

Roll No.

6671

**B. C. A. (Second Semester)
EXAMINATION, 2025-26**

Paper Fourth
STATISTICS

Course Code : B230204T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections–A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) Find mean deviation for the following :

5, 7, 9, 11, 13

(b) Explain population and sample with example.

(c) The mean of 20 observations is 40. One value 50 was wrongly taken instead of 30. Find corrected mean.

(d) What is the difference between Deterministic and Non-deterministic experiments ?

(e) Find quartile deviation for the following data :

5, 7, 9, 12, 15, 18, 21

P. T. O.

Section—B

Short Answer Type Questions

Note : Attempt any *four* questions. Answer each question in about

225 words. Each question carries 9 marks.

$4 \times 9 = 36$

2. (a) Explain primary and secondary data with example.

(b) Calculate Median for the following distribution :

X	f
10	4
15	6
20	8
25	5
30	2

(c) Define Dispersion. Explain the types of dispersion with example.

(d) What is Cumulative Frequency ? Make a less than C.F. table and more than C.F. table for the following data :

X	f
5	4
10	2
15	3
20	5
25	8
30	6

- (c) Calculate Mean for the following data using step deviation (assumed mean) method :

Class Interval	Frequency
0—10	5
10—20	8
20—30	12
30—40	10
40—50	5

- (f) The combined mean of two groups having 30 and 40 observations is 55. If the mean of first group is 50, find the mean of second group.
- (g) Find missing frequency f , if the median is 27.

C. I.	Frequency
0—10	4
10—20	6
20—30	f
30—40	10
40—50	5

Section—C

Long Answer Type Questions

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. $2 \times 15 = 30$

3. (a) Calculate standard deviation for the following grouped data :

Class Interval	Frequency
0—10	5
10—20	8
20—30	15
30—40	10
40—50	7

- (b) Define Event. What is the difference between Sample Space and Event ? Explain different types of events with examples.
- (c) A bag contains 8 black, 3 red and 9 white balls. If 3 balls are drawn at random, find the probability that :
- (i) All are black
 - (ii) 2 are black and 1 is red
 - (iii) One of each color.
- (d) From 8 men and 5 women a committee of 4 persons is to be formed. Find the number of ways in which the committee can be formed if it must contain :
- (i) Exactly 2 women
 - (ii) At least 1 woman.

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B. C. A. (Second Semester)

EXAMINATION, 2025-26

Paper III

DISCRETE MATHEMATICS

Course Code : B230203T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about
50 words. Each question carries 3 marks. 3×3=9

1. (a) What is a proposition ? Give examples.
- (b) What are quantifiers in predicate logic ?
- (c) What do you mean by reflexive relation ? Explain.
- (d) What is a contradiction ? Prove that $(p \rightarrow q) \wedge (p \wedge \neg q)$ is a contradiction.
- (e) Draw a complete bipartite graph for $K_{2,3}$ and $K_{2,2}$.

P. T. O.

Section—B**Short Answer Type Questions**

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) Test the validity of the following argument : "If two sides of a triangle are equal then the opposite angles are equal. Two sides of a triangle are not equal therefore the opposite angles are not equal."
- (b) State and prove De Morgan's Law.
- (c) What is a directed graph ? Explain Adjacency Matrix and Incidence Matrix with the help of a directed graph.
- (d) What do you mean by an equivalence relation ? Find whether the relation $R = \{(1, 1), (2, 2), (3, 3), (1, 2), (2, 1)\}$ on the set $A = \{1, 2, 3\}$ is an equivalence relation or not.
- (e) Write the Distributive law for logical equivalences. Prove that $(p \rightarrow q) \wedge (q \rightarrow r) \equiv p \rightarrow (q \wedge r)$.
- (f) Explain functionally complete set of connectives with example.
- (g) Write a short note on connectedness of a directed graph.

Section—C**Long Answer Type Questions**

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. $2 \times 15 = 30$

3. (a) Among 100 students, 32 study Mathematics, 20 study Physics, 45 study Biology, 15 study Mathematics and Biology, 7 study Mathematics and Physics, 10 study Physics and Biology and 5 study all the three subjects.

Find :

- (i) The number of students who study at least one of the three subjects.

- (ii) The number of students who do not study any of the three subjects.
- (iii) The number of students who study only Physics.
- (b) Explain Warshall's algorithm for transitive closure. Find the transitive closure of R using Warshall's algorithm where $R = \{(1, 1), (1, 3), (2, 2), (3, 1), (3, 2)\}$ on the set $A = \{1, 2, 3\}$.
- (c) What are normal forms ? Convert the following expression into DNF and CNF : $(p \leftrightarrow q)$.
- (d) Write short notes on the following terms :
Degree of vertex in a graph, Domain and range, Tautology, Asymmetric relation.

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B. C. A. (Second Semester)

EXAMINATION, 2025-26

Paper II

PRINCIPLES OF PROGRAMMING USING 'C'-II

Course Code : B230202T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about
50 words. Each question carries 3 marks. 3×3=9

1. (a) Differentiate between actual and formal arguments with example.
- (b) What is an array ? How to declare and initialize a 2D array ?
- (c) Define structure. What is the importance of structure ?
- (d) Differentiate between local and global variables.
- (e) Write a C program to perform linear search on an integer array having 10 numbers.

P. T. O.

Section—B**Short Answer Type Questions**

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) What is a string ? What is the difference between string and character array ? Also explain the use of `strlen()`, `strcmp()` and `strcat()`.
- (b) Write a C program to perform insertion sort on an integer array for 10 elements.
- (c) Discuss the advantages and disadvantages of recursive functions. Write a recursive function to calculate factorial of a given number.
- (d) What is a file in C ? Describe file opening modes and file operations with examples.
- (e) Why is dynamic memory allocation ? How we can create blocks dynamically ? Explain the methods with example.
- (f) What is a function ? How a function can be declared, defined and called in C language ? Explain with example.
- (g) Differentiate between call by value and call by reference using suitable examples of both.

Section—C**Long Answer Type Questions**

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. $2 \times 15 = 30$

3. (a) What is binary search ? What are necessary conditions for binary search ? Write a C program to perform binary search on an integer array.

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- (b) Write short notes on the following :
- (i) Function prototype
 - (ii) Preprocessor
 - (iii) Pointer
 - (iv) Conditional compilation
 - (v) Header files
- (c) Write a C program to copy the contents of one file on to another using the concept of file handling.
- (d) What is quick sort ? Write an algorithm to perform quick sort on an integer having 10 elements. Show the process of quick sort with an example.

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B. C. A. (Second Semester)

EXAMINATION, 2025-26

Paper I

COMPUTER SYSTEM ARCHITECTURE

Course Code : B230201T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C. Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) Name different types of computer register and buses.
(b) Define stack and stack pointer in brief.
(c) What is Register Transfer Language ?
(d) Discuss in brief Instruction Format.
(e) Explain the function of Cache memory in brief.

Section—B

Short Answer Type Questions

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) Explain the working of DMA with the help of neat diagram.
(b) Explain the concept of instruction cycle and its different phases.

P. T. O.

[2]

- (c) What do you mean by Addressing modes ? Explain in brief its types with example.
- (d) Explain stored program design with neat diagram.
- (e) Differentiate between RISC and CISC.
- (f) Explain common bus system in a basic computer with diagram.
- (g) Explain three instruction code format related to memory, register and input-output.

Section—C

Long Answer Type Questions

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. $2 \times 15 = 30$

- 3. (a) Define computer organization in detail with the help of diagram.
- (b) Explain virtual memory with the help of diagram.
- (c) Explain micro-operation and also explain logic micro-operation in detail, with the help of neat diagram.
- (d) Explain the working of general registers organizations and each block also, with the help of diagram.

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**B. C. A. (Second Semester)
EXAMINATION, 2025-26**

Paper Fifth

CYBER SECURITY

Course Code : B230205T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C. Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

(Very Short Answer Type Questions)

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. 3×3=9

1. (a) Define the CIA security triad. Explain 3 core components.
- (b) What do you understand by trade secret in context of intellectual property ?
- (c) Define cyber squatting in brief, how does it affect brand identity.
- (d) What is the primary purpose of professional code of Ethics ?
- (e) What is the difference between Hashing and Encryption ?

Section—B

(Short Answer Type Questions)

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. 4×9=36

2. (a) Discuss the threat, differentiate between threat and attack.

P. T. O.

- (b) Describe the implementation of CIA triad with specific examples of security measures at Network Level.
- (c) Explain the role of computer forensics in incident and legal proceedings.
- (d) Differentiate between copyright and trademark.
- (e) What is the primary goal of the electronic transaction act in India ? Explain with example.
- (f) Explain the concept of reverse engineering and when it becomes the violation of intellectual property.
- (g) Discuss the software licensing. What is open source code ?

Section—C

(Long Answer Type Questions)

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. 2×15=30

3. (a) Critically analyze the cyber law provisions in India. How effective are they in addressing modern computer incidents and exploits ?
- (b) Differentiate between privacy and workplace monitoring. What are the challenges ?
- (c) Analyze the ethics for IT workers and IT users. How do professional organisations and certifications help foster corporate social responsibility ?
- (d) What are Intellectual Property Rights ? Explain types with examples. Explain trademark infringement.

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Code : 5038

**B. A./B. Sc./B. Com./B. B. A./B. C. A. (Second Semester)
Examination, 2025-26**

**(Z010201T)
(Ability Enhancement Courses)
हिन्दी भाषा कौशल एवं संचार**

(To be filled in by the Candidate/निम्न पूर्तियाँ परीक्षार्थी स्वयं भरें)

[Maximum Marks : 75

[अधिकतम अंक : 75

Roll No. (in figures) :

[Time : 2 Hours

अनुक्रमांक (अंकों में)

[समय : 2 घण्टे

Roll No. (in words) :

अनुक्रमांक (शब्दों में)

Booklet Code

C

Name of College :

कॉलेज का नाम

**Question Booklet
Number**

242103

College Code :

कॉलेज का कोड

Signature of Candidate

परीक्षार्थी के हस्ताक्षर

Signature of Invigilator

कक्ष-निरीक्षक के हस्ताक्षर

Instructions to the Examinee :

परीक्षार्थियों के लिए निर्देश :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 75 questions. Examinee is required to answer all 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 75 प्रश्न हैं। परीक्षार्थी को सभी 75 प्रश्नों को केवल दी गई OMR आन्तर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।

(Remaining instructions on the last page)

(शेष निर्देश अन्तिम पृष्ठ पर)

1. 'चतुर' का विलोम है :

- (A) छल
- (B) मूर्ख
- (C) अटल
- (D) प्राचीन

2. 'आकाश' का विपरीतार्थक शब्द है :

- (A) पाताल
- (B) अम्बर
- (C) अगम
- (D) अवरोध

3. कौन-सा शब्द 'सज्जन' का उल्टा अर्थ प्रदान करता है ?

- (A) तिमिर
- (B) दुर्जन
- (C) तारीफ
- (D) गोचर

4. 'जय' का विलोम है :

- (A) विजय
- (B) आदर
- (C) अग्नि
- (D) पराजय

5. 'अगम' के लिए सही विलोम शब्द है :

- (A) आगमन
- (B) अवल
- (C) अधर्म
- (D) सुगम

6. 'अमर' के लिए सही वाक्यांश है :

- (A) जो टूट न सके
- (B) जिसमें चेतना न हो
- (C) जो कभी नहीं मरता
- (D) जो दिखायी न दे

7. 'जिसका कभी जन्म न हो' के लिए सही

शब्द है :

- (A) अजन्मा
- (B) अदृश्य
- (C) अनुज
- (D) असाध्य

8. 'सूर्योदय से पूर्व का समय' के लिए एक

शब्द है :

- (A) अंधकार
- (B) अरुणोदय
- (C) दिन
- (D) रात

9. 'औसू' का तत्सम है :

- (A) औच
- (B) अशु
- (C) औख
- (D) ओम

10. 'सफेद' का तत्सम है :

- (A) सात
- (B) स्वर्ण
- (C) सपूत
- (D) श्वेत

11. 'साँप' का तत्सम है :

- (A) सप्त
- (B) सपना
- (C) सर्प
- (D) हीरा

12. 'कज्जल' का तद्भव है :

- (A) कसौटी
- (B) किरन
- (C) काजल
- (D) कैंची

13. 'गाहक' किसका अशुद्ध रूप है ?

- (A) ग्राहक
- (B) गोपाल
- (C) कौयल
- (D) गायक

14. 'सत्य' का लुप्तप्राय है :

- (A) गाँव
- (B) सच
- (C) खेत
- (D) चोर

15. 'अक्ल का दुश्मन होना' मुहावरे का अर्थ है :

- (A) अधिक बुद्धिमान
- (B) सहयोगी होना
- (C) समझदार होना
- (D) मूर्ख होना

16. 'न दिखायी पड़ना' किस मुहावरे का अर्थ है ?

- (A) आसन डोलना
- (B) गुल खिलाना
- (C) गूलर का फूल होना
- (D) आँचल पसारना

17. 'आग बबूला होना' मुहावरे का सही अर्थ है :

- (A) छिप जाना
- (B) अत्यन्त क्रोधित होना
- (C) भाग जाना
- (D) तिरस्कार करना

18. 'अकारण मुसीबत मोल लेना' के लिए सही लोकोक्ति है :

- (A) आ बैल मुझे मार
- (B) अंधे की लकड़ी
- (C) अपना रख पराया चख
- (D) थोथा चना बाजे घना

19. 'आपसी फूट अत्यधिक हानिकारक होती है' के

लिए उपयुक्त कहावत है :

- (A) घा का भेदी लंका छये
- (B) ऊँट के मुँह में जीरा
- (C) एक अनार सौ बीमार
- (D) चोर-चोर मौसेरे भाई

20. 'शक्तिशाली व्यक्ति की ही जीत होती है' के

लिए उपयुक्त कहावत है :

- (A) जितने मुँह उतनी बातें
- (B) जान है तो जहान है
- (C) पाँव उखड़ना
- (D) जिसकी लाठी उसकी भैंस

21. किस शब्द में 'प्रति' उपसर्ग है ?

- (A) प्रस्तुत
- (B) प्रमाण
- (C) प्रतिदिन
- (D) प्रशासन

22. 'अप' उपसर्ग वाला शब्द है :

- (A) अवगत
- (B) अनुचर
- (C) अपमान
- (D) अतिरिक्त

23. 'अधिकरण' में कौन-सा उपसर्ग है ?

- (A) नि
- (B) अधि
- (C) प्र
- (D) प्रति

24. 'लड़ाई' में प्रत्यय है :

- (A) आई
- (B) आन
- (C) ती
- (D) आ

25. 'आवट' प्रत्यय किस शब्द में प्रयुक्त है ?

- (A) चढ़ाई
- (B) मोरनी
- (C) मिलाप
- (D) थकावट

26. 'घबराहट' में कौन-सा प्रत्यय है ?

- (A) आई
- (B) आहट
- (C) ई
- (D) इया

27. 'विद्यालय' का संधि विच्छेद है :

- (A) विद्य + आलय
- (B) विद्या + आलय
- (C) विद्या + आलय
- (D) विद्य + आलय

28. 'सूर्य + अस्त' का सही रूप है :

- (A) सूर्यास्त
- (B) सूर्यास्त
- (C) सुरास्त
- (D) सुग्रास्त

29. 'परोपकार' का सन्धि विच्छेद बताइए :

- (A) प + उपकार
- (B) पर + उपकार
- (C) परो + उपकार
- (D) पर + ओपकार

30. 'रात-दिन' में कौन-सा समास है ?

- (A) तत्पुरुष समास
- (B) कर्मधारय समास
- (C) अव्ययीभाव समास
- (D) द्वन्द्व समास

31. 'शक्ति के अनुसार' के लिए सही सामासिक शब्द है :

- (A) यथाकर्म
- (B) प्रत्येक
- (C) यथाशक्ति
- (D) भरपेट

32. 'पाँच वटों का समाहार' के लिए उपयुक्त सामासिक पद है :

- (A) नवग्रह
- (B) पंचवटी
- (C) पंचपात्र
- (D) त्रिभुज

33. 'खूब लड़ी मर्दानी, वह तो झाँसी वाली रानी
थी' पंक्तियों में कौन-सा रस है ?

- (A) वीर रस
- (B) हास्य रस
- (C) शृंगार रस
- (D) करुण रस

34. निम्नलिखित में से कौन-सा एक रस का प्रकार
नहीं है ?

- (A) शृंगार
- (B) हास्य
- (C) रूपक
- (D) रौद्र

35. 'शृंगार रस' का स्थायी भाव है :

- (A) शोक
- (B) क्रोध
- (C) उत्साह
- (D) रति

36. निम्नलिखित में से कौन-सा एक छन्द का
प्रकार है ?

- (A) अनुप्रास
- (B) दोहा
- (C) उपमा
- (D) यमक

37. प्रत्येक चरण में 16-16 मात्राओं वाला छन्द है :

- (A) चौपाई
- (B) रौद्र
- (C) हास्य
- (D) अनुप्रास

38. निम्नलिखित में से कौन-सा एक अलंकार नहीं
है ?

- (A) अनुप्रास
- (B) उपमा
- (C) श्लेष
- (D) सौख्य

39. 'चारु चन्द्र की चंचल किरणें' में कौन-सा
अलंकार है ?

- (A) उपमा
- (B) रूपक
- (C) अनुप्रास
- (D) संदेह

40. हिन्दी वर्णमाला का प्रथम अक्षर है :

- (A) क
- (B) च
- (C) अ
- (D) म

41. 'ऋ' क्या है ?

- (A) व्यंजन
- (B) स्वर
- (C) मात्रा
- (D) संज्ञा

42. निम्नलिखित में संयुक्त व्यंजन है :

- (A) अ
- (B) इ
- (C) क
- (D) ज्ञ

43. निम्नलिखित में से कौन 'क' वर्गीय व्यंजन है ?

- (A) ख
- (B) छ
- (C) ठ
- (D) थ

44. निम्नलिखित में शुद्ध शब्द है :

- (A) क्रपा
- (B) कृपा
- (C) किरपा
- (D) क्रिरपा

45. निम्नलिखित में सही वर्तनी वाला शब्द है :

- (A) संसार
- (B) संसआर
- (C) संसकार
- (D) संमसार

46. निम्नलिखित में से कौन-सा शब्द शुद्ध है ?

- (A) शृंगार
- (B) शृंगार
- (C) शृंगार
- (D) संगार

47. प्रश्नवाचक चिह्न है :

- (A) |
- (B) |
- (C) "
- (D) ?

48. 'वाह !' में कौन-सा विराम चिह्न है ?

- (A) प्रश्नवाचक
- (B) विस्मयादिबोधक
- (C) पूर्ण विराम
- (D) अल्प विराम

49. निम्नलिखित में से पूर्ण विराम है :

- (A) ?
- (B) |
- (C) !
- (D) "

50. निम्नलिखित में संज्ञा है :

- (A) हिमालय
- (B) चलना
- (C) वह
- (D) लाल

51. निम्नलिखित में द्रव्यवाचक संज्ञा है :

- (A) लखनऊ
- (B) लड़का
- (C) लोहा
- (D) रमेश

52. 'राम' किस प्रकार की संज्ञा है ?

- (A) द्रव्यवाचक
- (B) व्यक्तिवाचक
- (C) भाववाचक
- (D) समूहवाचक

53. निम्नलिखित में संज्ञा शब्द है :

- (A) यह
- (B) वह
- (C) कुछ
- (D) मोहन

54. 'वह सुबह स्कूल गया' में सर्वनाम है :

- (A) वह
- (B) सुबह
- (C) स्कूल
- (D)

55. निम्नलिखित में प्रश्नवाचक सर्वनाम है :

- (A) श्याम
- (B) कौन
- (C) बाजार
- (D) बंदर

56. निम्नलिखित में 'पुरुषवाचक' सर्वनाम है :

- (A) पीला
- (B) तुम
- (C) पानी
- (D) किरण

57. 'यह पुस्तक है' में 'यह' किस प्रकार का सर्वनाम है ?

- (A) पुरुषवाचक
- (B) प्रश्नवाचक
- (C) निश्चयवाचक

58. 'काला घोड़ा दौड़ रहा है' में विशेषण है :

- (A) काला
- (B) घोड़ा
- (C) दौड़
- (D) रहा

59. निम्नलिखित में 'संख्यावाची' विशेषण है :

- (A) लाल
- (B) अच्छा
- (C) गोल
- (D) पाँच

60. 'मेरा भारत सुन्दर देश है' में विशेषण है :

- (A) मेरा
- (B) भारत
- (C) सुन्दर
- (D) देश

61. निम्नलिखित में क्रिया शब्द है :

- (A) किताब
- (B) दौड़ना
- (C) घड़ा
- (D) राम

62. 'मोहन का फुटबाल खेलना निश्चित है' में क्रिया है :

- (A) मोहन
- (B) फुटबाल
- (C) खेलना
- (D) निश्चित

63. 'तनु कल भोपाल जायेगी' में क्रिया है :

- (A) तनु
- (B) कल
- (C) भोपाल
- (D) जायेगी

64. निम्नलिखित में 'प्रेरणाशंक' क्रिया है :

- (A) लिखवाना
- (B) कुंसी
- (C) किताब
- (D) सूखा

65. क्रिया की विशेषता बताने वाले शब्द को कहते हैं :

- (A) सर्वनाम
- (B) क्रिया-विशेषण
- (C) संज्ञा
- (D) क्रिया

66. 'राहुल गाड़ी तेज चलाता है' में क्रिया-विशेषण है :

- (A) राहुल
- (B) गाड़ी
- (C) तेज
- (D) चलाता

67. निम्नलिखित में 'क्रिया-विशेषण' है :

- (A) धीरे-धीरे
- (B) भोजन
- (C) खाता
- (D) श्याम

68. 'असुर' का पर्यायवाची शब्द है :

- (A) देवता
- (B) मनुष्य
- (C) संसार
- (D) राक्षस

69. 'फूल' का पर्यायवाची शब्द है :

- (A) पहाड़
- (B) पुष्प
- (C) सूर्य
- (D) आकाश

70. निम्नलिखित में 'आकाश' का पर्यायवाची नहीं है :
- (A) आसमान
(B) गगन
(C) सर्प
(D) नभ
71. 'पहाड़' का पर्यायवाची है :
- (A) अंधेरा
(B) नदी
(C) पर्वत
(D) कमल
72. 'मेघ' का समानार्थी शब्द है :
- (A) मदन
(B) नीरद
(C) मोक्ष
(D) प्रकाश
73. एक से अधिक अर्थ देने वाले शब्दों को क्या कहते हैं ?
- (A) संज्ञा शब्द
(B) सर्वनाम शब्द
(C) विशेषण शब्द
(D) अनेकार्थक शब्द
74. 'जल' और 'इज्जत' किस शब्द के अर्थ हैं ?
- (A) पानी
(B) कोयल
(C) पुराना
(D) बिजली
75. 'भूत' का अर्थ है :
- (A) बूँद, कण
(B) द्विज, पक्षी
(C) बीता हुआ, प्रेत
(D) दवा, दारू

Roll No.

6078

B. C. A. (Fourth Semester)

EXAMINATION, 2025-26

Paper Fifth

OPERATING SYSTEMS

Course Code : B230405T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections–A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

(Very Short Answer Type Questions)

Note : Attempt any *three* questions. Give answer of each question in about
50 words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) Define operating system with any *three* functions of OS.
- (b) What is virtual memory ? Write its advantages.
- (c) What is a process ? Write the components of PCB.
- (d) Define critical section problem. What are its requirements ?
- (e) Differentiate between batch system and time sharing system.

P. T. O.

Section—B**(Short Answer Type Questions)**

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) Explain process synchronization. Also describe semaphore and their types with examples.
- (b) Discuss deadlock detection and prevention techniques in detail.
- (c) Explain the concept of process scheduling. Also describe the working of FCFS and SJF algorithms with suitable examples of each.
- (d) Define virtual memory. How the concept of virtual memory can be implemented ? Explain paging technique in detail.
- (e) Write short notes on the following :
- (i) Thrashing
 - (ii) Page Replacement Algorithms
 - (iii) Scheduling Criteria
- (f) Describe the file system structure. Explain the methods used for directory implementation.
- (g) Describe the structure of OS. Explain how system calls, system programs and virtual machine help in providing services to users and applications.

Section—C**(Long Answer Type Questions)**

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. $2 \times 15 = 30$

3. (a) What is Producer-Consumer Problem ? Explain the solution of this problem with suitable examples of producers solution and consumer's solution.

- (b) Explain the concept of Deadlock Avoidance, consider a system with 5 processes (P_0, P_1, P_2, P_3, P_4) and three resource types (A, B, C). Resource A has 10 instances. B has 5 and C has 7 instances. The snapshot of system at time t_0 is :

Process	Allocation			Max			Available		
	A	B	C	A	B	C	A	B	C
P_0	0	1	0	7	5	3	3	3	2
P_1	2	0	0	3	2	2			
P_2	3	0	2	9	0	2			
P_3	2	1	1	2	2	2			
P_4	0	0	2	4	3	3			

- (i) Calculate the need matrix.
 - (ii) Is the system in a safe state ?
 - (iii) If yes, what is the safe sequence ?
- (c) Explain the concept of security and protection in OS. Also describe safeguards, information flow control and formal models used for protection of OS.
- (d) What is operating system ? What are its types ? Explain the characteristics of following OS in detail :
- (i) Real Time System
 - (ii) Distribute OS
 - (iii) Time Sharing OS

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Roll No.

6077

B. C. A (Fourth Semester)

EXAMINATION, 2025-26

Paper Third

INTRODUCTION TO PYTHON

Course Code : B230403T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections–A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

(Very Short Answer Type Questions)

Note : Attempt any *three* questions. Give answer of each question in about
50 words. Each question carries 3 marks. 3×3=9

1. (a) Define indentation in python with the help of example.
- (b) What is Lambda function ?
- (c) Discuss in brief nested if with the help of program.
- (d) Define data frame with example.
- (e) Differentiate among list, tuple and dictionary.

P. T. O.

Section—B

(Short Answer Type Questions)

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. 4×9=36

2. (a) Define string. Explain the following string methods in detail :
- (i) lower()
 - (ii) capitalize()
 - (iii) split()
 - (iv) strip()
 - (v) upper()
- (b) What is Numpy in Python ? Discuss indexing and slicing in Numpy with the help of proper code.
- (c) Explain and discuss the namespaces and scope in python with the help of program.
- (d) Define matplotlib in python. Write the code to draw scatter plot and line plot.
- (e) Write short notes on the following :
- (i) Scikit Learn
 - (ii) Scipy
- (f) Define exception handling in Python with the help of program in detail.
- (g) Write a python program to :
- (i) Print the factorial of any number
 - (ii) Find the Largest number from three given numbers.

Section—C

(Long Answer Type Questions)

Note : Attempt any *two* questions. Answer each question in about 475 words. Each question carries 15 marks. $2 \times 15 = 30$

3. (a) What is python ? Write down any *five* features of python in detail and also list the application of python.
- (b) What do you understand by List ? Write down its characteristics. Explain the following method of list :
- (i) `append()`
 - (ii) `count()`
 - (iii) `pop()`
 - (iv) `remove()`
 - (v) `extend()`
- (c) What is file handling in Python ? Explain the types of files and its operation in detail.
- (d) What is Pandas in Python ? Explain the built in pandas function with proper syntax and code : `head()`, `tail()`, `dropna()`, `isnull()` and `describe()`.

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Roll No.

6076

B. C. A. (Fourth Semester)

EXAMINATION, 2025-26

Paper II

DATABASE MANAGEMENT SYSTEMS

Course Code : B230402T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C. Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) Differentiate between physical and logical data independence.
- (b) State any *two* of codd's 12 rules for a relational database.
- (c) Define a weak entity set and explain how it is identified.
- (d) Differentiate between a view and a cursor.
- (e) Briefly define functional dependency.

Section—B

Short Answer Type Questions

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) What is a deadlock in a database environment ?
- (b) Explain the Architecture of a database system (three schema architecture).

P. T. O.

- (c) Describe the concepts of specialization and aggregation with examples.
- (d) Compare and contrast TRC and Relational Algebra.
- (e) Explain 3rd normal form and differentiate it with BCNF.
- (f) Discuss the role of indexing and how it improves query performance.
- (g) Describe *two* phase commit protocol in transaction handling.

Section—C

Long Answer Type Questions

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. 2×15=30

3. (a) Explain the process of converting an ER model into relational schema.
- (b) Discuss various types of joins and set operations used in relational algebra.
- (c) Explain various concurrency problem : Dirty reads, lost updates and how to solve them using locking mechanisms.
- (d) Discuss the importance of Encryption and access control in maintaining database security and integrity.

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Roll No.

6696

B. C. A. (Fourth Semester)

EXAMINATION, 2025-26

Paper I

JAVA PROGRAMMING

Course Code : B230401T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about
50 words. Each question carries 3 marks. 3×3=9

1. (a) Why Java is known as a 'Platform Indepent' Language.
- (b) Differentiate between an Interface and an Abstract class ?
- (c) What is the difference between the 'throw' and 'throws' keywords ?
- (d) What is super and sub-class ?
- (e) List the various states in a Java Thread's Life cycle.

P. T. O.

Section—B

Short Answer Type Questions

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. 4×9=36

2. (a) Describe method overloading. Explain with a Java program.
- (b) Describe the role of 'SUPER' keyword in Java programming.
- (c) Describe layout manager. Compare different layout managers.
- (d) Explain the use of Try, Catch and Finally blocks.
- (e) Define Thread and Multi Threading. Explain why Thread Synchronization is necessary.
- (f) Briefly explain the purpose of Java Beans.
- (g) Write a Java Program to show implementation of method overriding.

Section—C

Long Answer Type Questions

Note : Attempt any *two* questions. Answer each question in about **475** words. Each question carries 15 marks. 2×15=30

3. (a) Define the applet. Explain in detail about applet's life cycle.
- (b) Describe the constructor mechanism. Explain constructor overloading and types of constructor.
- (c) Why is multiple Inheritance not supported through classes in Java ? How is it achieved ?
- (d) Explain the collections frame work hierarchy. Discuss about list, set and map.

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Roll No.

6695

B. C. A. (Fourth Semester)

EXAMINATION, 2025-26

Paper Fourth

SOFTWARE ENGINEERING

Course Code : B230404T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C. Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

(Very Short Answer Type Questions)

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) Define the term 'Software Engineering'. How does it differ from simple programming ?
(b) What is the primary difference between verification and validation ?
(c) Briefly explain the concept of Software reliability.
(d) List the *two* main types of Software maintenance tasks.
(e) What do you mean by Abstraction ?

Section—B

(Short Answer Type Questions)

Note : Attempt any *four* questions. Answer each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) Explain the waterfall model of software development. What are its limitations ?

P. T. O.

- (b) Compare and contrast Cohesion and Coupling. Why is 'High Cohesion, Low Coupling' a goal in Software design ?
- (c) What is Black Box testing ? Provide *two* examples of testing techniques used in this approach.
- (d) Describe the key activities involved in Software Configuration Management (SCM).
- (e) Briefly explain the concept of project scheduling and project control.
- (f) What do you mean by Reverse Engineering ? Explain.
- (g) Briefly introduce the SEI-CMM model and its significance in Software quality assurance.

Section—C

(Long Answer Type Questions)

Note : Attempt any *two* questions. Answer each question in about 475 words. Each question carries 15 marks. 2×15=30

3. (a) Briefly compare the Evolutionary vs. Prototype Models. In what scenarios would you choose a prototyping model over a spiral model ?
- (b) Elaborate on the various levels of testing, specifically focusing on 'System Testing and Debugging'. How does 'Testing in the Large' differ from 'Testing in the Small' ?
- (c) Discuss the various Quality Models and the specific activities required to ensure high quality Software delivery.
- (d) Briefly differentiate between Abstraction and Modularity in the context of Software design.

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B.A./B.SC./B.COM/B.B.A/B.C.A (SEMESTER-IV)**EXAMINATION - 2025-26****ABILITY ENHANCEMENT COURSES****ENGLISH LANGUAGE SKILL AND COMMUNICATION****PAPER-VI**

(To be filled in by the candidate / निम्न पूर्तियाँ परीक्षार्थी स्वयं भरें)

[Maximum Marks : 75]

[अधिकतम अंक : 75]

Roll No. (In Figures) :

अनुक्रमांक (अंकों में)

[Time : 2 Hours]

[समय : 2 घण्टे]

Roll No. (In Words) :

अनुक्रमांक (शब्दों में)

Booklet Code**B**

Name of College :

कॉलेज का नाम

**Question Booklet
Number**

College Code :

कॉलेज का कोड

Signature of Candidate

परीक्षार्थी के हस्ताक्षर

Signature of Invigilator

कक्ष-निरीक्षक के हस्ताक्षर

Instructions to the Examinee :

परीक्षार्थियों के लिए निर्देश :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer all 100 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को सभी 100 प्रश्नों को केवल दी गई OMR आन्तर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्तर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें, कुछ भाग, छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।

(Remaining instructions on the last page)

(शेष निर्देश अन्तिम पृष्ठ पर)

QUESTION NO.:- 1

Fill in the blank with correct verb

They —— playing cricket since morning

- (A) are
- (B) were
- (C) have been
- (D) have

QUESTION NO.:- 2

Fill in the blank with correct preposition

He was born —— 25th October

- (A) in
- (B) on
- (C) for
- (D) to

QUESTION NO.:- 3

The correct passive voice of the sentence -

"I read a book yesterday" is -

- (A) A book is read by me yesterday.
- (B) A book was read by me yesterday
- (C) I was read a book yesterday.
- (D) Yesterday was read a book by me.

QUESTION NO.:- 4

The correct indirect speech of the sentence -

The teacher said to the students, "The earth moves round the sun." is -

- (A) The teacher told the students that the earth moves round the sun.
- (B) The teacher said the students that the earth moved round the sun.
- (C) The teacher informed about the sun.
- (D) The teacher told the students that the earth has moved round the sun

QUESTION NO.:- 5

Antonym of Permanent is -

- (A) Regular
- (B) Irregular
- (C) Temporary
- (D) Everlasting

QUESTION NO.: - 6

What is one word for 'One who knows everything'?

- (A) Powerful
- (B) Omniscient
- (C) Omnipotent
- (D) Omnipresent

QUESTION NO.: - 7

'Look after' means -

- (A) Look when one has gone
- (B) Take care of
- (C) Always looking
- (D) Searching

QUESTION NO.: - 8

"Man of letters" means -

- (A) Scholar
- (B) Postman
- (C) Man carrying letters
- (D) Man full of letters

QUESTION NO.: - 9

In the sentence "She is like a lioness." there is -

- (A) Simile
- (B) Metaphor
- (C) Oxymoron
- (D) Personification

QUESTION NO.: - 10

In the sentence "Life is a bitter-sweet." there is -

- (A) Metaphor
- (B) Simile
- (C) Oxymoron
- (D) Personification

QUESTION NO.:- 11

In the sentence "It has been raining since five days." which part has an error-

- (A) it has been
- (B) raining
- (C) since
- (D) five days

QUESTION NO.:- 12

In the sentence "Neither of the two boys are doing work properly." which part has an error

- (A) neither of the two boys
- (B) are
- (C) doing
- (D) work properly

QUESTION NO.:- 13

The assertive sentence of "Who has seen the wind?" is

- (A) I have seen the wind
- (B) Everyone has seen the wind
- (C) None has seen the wind
- (D) Who has not seen the wind?

QUESTION NO.:- 14

Antonym of virtue is -

- (A) Goodness
- (B) Vice
- (C) Wise
- (D) Natural

QUESTION NO.:- 15

"Under the Banyan Tree" is written by

- (A) A.K. Ramanujan
- (B) R.K. Narayan
- (C) Tagore
- (D) Premchand

QUESTION NO.:- 16

The story "Under the Banyan Tree" focuses on

- (A) War
- (B) Politics
- (C) Love
- (D) Story Telling

QUESTION NO.:- 17

Women's Education is written by -

- (A) Gandhi
- (B) Nehru
- (C) Tagore
- (D) Radhakrishnan

QUESTION NO.:- 18

In the essay Women's Education the writer promotes -

- (A) Men education
- (B) Women education
- (C) Poor - education
- (D) Child - education

QUESTION NO.:- 19

According to the essay Women's Education, education leads to

- (A) Poverty
- (B) Ignorance
- (C) Empowerment
- (D) Weakness

QUESTION NO.:- 20

"Where there is a Will" is a

- (A) Novel
- (B) Poem
- (C) Drama
- (D) Essay

QUESTION NO.:- 21

What is the theme of Where is a Will

- (A) Love
- (C) Nature

- (B) War
- (D) Family Conflict

QUESTION NO.:- 22

Who is protagonist of the novel He Who Rides a Tiger -

- (A) Kali Charan
- (C) Wealthy Merchant

- (B) Chandrika
- (D) Pandit

QUESTION NO.:- 23

The theme of He Who Rides a Tiger is -

- (A) Social Issues
- (C) Nature

- (B) War
- (D) Comedy

QUESTION NO.:- 24

Literature helps in

- (A) Language learning
- (C) Silence

- (B) Ignorance
- (D) Confusion

QUESTION NO.:- 25

Protagonist in literature is -

- (A) Villain
- (C) Side character

- (B) Hero
- (D) Narrator

QUESTION NO.:- 26

Antagonist is

- (A) Hero
- (C) Friend

- (B) Villain
- (D) Narrator

QUESTION NO.:- 27

Literature reflects

- (A) Society
- (C) Culture

- (B) Nature
- (D) All

QUESTION NO.:- 28

Who is not a character of He Who Rides a Tiger

- (A) Kali charan
- (C) Chandrika

- (B) Kali das
- (D) The Seth

QUESTION NO.:- 29

Who is the central character in the play Where There is Will

- | | |
|-----------|--------------------|
| (A) Ajit | (B) Hashmukh Mehta |
| (C) Kiran | (D) Preeti |

QUESTION NO.:- 30

Who controls the family even after Hashmukh's death -

- | | |
|-----------|----------------------|
| (A) Ajit | (B) Hashmukh's ghost |
| (C) Kiran | (D) Preeti |

QUESTION NO.:- 31

Who is Kiran Jhaveri

- | | |
|-------------------------|---------------------|
| (A) A lawyer | (B) Hashmukh's wife |
| (C) Hashmukh's mistress | (D) Ajit's sister |

QUESTION NO.:- 32

What happens to Hashmukh Mehta at the beginning of the play -

- | | |
|---------------------|---------------------|
| (A) He gets married | (B) He dies |
| (C) He leaves home | (D) He becomes rich |

QUESTION NO.:- 33

काश! मैं राजा होता। which is the correct translation of it ?

- | | |
|-----------------------------|----------------------------------|
| (A) I wish, I were a king. | (B) I want to be a king. |
| (C) I wish that I am a king | (D) I wanted that I were a king. |

QUESTION NO.:- 34

मुझे स्कूल जाना पड़ता है" what is correct translation of it ?

- | | |
|-----------------------------------|---------------------------|
| (A) I have to go to school. | (B) I am to go to school. |
| (C) I shall have to go to school. | (D) I do go to school. |

QUESTION NO.:- 35

Translate into Hindi - There was a king in Varanasi

- | | |
|---------------------------------|----------------------------|
| (A) वहाँ वाराणसी में एक राजा था | (B) वाराणसी में एक राजा था |
| (C) वाराणसी का एक राजा था | (D) एक वाराणसी राजा था |

QUESTION NO.:- 36

Verbal Communication includes -

- (A) gestures
- (B) spoken words
- (C) Facial expression
- (D) Postures

QUESTION NO.:- 37

Non-verbal communication includes -

- (A) Speech
- (B) Writing
- (C) Body Language
- (D) Grammar

QUESTION NO.:- 38

Communication means

- (A) Writing only
- (B) Exchange of Ideas
- (C) Reading only
- (D) Speaking only

QUESTION NO.:- 39

Intrapersonal communication is -

- (A) Between two people
- (B) Within oneself
- (C) In a group
- (D) Public speaking

QUESTION NO.:- 40

Group communication involves

- (A) One person
- (B) Two people
- (C) Many people
- (D) Machine

QUESTION NO.: - 41

Barrier in communication means -

- (A) Help in communication
- (B) Language
- (C) Obstacle
- (D) Speech

QUESTION NO.: - 42

Noise is a type of

- (A) Medium
- (B) Barrier
- (C) Feedback
- (D) Message

QUESTION NO.: - 43

Feedback means -

- (A) Sending message
- (B) Receiving response
- (C) Ignoring
- (D) Writing

QUESTION NO.: - 44

Dialogue involves -

- (A) One person
- (B) Two persons
- (C) No one
- (D) Machine

QUESTION NO.: - 45

Group discussion is useful for -

- (A) Fighting
- (B) Sharing ideas
- (C) Silence
- (D) Sleeping

QUESTION NO.:- 46

Monologue means

- (A) Two speakers
- (B) Group speaking
- (C) One speaker
- (D) Debate

QUESTION NO.:- 47

Interview is

- (A) Informal talk
- (B) Formal conversation
- (C) Argument
- (D) Debate

QUESTION NO.:- 48

Public speech is

- (A) Private talk
- (B) Writing
- (C) Speaking to audience
- (D) Reading

QUESTION NO.:- 49

Close reading means -

- (A) Careful Reading
- (B) Skipping
- (C) Guessing
- (D) Fast Reading

QUESTION NO.:- 50

Paraphrasing means -

- (A) Copying
- (B) Re-writing in own words
- (C) Reading
- (D) Ignoring

QUESTION NO.:- 51

Translation means -

- (A) Writing
- (B) Converting language
- (C) Reading
- (D) Speaking

QUESTION NO.:- 52

Report writing is -

- (A) Informal writing
- (B) Formal writing
- (C) Poetry
- (D) Story

QUESTION NO.:- 53

Letter writing includes -

- (A) Only Formal
- (B) Only Informal
- (C) Both Formal and Informal
- (D) None

QUESTION NO.:- 54

Notice writing is

- (A) Personal Information
- (B) Public Information
- (C) Poem
- (D) Short Story

QUESTION NO.:- 55

Email writing is -

- (A) Modern communication
- (B) Old method
- (C) Oral
- (D) Gesture

QUESTION NO.: - 56

Business communication is

- (A) Professional
- (B) Informal
- (C) Personal
- (D) Emotional

QUESTION NO.: - 57

Tone in communication means -

- (A) Sound
- (B) Language
- (C) Style
- (D) Attitude

QUESTION NO.: - 58

Effective communication requires -

- (A) Clarity
- (B) Confusion
- (C) Noise
- (D) Anger

QUESTION NO.: - 59

Listening is

- (A) Passive Process
- (B) Writing
- (C) Active Process
- (D) Neutral Process

QUESTION NO.: - 60

Encoding means -

- (A) Receiving
- (B) Sending message
- (C) Converting ideas into words
- (D) Ignoring

QUESTION NO.: - 61

Pronoun replaces

- (A) Verb
- (B) Adjective
- (C) Noun
- (D) Adverb

QUESTION NO.: - 62

Verb shows -

- (A) Name
- (B) Action
- (C) Quality
- (D) Place

QUESTION NO.: - 63

Preposition shows -

- (A) Action
- (B) Relation
- (C) Name
- (D) Quality

QUESTION NO.: - 64

In active voice

- (A) Object acts
- (B) Subject acts
- (C) Both acts
- (D) None acts

QUESTION NO.: - 65

Direct speech has -

- (A) Reporting Verb and Reporting Noun
- (B) Reporting Verb and Reporting Subject
- (C) Reporting Verb and Reported Speech
- (D) Reported speech and Reported Subject

QUESTION NO.:- 66

'An apple of one's eyes' means

- (A) Very popular
- (B) Very intelligent
- (C) Very dear
- (D) One apple in eyes

QUESTION NO.:- 67

Paragraph should have -

- (A) One idea
- (B) Many ideas
- (C) No idea
- (D) Confusion

QUESTION NO.:- 68

Essay writing includes

- (A) Introduction
- (B) Body
- (C) Conclusion
- (D) All

QUESTION NO.:- 69

Precis writing means

- (A) Long writing
- (B) Short summary
- (C) Story
- (D) Essay

QUESTION NO.:- 70

Story writing includes

- (A) Plot
- (B) Characters
- (C) Ending
- (D) All

QUESTION NO.: - 71

Autobiography is

- (A) Life of others
- (B) Life story of oneself
- (C) Life story of a poet
- (D) Life story of any writer

QUESTION NO.: - 72

Comprehension means -

- (A) Writing
- (B) Reading
- (C) Understanding
- (D) Listening

QUESTION NO.: - 73

"Honest" begins with -

- (A) Vowel sound
- (B) Consonant sound
- (C) Silent
- (D) None

QUESTION NO.: - 74

"He goes to school." is in

- (A) Past Tense
- (B) Future Tense
- (C) Present Tense
- (D) Future Perfect Tense

QUESTION NO.: - 75

"She is eating" is in -

- (A) Present Perfect
- (B) Present Indefinite
- (C) Present Continuous
- (D) Present Perfect Continuous

Roll No.

6711

B. C. A. (Sixth Semester)

EXAMINATION, 2025-26

Paper First

E COMMERCE AND APPLICATION

Course Code : B230601T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections—A, B and C.
Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) What is the difference between e-commerce and e-business ?
(b) What do you understand by Electronic Payment System ?
(c) Define Trade Cycle and its types.
(d) Define type of transactions in B2B e-commerce.
(e) Explain Internet and Extranet with example.

Section—B

Short Answer Type Questions

Note : Attempt any *four* questions. Attempt each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) Explain electronic cash transaction with suitable diagram.
(b) Define internet security threads and its types.
(c) Define supply chain management with examples.

P. T. O.

- (d) Differentiate between traditional and EDI (Electronic Data Interchange) and what are the benefits of EDI ?
- (e) Define Public Policy. Also explain the law of public policy.
- (f) What is electronic force and market force in e-Commerce ?
- (g) Define business environment in terms of economy, technology and labour.

Section—C

Long Answer Type Questions

Note : Attempt any *two* questions. Attempt each question in about **475** words. Each question carries 15 marks. 2×15=30

- 3. (a) Discuss the scope and applications of e-commerce in modern business. How has it changed traditional business practices ?
- (b) Describe different types of e-commerce models such as B2B, B2C, C2C and C2B with suitable examples.
- (c) What is M-Commerce (Mobile Commerce) ? Explain its features, benefits and challenges.
- (d) Discuss the legal and ethical issues involved in e-Commerce.

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Roll No.

6712

B. C. A. (Sixth Semester) EXAMINATION, 2025-26

Paper Second

ADVANCED DATABASE MANAGEMENT SYSTEM

Course Code : B230602T

Time : Two Hours]

[Maximum Marks : 75

Note : This question paper is divided into three Sections–A, B and C. Attempt questions from all Sections as directed.

Inst. : The candidates are required to answer only in serial order. If there are many parts of a question, answer them in continuation.

Section—A

Very Short Answer Type Questions

Note : Attempt any *three* questions. Give answer of each question in about **50** words. Each question carries 3 marks. $3 \times 3 = 9$

1. (a) Briefly explain about Query Optimization.
- (b) What is the significance of object identity in Object-Oriented Databases ?
- (c) Differentiate between horizontal and vertical fragmentation in DDBMS.
- (d) Briefly define the purpose of a 2-phase commit (2PC) protocol.
- (e) Define Spatial Database Concepts.

Section—B

Short Answer Type Questions

Note : Attempt any *four* questions. Attempt each question in about **225** words. Each question carries 9 marks. $4 \times 9 = 36$

2. (a) Explain various join strategies for parallel processors.

P. T. O.

- (b) Discuss the importance of database workloads and tuning decisions in performance management.
- (c) Explain the concept of Structured Types and Nested Relational Models.
- (d) Describe the system architecture and data model of a Distributed Database System.
- (e) Explain the techniques of deadlock detection and resolution in a distributed environment.
- (f) Define data mining and explain its relationship with data warehousing.
- (g) Discuss the unique issues and challenges faced in Real-Time and Mobile Databases.

Section—C

Long Answer Type Questions

Note : Attempt any *two* questions. Attempt each question in about **475** words. Each question carries 15 marks. 2×15=30

3. (a) Provide a detailed comparison between multimedia databases, web databases and deductive databases.
- (b) Discuss the features of object-oriented DBMS.
- (c) Write a comprehensive note on 'Expert Database Systems' and 'Fuzzy Database Systems'.
- (d) Explain the role of 'Active Databases' in modern automation.

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