

9. (a) *Award [1] for the answer identifying improved programmer productivity and [1] for making reference to machine independence up to [2 max].*

High-level language(HLL) provides statements (for example, high level `if(...)`, `while(...)` , etc) which are not dependent on the specific machine / and ability to create various data structures;

Which saves the programmer's time;

Higher level languages are closer to human language;

So programmers find them easier to understand/work with than lower level languages;

HLL saves programmer from knowing details of computer architecture (and using all the specific (machine) instructions);

So giving more time to creating/developing the best way of coding a problem/process of coding is simpler and more understandable;

[2]

- (b) *Award [4 max].
Mark as [2] and [2].*

Award [1] for an answer stressing the usefulness of sub-procedures in any of the following

Program organization;

Program coding;

Program testing;

Maintenance;

Etc.

Award [1] for the expansion up to [2 max].

Problem could be divided into smaller/easier parts;

Which means solving easier/smaller parts of the problem for one programmer;

Or for a team of programmers, each programmer could work on different smaller parts;

Simpler testing;

Each part of the program could be separately tested;

By the programmer who created the code or someone else in the team of programmers;

Reusable code;

Sub-procedures already written/tested could be used in various programs;

Simpler maintenance and changes;

Could be done only on required sub-programs;

[4]

- (c) *Award [3 max].*

Award [1] for data structure implementation/objects/elements of collections.

Award [1] for algorithms/methods/callback functions.

Award [1] for showing that collection reduces programming effort / increases performance (by providing efficient implementations of data structures and algorithms).

Award marks for description of a specific example collections (in Java or any other programming language) such as arrays, dictionaries, sets, lists, trees (they