AA—1002—2025

FACULTY OF ALL

B.A./B.Com./B.Sc. (First Year) (First Semester) EXAMINATION

APRIL/MAY, 2025

(NEP-2020 Pattern)

INDIAN KNOWLEDGE SYSTEM

Paper–IKS-1101

(Wednesday, 2-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours*   *Maximum Marks*—40

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

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

      (*iii*)   Solve any *three* of the remaining five questions (Q. Nos. **2** to **6**).

      (*iv*)   Figures to the right indicate full marks.

      (*i*)   **सर्व** प्रश्नांना समान गुण आहेत.

      (*ii*)   प्रश्न क्र. **1** अनिवार्य आहे.

      (*iii*)   उर्वरित **5** प्रश्नांपैकी कोणतेही **3** प्रश्न सोडवा (प्र. क्र. **2** ते **6**).

      (*iv*)   उजवीकडील अंक पूर्ण गुण दर्शवितात.

P.T.O.

1. Solve the following questions (2.5 marks each) : 10

   (a) What is the Indian Knowledge System ?

   (b) Describe in detail the nature of Buddhist philosophy, its four Noble Truths and the Eightfold Path.

   (c) What is the significance of city planning in ancient Indian architecture ?

   (d) What is the importance of the contributions of Sushruta Samhita and Vagbhata ?

   खालील प्रश्न सोडवा (प्रत्येकी 2.5 गुण) :

   (a) भारतीय ज्ञान प्रणाली म्हणजे काय ?

   (b) बौद्ध दर्शनाचे स्वरूप, त्याचे चार आर्यसत्ये आणि अष्टांगिक मार्ग यांचे सविस्तर वर्णन करा.

   (c) प्राचीन भारतीय स्थापत्यकलेतील शहर नियोजनाचे महत्त्व काय आहे ?

   (d) सुश्रुत संहिता आणि वाग्भट यांच्या योगदानाचे महत्त्व काय आहे ?

2. What is the significance of the Gurukula system, and how did it operate within the context of ancient Indian education ? 10

   गुरुकुल पद्धतीचे महत्त्व काय आहे आणि ती प्राचीन भारतीय शिक्षण पद्धतीत कशी कार्यरत होती ?

3. What is the concept of Nāstika systems ? Provide a detailed introduction to Jainism, including its nature, concepts and scriptures, as one of the Nāstika systems. 10

   नास्तिक प्रणाली म्हणजे काय ? जैन धर्म या नास्तिक प्रणालींचे स्वरूप, संकल्पना आणि साहित्याचा सविस्तर परिचय द्या.

4. What is the concept of Indian Economics ? 10

   भारतीय अर्थशास्त्राची संकल्पना काय आहे ?

5.   How was the metal industry in ancient India ?   10

      प्राचीन भारतातील धातू उद्योग कसा होता ?

6.   Solve the following questions (2.5 marks each) :   10

      (a)   What were the features of the ancient Indian education system ?

      (b)   What does 'Apoorva' mean, and what is its significance ?

      (c)   Provide a detailed description of the concept and tradition of ancient Indian music.

      (d)   How did the historical development of astronomy unfold in India ?

      खालील प्रश्न सोडवा (प्रत्येकी **2.5** गुण) :

      (a)   भारतीय प्राचीन शिक्षण पद्धतीची वैशिष्ट्ये कोणती होती ?

      (b)   अपूर्वा म्हणजे काय आणि त्याचे महत्त्व काय आहे ?

      (c)   प्राचीन भारतीय संगीताची संकल्पना आणि परंपरा याबद्दल सविस्तर वर्णन करा.

      (d)   भारतामध्ये खगोलशास्त्राचा ऐतिहासिक विकास कसा झाला ?

AA—01—2025

FACULTY OF HUMANITIES/SCIENCE AND TECHNOLOGY AND COMMERCE AND MANAGEMENT

B.A./B.Sc./B.Com. (First Year) (First Semester) EXAMINATION

APRIL/MAY, 2025

(NEP-2020)

ENGLISH (Comp.)

Paper–I(HENGAEC-1101)

(Developing Spoken Communication)

(Friday, 4-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

      (*ii*) Attempt any *three* questions from Q. Nos. **2** to **5**.

      (*iii*) Figures to the right indicate full marks.

1. Write short notes on :   10

    (*i*)   Types of communication

    (*ii*)   Imperative sentences

    (*iii*) Tips for proposing vote of thanks

    (*iv*) Telephonic conversation.

P.T.O.

2. Explain, how verbal communication differs from nonverbal communication. 10

3. Illustrate the usage of exclamations in English language by giving suitable examples. 10

4. Draft a Welcome Speech for the College Annual Function. 10

5. Ramesh calls up Rohan to convince him to go to college trip. Draft the conversation. 10

AA—09—2025

FACULTY OF HUMANITIES

B.A./B.Sc./B.Com. (First Year) (First Semester) EXAMINATION

APRIL/MAY, 2025

(NEP-2020)

HINDI (MIL)

Paper–I–HHINMIL-1101

(साहित्य कलश और व्यावहारिक हिंदी, भाग-1)

(Monday, 7-4-2025)   **Time : 10.00 a.m. to 12.00 Noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :—   (i)   **पहला** प्रश्न अनिवार्य है।

(ii)   प्रश्न क्रमांक **2** से **6** में से किन्हीं **तीन** प्रश्नों के उत्तर लिखिए।

(iii)   **सभी** प्रश्नों के समान अंक हैं।

1.   निम्नलिखित में से किन्हीं **दो** पर टिप्पणियाँ लिखिए :   10

(अ)   'ब्लॉग' की उपयोगिता

(ब)   दूरदर्शन के विज्ञापन की विशेषताएँ

(क)   'पंच परमेश्वर' कहानी का समझू साहू।

(ड)   'जो बीत गई सो बात गई' कविता का आशय।

P.T.O.

2. 'चीफ़ की दावत' कहानी की कथावस्तु लिखिए। 10

3. 'गीत फरोश' कविता की संवेदना को स्पष्ट कीजिए। 10

4. ब्लॉग के स्वरूप पर प्रकाश डालिए। 10

5. आकाशवाणी के विज्ञापन की विशेषताएँ लिखिए। 10

6. 'उर्फ सैम' कहानी की कथावस्तु लिखिए। 10

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

AA—10—2025

FACULTY OF HUMANITIES

B.A./B.Sc./B.Com. (First Year) (First Semester) EXAMINATION

APRIL/MAY, 2025

MARATHI (MIL)

Paper–AECMAR-1101

(गद्य, पद्य व उपयोजित मराठी-I)

(Monday, 7-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 *Hours*   *Maximum Marks*—40

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

       (*ii*)   **सर्व** प्रश्नांना समान गुण आहेत.

1.   टिपा लिहा (कोणत्याही **दोन**) :   10

    (अ)   'काळ्या तोंडाची' या कथेतील चंपी

    (ब)   'युगायुगाची गुलामी चाल' मधील स्त्री

    (क)   कार्यालयीन पत्रलेखनाचे घटक

    (ड)   इतिवृत्ताचे स्वरूप.

P.T.O.

(पुढील प्रश्न क्रमांक **2** ते प्रश्न क्रमांक **6** या मधील कोणतेही **तीन** प्रश्न सोडवा) :   30

2. 'पुरुषांकडून स्त्रियांवर होणाऱ्या अन्यायाचे विवेचन' ताराबाई शिंदे यांनी कसे केले आहे ते लिहा.

3. 'भुरा' या नायकाच्या जीवन संघर्षाचे चित्रण शरद बावीस्कर यांनी कसे केले आहे ते स्पष्ट करा.

4. प्रेमाचा उत्कट आविष्कार 'अंदाज आरशाचा' या गझलेतून कसा उमटला आहे. ते लिहा.

5. दुष्काळी परिस्थितीमुळे होरपळलेल्या गावाचे चित्रण रवी कोरडे यांनी कसे केले आहे ?

6. कार्यालयीन पत्रलेखन करतांना कोणत्या बाबीची काळजी घेतली पाहिजे ते लिहा.

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

NEPSJ—101—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (NEP) (First Year) (First Semester) EXAMINATION

APRIL/MAY, 2025

SOFTWARE ENGINEERING

Paper–I–SSFECT-1101

(Logic Building with C Part-I)

(Wednesday, 9-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (*i*)   Question paper consists of **6** questions, each of **10** marks.

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

       (*iii*)   Solve any *three* questions from Q. No. **2** to Q. No. **6**.

1.   Attempt the following (**2** marks each) :   10

   (*a*)   Explain low level language.

   (*b*)   What is the goto statement ?

   (*c*)   What is algorithm ?

   (*d*)   Explain continue statement.

   (*e*)   What is identifiers ?

                                  P.T.O.

2.   Attempt the following questions :   10

(*a*)   Explain basic structure of C programming.

(*b*)   Write a program to find the number is prime or not.

3.   Attempt the following questions :   10

(*a*)   Explain two-dimensional array.

(*b*)   Explain while loop with example.

4.   Attempt the following questions :   10

(*a*)   Explain with examples formatted input-output statements.

(*b*)   Write a program to find the number is even or odd.

5.   Attempt the following questions :   10

(*a*)   Write a program to reverse three digits number.

(*b*)   Explain Primary datatypes in C.

6.   Attempt the following questions :   10

(*a*)   Explain if-else statements with example.

(*b*)   Explain the operators in C language.

NEPSJ—102—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (NEP) (First Year) (First Semester) EXAMINATION

APRIL/MAY, 2025

SOFTWARE ENGINEERING

SSFEMT-1101

(Web Technology-I)

(Saturday, 12-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (*i*)   Question paper consists of **6** questions, each of **10** marks.

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

      (*iii*)   Solve any *three* questions from Q. No. **2** to Q. No. **6**.

1.   Attempt the following (**2** marks each) :   10

   (*a*)   What is Client Side Programming ?

   (*b*)   Explain frameset tag with *two* attributes.

   (*c*)   HR Tag.

   (*d*)   Ordered List.

   (*e*)   Explain any *two* elements in HTML5.

<div align="right">P.T.O.</div>

2. Attempt the following questions : 10

    (*a*) Describe anchor tag with attributes.

    (*b*) Explain structure of HTML in detail.

3. Attempt the following questions : 10

    (*a*) Explain Web Protocols HTTP.

    (*b*) Define Image Tag with attributes in detail.

4. Attempt the following questions : 10

    (*a*) Explain HTTP Web Protocols in detail.

    (*b*) Explain heading tag and paragraph tag in detail.

5. Attempt the following questions : 10

    (*a*) Explain creating table in HTML.

    (*b*) Explain any *five* input controls in form.

6. Attempt the following questions : 10

    (*a*) Marquee Tag.

    (*b*) Advantages and disadvantages of HTML5.

NEPSJ—103—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (First Year) (First Semester) (NEP) EXAMINATION

APRIL/MAY, 2025

SOFTWARE ENGINEERING

SSFEMT-1102

(Office Automation-I)

(Wednesday, 16-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

(*ii*) From Q. No. **2** to Q. No. **6** solve any *three*.

(*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** marks each) :   10

(*a*) Explain font tab in MS-Word.

(*b*) Explain Find and replace.

P.T.O.

(*c*) Write a note on splitting columns.

(*d*) Explain format painter.

(*e*) Explain types of queries.

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

(*a*) Discuss about creating database in MS-Access.

(*b*) Explain creating tables in MS-Word.

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

(*a*) Explain Recycle Bin in detail.

(*b*) Explain goal seek in detail.

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

(*a*) Explain custom dictionary in detail.

(*b*) Describe slide show in MS-PowerPoint.

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

(*a*) Explain how to add audio and video in slides.

(*b*) Explain advantages and disadvantages of Access.

6. Write short notes on the following (**5** marks each) : 10

(*a*) Write down the steps to create a form and add records in it.

(*b*) Explain paragraph tab in MS-Word.

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

AA—1003—2025

FACULTY OF ALL

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

APRIL/MAY, 2025

(NEP-2020 Pattern)

VALUE EDUCATION

(VECCOI-1151))

(Constitution of India–I)

(Thursday, 3-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

     (*ii*)   Students are required to solve a total of **4** questions.

     (*iii*)   Students are required to solve any *three* of the remaining five questions (Q. Nos. **2** to **6**).

     (*i*)   प्रश्न क्रमांक **एक** अनिवार्य आहे.

     (*ii*)   एकूण **4** प्रश्न सोडविणे आवश्यक आहे.

     (*iii*)   प्रश्न क्रमांक **2** ते **6** पैकी कोणतेही **तीन** प्रश्न सोडवा.

1.   Write short notes on (All) (2.5 marks each) :   10

   (*a*)   Explain the sources of Indian Constitution

   (*b*)   Discuss the Directive Principles of State Policy

   (*c*)   Comment on Judicial activism

   (*d*)   Explain the utility of Rajya Sabha.

                           P.T.O.

थोडक्यात टिपा लिहा (सर्व) (प्रत्येकी 2.5 गुण) :

(a) भारतीय राज्यघटनेची उगमस्थाने स्पष्ट करा

(b) मार्गदर्शक तत्वांची चर्चा करा

(c) न्यायिक सक्रियतेवर भाष्य करा

(d) राज्यसभेची उपयुक्तता स्पष्ट करा.

2. State the salient features of the Indian Constitution. 10

भारतीय राज्यघटनेची ठळक वैशिष्ट्ये स्पष्ट करा.

3. Explain in detail the Fundamental Rights. 10

मूलभूत अधिकाराचे सविस्तर विवेचन करा.

4. Explain the powers and functions of Indian President. 10

भारताच्या राष्ट्रपतीचे अधिकार व कार्य स्पष्ट करा.

5. Explain the structure and powers of Lok Sabha. 10

लोकसभेची रचना आणि अधिकार स्पष्ट करा.

6. Elucidate the administrative relations between the Centre and State. 10

केंद्र आणि राज्य यांच्यातील प्रशासकीय संबंधाचे विवेचन करा.

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

AA—16—2025

FACULTY OF HUMANITIES/SCI. AND TECHNOLOGY AND COMMERCE AND MANAGEMENT

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

APRIL/MAY, 2025

(NEP-2020)

ENGLISH (Compulsory)

Paper–II (HENGAEC-1151)

(Developing Written Communication)

(Tuesday, 8-4-2025)	**Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

      (*ii*)   Attempt any *three* questions from Question Nos. **2** to **5**.

      (*iii*)   Figures to the right indicate full marks.

1.   Write short notes on :   10

    (*i*)   Purpose of a paragraph

    (*ii*)   Expanding Vocabulary

    (*iii*)   Types of resumes

    (*iv*)   Features of circulars.

                                               P.T.O.

2. Explain the principles of clear writing in detail. 10

3. What are the essential components of essay writing ? Discuss each component in detail. 10

4. Write a job application for the post of Marketing Coordinator at Infosys, Pune. 10

5. Prepare the meeting agenda of the "Marketing Team Strategy Session" including the introduction, review of the previous quarter, upcoming campaign, budget allocation and next steps. 10

AA—02—2025

FACULTY OF HUMANITIES

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

APRIL/MAY, 2025

HINDI (MIL)

Paper HHINMIL-1151

(साहित्य कलश और व्यावहारिक हिंदी : भाग-II)

(Saturday, 5-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (1)   **पहला** प्रश्न अनिवार्य है।

       (2)   प्रश्न क्रमांक **2** से प्रश्न क्रमांक **6** में से किन्हीं **तीन** प्रश्नों के उत्तर लिखिए।

       (3)   **सभी** प्रश्नों के अंक समान हैं।

1.   निम्नलिखित में से किन्हीं **दो** पर टिप्पणियाँ लिखिए :   10

     (अ)   'कृत्रिम मेधा' की उपयोगिता।

     (ब)   'बाशिंदा' कहानी का करेला झा।

     (क)   वाक् से पाठ प्रणाली।

     (ड)   'फर्क नहीं पड़ता' कविता का आशय।

                                                  P.T.O.

2. 'वसीयतनामा' कहानी की कथावस्तु लिखिए। 10

3. 'कदम मिलाकर चलना होगा' कविता में व्यक्त संदेश स्पष्ट कीजिए। 10

4. 'कृत्रिम मेधा' का अर्थ स्पष्ट करते हुए उसके महत्व को विशद कीजिए। 10

5. 'मुंबई काण्ड' कहानी में व्यक्त मानवीय मूल्यों का विश्लेषण कीजिए। 10

6. 'अपने घर की तलाश' कविता की मूल संवेदना पर प्रकाश डालिए। 10

AA—03—2025

FACULTY OF HUMANITIES

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

APRIL/MAY, 2025

(NEP-2020)

MARATHI (MIL)

Paper–AECMAR-1151

(मराठी साहित्य आणि व्यावहारिक मराठी–II)

(Saturday, 5-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

     (*ii*)   **सर्व** प्रश्नांना समान गुण आहेत.

1.   टिपा लिहा (कोणत्याही **दोन**) :   10

    (अ)   'वाटा-पळवाटा' मधील सतीश

    (ब)   हायकू

    (क)   बातमी मूल्ये

    (ड)   जाहिरातीचा मसुदा.

                 P.T.O.

पुढील प्रश्न क्रमांक **2** ते **6** यामधील कोणतेही **तीन** प्रश्न सोडवा : 30

2. 'रोमराज्य' या पाठातून लेखिकेने 'रोम' शहराचे वर्णन कसे केले ते तुमच्या शब्दात लिहा.

3. पंडित जवाहरलाल नेहरू यांनी आपल्या पत्रातून इंदूस कोणता संदेश दिला ते लिहा.

4. कवी केशवकुमार यांनी 'प्रेमाचा गुलकंद' या कवितेतून एकतर्फी प्रेमाचे चित्रण कसे केले ते सांगा.

5. 'आम्ही तुफानातील दिवे' या कवितेचा आशय स्पष्ट करा.

6. आकाशवाणीवरील जाहिरातीच्या स्वरूपाविषयी चर्चा करा.

NEPSJ—201—2025

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (SE) (NEP) (First Year) (Second Semester) EXAMINATION

APRIL/MAY, 2025

SOFTWARE DEVELOPMENT

SSFECT-1151

(Introduction to RDBMS-II)

(Friday, 11-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

       (*ii*)   From Q. No. **2** to Q. No. **6** solve any *three* 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** marks each) :   10

   (*a*)   Write a note on Select Command.

   (*b*)   Write a note on Self Join.

                          P.T.O.

(c) Explain the concept of Keys.

(d) Explain Before Triggers.

(e) Write a note on creating table structure.

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

(a) Explain entity relationship model.

(b) Explain advantages of DBMS in detail.

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

(a) Explain the concept of Implicit cursor.

(b) What is Normalization ? Explain 2NF in detail.

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

(a) Explain Codd's rules of DBMS in detail.

(b) Write a note on Outer Join.

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

(a) Explain Multiple Row functions.

(b) Explain Alter command in detail.

6. Write short notes on the following (**5** marks each) : 10

(a) Explain SQL commands in detail.

(b) Explain the concept of views.

NEPSJ—202—2025

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2025

(NEP 2020)

SOFTWARE ENGINEERING

Paper–II–SSFEMT-1151

(Programming in C Part-II)

(Tuesday, 15-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (*i*)   Question paper consists of **6** questions, each of **10** marks.

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

(*iii*)   Solve any *three* questions from Q. No. **2** to Q. No. **6**.

1.   Attempt the following (**2** marks each) :   10

(*a*)   Unions.

(*b*)   Explain Call by value.

(*c*)   What is string ?

(*d*)   What is structure ?

(*e*)   What is Pointer ?

2. Attempt the following questions : 10

   (*a*) Explain recursion with example.

   (*b*) WAP to factorial of number using recursion.

3. Attempt the following questions : 10

   (*a*) Explain types of functions.

   (*b*) Explain storage classes.

4. Attempt the following questions : 10

   (*a*) Explain Dynamic memory allocation.

   (*b*) Explain command line argument.

5. Attempt the following questions : 10

   (*a*) Explain types of file.

   (*b*) Explain random access to file.

6. Attempt the following questions : 10

   (*a*) Explain creating structure with example.

   (*b*) WAP to create student.xls file and store record of five students.

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

NEPSJ—203—2025

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2025

(NEP Pattern)

SOFTWARE ENGINEERING

SSFEMT-1152

(Data Structure and Algorithms-I)

(Thursday, 17-4-2025)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

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

      (*ii*)   From Q. No. **2** to Q. No. **6** solve any *three* 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** marks each) :   10

   (*a*)   Write stack.

   (*b*)   Explain general tree.

P.T.O.

(c)   Write **2** trees.

(d)   Write garbage collection.

(e)   Write queue.

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

(a)   Explain insertion sort algorithm.

(b)   Write an algorithm of traversing linear array.

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

(a)   Write queue operations.

(b)   Explain terminology of binary tree.

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

(a)   Explain complexity, time space tradeoff.

(b)   Write an algorithm of searching ITEM from unsorted linked list.

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

(a)   Write types of binary tree.

(b)   Write representation of linear array in memory.

6.   Write short notes on the following (**5** marks each) :   **10**

(a)   Write an algorithm of insert ITEM at beginning of linked list.

(b)   Write non-linear data structure.