

LAKSHYA INSTITUTE OF TECHNOLOGY



BSC. ITM

2nd SEM UNIVERSITY

OLD QUESTION

2022

Time :As in Programme

Full Marks : 80

The figures in the right-hand margin indicate marks.

*Answer **all** questions.*

GROUP- A

1. Answer any eight of the following questions. $2.5 \times 8 = 20$
 - (a) Why is ‘listening’ an important part of communication ?
 - (b) What is paralinguistics ?
 - (c) What is the role of context in communication ?
 - (d) What is information loss ? How it affects the process of communication ?
 - (e) Replace the underlined word with a phrasal verb:
 - (i) The game was cancelled because of bad weather.
 - (ii) It’s been five years since John quit drinking
 - (f) Do as directed :
 - (i) Be sure to _____ a life jacket before getting into the boat. (Use the appropriate phrasal verb in the blank)
 - (ii) The police would not _____ to the kidnapper’s demands. (Use the appropriate phrasal verb in the blank)
 - (g) There were a lot of children _____ the classroom _____ the teacher. (Use the appropriate prepositions in the blanks)
 - (h) Change the voice:
 - (i) She showed me a nice portrait
 - (ii) A thunderstorm often turns milk sour
 - (i) Change the following word into adjective and use it in a sentence:
 - (i) Religion
 - (ii) Space
 - (j) Correct the error:
 - (i) My father is thinking that I should stop smoking
 - (ii) She is married with a plumber who is five years older than her.

GROUP- B

Answer any four of the following questions:

15x4=60

2. Write a note on the process of communication.

OR

What are the different types of communication ? Elaborate with examples.

3. Write a note on the differences between verbal and non-verbal communication.

OR

Show your acquaintance with the different types of communication barriers.

4. Read the following passage carefully and answer the questions that follows:

The expression “an educated person” might be taken to apply to an individual who, being possessed of average intelligence, application and memory, has devoted several years of his or her life to the acquisition of general knowledge. It would not be within such, narrow confines that I should use the expression, since a moment’s examination of this definition proves it to be wholly unsatisfactory.

What, for instance, is meant by ‘Several years’? Does it mean the years between the ages of five and fourteen, or the years between the ages of five and twenty-one? Assuredly it means nothing of the sort, since a person who ceases to educate himself at any age is not, in my sense of the word, an educated person. Only those can lay claim to that resounding title who continue to learn and learn until they are nailed in their coffins. What, again, is meant by “general knowledge” ? The pedants have assured us that the aim of all higher education is to know something about everything and everything about something. Much as I envy and admire those rare people who are in fact capable of these extremes of erudition, I should regard them, not so much as persons of exceptional education but rather as sports or freaks, akin to lightning calculators, who have been endowed by nature with extraordinary minds. No normal person can possibly know something about everything, and even those who know everything about something become incapable of elastic thought and are contorted into unnatural shapes which recall the masterpieces of the topiarist’s art. The normal human being who aspires to be educated should concentrate upon those areas of learning which are attuned to his individual capacities, and should enlarge those areas by becoming acquainted with the wider areas, which surround his own nucleus of knowledge.

(a) What does the expression ‘an educated person’ mean ?
(b) Why the given definition of ‘an educated person’ is not satisfactory ?
(c) Who is not an educated person according to the writer ?
(d) What is the aim of our higher education according to the pedants ?
(e) Who are regarded as sports or freaks by the writer ?
(f) What a normal human being, who aspires to be educated, should do ?

5. Write a formal email to your professor requesting him to recommend your name for the job of research assistant at the university.

OR

As a manager of a shopping mall write an email to your product supplier to speed up the supply.

6. Expand the following idea into paragraph

“All good things must come to an end”

OR

“Time and tide waits for none” .



II - S - BCA - AEC - 2 - (English Communication) -
(Back) - (2021, 2022 & 2023 AB)

2025

Full Marks - 80

Time - As in the Programme

The figures in the right hand margin indicate marks.

Answer ALL questions.

Group - A

1. Answer all question : [10 x 2 = 20]
 - (a) Discuss the elements of communication ?
 - (b) What are barriers to effective communication ?
 - (c) What are the tactics of listening skill ?
 - (d) What are the disadvantages of non-verbal communication ?
 - (e) Differentiate synonyms and antonyms with example.
 - (f) What is the role of grammar in communication ?
 - (g) What is the difference between oral and written presentation ?
 - (h) How interviewer is different from interviewee ?
 - (i) Describe about CV.
 - (j) Describe about formal letter.

[Cont...

[2]

Group – B

Explain any FOUR of the following :

2.(a) Define communication. Explain the process with neat labeling of elements. [7.5]

(b) What are the key principles of effective communication ? Discuss how they help in achieving clarity and understanding. [7.5]

OR

(c) Write the Different communications, today we are using. [15]

3.(a) Define Listening. What are different types of listening ? Explain the process of listening and why it is considered as important of all the skill in communication ? [15]

OR

(b) Write the methods and techniques of skimming and scanning. [15]

4.(a) ONE word substitution : [5]

The study of planets = _____.

One who is unable to pay off one's debts = _____.

A person who eats human flesh = _____.

[3]

A person who is not easily pleased = _____.

That which can't be corrected = _____.

(b) Write the Opposite words : [5]

Agree, Bold, Construction, Changeable, Best.

(c) Define Sentence. Write types of sentences with examples. [5]

OR

(d) Write an essay "Water- The Elixer Life." [15]

5.(a) Write the guidelines of official correspondence for making Esquires, complaints and replies. [15]

OR

(b) Write a Formal letter for your job. [7.5]

(c) What is Interview ? Write the process of interview. [7.5]



II - S - BCA - AEC - 2 - (English Communication) - (Back) - (2021, 2022 & 2023 AB)

[4]
Part - IV

4. Answer any FOUR of the following in about 800 words each : [8 x 4]

- (a) What is Communication ? Describe the process of communication.
- (b) Explain about various types of communication providing examples of each.
- (c) What is Listening Skill ? Describe about informal, critical and empathic listening with providing examples of each.
- (d) Discuss the role of Body language in public speaking. How can it be used effectively ?
- (e) What is the role of Vocabulary in reading comprehension ? Mention the different steps to improve vocabulary ?



II - S - BCA - AEC - 2 - (English) -
(Regular) - (2024 AB, NEP - 2020)

II - S - BCA - AEC - 2 - (English) -
(Regular) - (2024 AB, NEP - 2020)

2025

Full Marks - 100

Time - As in the Programme

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Answer ALL questions.

Part - I

1. Answer all the question in ONE word or ONE sentence each : [1 x 10]

- (a) What is communication ?
- (b) What is the primary purpose of communication ?
 - (i) To inform
 - (ii) To persuade
 - (iii) To entertain
 - (iv) All of the above
- (c) Define Encoding in Communication.
- (d) State about Active Listening.
- (e) IPA stands for ?
- (f) What is the primary purpose of reading text ?

[Cont...]

[2]

Part - II

2. Answer all the questions in about 50 words each. [2 x 9]

- (a) Define feedback in communication.
- (b) What is Horizontal communication ?
- (c) State the purpose of Skimming and Scanning in Reading.
- (d) How can you improve your speaking skill ?
- (e) Write the IPA symbol of the word "Sat".
- (f) How many syllables are there in the word "Institution".
- (g) When do we use "Will" and "Would".
- (h) Mention the difference between Present simple and Present continuous.
- (i) Make Sentences of the following Words "State" and "Report".

[Cont...]

[3]

Part - III

3. Answer any EIGHT of the following in about 250 words each : [5 x 8]

- (a) What are the elements of Communication Process ?
- (b) Describe about Formal, Semi-formal and Informal Styles of Communication in English.
- (c) Explain some common barriers to effective listening.
- (d) Mention the importance of Non-verbal communication in public speaking.
- (e) What are the different types of Reading Skills ?
- (f) Describe the importance of Vocabulary in Reading Comprehension.
- (g) State the difference between Active voice and Passive Voice.
- (h) How do you use Clauses in sentence structure ?
- (i) Differentiate between hearing and listening.
- (j) Write the short notes on Simple Sentence and Compound Sentence.

[Cont...]

[4]

(e) Deepak / Diya Mishra of L/105, Nayapalli, Bhubaneswar bought a HP Desk Jet 200 Printer from The Computer Centre, the sole dealer of Hewlett Packard at Master canteen, for use with his/her newly acquired personal computer, a month ago. Now he/ she finds that the print quality is poor and the ink nozzles of the print cartridge get frequently clogged. The printer has been given one year warranty against any technical fault. Write a letter as Deepak/ Diya Mishra to the dealer complaining about the same and requesting him to attend to it.

(f) Recently your college has celebrated Independence Day in the college campus. Draft a report in about 120 words on the celebration of Independence Day to be published in a local Odia Daily.

(g) Discuss Reading Skill and its different methods.

(h) Write a detailed account of English in the Print and Electronic media in India.



II - S - B.Sc. (ITM) - AEC - 2 -
(English Communication)

II - S - B.Sc. (ITM) - AEC - 2 -
(English Communication)

2023

Full Marks - 80

Time - As in the Programme

*The figures in the right hand margin indicate marks.
Answer ALL questions.*

1. Answer all the questions : [1 x 12 = 12]
 - (a) They have invited him to the party. (Change the voice.)
 - (b) Better late than _____. (Complete the proverb with an appropriate word.)
 - (c) The students (eat) _____ their lunch without a complaint.
 - (d) Everyone who crosses the border _____ show his / her passport. (must/ should/ can)
 - (e) Peter _____ (teach) English at the University.
 - (f) All the _____ is not gold. (glitter / glitters)
 - (g) He does not believe _____ God. (Write a preposition.)
 - (h) Mother said, "I am not well today". (Change the Narration.)
 - (i) It _____ (rain) for two hours and the ground is too wet.

[P.T.O.]

[2]

(j) After unpacking all boxes, the family of Mr. Gupta _____ (set off/ set up/ set on) their house.

(k) Write the synonym of 'Clarify'.

(l) Write the antonym of 'Arrival'.

2. Answer any EIGHT of the following questions :

[2 x 8 = 16]

(i) Define Communication.

(ii) What is Horizontal Communication ?

(iii) Explain Grapevine Communication ?

(iv) Write accusatory tone in communication.

(v) Write two examples of nonverbal communication ?

(vi) Define Skimming in reading skill.

(vii) What is the use of Officialese ?

(viii) Write two examples of pseudo-cleft sentence.

(ix) Write two examples by using the connector/ word 'as well as' and 'not only__but also'.

(x) Define who is a 'Sender' in communication process ?

3. Answer any EIGHT of the following questions :

[3 x 8 = 24]

(a) Define Medium of Communication ?

(b) Differentiate between Skimming and Scanning.

[Cont...

[3]

(c) What is Active Listening Skill ?

(d) What is Communicative-English in your opinion ?

(e) What is Inter-Cultural communication ?

(f) Define Sympathetic tone with two examples.

(g) Write a short note on Indianization with examples.

(h) Define Jargon with examples.

(i) Define Cohesive Writing.

(j) Write two distinct features of electronic media in India.

4. Answer any FOUR of the following questions :

[7 x 4 = 28]

(a) Define Communication. Write elements and process of communication.

(b) When does Communication Fail ? Define Barriers of Communication.

(c) Enlist important aspects of a Resume with a sample ?

(d) You have seen an advertisement of job recruitment in an IT sector. You want to apply for the same job. Write a letter to the Manager of that company to apply for the job by attaching all the essential documents with it.

[Cont...

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II - S - B.Sc. - (ITM) - P - AEC - 2 -
(English) - (Regular) - (NEP-2020)

2025

Full Marks - 100

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 10 = 10]
 - (a) Which communication includes both oral and written communication ?
 - (b) _____ is the study of body movements to judge inner state of emotions expressed through different parts of the body.
 - (c) _____ language is the kind of language we use when we are talking or writing to our family members or friends.
 - (d) There are 24 _____ sounds in English language.
 - (e) Which tone is used to convey strong feelings of anger and discontent.

[Cont....

[2]

(f) _____ paragraphs are written on the lives of great persons.

(g) Which media is a group of internet-based applications that allows individuals to create, collaborate and share contents with each other.

(h) Give a suitable word which pairs with co- relative conjunction : "Neither Mohan _____ Sohan has committed this mischief".

(i) The information you gave me _____ (happen : simple present tense) to be incorrect.

(j) _____ sentences express an order, command, advice, request, proposal or suggestion.

2. Answer the following questions : [2 x 9 = 18]

(a) What is non- academic writing ?

(b) Convert the complex sentences into compound sentences :

(i) She left the hall when the lights went off.

(ii) If you are careful, you will be healthy.

[7]

advice to the young men and women who are graduating today through this university is : Mother India expects of you that your lives should be clean, noble and dedicated to selfless work.

Questions :

(i) What is the role of character in nation building ?

(ii) What is the role of character in life ?

(iii) What has the Indian Civilization played its role in influencing the culture of the East ?

(iv) What is the advice of the author to graduating students ?

(v) How do you think that integrity of character in a student can contribute to the institution as well as nation ?



II - S - B.Sc. - (ITM) - P - AEC - 2 -
(English) - (Regular) - (NEP-2020)

[Cont....

[6]

Character is destiny. Character is that on which the destiny of a nation is built. One cannot have a great nation with men of small character. We must have young men and women who look upon others as the living images of themselves, as our Sastras have so often declared. But whether in public life or student life, we cannot reach great heights if we are lacking in character. We cannot climb the mountain when the very ground at our feet is crumbling. When the very basis of our structure is shaky, how can we reach the heights which we have set before ourselves ? We must all have humility. Here is a country which we are interested in building up. For whatever service we take up, we should not care for what we receive. We should know how much we put into that service. That should be the principle which should animate our young men and women. Ours is a great country. We have had for centuries a great history. The whole of the East reflects our culture. We have to represent what India taught right from the time of Mohenjodaro and Harappa. Whether in domestic affairs or in international affairs, we must adhere to certain standards. My

[Cont...

[3]

(c) Change the sentences into passive voice.

(i) Nibedita is making a bouquet of roses and lilies.

(ii) Does Lila read science fiction ?

(d) What is rising and falling tone ?

(e) Why is communication essential ?

(f) What do you mean by non-verbal communication ?

(g) What is bias-free communication ?

(h) What is contrastive stress in a sentence ?

(i) What do you mean by brainstorming session ?

3. Answer any EIGHT of the following questions :

[$5 \times 8 = 40$]

(a) Discuss different parts of sentences.

(b) What are the steps followed in different types of media writing.

(c) Write an essay on "Internet banking".

(d) Discuss the different rules of stress.

(e) How can we ensure bias free communication in case of age, gender and disability ?

[Cont...

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Character is destiny. Character is that on which the destiny of a nation is built. One cannot have a great nation with men of small character. We must have young men and women who look upon others as the living images of themselves, as our Sastras have so often declared. But whether in public life or student life, we cannot reach great heights if we are lacking in character. We cannot climb the mountain when the very ground at our feet is crumbling. When the very basis of our structure is shaky, how can we reach the heights which we have set before ourselves ? We must all have humility. Here is a country which we are interested in building up. For whatever service we take up, we should not care for what we receive. We should know how much we put into that service. That should be the principle which should animate our young men and women. Ours is a great country. We have had for centuries a great history. The whole of the East reflects our culture. We have to represent what India taught right from the time of Mohenjodaro and Harappa. Whether in domestic affairs or in international affairs, we must adhere to certain standards. My

[Cont...

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- (e) How can we ensure bias free communication in case of age, gender and disability ?

[Cont...

[4]

- (b) Recently your college has celebrated Republic Day in the college campus. Draft a report in about 120 words on the celebration of Independence Day to be published in a local Odia Daily.
- (c) Discuss Reading Skill and its different methods.
- (d) Write a detailed account of English in the Print and Electronic media in India.
- (e) Define Communication. Write elements and process of communication.
- (f) When does Communication fail ? Define Barriers of Communication.
- (g) Enlist important aspects of a Resume with a sample ?
- (h) You have seen an advertisement of job recruitment in a corporate sector. You want to apply for the same job. Write a letter to the Manager of that company to apply for the job by attaching all the essential documents with it.



II - S - B.Sc. - (ITM) - P - AEC - 2 -
(English Communication) - (Back)

23-26 AD
17th 2nd Baum-25
27.10.25

II - S - B.Sc. - (ITM) - P - AEC - 2 -
(English Communication) - (Back)

2025

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

- 1. Answer all the questions : [1 x 12 = 12]
 - (a) Peter _____ (teach) English at the University.
 - (b) All the _____ is not gold. (glitter / glitters)
 - (c) He does not believe _____ God. (write a preposition)
 - (d) They have invited him to the party. (change the voice)
 - (e) Better late than _____. (complete the proverb with an appropriate word)
 - (f) The students (eat) _____ their lunch without a complaint.
 - (g) Everyone who crosses the border _____ show his/ her passport. (must/ should/ can)
 - (h) Write the synonym of 'Clarify'.
 - (i) Write the antonym of 'Arrival'.
 - (j) Mother said, "I am not well today" (change the Narration)

[Cont...

[2]

(k) It _____ (rain) for two hours and the ground is too wet.

(l) After unpacking all boxes, the family of Mr. Gupta _____. (set off/ set up/ set on) their house.

2. Answer any EIGHT of the following questions :

[2 x 8 = 16]

(i) What is the use of Officialese ?

(ii) Write two examples of pseudo-cleft sentence.

(iii) Write two examples by using the connector/word 'as well as' and 'not only but also'.

(iv) What is Horizontal Communication ?

(v) Explain Grapevine communication ?

(vi) Write accusatory tone in communication.

(vii) Write two examples of nonverbal communication ?

(viii) Define Skimming in reading skill.

(ix) Define who is a 'Sender' in communication process ?

(x) Define communication.

3. Answer any EIGHT of the following questions.

[3 x 8 = 24]

(a) Define Jargon with examples.

(b) Define Cohesive Writing.

[3]

(c) What is Communicative-English in your opinion ?

(d) What is Inter-Cultural communication ?

(e) Define Sympathetic tone with two examples.

(f) Write a short note on Indianization with examples.

(g) Define Medium of Communication ?

(h) Differentiate between Skimming and Scanning.

(i) What is Active Listening skill ?

(j) Write two distinct features of electronic media in India.

4. Answer any FOUR of the following questions :

[7 x 4 = 28]

(a) Soumya / Sampark Miah of Nayapalli, Bhubaneswar bought a HP Desk Jet 200 Printer from The Computer Centre, the sole dealer of Hewlett Packard at Master canteen, for use with his/ her newly acquired personal computer, a month ago. Now he/ she finds that the print quality is poor and the ink nozzles of the print cartridge get frequently clogged. The printer has been given one year warranty against any technical fault. Write a letter as Deepak/ Diya Mishra to the dealer complaining about the same and requesting him to attend to it.

[Cont...]

[Cont...]

II - S - BCA - AEC - 2 -
(English Communication) - (R & B)

2024

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

Group - A

1. Fill in the blanks : [2 x 8 = 16]

- (a) Communication is a part of _____ skills.
- (b) The response to a sender's message is called _____.
- (c) _____ is the method used to receive information from the sender through a letter.
- (d) Our dress code is an example of _____ communication.
- (e) The information which is transferred to the receiver has to be interpreted the process is called _____.

[Cont...

[2]

(f) The message may be misinterpreted because of _____

(g) _____ means looking quickly over a text book to get a general superficial idea of the content.

(h) _____ is the person who notices and decodes and attaches some meaning to a message.

2. Write short notes on any FOUR : [4 x 4 = 16]

(a) Skimming

(b) Semantic Barrier

(c) Feedback

(d) Group Discussion

(e) Importance of Reading

3. Communication should be audience oriented.

Why ? [12]

OR

What is 'Barrier' in communication ? Discuss the different types of it and how to overcome.

4. Define Note Making. Explain the different types of Note making process. [12]

[Cont...]

[3]

OR

Write a letter to the Municipal Commissioner to take necessary actions regarding unsanitary conditions in the streets.

5. Differentiate between Interviewer and interviewee.
Write the process of interview. [12]

OR

Elaborately discuss the process of communication.

6. What is Close Reading ? Elaborately state the different types of reading. [12]

OR

Write a paragraph on Digital India.



II - S - BCA - AEC - 2 -
(English Communication) - (R & B)

(2)

3. Communication should be audience oriented,
why ? [12]

OR

What is 'barrier' in communication, discuss the
different types of it and how to overcome ?

4. TCS India Ltd. Invites applications for the post
of software developer. Write a Resume along
with a cover letter for the said post as per the
advertisement published in the times of India on
25th March. [12]

OR

Write a letter to the editor of the Indian Express
highlighting the cause of not to use phone while
driving ?

5. Discuss the importance and relevance of
communication in Modern times ? [12]

OR

Elaborately discuss the process of
communication ?

6. Précis writing:- [12]
(Any passage of 150 words)

OR

Write a paragraph on your Mobile



II - S - BCA - AECC - II - Eng. Comm .

2023

Full Marks - 80

Time - As in the Programme

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Answer ALL questions.

1. Write whether the following sentences are True or False :- [2 x 8 = 16]
 - (a) Communication is a two-way process.
 - (b) Feedback has no role in communication.
 - (c) 'Context' refers to the total setting in which communication takes place.
 - (d) Nonverbal signals received by the receiver during the process of communication are more reliable than the verbal message.
 - (e) Decoding is done by the sender.
 - (f) Fast reading is more beneficial than Slow reading.
 - (g) Communication works on the principles of barriers and filters.
 - (h) One should put on formal dress for the purpose of attending an interview.
2. Write short notes on any four:- [4 x 4 = 16]
 - (a) Active listening
 - (b) Encoding
 - (c) Skimming
 - (d) Cross cultural communication
 - (e) Feedback

P.T.O.

II - S - BCA - AECC - II - Eng. Comm .

(2)

3. Communication should be audience oriented,
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 - (f) All the _____ is not gold. (glitter / glitters)
 - (g) He does not believe _____ God. (Write a preposition.)
 - (h) Mother said, "I am not well today". (Change the Narration.)
 - (i) It _____ (rain) for two hours and the ground is too wet.

[P.T.O.]

[2]

(j) After unpacking all boxes, the family of Mr. Gupta _____ (set off/ set up/ set on) their house.

(k) Write the synonym of 'Clarify'.

(l) Write the antonym of 'Arrival'.

2. Answer any EIGHT of the following questions :

[2 x 8 = 16]

(i) Define Communication.

(ii) What is Horizontal Communication ?

(iii) Explain Grapevine Communication ?

(iv) Write accusatory tone in communication.

(v) Write two examples of nonverbal communication ?

(vi) Define Skimming in reading skill.

(vii) What is the use of Officialese ?

(viii) Write two examples of pseudo-cleft sentence.

(ix) Write two examples by using the connector/ word 'as well as' and 'not only__but also'.

(x) Define who is a 'Sender' in communication process ?

3. Answer any EIGHT of the following questions :

[3 x 8 = 24]

(a) Define Medium of Communication ?

(b) Differentiate between Skimming and Scanning.

[Cont...

[3]

(c) What is Active Listening Skill ?

(d) What is Communicative-English in your opinion ?

(e) What is Inter-Cultural communication ?

(f) Define Sympathetic tone with two examples.

(g) Write a short note on Indianization with examples.

(h) Define Jargon with examples.

(i) Define Cohesive Writing.

(j) Write two distinct features of electronic media in India.

4. Answer any FOUR of the following questions :

[7 x 4 = 28]

(a) Define Communication. Write elements and process of communication.

(b) When does Communication Fail ? Define Barriers of Communication.

(c) Enlist important aspects of a Resume with a sample ?

(d) You have seen an advertisement of job recruitment in an IT sector. You want to apply for the same job. Write a letter to the Manager of that company to apply for the job by attaching all the essential documents with it.

[Cont...

2022

Full Marks - 80

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

Group – A

1. Answer ALL questions : [10 x 2 = 20]
 - (a) Discuss the elements of communication ?
 - (b) What are barriers to effective communication ?
 - (c) What are the tactics of listening skill ?
 - (d) What are the disadvantages of non-verbal communication ?
 - (e) Differentiate synonyms and antonyms with example.
 - (f) What is the role of grammar in communication ?
 - (g) What is the difference between oral and written presentation ?
 - (h) How interviewer is different from interview ?

[P.T.O...]

[2]

- (i) Describe about CV.
- (j) Describe about formal letter.

Group – B

Explain any FOUR of the following :

2.(a) Define Communication. Explain the process of communication with its elements. [7.5]

(b) How communication is considered as effective communication ? Discuss the basic principles of effective communication. [7.5]

OR

(c) Write the different communications, today we are using. [15]

3.(a) Define Listening. What are different types of listening ? Explain the process of listening and why it is considered as important of all the skill in communication ? [15]

OR

(b) Write the methods and techniques of skimming and scanning. [15]

4.(a) One word substitution : [5]

The study of planets = _____.

[Cont...

[3]

One who is unable to pay off one's debts = _____.

A person who eats human flesh = _____.

A person who is not easily pleased = _____.

That which can't be corrected = _____.

(b) Write the opposite words : [5]

Agree, Bold, Construction, Changeable, Best.

(c) Define Sentence. Write types of sentences with examples. [5]

OR

(d) Write an essay "Water - The Elixer Life". [15]

5.(a) Write the guidelines of official correspondence for making Esquires, complaints and replies. [15]

OR

(b) Write a Formal letter for your job. [7.5]

(c) What is interview ? Write the process of interview. [7.5]



[4]

5. Write a program to check a number is perfect or not by taking the number as input from the keyboard.

OR

Write a program to print the following output using for loop.

A

A B

A B C

A B C D

6. Write a program to explain the use of various thread methods such as yield(), sleep(), stop().

OR

Write a program to explain use of multiple catch blocks in exception handling.

7. Write a program to sort the elements of an array in descending order.

OR

Write a program to copy the characters from one file to another.



III - S - BCA - CC - 6 -
(JAVA Programming) - (R & B)

III - S - BCA - CC - 6 -

(JAVA Programming) - (R & B)

2024

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

Group - A

1. Answer all questions : [8 x 1]
(a) A class that cannot be subclassed is called _____.(b) _____ method is used to read characters including space.(c) A subclass can call a constructor method defined by its superclass by the use of _____ keyword.(d) Java programming language was developed by _____.(e) _____ exception is caused by bad array indexes.(f) _____ package contains standard mathematical library methods.(g) System in refers to _____.(h) _____ statement prevents fall through in switch.

[Cont...]

[2]

Group - B

2. Answer any 8 questions : [8 x 1.5]

- (a) Explain autoboxing and autounboxing with example.
- (b) Differentiate between String and String Buffer ?
- (c) Explain use of each word in the statement public static void main (String args[])).
- (d) What is a jagged array ?
- (e) How does operator precedence differ from associativity ?
- (f) Differentiate between print and println with example.
- (g) What is the use of this keyword in java programming ?
- (h) Explain instantiation of an object with example.
- (i) Differentiate between checked exception and unchecked exception.
- (j) Mention the different states a thread goes through during its life cycle.

Group - C

3. Answer any 8 of the following : [8 x 2]

- (a) Differentiate between multithreading and multitasking.

[3]

- (b) Java is platform independent. Justify the statement.
- (c) What is a Vector ? How is it different from array ?
- (d) Differentiate between break and continue in context of a labelled loop.
- (e) What is a Package ? Write the syntax to create and access a package.
- (f) Differentiate between method overloading and method overriding.
- (g) How many access specifiers are used in java programming ? Explain each in one sentence.
- (h) Differentiate between aggregation and inheritance with example.
- (i) State different type of exceptions encountered during I/O activities.
- (j) Differentiate between interface and class.

Group - D

Answer all questions : [4 x 6]

4. Write a program to find largest of any number of integers entered as command line arguments.

OR

Write a program to input a character and find whether it's an uppercase alphabet, lowercase alphabet, digit or special symbol.

[Cont...

[Cont...

2023

Time :As in Programme

Full Marks : 60

The figures in the right-hand margin indicate marks.

Answer *all* questions.

PART-I

1. Answer the following questions. 1x8
 - a. JVM stands for ____.
 - b. The compiled java program generates an intermediate file with file extension of ____.
 - c. To invoke a constructor, most often programmers use ____ operator.
 - d. If you don't specify any access specifier to any member of a class, it would be treated as ____.
 - e. In Java, the data type float has the size of 4 byte, then the size of the int is ____ byte.
 - f. The operator >>> is known as ____.
 - g. To determine whether an object belongs to a particular class or not, we can use ____ operator.
 - h. The keyword super can be used to invoke ____ constructor.

(Turn Over)

PART-II

2. Answer any eight within two to three sentences. 1.5x8

- a. What is the use of 'this' keyword ?
- b. What is the meaning of operator precedence and associativity ?
- c. Define instance variable, class variable and local variable.
- d. What is Boolean type ? What will be default value of newly declared Boolean variable ?
- e. State the Bitwise operators available in java.
- f. State the usage of 'break' and 'continue' in control statements.
- g. Write the syntax of for-each loop and state the limitation of for-each loop.
- h. What is the significance of finalize() method.
- i. What is an Interface ?
- j. What is the essence of 'static import' in java program ?

PART-III

3. Answer any eight of the following (in maximum 75 words.) 2x8

- a. Compare == operator with equals () method.
- b. What is Wrapper class ? Discuss its usages.
- c. What is Inner class ? When the inner classes are primarily used ?
- d. Compare Static binding with Dynamic binding.
- e. What is an Exception ? State any two exception class name.
- f. Compare final, finalize() and finally.
- g. Compare the role of throw with throws.
- h. What is JDBC ? State the 4 types of JDBC drivers commonly used in java programs.

(2)

(Contd.)

- i. What is String class ? State any two methods of this class.
- j. State any two methods (with chunk of code) that can be used to receive input from the user.

PART-IV

Answer within 500 words each.

6x4

4. Write a java program to find all the prime numbers between 1 to 100 using recursion.

OR

Write a java program to swap the content of two integer variables using bitwise operators.

5. What is the meaning of jagged array ? Write a java program to illustrate working of the same.

OR

Distinguish between Byte stream and character stream. Write a java program to read the text file ‘input.txt’ and display over the console using Input Stream Reader.

6. What is Inheritance ? Why java does not provides multiple inheritance ? Write a program to illustrate multi-level inheritance.

OR

What is the meaning of Inter Thread communication ? Write a program to illustrate the same.

7. Distinguish between Interface and abstract class. Write a small java program to illustrate such distinction between them.

OR

Write a program to receive data (such as Name, Roll-number, Course-name) of students and store these data in a database using JDBC.



(3)

(4)

COMP.SC.-214(4)

1270

2024

Time :As in Programme

Full Marks : 60

The figures in the right-hand margin indicate marks.

*Answer **all** questions.*

PART-I

1. Answer all questions: (1x8=8)
 - a) _____ keyword can be used to invoke immediate parent class method?
 - b) _____ class in Java is a class whose object wraps or contains primitive data types?
 - c) OOP stands for _____?
 - d) In Java, _____ specifies the behavior of a class by providing an abstract type?
 - e) In Java, `println()` method is present in _____ class?
 - f) _____ is provided in Java to compress the file contents?
 - g) _____ is the full form of TCP/IP?
 - h) JDBC stands for _____?

(Turn Over)

PART-II

2. Answer any eight of the following within two to three sentences each. $(1.5 \times 8 = 12)$

- a) What is final keyword?
- b) Define java method?
- c) What do you mean by scanner class?
- d) Define object?
- e) What is auto-boxing?
- f) Define final class?
- g) Why File Writer class is used?
- h) How to uncompress a file?
- i) What is throw?
- j) Define datagram programming?

PART-III

3. Answer any eight of the following within 75 words each. $(2 \times 8 = 16)$

- a) Why extends keyword is used in java?
- b) Define type conversion? What are its types?
- c) What is a Buffered Reader class?
- d) Write down the principles of object oriented programming?
- e) Define garbage collection?
- f) Differentiate between aggregation and inheritance?
- g) What is jagged array? Give an example?
- h) What is IO package?

(2)

(Contd.)

- i) Define multi threading?
- j) What is the use of TCP/IP?

PART-IV

Answer all the following within 500 words each. (6x4=24)

- 4. Define loop in java? Write a java program to check whether a number is even or not using loop?

OR

Write about the history of java? Differentiate between C++ and java?

- 5. What is the need of method overriding? Demonstrate method overriding with an appropriate java program?

OR

Define constructor? Explain different types of constructors in detail?

- 6. What is an array? Write a java program to initialize and display the contents of a 2D array?

OR

Differentiate between Byte Streams and Character Streams? Why Input Stream Reader class is used? Explain with a java program?

- 7. What is an exception? How it can be handled? Write a java program to create your own exception?

OR

Discuss accessing and manipulating databases using JDBC in detail?



(3)

(4)

CSC-214(4)

1190

[4]

OR

What is string in Java ? Write a java program that will take input of parents from keyboard and suggest the name of their child.

(d) What is Exception ? How many types you can handle the exception in Java ? Write a java program that will implement “try”, “catch” block.

OR

What is thread ? Draw thread life cycle diagram in Java.



III - S - B.Sc. - (ITM) - Core - 05 -
(Java Programming)

III - S - B.Sc. - (ITM) - Core - 05 -

(Java Programming)

2023

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 8 = 8]

- (a) What is a Class Loader ?
- (b) What is JIT ?
- (c) What is a static variable ?
- (d) What is the use of this keyword in Java ?
- (e) What is constructor ?
- (f) What is token in java ?
- (g) Define thread.
- (h) Write the name the super class of exception.

2. Answer any EIGHT of the following questions :

[1.5 x 8 = 12]

- (a) Why java is called platform independent ?
- (b) What is operator in java ? Give an example of logical operator.

[P.T.O...]

[2]

- (c) What is scanner class ? How it can be used in a program ?
- (d) Distinguish between interface and class.
- (e) What is the constructor ? Give one example.
- (f) What is Vector ? How it differs from array ?
- (g) What is inheritance ? Which types of inheritance supported by java ?
- (h) What is Polymorphism ? Which concept in java implies polymorphism ?
- (i) What is aggregation in java ?
- (j) Why strings are immutable in java ?

3. Answer any EIGHT of the following questions :

[2 x 8 = 16]

- (a) What is package in java ? Write the syntax to create a package in java.
- (b) What is exception ? Why it's important to handle the exception ?
- (c) What is conditional statement ? Write an example of it.
- (d) Write the differences between method overloading and method overriding.
- (e) What is jagged array ? How it differs from 2D array ?

[Cont...

[3]

- (f) How an array is declared in java and why does the Java array index start with 0 ?
- (g) What is JDBC ? For what it is used ?
- (h) Distinguish between local and global variable.
- (i) Distinguish between C++ and Java.
- (j) What is constructor overloading ?

4. Answer any FOUR of the following questions :

[6 x 4 = 24]

- (a) What is Object oriented programming language ? Write a java program to display all the odd numbers between 1 to 30 using for loop & if statement.

OR

What are the data types available in Java ? Write a program to check whether given number is prime or not.

- (b) What are the different types of loops used in java ? Write a java program to demonstrate for loop.

OR

Write different selection statement used in java with example.

- (c) Write a short note in "Array in Java".

[Cont...

(b) What is a Java thread ? Explain the two ways to create a thread with examples.

OR

What is JDBC in Java ? Explain the steps to connect a Java application to a database.

(c) Explain Java interfaces with an example. How are they different from abstract classes.

OR

Discuss different types of looping with examples.

(d) Discuss the concept of array in Java. Write a program to create a two-dimensional array to store index and value of set of numbers and print it.

OR

Explain string, string Buffer and string Builder with programming example.



2024

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 8 = 8]
 - (a) What is Java Virtual Machine (JVM) ?
 - (b) What is the default value of a boolean variable in Java ?
 - (c) Name two access modifiers in Java.
 - (d) What is the use of the final keyword in Java ?
 - (e) What is method overloading ?
 - (f) Which class in Java is the superclass of all classes ?
 - (g) What is the use of finally block in Java ?
 - (h) Which keyword is used to inherit a class in Java ?

[Cont...]

[2]

2. Answer any EIGHT of the following questions :

[1.5 x 2 = 12]

- (a) What are constructors in Java ? Give an example.
- (b) What is Exception Handling in Java ? Why is it important ?
- (c) Write the differences between checked and unchecked exceptions.
- (d) What is a constructor ? How is it different from a method ?
- (e) What is method overloading ? How it is different from overriding ?
- (f) Why Java is called as platform-independent ?
- (g) How to use scanner class in Java ?
- (h) What are the main features of Java ?
- (i) What is an interface in Java ? How is it different from an abstract class ?
- (j) What is the significance of the static keyword in Java ?

3. Answer any EIGHT of the following questions :

[2 x 8 = 16]

- (a) What is Object-Oriented Programming (OOP) ? Write down its main principles.

[3]

- (b) What is garbage collection in Java ? How does it work ?
- (c) Differentiate between String and String Buffer in Java.
- (d) Explain polymorphism in Java with an example.
- (e) What are the different types of inheritance supported in Java ?
- (f) Differentiate between abstract class and interface in Java.
- (g) What are the different types of loops in Java ?
- (h) What are wrapper classes in Java ? Give examples.
- (i) What is multithreading in Java ? How does it improve performance ?
- (j) How do you compare two strings in Java ?

4. Answer any FOUR of the following questions :

[6 x 4 = 24]

- (a) Write the need of Inheritance in Java. Write a program to demonstrate single, multiple and multilevel inheritance.

OR

Explain the concept of exception handling in Java. Write a program demonstrating try, catch and finally blocks.

[Cont...]

[Cont...]

[2]

5. Discuss advantages of array over normal variables. Explain types of array with syntax. Write an array program to find out the smallest number in the list of numbers.
6. How reusability applied in Java ? Write the differences between base and derived class. Explain it with example. Write a base class and derived class to print parent and child name.
7. Discuss different types of JDBC Drivers used in Java to access and manipulating data of databases. Write a program to store employee code, name and designation in a data file.
8. Write the advantages of multithreading. What is thread priority ? Write a multithreading program to execute any three different task using thread priority.
9. Explain the life cycle of an applet with a diagram. Write an applet program to display your name and address in a page.
10. Discuss types of Layout Managers supported by Java. Differentiate between them with example.



IV - S - B.Sc. - (ITM) - Core - IX -
(Java Programming) - (OC)

IV - S - B.Sc. - (ITM) - Core - IX -

(Java Programming) - (OC)

2022

Full Marks - 50

Time - As in the Programme

The questions are of equal value.

Answer any SIX questions including Q. No. 1.

1. Write the answer of the following questions :
 - (i) Write the differences between abstract class and interface.
 - (ii) What is the need of garbage collector ?
 - (iii) Write the concept of overriding ? How is it different from overloading ?
 - (iv) Write any four operators with example.
 - (v) What is command line argument ?
2. Explain various tokens used in Java.
3. What is OOPS ? Discuss various concepts and application of object-oriented programming.
4. Explain types of constructor used in Java. Is it possible to overload a constructor ? Justify your answer using an example.

[P.T.O...]

NEP
28.10.25 (R)

[4]

- (c) What is the use of scanner class ? Write a java program to accept three numbers and find out the greater number.
- (d) Discuss the need of constructor in java ? Write various rules associated with declaration of constructor. What is default constructor ? Write a java program to set the values of two numbers and add it.
- (e) What are the different types of inheritance in Java ? Explain briefly.
- (f) Differentiate between method overloading and method overriding. Explain the concept with suitable examples.



II - S - B.Sc. - (ITM) - P - Major - I - P4 -
(Java Programming) - (Regular) - (NEP-2020)

II - S - B.Sc. - (ITM) - P - Major - I - P4 -
(Java Programming) - (Regular) - (NEP-2020)

2025

Full Marks - 100

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 10 = 10]
 - (a) What is an object ?
 - (b) Write the use of keyword "extend" in java.
 - (c) What is constant ?
 - (d) What is type conversion ?
 - (e) Can we declare Pointer in Java ?
 - (f) What is the default value of byte data type in Java ?
 - (g) Which Java operator is right associative ?
 - (h) Is Java Platform Independent if yes, then how ?
 - (i) What is JVM ?
 - (j) What are the symbols used in arithmetic operator ?

[Cont...

[2]

2. Answer the following questions : [2 x 9 = 18]

- (a) What is Constructor ?
- (b) What is the use of conditional operator ?
- (c) Difference in the use of print, print ln and print f
- (d) Write the difference between >> and >>> operators.
- (e) What is the Wrapper class in Java ?
- (f) What do you mean by polymorphism ?
- (g) What is garbage collector ? What is its use java ?
- (h) What do you mean by abstract data type ?
- (i) What do you understand by an IO stream ?

3. Answer any EIGHT of the following questions :

[5 x 8 = 40]

- (a) What is parameterized constructor ? Write a java program to add two numbers using such constructor.
- (b) What is inheritance. Write a java program to represent the implementation of single inheritance.
- (c) How to define array in java ? Write a program to set the values for array and find out the greater number among five numbers.

[Cont...

[3]

- (d) Write the differences between class and object. Discuss with suitable example.
- (e) What is the difference between int array [] and int [] array ? Explain with examples.
- (f) Discuss overriding concept in java with suitable example.
- (g) Is it possible to make an array volatile ?
- (h) Discuss various features of OOPs.
- (i) What do you mean by loop ? Write a program to calculate factorial of a number using for loop statement.
- (j) How many types of packages are there in Java ?

4. Answer any FOUR of the following questions :

[8 x 4 = 32]

- (a) Discuss various data types used in java with suitable examples.
- (b) Discuss advantages and disadvantages of an array. Write a program to find the duplicate elements in the given array "arr [50, 34, 55, 50, 44, 34, 66, 34, 66, 50]".

[Cont...

2023

Full Marks - 60

Time - As in the Programme

The figures in the right hand margin indicate marks.

Answer ALL questions.

Part – I

1. Fill in the blanks or answer in ONE word :[1 x 8]
 - (a) Java Programming language have _____ numbers of basic data types.
 - (b) In Java, a constant could be declared with the _____ keyword.
 - (c) The Boolean variable has _____ as default value.
 - (d) What will be the value of r, If $x = -1$; $r = x >>> 29$?
 - (e) State the notation of 'bitwise exclusive OR' operator.
 - (f) The java programming language have _____ numbers of access modifiers.
 - (g) The size of an array could be found through which predefined variable ?
 - (h) The properties of the superclass could not be inherited, if it is using _____ access modifier.

[P.T.O.]

[2]

Part – II

2. Answer any EIGHT questions within TWO or THREE sentences : [1.5 x 8]

- (a) What is Byte Code ?
- (b) How Single line and multiline comments could be induced into a java program ?
- (c) What is type casting ? Give an example.
- (d) State the special operators available in java with suitable examples.
- (e) What is an empty statement ? State its usefulness.
- (f) Write the syntax of for each loop with an example.
- (g) What is an anonymous object ? State a code snippet to instantiate anonymous object.
- (h) What the finalizer () method does ?
- (i) Write the two usages of super keyword.
- (j) What is polymorphism ? Define run-time and compile-time polymorphism.

Part – III

3. Answer any EIGHT questions within 75 words : [2 x 8]

- (a) Compare while loop and do-while loop with their syntax.
- (b) What is an array ? State a code snippet to define a multi-dimensional array.

[Cont...]

[3]

- (c) How strings are presented in a java program ? State any two string manipulating methods with their syntax and examples.
- (d) What is a constructor ? State the different ways of constructor invocation with examples.
- (e) What is the role of static keyword in java programs ? When do we declare a member of class as static ?
- (f) Compare and contrast the concept of method overloading and method overriding.
- (g) What is autoboxing and unboxing ? Explain with a tiny program.
- (h) Compare Interface with abstract class.
- (i) What is Inheritance ? Explain different types of inheritance available in java.
- (j) Compare recursion with iteration with a suitable code snippet.

Part – IV

Answer all questions :

4. Write a java program to receive a string from the user and check is it a palindrome or not. [6]

OR

Write a java program to find factorial of a positive integer number with recursion. [6]

[Cont...]

[4]

5. Write a java program to find prime numbers between 1 to 40 using do while loop. [6]

OR

Write a java program to illustrate the usages of static keyword in java program. [6]

6. What is switch-case statement ? Write a java program to illustrate its usage. [6]

OR

What is for-each loop ? Write a java program to create an one dimensional array and then use the for each loop to find sum of each elements of that array. [6]

7. What is abstract class ? Write a java program to illustrate the significance of abstract class. [6]

OR

Write a java program to demonstrate multiple inheritance in java. [6]



2018

10 - 10b

Full Marks - 50

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer any SIX including questions No. 1.

1. Answer all questions. [1x10]
 - (a) What is Object Oriented Programming ? How it is different from Procedural concept ?
 - (b) What is an Object ? How to allocate memory for objects ?
 - (c) Can a method be overloaded based on different return type but same argument type ?
 - (d) "Write Once and Run Anywhere" - Support this statement with proper reasoning.
 - (e) What is a constructor ? When does the compiler supply default constructor for a class ?

[Cont...

[2]

(f) What is the difference between the `>>` and `>>>` operators ?

(g) "Java class can be used both as an applet as well as an application" - Support this statement with an example.

(h) What is the importance of synchronization in java ?

(i) What is the difference between `&` operator and `&&` operator ?

(j) Differentiate between `sleep()` and `wait()`.

2.(a) "Java is called Machine Independent language" - Justify this statement with proper explanation. [4]

(b) Explain various access specifies supported by Java with examples. [4]

3.(a) Write a java program to illustrate "Constructor Overloading". [4]

(b) How Packages differ from Interfaces ? Explain it with a suitable example. [4]

4.(a) Describe the life cycle of java thread. [4]

(b) Write a program to find the product of two matrixes. [4]

[Cont...

5.(a) Write a Java program to interchange the rows and columns of a given matrix. [4]

(b) Write a Java program to demonstrate multithreading operation. [4]

6.(a) What is thread synchronization ? Discuss with an example. [4]

(b) Discuss various types of exceptions available in Java and how they are handled ? [4]

7.(a) What do you mean by static class and static method ? Can we make an instance of an abstract class ? Justify your answer with an example ? [4]

(b) Write a program to perform the following functions using classes, objects, constructors and destructors wherever necessary (i) Read 5 subjects marks of 5 students (ii) Calculate the total and print the result on the screen. [4]



No - 146

2019

Full Marks - 50

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

Group - A

1. (Answer ALL questions, each carries 1 mark)
 - (a) Write differences between C++ and JAVA.
 - (b) What is JDBC ?
 - (c) What is type-II driver ?
 - (d) What are the advantages of driver ?
 - (e) What is join() method ?
 - (f) What is Alive() method ?
 - (g) What is the use of JScrollPane object ?

[Cont...

[2]

- (h) Define the term Socket.
- (i) Define the term Deadlock.
- (j) What is Multithreading ?

Group - B

(Answer ALL questions, each question carries
8 marks)

1.(a) Write a program in java to take input of three sides of a tringle using standrad input dialog box compute the area of that triangle. Show the output using message dialog box.

OR

(b) Discuss all important features of JAVA.

2.(a) What are the advantages of constructor overloading. Give an example of constructor overloading.

OR

(b) Explain the techniques of garbage collection and finalization.

3.(a) What is interface ? Illustrate the behavior of interface by example.

[Cont...

[3]

OR

(b) Explain boxing, unboxing, autoboxing, autounboxing.

4.(a) Give an example of nested try and catch blocks.

OR

(b) Write a program to create your own exception class and handle your own exception.

5.(a) Explain event delegation model of event handling.

OR

(b) Write an applet program to pass student information such as name, roll number, mark secured and full mark as parameter. Compute percentage and show all information.



IV - S - B.Sc. - (H) - CBCS -

CC - VIII - (J. Prog.) - R & B

2020

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer ALL questions. [8×1=8]
 - (i) Which of the following option leads to the portability and security of Java ?
 - (a) Bytecode is executed by JVM
 - (b) The applet makes the Java code secure and portable
 - (c) Use of exception handling
 - (d) Dynamic binding between objects
 - (ii) Which of the following is not a Java features ?
 - (a) Dynamic
 - (b) Architecture Neutral
 - (c) Use of pointers
 - (d) Object-oriented
 - (iii) _____ is used to find and fix bugs in the Java programs.
 - (a) JVM
 - (b) JRE

[Cont....]

[2]

- (c) JDK
- (d) JDB

(iv) Which of the following is a valid declaration of a char ?

- (a) char ch = '\utea';
- (b) char ca = 'tea';
- (c) char cr = '\u0223';
- (d) char cc = '\itea';

(v) Which of the following is a valid long literal ?

- (a) ABH8097
- (b) L990023
- (c) 904423
- (d) 0xnf029L

(vi) Evaluate the following Java expression, if x = 3, y = 5 and z = 10 :

$$++z + y - y + z + x++$$

- (a) 24
- (b) 23
- (c) 20
- (d) 25

(vii) Which of the following for loop declaration is not valid ?

- (a) for (int i = 99; i >= 0; i / 9)
- (b) for (int i = 7; i <= 77; i += 7)

[Cont....

[3]

(c) `for (int i = 20; i >= 2; --i)`
(d) `for (int i = 2; i <= 20; i = 2 * i)`

(viii) Which package contains the Random class ?
(a) `java.util` package
(b) `java.lang` package
(c) `java.awt` package
(d) `java.io` package

2. Answer any EIGHT : [8×1.5=12]

(i) What do you mean by nameless objects ?
(ii) What is the use of the `intern()` method ?
(iii) Which keyword is used for accessing the features of a package ?
(iv) In java, JAR stands for _____.
(v) What will be the output of the following program ?

```
public class Test2 {  
    public static void main(String[ ] args) {  
        StringBuffer s1 = new StringBuffer ("Complete");  
        s1.setCharAt(1,'i');  
        s1.setCharAt(7,'d');  
        System.out.println(s1);  
    }  
}
```

(vi) Given, `ArrayList list = new ArrayList();`
What is the initial quantity of the `ArrayList` list ?

[Cont....]

[4]

(vii) Given that Student is a class, how many reference variables and objects are created by the following code ?

```
Student studentName, studentId;  
studentName = new Student();  
Student stud_class = new Student();
```

(viii) Given,

```
int values[ ] = {1,2,3,4,5,6,7,8,9,10};  
for(int i=0;i< Y; ++i)  
    System.out.println(values[i]);
```

Find the value of value[i] ?

(ix) What is JVM ?

(x) What is Super in Java ?

(xi) State two characteristic of Method Overloading.

3. Answer any EIGHT : [8x2=16]

- (i) What are the various access specifiers in Java ?
- (ii) What is the purpose of static methods and variables ?
- (iii) What are the advantages of Packages in Java ?
- (iv) What do you mean by Java is 'write once and run anywhere' nature ?
- (v) Define the term classloader.

[Cont....]

2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicates marks.

Answer ALL questions.

1. Answer all the Questions : [1×8=8]
 - (a) Define JVM.
 - (b) Structure oriented programming follows top down approach. (True/False)
 - (c) List any four-object oriented concept in java.
 - (d) What is standalone application in java ?
 - (e) Java is architecture neutral language. (True/False)
 - (f) What is keyword ?
 - (g) How to compile a java program ?
 - (h) Define the term class in java.
2. Answer any EIGHT of the following Questions. [1.5×8=12]
 - (i) Why main () in java is always public ?

[Cont...

- (ii) What the byte code in java ?
- (iii) Define method area with respect to JVM architecture.
- (iv) What is a keyword in java ?
- (v) What is short circuit operator in java ?
- (vi) Define the term instance variable in java ?
- (vii) How public keyword is used in java ?
- (viii) What is non static block in java ?
- (ix) Define method overloading in java.
- (x) Write the use of extends in Java.

3. Answer any EIGHT of the following Questions. [2×8=16]

- (a) Explain different types of thread priorities.
- (b) Differentiate between final and finalize().
- (c) What is the difference between error and exception ?
- (d) List the different block used to handle exception in java.
- (e) What the following statement will do ?
- (f) Public static Integer parseInt (String i)
- (g) Write down any four methods of String Builder class ?

[Cont...

- (h) Explain left shift (`<<`) operator in java with an example.
- (i) String is immutable. Justify the statement.
- (j) Define inner class in java.
- (k) Find the output of following code.

class exam

```
{
    public static void main (String args[])
    {
        int i = 8, j;
        j = i++;
        System.out.println ("i=" + i + " " + "j = " + j);
    }
}
```

4. Answer any FOUR of the following Questions.

[6×4=24]

- (a) Explain at least six features of JAVA briefly.

OR

By the help of a neat sketch explain JVM architecture briefly.

- (b) What is method overloading ? WAP to find area of a circle, rectangle and triangle using method overloading.

/ Cont...

OR

Write a java program to find sum of diagonal elements in a 2D Array.

(c) Explain the multilevel inheritance by the help of suitable example.

OR

Explain string comparison by the help of suitable example by using the following.

- (a) equals()
- (b) == operator
- (c) compare To()

(d) Discuss autoboxing and unboxing concept briefly with the help of suitable example.

OR

Explain the exception handling mechanism by using suitable diagram:



2022

Full Mark – 60

Time – As in Programme

The figures in the right hand margin indicate marks.

Answer all questions

(Each Questions carry equal marks)

1. Briefly explain the nature, importance & functions of Management.

OR

Elaborate the contribution & approaches to the management thought.

2. What are the elements of organizing? Describe to the types of organizations.

OR

Write briefly about the need & importance of planning. Add a note on the need & techniques on forecasting.

3. What is Communication? Explain types & importance of Communication.

OR

Briefly explain the theories & importance of motivation.

4. Describe the classes and levels of decisions.

OR

Define strategy and elaborate the role of different strategist.

5. Write short notes:

- i. Quality and functions of leaders
- ii. Techniques of counselling

OR

Explain the strategic management in India. Describe the relevance of strategic management & its benefit.



[4]

6. Explain the term Motivation. Explain any two motivational theories.

OR

What do you understand by "Leadership Style" ? Describe the different styles of leadership.

7. Conceptually, strategy of a firm consists of two inseparable parts: business strategy and corporate strategy. Distinguish between them.

OR

The strategic management process encompasses three phases-strategy formulation, implementation, and evaluation and control. — Discuss.

I - S - BCA - GE / IC - I -

(Principles of Management) - (R & B)

2200

I - S - BCA - GE / IC - I -
(Principles of Management) - (R & B)

2023

Full Marks - 60

Time - As in the Programme

The figures in the right hand margin indicate marks.

Answer ALL questions.

Group - A

1. Answer all question : [8 x 1]

(a) _____ function of management is considered as base for all other functions.

(b) The _____ theorized by Frederick Winslow Taylor.

(c) Planning is the most challenging activity for the management as _____.

(d) _____ is a key element in effective organization.

(e) Staffing is the _____ stage of management process.

(f) The process by which activities are started, directed, and continued so that physical or psychological needs or wants are met is known as _____.

[Cont...]

[2]

(g) Controlling function finds out how far _____ deviates from standards.

(h) Strategic plans establish _____ objectives and an overall strategy by which a firm fulfils its mission.

Group – B

2. Answer any EIGHT questions : [8 x 1.5]

(a) Define Management.

(b) Mention the role of Managers (any two).

(c) What are the various functions of Management ?

(d) What is Scalar Chain ?

(e) State two advantages of planning ?

(f) What is meant by Esprit de corps ?

(g) What do you mean by Free rain leadership ?

(h) What is Decentralization ?

(i) What is Feedback Control ?

(j) Differentiate between forecast and budget.

Group – C

3. Answer any EIGHT questions : [8 x 2]

(a) Is Managing, a science or an art ?

(b) Define Corporate Planning.

[Cont...]

[3]

(c) List any four quantitative forecasting techniques.

(d) What is Line Authority ?

(e) What is meant by Delegation of Authority ?

(f) List out the basic needs in a hierarchy.

(g) Who is Leader ?

(h) What are the types of control ?

(i) What is the importance of coordination ?

(j) What are the various levels of decisions ?

Group – D

Answer all : [4 x 6]

4. Explain the various functions of management.

OR

Describe about the evolution of management thought.

5. What are different types of plans ? Explain.

OR

Define Decision - Making and explain the process of decision – making that affects the efficiency of the business decisions.

[Cont...]

2021

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicates marks.

Answer ALL questions.

1. Answer any FOUR of the following questions : [2 $\hat{1}$ 4=8
 - (a) Define MBO.
 - (b) What is the importance of motivation ?
 - (c) Differentiate between formal and informal organisation.
 - (d) What is Staffing ?
2. Answer any FOUR of the following questions : [3 $\hat{1}$ 4=12
 - (a) State the Maslow's Hierarchy of needs.
 - (b) "Management as Art, Science & Profession", justify.
 - (c) What are the various types of planning ?
 - (d) Leadership is situational. Explain.
3. Answer any FOUR of the following questions : [4 $\hat{1}$ 4=16
 - (a) What are the advantages and limitation of planning ?
 - (b) Discuss the function of management.
 - (c) Suggest your views on what are the quality and function you want to see within a good leader ?
 - (d) Define coordination. Discuss its importance to the organization.
4. Answer any THREE of the following questions : [8 $\hat{1}$ 3=24
 - (a) What do you mean by forecasting ? How is it related to planning ?
 - (b) Decision making is the primary task of the management. Discuss this statement and explain the process of decision making.
 - (c) Elucidate the contribution of F. W. Taylor to Management.

[2]

- (d) What is the importance of controlling ? Discuss various tools and techniques applied by the manager for effective controlling.
- (e) Discuss the relevance of strategic management and its benefit to any organization.
- (f) Define delegation of authority. What is the need of such ? What are the difficulties in delegation ? Suggest your solution to such difficulties.



III - S - B.Sc. - (ITM) - C - 7 - (PM)

(14)

2023

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer the following questions : [1 x 8 = 8]

- (a) What is Administration ?
- (b) Define the concept of operative management.
- (c) What do you mean by planning ?
- (d) Write the need of organisational structure.
- (e) Write the reasons of delegation.
- (f) What is the need of management ?
- (g) Define leadership.
- (h) What do you mean by decentralization ?

2. Answer any EIGHT of the following questions :

[1.5 x 8 = 12]

- (a) Write down the overview of management.
- (b) What do you mean by motivation ?
- (c) Write different approaches in management.
- (d) What is social responsibility ?
- (e) Write the differences between Management vs. administration.

[P.T.O...]

[2]

- (f) Write down different types of communication.
- (g) What is classical theory ?
- (h) How delegation and authority are related ?
- (i) Define span of management.
- (j) Define decision making in forecasting.

3. Answer any EIGHT of the following questions (within 50 words) : [2 x 8 = 16]

- (a) What are the classes of decision ?
- (b) Write down two advantages of planning.
- (c) What are the types of organization ?
- (d) Write different skills required by a good manager.
- (e) Discuss the modern approach to management.
- (f) Explain Fayol's contribution to management.
- (g) What are the barriers of communication ?
- (h) Explain the merits of decision making.
- (i) Define the concept of centralization and decentralization in management.
- (j) What do you mean by staffing and controlling ?

4. Answer any FOUR of the following questions : [6 x 4 = 24]

- (a) Point out the distinctive contribution of Taylor to the theory of management. Why is he regarded as the father of scientific management ?

OR

Explain briefly the contribution of Peter Drucker to management thought.

[Cont...

[3]

- (b) Write down the advantages and limitation of planning. Discuss how planning is helpful to a manager in decision making ?

OR

Discuss the various leadership styles in management process.

- (c) What is Controlling ? Write down the importance and process of controlling.

OR

What is Communication ? Discuss various types of communication in management.

- (d) Define strategy and discuss its benefits in decision making.

OR

Give an analytical note on different types of decisions taken in an organization.



III - S - B.Sc. - (ITM) - Core - 7 -
(Principle of Management)

[4]

(b) Describe the concept of organizational change and organizational development.

OR

Briefly explain how effective leadership styles contributed in the implementation of effective management ?

(c) What is dominant reductive style ? Discuss different types of dominant reductive style. Describe a situation where it was a total failure ? What lesson did you learn from the experience ?

OR

Define the strategic planning. What are the states involved in strategic planning ?

(d) Explain briefly recruitment and source of manpower supply.

OR

Give an analytical note on different types of decisions taken in an organization.



III - S - B.Sc. - (ITM) - Core - 7 -
(Principle of Management) - (R & B)

III - S - B.Sc. - (ITM) - Core - 7 -
(Principle of Management) - (R & B)

2024

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer the following questions : [1 x 8 = 8]
 - (a) What is management ?
 - (b) Which document is outlining mission, vision and values of an organization ?
 - (c) The process of setting goals and developing strategies to achieve them is called _____.
 - (d) Which level of management is responsible for day-to-day operation of an organization ?
 - (e) Which leadership style a manager empowers a team for decision making ?
 - (f) The process of monitoring performance and taking corrective action is known as _____.

[Cont...

[2]

(g) Which communication with employees leads to effective management ?

(h) How operational efficiency achieved ?

(i) What is planning ?

2. Answer any EIGHT of the following questions :
[1.5 x 8 = 12]

(a) What are the benefits of management by objective ?

(b) What do you mean by strategic ?

(c) Define the performance appraisals ?

(d) What do you know about barriers in planning ?

(e) What is the purpose of co-ordination in management ?

(f) What is behavioral school theory of management ?

(g) What do you know about a spirit of clause ?

(h) What do you understand by the management science theory ?

(i) What are the functions of management ?

(j) Explain the chain of command ?

[3]

3. Answer any EIGHT of the following questions (within 50 words : [2 x 8 = 16]

(a) List any four quantitative forecasting techniques.

(b) What do you mean by delegation of authority ?

(c) Explain types of motivation.

(d) What are the barriers involved in effective communication ?

(e) What are the essential of effective control system ?

(f) Explain the nature of principle of management.

(g) What do you mean by optimum utilization of resource and effective administration ?

(h) How the scalar chain as a principle of management ?

(i) How does effectiveness default from efficiency ?

(j) What are the advantages of planning premises ?

4. Answer any FOUR of the following questions :
[6 x 4 = 24]

(a) Discuss the contribution made by Henry Fayol and F. W. Taylor to the field of management ?

OR

Discuss various types of communication in management. Is it necessary ? If yes, explain.

[Cont...]

[Cont...]

I - S - BCA - CBCS - GE/IC - I

(Principle of Management)

2021

Full Marks - 60

Time - As in the Programme

Answer ALL questions

(Each question carries equal marks)

1. Define management. What is the relevance of principles of management? Describe the 14 principles of management..

OR

What are the different management level sand management functions ? Explain different roles played by a manager in an organization.

2. What are the different types of plans ? Describe the process of planning with a suitable example.

OR

Differentiate between Planning and Forecasting.

3. What is Control ? Explain essential steps in Control Process.

[Cont...]

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OR

What is motivation? Explain and correlate Maslow's Need Hierarchy with Alderfer's ERG theory.

4. What do you mean by organizational structure? Explain the four building blocks of organizational structure.

OR

Write short notes :

- i) Communication process
- ii) Feed forward, concurrent & feedback control

5. Write short notes:

- i) Techniques of forecasting
- ii) Techniques of decisionmaking

OR

Differentiate between leadership and management. What are the different leadership styles? Explain managerial grid with a suitable diagram.



I - S - BCA - CBCS - GE/IC - I
(Principle of Management)

2022

Full Marks - 60

Time - As in the Programme

The figure in the right hand margin indicates marks.

Answer ALL questions.

1. Answer any EIGHT of the following Questions : [1×8=8]

- (a) Define Management.
- (b) How to differentiate between Management and administration ?
- (c) Why supervisor's job is difficult ?
- (d) What is social responsibility ?
- (e) Why business organisation feel concerned with social responsibility ?
- (f) What are the major elements of planning process ?
- (g) The theory X & theory Y of motivation propounded by ____.
- (h) Directing is a ____ process:

[Cont...]

[2]

(i) Unit of command is one of the merits of _____ organisation.

(j) Number of sub-ordinate that a Manager/ Supervisor can effectively & efficiently manage/ supervise is knowing as _____.

2. Answer any EIGHT of the following Questions. [1.5×8=12]

(i) What is contingency approach of Management ?

(ii) What is planning premises ?

(iii) Define forecasting.

(iv) What do you mean by Departmentation ?

(v) State any two features of staffing.

(vi) Define the merits of directing.

(vii) Define co-ordination.

(viii) Write any two features of leadership.

(ix) What is strategic management ?

(x) What is the need of level of management ?

3. Answer any EIGHT of the following Questions (Within 50 words). [2×8=16]

(a) Write short note of corporate planning.

(b) Define the three principles of management.

[Cont...

- (c) State the merit of the organization structure.
- (d) State the limitation of staffing.
- (e) Write a note on "Span of management".
- (f) What are the benefits of strategic management ?
- (g) "Co-ordination is the essence of management", discuss ?
- (h) Is management a science or art ?
- (i) Explain various types of managerial skill.
- (j) Distinguish between proactive planning & reactive planning.

4. Answer any FOUR of the following Questions.

[6×4=24]

- (a) Discuss the major characteristics of management as profession. To what extent has Indian Management been professionalised ?

OR

What is directing ? Outline the importance principle of directing.

- (b) What is the concept of planning as an element of management process ? Discuss the role in business organisation.

/ Cont...

[4]

OR

Discuss the concept of strategy. How does it differ from tactics ? Discuss the different levels at which strategies operate.

(c) Define motivation. Explain Maslow's need hierarchy theory of motivation.

OR

Define briefly the 14th principles of management.

(d) Discuss various functions, style and quality of a leader.

OR

Define delegation of authority ? Explain pros and cons of delegation.



III - S - B.Sc. (ITM) - C - 7 - (P.M) - (R)

NEP
27.10.25 (R)

II - S - B.Sc. - (ITM) - P - Major - I - P3 -
(Principles of Management) - (Regular) - (NEP-2020)

2025

Full Marks - 100

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 10 = 10]
 - (a) What is Management ?
 - (b) Explain the various levels of management.
 - (c) What is meant by social audit ?
 - (d) Point out the importance of planning.
 - (e) _____ is extended version of classical theory.
 - (f) Management is about balancing effectiveness and _____.
 - (g) What is "Unity of Command" ?
 - (h) Define Social Responsibility.
 - (i) What is Management Thoughts ?
 - (j) Define Staffing.

[Cont...

[2]

2. Answer the following questions : [2 x 9 = 18]

- (a) List the contribution of F. W. Taylor.
- (b) What is Motivation ? Why is it needed in the organisation ?
- (c) Write the importance of coordination.
- (d) What do you mean by span of control ?
- (e) Define two importance of staffing.
- (f) What do you mean by MBO ? Do you feel is it needed, if yes then why ?
- (g) Define the term of Organisation.
- (h) What do you mean by leadership traits ?
- (i) Write the need of departmentation.

3. Answer any EIGHT of the following questions : [5 x 8 = 40]

- (a) Explain the importance of performance appraisals.
- (b) Write any four principles of goods management.
- (c) Differentiate between centralization and decentralization of authority.
- (d) Discuss various functions of management.
- (e) Explain briefly about leadership style.
- (f) What do you know about decision making ? Explain its features.
- (g) Differentiate between lines and staff organization structure.

[Cont...

[3]

- (h) Write the theory of motivation.
- (i) Briefly discuss the need of forecasting.
- (j) Discuss briefly on contingency approach.

4. Answer any FOUR of the following questions :

[8 x 4 = 32]

- (a) Briefly discuss about delegation of authority ? Write the common barriers to effective delegation.
- (b) Discuss various characteristics of effective management in decision making.
- (c) Discuss different levels, task and skills related to management.
- (d) Briefly explain the steps used in the selection process.
- (e) Discuss the key characteristics of Line and Staff Organizations.
- (f) Discuss need, importance, types and limitations of planning.
- (g) Explain the Herzberg's two factors theory of motivation and discuss the managerial implication.

[4]

4. Answer any FOUR of the following questions :

[8 x 4 = 32]

- Eight friends A, B, C, D, E, F, G and H are sitting around a circular table facing each other for a lunch. A is opposite F and third to the right of B. G is between F and D. H is to the left of D. E is between C and A. Who is sitting third to the right of H. Explain the reasoning process step by step and draw the sitting arrangement.
- A man walks 5 meters to the right and again 5 meters to the right then he walks 3, 6 and 9 meters in each time turning to the left respectively. How far is he from the starting point ? Explain.
- Seven people L, M, N, O, P, Q and R are sitting in a straight line facing the north but not necessarily in the same order. M is sitting to the immediate left of P, O is sitting to immediate left of Q, R is sitting to the immediate right of P and the immediate left of L. N is sitting to the immediate right of L and the immediate left of O. Who is sitting second to the left of N, explain and draw the sitting arrangement.
- Critically evaluate deductive and inductive reasoning.
- Explain the difference between statement and assumption with examples construct a problem where multiple assumptions are given and analyze which assumption is valid and why ?



2025

Full Marks - 100

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 10 = 10]

(a) Kidney : : Lungs : Heart :

(i) Liver	(ii) Blood
(iii) Nose	(iv) Eyes

(b) HIDE : 8945 :: BEAD : _____.

(i) 1524	(ii) 2154
(iii) 2514	(iv) 2541

(c) Find odd word out.

(i) Arrow	(ii) Axe
(iii) Knife	(iv) Danger

(d) Grand Father's daughter is called _____.

(i) Father	(ii) Aunty
(iii) Brother	(iv) None of these

(e) Find the odd number out.

(i) 8	(ii) 27	(iii) 64	(iv) 25
-------	---------	----------	---------

(f) Find the odd paid.

(i) Line : roar	(ii) Snake : hiss
(iii) Frog : Bleat	(iv) Bees : hum

[2]

(g) Statement : Most of the rich people have heart attacks

- (i) If only I is implicit
- (ii) If only II is implicit
- (iii) If neither I nor II is implicit
- (iv) If both I and II are implicit

(h) If south-west becomes north and East becomes South-west, than what will North-west becomes ?

- (i) South-East (ii) North-East
- (iii) East (iv) South

(i) Statement all crows are black birds No black birds are clever creature
Conclusion : (i) Same black birds are crows, (ii) No clever creatures are crows.

- (1) If only conclusion - I follow
- (2) If only conclusion - II follows
- (3) If either conclusion - I or II follows
- (4) If neither conclusion - II follows
- (5) If both conclusion - I & II follows

2. Answer the following questions : [2 x 9 = 18]

- (a) What is decision making ? Explain with an example ?
- (b) A man is facing towards west and turns through 45 clockwise, again 180.
- (c) Clockwise and the turns through 270 anticlockwise. In which direction is he facing now ?
- (d) The clock shows the time 6.15. If the hour hand points towards the west, then what the direction opposite to the minute hand.
- (e) What is deductive reasoning ?
- (f) The time in the clock is 12.15. Find the time in the reflected image in mirror.

[Cont...

[3]

(g) In an ordinary year, if 31st January is Thursday, what day will be 31st December is that year.

(h) A cube of 24cm side is painted completely. It is cut into smaller cubes are obtained in total ?

- (i) What is a premise ?
- (j) Explain what do you mean by mirror and water image.

3. Answer any EIGHT of the following questions : [5 x 8 = 40]

- (a) What is decision making ? Explain with an example ?
- (b) Given $n(A) = 55$, $n(A \cap B) = 108$ $n(A \cup B) = 13$ find $n(B)$ using Venn diagram method.
- (c) What is blood relation and focus on its problem.
- (d) What is spatial reasoning and what is logical reasoning explain in short ?
- (e) In a group of 63 people, 46 like tea and 49 like coffee. How many like both tea and coffee ?
- (f) What is coding and decoding ? Critically analyze their classification.
- (g) What is deductive reasoning, inductive reasoning, explain in short ?
- (h) What is logical sequence series and alphanumeric series ? Explain both with example ?
- (i) What is cause and effect relation ? Explain with example.
- (j) Critically evaluate binary reasoning problem.

[Cont...

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II - S - B.Sc. - (ITM) - P - MDC - 2 -
(Computer Fundamentals) - (Regular) - (NEP-2020)

2025

Full Marks - 100

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : $[1 \times 10 = 10]$
 - (a) What is the full form of SSD in computer storage ?
 - (b) What is the full form of UPI ?
 - (c) What is a USB flash drive ?
 - (d) Name one example of social networking.
 - (e) What is multiprogramming ?
 - (f) What is the role of cache memory ?
 - (g) What is the World Wide Web (WWW) ?
 - (h) What is Firmware ? Write down the smallest unit of data.
 - (i) _____ is volatile in nature.
 - (j) What is System Bus ?

[Cont...

[2]

2. Answer the following questions : $[2 \times 9 = 18]$

- (a) Mention any two applications of e-Governance.
- (b) List any two characteristics of a computer.
- (c) Define peer-to-peer computing.
- (d) What is the function of an output device ?
- (e) Explain algorithm.
- (f) What is the difference between hardware and software ?
- (g) What is meant by memory hierarchy ?
- (h) Differentiate between primary memory and secondary memory.
- (i) List any two advantages and disadvantages of using video conferencing ?

3. Answer any EIGHT of the following questions : $[5 \times 8 = 40]$

- (a) What is flow chart and draw a flow chart for find average of 4 numbers ?
- (b) Define Operating System and its types.
- (c) What is memory hierarchy ? Explain with diagram.
- (d) Explain e-learning and its advantages.
- (e) How does e-governance help in improving government services ?
- (f) Write a short note on computer software and its classification.

[Cont...

[3]

(g) Discuss any five types of secondary storage devices.

(h) Describe LAN, MAN and WAN with examples.

(i) Define cloud computing. Explain different cloud deployment models.

(j) Discuss the role of UPI in modern digital payments.

4. Answer any FOUR of the following questions : $[8 \times 4 = 32]$

- (a) Explain in detail the stored program concept with net diagram.
- (b) Describe the types of computer memory with examples.
- (c) Explain various services provided by an operating system.
- (d) Describes different types of network topologies with diagrams and their advantages & disadvantages.
- (e) Briefly explain about various input and output devices with examples.
- (f) Discuss various emerging computing environment
- (g) What is Flowchart ? Discuss various symbols used in flowchart. Draw a flowchart to find out greater number among three numbers.



II - S - B.Sc. - (ITM) - P - MDC - 2 -

(Computer Fundamentals) - (Regular) - (NEP-2020)

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[4]

4. Answer any FOUR of the following questions :

[8 x 4 = 32]

(a) Explain vector triple product with its various properties.

(b) Explain the surface integral of a vector function and evaluate $\iint_0^x \frac{dx \cdot dy}{x^2 + y^2}$.

(c) Derive the expression for velocity and Acceleration in cylindrical co-ordinate system ?

(d) Derive an expression for second order homogeneous differential equation with constant coefficient.

(e) State and prove Gauss divergence theorem.

(f) What is the solution of non-homogeneous differential equation with constant coefficient ?

Solve the differential equation $\frac{d^2y}{dx^2} - 3 \frac{dy}{dx} - 2y = e^{3x}$.

II - S - B.Sc. - (ITM) - P - Minor - II - 1 -
(Mathematical Physics - I) - (Regular) - (NEP-2020)

II - S - B.Sc. - (ITM) - P - Minor - II - 1 -

(Mathematical Physics - I) - (Regular) - (NEP-2020)

2025

Full Marks - 100

Time - As in the Programme

The figure in the right hand margin indicate marks.

Answer ALL questions.

1. Answer all the questions : [1 x 10 = 10]

(a) $(x - a)^2 + (y - b)^2$ is an equation of a _____.

(b) Dependent variables and derivatives of linear differential equation are of _____ degree.

(c) Area is a function of three variables. (true / false)

(d) Partial derivative is the function of how many variables ?

(e) Curl of a conservative field is _____.

(f) Delta function has same dimension as that of the reciprocal of its _____.

(g) The value of $\hat{i} \cdot (\hat{i} \times \hat{J})$ is _____.

[Cont...

[2]

(h) Green's Theorem in a plane is a special case of _____ theorem.

(i) $\delta(ax) = \frac{1}{|a|} = \underline{\hspace{2cm}}$

(j) $\lim_{x \rightarrow 0} \frac{\tan x}{x} = \underline{\hspace{2cm}}$

2. Answer the following questions : [2 x 9 = 18]

(a) If $x^2 + y^2 = c$, then find $\frac{dy}{dx}$.

(b) State Stokes's Theorem and give its mathematical form.

(c) Solve the equation $y \cdot dx - x \cdot dy = 0$

(d) Plot the curve of $y = 2x + 3$.

(e) Write the application of partial derivative.

(f) Explain scalar triple product.

(g) Explain curl of vector field.

(h) Prove that $\delta(-x) = \delta(x)$.

(i) If $u = \frac{y}{z} + \frac{z}{x}$ show that $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} + z \frac{\partial u}{\partial z} = 0$.

[3]

3. Answer any EIGHT of the following questions :

[5 x 8 = 40]

(a) Define Dirac delta function and prove that $\delta(x) = 0$.

(b) Explain Laplacian in terms of orthogonal curvilinear co-ordinate system ?

(c) Explain orthogonal curvilinear co-ordinate ?

(d) Derive an expression for partial differentiation of vector ?

(e) Explain scalar field and vector field ?

(f) Explain a function is linearly independent through Wronskian ? show that e^{ax} and e^{-ax} are linearly independent ?

(g) When a differential equation is said to be exact ? Show that $y \, dx + x \, dy = 0$ is exact and solve this ?

(h) Explain approximation in differential calculus ? Find the approximate value of $\sqrt{101}$?

(i) Explain Jacobian and represent Jacobian of (u, v, w) with respect to (x, y, z) .

(j) Find the minimum value of $x^2 + y^2 + z^2$ subject to the condition $xyz = a^3$ using Lagrange's multiplier.

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