<Proficiency Test (1)>

Choose the best word or phrase from the choices about construction management.

Construction management usually covers the management of **(A:** **)**, **(B:** **)**, **(C:** **),** human power, equipment and material, work facility, **(D:**) and others. In road construction work, **(E:** **)**, **(F:** **)** and **(G:** **)** are particularly important.

Works shall be carried out according to **(H:** **),** and when there is **(I:** **)** during the work, it is important to **(J:** **)** and **(K:** **)** as soon as possible. For this reason, process control is necessary.

For quality control in road construction, it takes **(L:** **)** to find faulty points and fix them after work completion, which significantly impedes **(M:** **)**.

<Choices> safety, work management, process control, a delay in progress, quality control, accelerate the work, works, construction process, quality, considerable work capacity, investigate its cause, work progress, the progress chart

<Proficiency Test (5) >

Choose the best word or phrase from the choices about the basic procedure for preparing a work cost estimation chart.

Procedure	Action
Step 1	Analyze the work and classify it into work items and details, and arrange them in order of implementation.
Step 2	Summarize (A:) for each work item (detail).
Step 3	Calculate (B:) for each work item (detail).
Step 4	Calculate (C:) for required each work item (detail).
Step 5	Calculate (D:) for each work item (detail).

<Choices> required the work volume, the unit work volume, required the work capacity, the operating procedure

<Proficiency Test (1)>

Complete the work cost estimation chart. (For each answer, round down the decimals)
[Assumption] Daily work time: 7 hours
Conversion factor: Large-size bulldozer: 80 man-day,
Middle-size bulldozer: 60 man-day,
Hydraulic Excavator: 60 man-day

Work item	Work detail	Required work volume	Machinery to be used	Unit work volume	Required work capacity	Man-hour (machinery)
Earthwork	Cut soil	2,000m^3	Medium-size bulldozer	25m^3/h	**E:** (Machine-hour)	**H:** (Man-hour)
	Filled soil	1,500m^3	Large-size bulldozer	30m^3/h	**F:** (Machine-hour)	**I:** (Man-hour)
	Formation of slope	3,000m^2	Hydraulic excavator	80m^2/h	**G:** (Machine-hour)	**J:** (Man-hour)

[Exercise 1]

Which of the following statements about the progress chart is appropriate?

(1) The cumulative volume curve is usually an inverted S-curve.

(2) A network chart does not make it easy to clarify what tasks affect the construction period.

(3) A Gantt chart does not indicate how many days are necessary for each task.

(4) A bar chart clearly indicates the sequence of each task.

[Exercise 2]

Which of the following statements about process control is not appropriate?

(1) Horizontal line progress charts include a bar chart and Gantt chart, which are the most widely used progress charts in general.

(2) The critical path method is a type of network method.

(3) In the network method, it is difficult to show the effect of a delay in one process on other processes or on the whole.

(4) For progress control using a curved progress chart, it can be effectively conducted when the banana curve is used.

[Exercise 3]

Which of the following statements about progress charts used in process control is not appropriate?

(1) The work that affects the construction period is unknown in the bar chart.

(2) Creating charts and graphs is easy with the Gantt chart.

(3) The work procedure is unknown in the network chart.

(4) The number of days required for the work is unknown in the curve chart.

<Practice Test (4) >

Which of the following statements about "process management" is not appropriate?

(1) Work Progress Chart displays the items such as the execution order and required duration for construction.

(2) When there is a gap between the planned and actual processes, the cause of the gap should be investigated and eliminated immediately.

(3) On the process management, the actual workload should be little greater than the planned workload.

(4) On the progress chart, there is no need to compare the planed and actual progresses as long as the progress is under control during the construction.

<Practice Test (5) >

Which of the following statements on "process control curve (banana curve)" is not appropriate?

(1)The cumulative volume curve is usually an S-curve, and managed by process control curve.

(2)The vertical axis of process control curve is work progress rate, and horizontal axis of the curve is time lapse rate.

(3) It is okay as long as the implemented process curve is below the upper limit and exceeds the lower limit.

(4) If the implemented process curve is under the lower limit, the process is going too fast.

<Practice Test6 >

Which of the following statements on "process control curve (banana curve)" is not appropriate?

(1) Set the upper tolerance limit and lower tolerance limit to manage construction process.

(2) If it marks under the lower tolerance limit, there is a delay in construction process.

(3) The cumulative volume curve is usually an S-curve.

(4) Time lapse rate is displayed on the vertical axis, and volume rate is displayed on the horizontal axis.

<Practice Test7 >

Select two out of the following statements about "types and characteristics of progress charts" which are not appropriate.

(1) The gantt chart shows the current progress of each task eaily with the planned and actual number of days.

(2) The cumulative volume curve shows the comparison of the planning process and the implementation process of the entire construction.

(3) Diagonal line progress chart shows the process of each task in diagonal lines.

(4) The bar chart systematizes the construction works and shows the relationship between each task and the work that affects the construction period.