सिन्दबाद की अन्तिम यात्रा' की मूल संवेदना स्पष्ट कीजिए। 10
3. 'संस्कृति का स्वरूप' लेख का आशय प्रस्तुत कीजिए। 10
4. 'सूर्यास्त के पहले' रेडियो नाटक में मानवीय संवेदना को बताइए। 10
5. 'पत्थरबाज' कहानी में असलम का चरित्र-चित्रण कीजिए। 10

This question paper contains 2 printed pages]

HA—27—2026

FACULTY OF ARTS/COMMERCE/SCIENCE

B.A./B.Com./B.Sc. (NEP) (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

MARATHI (MIL)

(AECMAR-1251)

(मराठी भाषिक उपयोजन-IV)

(Wednesday, 8-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :- (i) पहिला प्रश्न अनिवार्य आहे.

(ii) प्रश्न क्रमांक 2 ते प्रश्न क्रमांक 5 पैकी कोणतेही दोन प्रश्न सोडवा.

(iii) सर्व प्रश्नांना समान गुण आहेत.

1. पुढील टिपा थोडक्यात लिहा :

10

(i) सूत्रसंचालनाचे स्वरूप

(ii) चरित्रात्मक मुलाखत

(iii) टिप्पणी लेखन—संकल्पना

(iv) रोजनिशी लेखनाची भाषा.

P.T.O.

2. प्रभावी सूत्रसंचालकाचे गुणविशेष सविस्तर लिहा. 10
3. मुलाखत म्हणजे काय ते सांगून मुलाखतीला सामोरे जाताना कोणती काळजी घ्यावी ते स्पष्ट करा. 10
4. टिप्पणी लेखनाचे महत्व विशद करा. 10
5. रोजनिशी लेखनाचे विशेष स्पष्ट करा. 10

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NEPJX—401—2026

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (AI & ML) (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

(NEP-2020)

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Paper—SAMLCT-1251

(Fundamentals of AI and ML)

(Friday, 10-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :— (i) Question paper consists of **5** questions, each of **10** marks.

(ii) Question No. **1** is compulsory.

(iii) Solve any *two* from Q. No. **2** to Q. No. **5**.

1. Attempt the following (**2.5** marks each) : 10

(a) Describe A* search.

(b) Explain K-Means.

(c) Explain First-order Logic.

(d) Explain forward chaining and backward chaining in AI.

2. Attempt the following questions : 10

(a) Explain Machine Learning Applications.

(b) Explain evolution of AI.

P.T.O.

3. Attempt the following questions : 10
- (a) Explain Ethical and Societal Impacts of AI.
 - (b) Explain types of AI.
4. Attempt the following questions : 10
- (a) Explain applications of AI.
 - (b) Explain depth-first search.
5. Attempt the following questions : 10
- (a) Explain tensorflow.
 - (b) Explain decision trees.

This question paper contains **2** printed pages]

NEPJX—402—2026

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (AI & ML) (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

(NEP-2020)

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Paper—SAMLCT-1252

(Data Structure and Algorithms)

(Monday, 13-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

N.B. :- (i) Question No. 1 is compulsory.

(ii) From Q. No. 2 to Q. No. 5 solve any 2 questions.

(iii) Figures to the right indicate full marks.

(iv) Assume suitable data, if necessary.

(v) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt the following (2.5 marks each) :

10

(i) Write Asymptotic notations.

(ii) Write doubly linked list.

(iii) Arithmetic expression.

(iv) Write graph.

P.T.O.

2. Solve the following (**5** marks each) : 10
- (a) Define data structure with its types.
 - (b) Explain data structure operations.
3. Solve the following (**5** marks each) : 10
- (a) Explain stack, memory representation of stack.
 - (b) Write an algorithm of insertion sort.
4. Solve the following (**5** marks each) : 10
- (a) Write stack operations.
 - (b) Write an algorithm of evaluation of postfix expression.
5. Solve the following (**5** marks each) : 10
- (a) Write binary tree and tree terminology.
 - (b) Write traversing of binary tree.

This question paper contains **2** printed pages]

NEPJX—403—2026

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (Second Year) (Fourth Semester) EXAMINATION

APRIL/MAY, 2026

(NEP-2020)

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Paper—SAMLMT-1251

(Software Engineering)

(Thursday, 16-4-2026)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—30

- N.B. :-*
- (i) Question No. 1 is compulsory.
 - (ii) From Q. No. 2 to Q. No. 5 solve any 2 questions.
 - (iii) Figures to the right indicate full marks.
 - (iv) Assume suitable data, if necessary.
 - (v) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt the following (**2.5** marks each) : 10
- (a) List the major phases of SDLC.
 - (b) What is abstraction and why is it important.
 - (c) What is unit testing ?
 - (d) Describe the components of a Gantt chart.

P.T.O.

2. Attempt the following (5 marks each) : 10
- (a) What are the types of software documentation ?
 - (b) Define Agile methodology. What are its key principles ?
3. Attempt the following (5 marks each) : 10
- (a) List and briefly explain the main activities in the requirement engineering process.
 - (b) Discuss the responsibilities of a software engineer during different SDLC phases.
4. Attempt the following (5 marks each) : 10
- (a) Explain the goal of integration testing with examples.
 - (b) Differentiate between system testing and acceptance testing.
5. Attempt the following (5 marks each) : 10
- (a) List *three* automation tools used in software testing.
 - (b) Describe the components of a Gantt chart.