

Kendriya Vidyalaya Class 8 Question Papers 2019

Computer Science Solved Practice Paper

Hard Level • Descriptive Examination

No Multiple Choice Questions

Class
VIII

Subject
Computer Science

Maximum Marks
80

Level
Hard

Section A – Very Short Answer Questions

10 × 1 = 10 Marks

Q1. What is an operating system?

1 Mark

Solution:

An operating system is system software that manages computer hardware, software resources and provides an interface for users and applications.

Answer: An operating system manages computer resources and provides an interface between the user and the computer.

Q2. What is a computer network?

1 Mark

Solution:

A computer network is a group of connected computers and devices that can communicate and share resources.

Answer: A network connects computers and devices for communication and resource sharing.

Q3. What is the full form of CPU?

1 Mark

Solution:

CPU stands for Central Processing Unit.

Answer: Central Processing Unit

Q4. What is an algorithm?

1 Mark

Solution:

An algorithm is a finite sequence of clear and ordered steps used to solve a problem.

Answer: A step-by-step procedure for solving a problem.

Q5. What is a web browser?

1 Mark

Solution:

A web browser is software used to access and view web pages and other online content.

Answer: Software used to access and view websites.

Q6. What is a strong password?

1 Mark

Solution:

A strong password is difficult to guess and generally contains a combination of letters, numbers and special characters.

Answer: A difficult-to-guess password using a combination of different characters.

Q7. What is a file extension?

1 Mark

Solution:

A file extension is the part of a file name that indicates its type or format.

Answer: It identifies the type or format of a file.

Q8. What is malware?

1 Mark

Solution:

Malware is malicious software designed to damage systems, steal information or perform unwanted activities.

Answer: Malicious software that can harm systems or data.

Q9. What is cloud storage?

1 Mark

Solution:

Cloud storage allows users to store data on remote servers accessed through the internet.

Answer: Storage of data on remote servers accessible through the internet.

Q10. What is a database?

1 Mark

Solution:

A database is an organised collection of related data that can be stored, searched and managed efficiently.

Answer: An organised collection of related data.

Section B – Short Answer Questions

10 × 2 = 20 Marks

Q11. Differentiate between RAM and ROM.

2 Marks

Solution:

RAM: It is temporary memory used while programs are running. Its contents are generally lost when power is switched off.

ROM: It stores instructions that are retained even when power is switched off.

Answer: RAM is mainly temporary working memory, while ROM retains stored instructions.

Q12. Why is it important to keep backup copies of important files?

2 Marks

Solution:

Files may be lost because of accidental deletion, hardware failure, malware or other problems. A backup allows the user to recover important information.

Answer: Backups protect against data loss and allow files to be recovered.

Q13. Explain the difference between hardware and software.

2 Marks

Solution:

Hardware refers to the physical components of a computer, such as keyboard, monitor and processor. Software refers to programs and instructions that tell the hardware what to do.

Answer: Hardware is physical; software consists of programs and instructions.

Q14. Why should students avoid sharing their passwords with friends?

2 Marks

Solution:

A password protects an account. Sharing it can allow another person to access private information or change account settings.

Answer: Passwords should remain private to protect accounts and personal information.

Q15. What is the purpose of antivirus software?

2 Marks

Solution:

Antivirus software detects, blocks and removes many types of malicious software.

Answer: It helps detect, block and remove malware.

Q16. What is the difference between the Internet and the World Wide Web?

2 Marks

Solution:

The Internet is a worldwide network of connected computer systems. The World Wide Web is a collection of interlinked web pages and resources accessed through the

Internet.

Answer: The Internet is the network infrastructure; the Web is a service that operates over it.

Q17. What is a search engine? Give two examples.

2 Marks

Solution:

A search engine is an online service that helps users find information on the web. Examples include Google and Bing.

Answer: A search engine helps find online information. Examples: Google and Bing.

Q18. Why should important software be updated regularly?

2 Marks

Solution:

Updates may fix security weaknesses, correct errors and improve performance or add useful features.

Answer: Updates improve security, fix bugs and may improve performance.

Q19. What is phishing?

2 Marks

Solution:

Phishing is a type of online fraud in which attackers use deceptive messages or websites to trick people into revealing sensitive information.

Answer: Phishing is an attempt to steal information through deceptive messages or websites.

Q20. Explain why a computer cannot perform a task correctly if the instructions are incorrect.

2 Marks

Solution:

Computers follow instructions exactly. If the instructions contain an error, the computer may produce an incorrect result or fail to perform the required task.

Answer: A computer depends on precise instructions, so incorrect instructions can produce incorrect results.

Section C – Application Based Questions

10 × 3 = 30 Marks

Q21. Write an algorithm to calculate the average of three numbers.

3 Marks

Solution:

Algorithm:

1. Start.
2. Input three numbers A, B and C.
3. Add the three numbers.
4. Divide the sum by 3.
5. Display the average.
6. Stop.

Answer: Average = $(A + B + C) / 3$

Q22. Write an algorithm to determine whether a number is even or odd.

3 Marks

Solution:

1. Start.
2. Input number N.

3. Divide N by 2 and check the remainder.
4. If the remainder is 0, display "Even".
5. Otherwise display "Odd".
6. Stop.

Answer: A number with remainder 0 when divided by 2 is even; otherwise it is odd.

Q23. Consider the following pseudocode and find the output.

3 Marks

```
START
A = 12
B = 8
C = A + B
C = C × 2
PRINT C
END
```

Solution:

A = 12
B = 8
C = 12 + 8 = 20
C = 20 × 2 = 40

Output: 40

Q24. A student receives an email asking for a password and bank details through an unknown link. What should the student do and why?

3 Marks

Solution:

The student should not click the link or share any sensitive information. The message should be reported or deleted. The student should verify the sender through an independent trusted method. Such messages may be phishing attempts designed to steal personal information.

Answer: Do not share information or open suspicious links; verify the message and report it.

Q25. Write a simple HTML program to display a heading and a paragraph. 3 Marks

Solution:

```
<!DOCTYPE html>
<html>
<head>
<title>My Page</title>
</head>
<body>
<h1>My School</h1>
<p>Welcome to my school webpage.</p>
</body>
</html>
```

Answer: The code uses an h1 heading and a p paragraph element inside the body.

Q26. Explain how a computer network can help students in a school. 3 Marks

Solution:

A school network can allow computers to share files, printers and other resources. Students and teachers can communicate and access shared educational material. A network can also make administration and resource management easier.

Answer: Networks support communication, resource sharing and access to common educational resources.

Q27. Explain the difference between a compiler and an interpreter.

3 Marks

Solution:

A compiler generally translates a complete program into machine-readable form before execution. An interpreter generally translates and executes program instructions one at a time.

Answer: A compiler translates the program as a whole, while an interpreter works instruction by instruction.

Q28. A computer becomes unusually slow and unknown programs appear without being installed by the user. What could be a possible cause? Explain two precautions.

3 Marks

Solution:

One possible cause is malware. Precautions: 1. Keep security software updated. 2. Avoid installing software from untrusted sources or opening suspicious files.

Answer: Malware may be responsible. Use updated security software and avoid untrusted downloads.

Q29. Explain why an algorithm should contain clear and finite steps.

3 Marks

Solution:

Clear steps prevent confusion and ensure that the problem is solved in the correct order. The steps must be finite so that the process eventually stops and produces a result.

Answer: Clear steps ensure correctness, while finite steps ensure that the process terminates.

Q30. A student has 5 GB of free storage and wants to save files of 700 MB, 1.2 GB, 850 MB and 1.5 GB. Explain whether the available storage is sufficient. Use 1 GB = 1000 MB.

3 Marks

Solution:

Convert all values into MB: 5 GB = 5000 MB Files: $700 + 1200 + 850 + 1500 = 4250$ MB
Available storage = 5000 MB Remaining storage: $5000 - 4250 = 750$ MB

Answer: Yes. The files require 4250 MB, leaving 750 MB free.

Section D – Long Answer Questions

$5 \times 4 = 20$ Marks

Q31. Explain the main components of a computer system and describe their functions.

4 Marks

Solution:

1. Input devices: They are used to enter data into the computer. Examples include keyboard and mouse.

2. CPU: It processes instructions and performs calculations.

3. Memory and storage: Memory holds data and instructions for processing, while storage keeps data for longer periods.

4. Output devices: They present processed information to the user. Examples include monitor and printer.

Answer: A computer system uses input, processing, memory/storage and output components to perform tasks.

Q32. Explain four important rules for staying safe while using the Internet. 4 Marks

Solution:

1. **Protect passwords:** Use strong passwords and do not share them.
2. **Avoid suspicious links:** Do not open unknown links or attachments.
3. **Protect personal information:** Do not unnecessarily share sensitive information online.
4. **Use trusted software:** Keep the operating system and security software updated.

Answer: Strong passwords, cautious browsing, privacy protection and updated software improve online safety.

Q33. Explain the steps involved in developing a solution to a computer problem. 4 Marks

Solution:

- Step 1 – Understand the problem:** Identify exactly what needs to be solved.
- Step 2 – Analyse the problem:** Identify inputs, required processing and expected output.
- Step 3 – Design the solution:** Prepare an algorithm or flowchart.
- Step 4 – Implement and test:** Write the program, test it with suitable data and correct errors.

Answer: Problem understanding, analysis, solution design, implementation and testing are important stages.

Q34. Explain the advantages and limitations of cloud storage.

4 Marks

Solution:

Advantages: 1. Data can be accessed from different devices. 2. It can provide useful backup and sharing facilities. 3. Large amounts of data can be stored without relying only on local storage.

Limitations: 1. Internet access may be required. 2. Account security and privacy must be managed carefully. 3. Storage may be limited depending on the service.

Answer: Cloud storage provides convenient access and sharing, but requires attention to connectivity, security and privacy.

Q35. Write a pseudocode program to find the largest of three numbers and explain its logic.

4 Marks

Solution:

```
START
INPUT A, B, C

IF A >= B AND A >= C THEN
    PRINT A
ELSE IF B >= A AND B >= C THEN
    PRINT B
ELSE
    PRINT C
END IF

END
```

Logic: The program compares the first number with the other two. If it is not the largest, the second number is compared with the remaining numbers. If neither is the largest, the third number must be the largest.



Answer: The algorithm compares all three values and prints the greatest one.

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Computer Fundamentals • Internet • Algorithms • HTML • Cyber Safety

No MCQs