

SCHOOL BASED ASSESSMENT 2024-25

Mid-Term

Computer Education Grade 7

School Name: _____

www.schoolbasedassessment.pk

www.schoolbasedassessment.pk

www.schoolbasedassessment.pk

ANSWER KEYS

Q. No.1 : a	Q. No.2 : b	Q. No.3 : b
Q. No.4 : c	Q. No.5 : a	Q. No.6 : c
Q. No.7 : a	Q. No.8 : b	Q. No.9 : b
Q. No.10 : c	www.schoolbasedassessment.pk	

ANSWERS / RUBRICS

Question No: 11

Official Website www.schoolbasedassessment.pk

سوال نمبر 11

a.) Define decomposition. (2 Marks)

ڈی کمپوزیشن کی تعریف کریں۔ (2 نمبر)

Item Rubric (English) :

Award Two Marks for the correct definition of decomposition.

Acceptable answer:

www.schoolbasedassessment.pk

Definition of Decomposition:

Decomposition is breaking down complex problems into smaller, more manageable parts. If you can break down a big problem into smaller problems, you can solve them easily. Decomposition is an important life skill.

Define pattern recognition and abstraction. (4 Marks)

پیٹرن کی شناخت اور ایسٹریکشن کی تعریف کریں۔ (4 نمبر)

Item Rubric (English) :

Award Two Marks for correct definition of pattern recognition.

Award Two Marks for correct definition of Abstraction.

Acceptable answer:

Pattern recognition:

www.schoolbasedassessment.pk

Pattern recognition is looking for patterns in the problem and determining if there could be any of the problem or solutions, we have faced in the past can be applied here. It may also involve recognizing shapes, sounds or images.

Abstraction:

Abstraction helps us learn to identify the details that are relevant to solving the problem and ignoring the details that are not relevant to the problem we are solving while generalization allows us to create generic idea of what the problem is and how to solve it. Once we have recognized patterns, we need to put it in its simplest terms so that it can be used whenever we need to use it.

Explain algorithm design. (4 Marks)

www.schoolbasedassessment.pk

الگورتھم ڈیزائن کی وضاحت کریں۔ (4 نمبر)

Item Rubric (English) :

Award Four Marks for correct explanation of an algorithm design.

Acceptable answer:

Algorithm:

An algorithm is a set of instructions for solving a problem or accomplishing a task. We can say that an algorithm is a sequence of instructions or steps that can be followed by humans and computer to complete a specific task. It is a systematic approach that produces the answer to a question or the solution of a problem in a finite number of steps.

Question No: 12

www.schoolbasedassessment.pk

a.) Define the Divide and Conquer Algorithm. (2 Marks)

ڈیوائنڈ (Divide) اور کنکور (Conquer) الگورتھم کی تعریف کریں۔ (2 نمبر)

Item Rubric (English) :

Award Two Marks for the correct definition of the Divide and Conquer Algorithm.

Acceptable Answer:

Define the Divide and Conquer Algorithm:

A divide and conquer algorithm recursively breaks down a problem into two or more sub-problems of the same or related type, until these become simple enough to be solved directly. The solutions to the sub-problems are then combined to give a solution to the original problem.

Define Unicode. (2 Marks)

www.schoolbasedassessment.pk

یونیکوڈ کی تعریف کریں۔ (2 نمبر)

Item Rubric (English) :

Award Two Marks for the correct definition of Unicode

Acceptable Answer:

Unicode:

computer could be used by different languages as Unicode can represent more than 65000 characters

Write three advantages and disadvantages of using a flowchart. (6 Marks)

فلو چارٹ استعمال کرنے کے تین فائدے اور تین نقصانات لکھیں۔ (6 نمبر)

Item Rubric (English) :

Award One Mark for each correct advantage of the Flowchart up to Three Marks.

Award One Mark for each correct disadvantage of the Flowchart up to Three Marks.

Acceptable Answer:

Advantages:

www.schoolbasedassessment.pk

1. Easy to make.
2. Easy to understand.
3. Mistakes can be easily identified.
4. Debugging becomes possible.
5. Logics can be easily understood.

Disadvantages

1. Difficult to present complex problems.
2. Modification is difficult.
3. Time consuming.
4. Difficult to understand for people who don't know flowchart symbols.

Question No: 13

سوال نمبر 13 official Website www.schoolbasedassessment.pk

a.) What is meant by ASCII? (5 Marks)

ASCII سے کیا مراد ہے؟ (5 نمبر)

Item Rubric (English) :

Award Five Marks on correct description of ASCII

www.schoolbasedassessment.pk

Acceptable Answer:

ASCII stands for American Standard Code For Information Interchange. The ASCII code takes each character on the keyboard and assigns it a binary number. ASCII is Eight bit code For Example:

- the letter 'a' has the binary number 01100001 (this is the decimal number 97)

Explain image representation in binary numbers system. (5 Marks)

بائری نمبرز سسٹم میں تصاویر ظاہر کرنے کی وضاحت کریں۔ (5 نمبر)

Item Rubric (English) :

Award Five Marks for the correct answer.

www.schoolbasedassessment.pk

Acceptable Answer:

Explanation image representation in binary numbers system:

Images also need to be converted into binary for a computer to process them so that they can be seen on our screen. Digital images are made up of pixels. Each image in a pixel is made up of binary numbers. If 1 is black (or on) and 0 is white (or off), then a simple black-and-white picture can be created using binary. To create the picture, a grid can be set out and the squares colored (1-black and 0-white). But before the grid can be created, the size of the grid must be known. This data is called metadata and computers need metadata to know the size of an image.

Explain sound representation in binary numbers system. (5 Marks)

ہائیری نمبرز سسٹم میں آواز ظاہر کرنے کی وضاحت کریں۔ (5 نمبر)

Item Rubric (English) :

Award Five Marks for the correct answer.

www.schoolbasedassessment.pk

Acceptable Answer:

The sound waves are analog and to store the waves digitally on the computer, we need to convert the waveform into a numerical representation so that the waveform can be stored in binary. To do this, we use an Analogue-to-Digital Converter (ADC). The ADC works by taking samples of the sound wave at regular intervals and displaying the diagram. The quality and size of the file are affected by two factors - sample rate and bit rate. The sample rate refers to the number of samples taken every second and the greater the frequency of the samples, the better the sound quality. The bit rate refers to the number of bits used to store each sample and the more bits that are sampled, the better the accuracy of the file but also the greater the file size.

Visite Official Website www.schoolbasedassessment.pk