



The ICFAI University, Dehradun
Ph.D. Entrance Examination, 2025
IUDRET-2025
Question Booklet

Computer Science & Engineering

BOOKLET NO.:

Name and Signature of Invigilators

1. (Signature): _____
(Name): _____

OMR Sheet No.:
(To be filled by the Candidate)

2. (Signature): _____
(Name): _____

Application No. :
(To be filled by the Candidate)

Time: 2 Hours

Maximum Marks: 50

Number of Pages in this Booklet: 06

Number of Questions in this Booklet: 50

General Instructions: -

1. Write the application number in the space provided.
2. This question booklet consists of fifty multiple-choice types of questions.
3. At the commencement of the examination, the question booklet will be given to you. In the first five minutes, you are required to open the question booklet and compulsorily examine it as below:
 - (i) To have access to the question booklet, tear off the paper seal on the edge of this cover page. Do not accept a question booklet without a sticker seal and do not accept an open question booklet.
 - (ii) Tally the number of pages and a number of questions in the booklet with the information printed on the cover page. A faulty question booklet due to pages/questions missing or duplicate or not in serial order or any other discrepancy should be replaced immediately by a correct booklet from the invigilators within five minutes. Afterward, neither the question booklet will be replaced nor any extra time will be given.
 - (iii) After this verification is over, the OMR Sheet Numbers should be entered into this question booklet.
4. Each item has four alternative responses marked (A), (B), (C), and (D). You have to darken the circle as indicated below on the correct response against each item.
Example: (A) (B) ● (D) where (C) is the correct response.
5. Your responses to the items are to be indicated in the **OMR Sheet**. It will not be evaluated if you mark at any place other than in the circle in the OMR Sheet.
6. Rough Work is to be done in the space provided in the question booklet.
7. Before leaving the examination hall, candidate is required to return the question booklet and OMR sheet to the invigilators at the end of the examination compulsorily.
8. Use only Blue/Black Ball point pen.
9. Use of any calculator or log table etc., is prohibited.
10. There is no negative marking for incorrect answer.

IUDRET-2025

COMPUTER SCIENCE & ENGINEERING



Note: This question booklet contains **fifty (50)** objective-type questions, each carrying one (01) mark.

1. Which of the following is the primary objective of research?
 - (A) To develop new theories
 - (B) To evaluate existing systems
 - (C) To find solutions to problems
 - (D) All of the above

2. The first step in the research process is
 - (A) Data collection
 - (B) Formulating hypothesis
 - (C) Identifying a research problem
 - (D) Literature Review

3. Which of the following is commonly used as a measure of a journal's quality based on citation frequency?
 - (A) h-index
 - (B) Altmetric Score
 - (C) Impact factor
 - (D) i10-index

4. The term "empirical" in research refers to
 - (A) Theoretical reasoning
 - (B) Use of statistical tools
 - (C) Data based on observation or experiment
 - (D) Use of abstract concepts

5. Which of the following can best be described as a Nominal variable?
 - (A) Gender
 - (B) Rank
 - (C) Height
 - (D) Satisfaction Score

6. In a simple linear regression equation, the slope represents
 - (A) The value of the independent variable
 - (B) The change in the dependent variable for a one-unit change in the independent variable
 - (C) The average of the residuals
 - (D) The mean of the dependent variable

7. Plagiarism refers to
 - (A) Publishing in a reputed journal
 - (B) Using others' ideas or words without proper attribution
 - (C) Repeating your own research
 - (D) Reviewing others' papers

8. Which organization in India manages the Shodhganga repository?
 - (A) ICSSR
 - (B) AICTE
 - (C) UGC-INFLIBNET
 - (D) NAAC



9. Match the following:

List – I	List – II
(Research Concept)	(Characteristics)
a. Shodhganga	1. Repository of research proposals
b. Shodhgangotri	2. Anti-plagiarism software platform
c. ShodhShuddhi	3. Repository of Indian Ph.D. theses
d. DrillBit	4. Plagiarism detection tool used in India

Choose the correct answer from the options given below:

- (A) a - 3, b - 1, c - 2, d - 4
(B) a - 1, b - 3, c - 4, d - 2
(C) a - 3, b - 4, c - 1, d - 2
(D) a - 2, b - 1, c - 3, 4 - 4
10. The null hypothesis generally represents
- (A) The researcher's assumption
(B) The expected outcome
(C) No effect or no difference
(D) A proven theory
11. A researcher selects every 10th name from a list of 1,000 students. This is an example of
- (A) Cluster sampling
(B) Systematic sampling
(C) Convenience sampling
(D) Stratified sampling

12. Which platform is officially promoted by the Government of India for online higher education courses?

- (A) Coursera
(B) edX
(C) SWAYAM
(D) Udemy

13. A person saves ₹500 per month from his salary of ₹6,000. What is his annual expenditure?

- (A) ₹66,000
(B) ₹60,000
(C) ₹63,000
(D) ₹63,500

14. If 'BOARD' is coded as 'OABRD', what will be the code for 'LEMON'?

- (A) EMOLN
(B) ELMON
(C) ELMNO
(D) EOMLN

15. Which indexing service is considered essential for measuring journal quality in scientific and technical research?

- (A) Google Scholar
(B) DOAJ
(C) Scopus
(D) Academia.edu



Directions 16-20: Study the following table carefully and answer questions 16–20. It consists of data on the number of research papers published by faculty members in five departments (A to E) of a university over two years: 2023 and 2024.

Department	Publications	
	2023	2024
A	50	65
B	80	70
C	45	60
D	60	90
E	55	75

16. Which department had the highest increase in publications from 2023 to 2024?
- (A) A
(B) D
(C) C
(D) E
17. What is the total number of publications made by all departments in 2024?
- (A) 340
(B) 360
(C) 370
(D) 380
18. What is the average number of publications in 2023 across all departments?
- (A) 58
(B) 56
(C) 57
(D) 55
19. What is the ratio of total publications in Department B to Department C for both years combined?
- (A) 150:105
(B) 160:115
(C) 150:110
(D) 145:105
20. Publications from Department A in 2024 are approximately what percent more than those in 2023?
- (A) 30%
(B) 28%
(C) 32%
(D) 35%
21. Which component of the operating system loads first?
- (A) Kernel
(B) Shell
(C) Command Interpreter
(D) Scheduler
22. Which of these is not a type of operating system?
- (A) Real-time
(B) Batch
(C) Text-based
(D) Distributed
23. In OS, which algorithm is best suited for time-sharing systems?
- (A) FCFS
(B) SJF
(C) Round Robin
(D) LIFO
24. Which SQL statement is used to retrieve data?
- (A) INSERT
(B) UPDATE
(C) SELECT
(D) DELETE



25. Which command is used to remove all records from a table?
- (A) REMOVE
 - (B) DELETE
 - (C) DROP
 - (D) TRUNCATE
26. In DBMS, normalization is used to:
- (A) Reduce data redundancy
 - (B) Increase complexity
 - (C) Remove NULL values
 - (D) Improve performance
27. Which of the following is an example of encapsulation?
- (A) Defining multiple methods with the same name
 - (B) Restricting access using private variables
 - (C) Using abstract classes
 - (D) Overriding methods
28. Which of the following supports method overloading?
- (A) C
 - (B) HTML
 - (C) Java
 - (D) SQL
29. What is used to implement abstraction in Java?
- (A) Classes
 - (B) Objects
 - (C) Interfaces
 - (D) Variables
30. Which operator is used to access the value at the address stored in a pointer?
- (A) &
 - (B) *
 - (C) ->
 - (D) %
31. Which keyword is used to define a constant in C?
- (A) Const
 - (B) Constant
 - (C) Define
 - (D) Static
32. Which function is used to allocate memory dynamically?
- (A) malloc()
 - (B) alloc()
 - (C) dynalloc()
 - (D) new()
33. Which of the following is a client-side scripting language?
- (A) PHP
 - (B) ASP
 - (C) JavaScript
 - (D) Python
34. Which tag is used to create a hyperlink in HTML?
- (A) <link>
 - (B) <href>
 - (C) <a>
 - (D) <hyperlink>
35. CSS stands for:
- (A) Creative Style Sheets
 - (B) Cascading Style Sheets
 - (C) Computer Style Sheets
 - (D) Central Style Sheets
36. Which phase of the compiler removes whitespace and comments?
- (A) Parser
 - (B) Lexer
 - (C) Optimizer
 - (D) Linker



37. Which one is responsible for syntax analysis?
(A) Semantic Analyzer
(B) Lexer
(C) Parser
(D) Code Generator
38. IPv4 address consist ofbits
(A) 8
(B) 16
(C) 24
(D) 32
39. Full form of HTTP is
(A) Hyper text transfer protocol
(B) High text transfer protocol
(C) Hyper text transmission
(D) Home text transfer protocol
40. Which automaton accepts context-free languages?
(A) DFA
(B) PDA
(C) NFA
(D) Turing Machine
41. Turing machine is more powerful than FSM because it has:
(A) Input tape
(B) Read/write head
(C) Infinite memory
(D) State transitions
42. Which data structure is used in recursion?
(A) Queue
(B) Stack
(C) Array
(D) Tree
43. Which of the following is not a linear data structure?
(A) Array
(B) Linked List
(C) Stack
(D) Graph
44. Which traversal visits root, left, and right subtree?
(A) Inorder
(B) Preorder
(C) Postorder
(D) Level order
45. Which file extension is used for C source files?
(A) .java
(B) .html
(C) .c
(D) .py
46. Which protocol is used to send email?
(A) HTTP
(B) FTP
(C) SMTP
(D) POP3
47. What is the primary function of the CPU in a computer?
(A) Store data permanently
(B) Execute instructions from programs
(C) Display output on the screen
(D) Connect to the internet
48. What is the purpose of a compiler?
(A) Read a program
(B) Translate high-level code into machine code
(C) Debug a program
(D) Store program files HTTP
49. What are the features of cyber security?
(A) Compliance
(B) Defense against internal threats
(C) Threat Prevention
(D) All of the above
50. Which of the following is a component of Artificial Intelligence?
(A) Learning
(B) Training
(C) Designing
(D) Puzzling

