

QUESTIONS



Nepal Institute of
Engineering

QUESTION 1

What does NOT distinguish a project from a program?

- 1. Driven by deliverables**
- 2. Bounded and scoped deliverables**
- 3. All benefits measurement included**
- 4. Finite start and finish**

QUESTION 2

A process that involves continuously improving and detailing a plan as more detail become available is termed as

1. project analysis
2. project enhancing
3. progressive deliberation
4. progressive elaboration

QUESTION 3

- Which from the following represents the correct project cycle?
 - (a) Planning→Initiating→Executing→Closing
 - (b) Planning→Executing→Initiating→Closing
 - (c) Initiating→Planning→Executing→Closing
 - (d) Initiating→Executing→Planning→Closing

QUESTION 4

- Budget costing of a construction project should be done
 1. In the planning stage
 2. During execution
 3. During project review
 4. After completion of the project.

QUESTION 5

- At break even point
 1. The revenue marginally exceeds the total production cost
 2. The revenue equalises the total production cost
 3. The revenue is made to equalise the production cost
 4. The revenue falls short of the total production cost

QUESTION 6

- Sensitivity Analysis is done to assess
 1. The commercial viability of the project
 2. The technical viability of the project.
 3. The economic viability of the project.
 4. None of the above.



Nepal Institute of
Engineering

QUESTION 7

- Budget costing of a construction project should be done
 1. In the planning stage
 2. During execution
 3. During project review
 4. After completion of the project.



Nepal Institute of
Engineering

QUESTION 8

PERT stands for

- 1. Performance Evaluation and Review Technique**
- 2. Project Evaluation and Review Technique**
- 3. Program Evaluation and Review Technique**
- 4. Performance Evaluation and Rational Timing**

QUESTION 9

Expected time of completion of a project in a CPM network is

- 1. Sum of all activity durations**
- 2. Sum of activity durations along critical path**
- 3. Arithmetic mean of activity duration**
- 4. Sum of activity durations having maximum output**

QUESTION 10

Critical activities in a network

1. Should not be delayed beyond what is required
2. Can be delayed
3. Should be delayed to allow non critical activities to be completed first.
4. None of the above.



QUESTION 11

A dummy activity

- 1. Has neither head event or tail event**
- 2. Doesn't consume neither time nor resources**
- 3. Reduces computation work in network analysis**
- 4. Can be inserted anywhere in a network.**

QUESTION 12

CPM network is

- 1. Resource oriented**
- 2. Event oriented**
- 3. Slack oriented**
- 4. Activity oriented**



Nepal Institute of
Engineering

QUESTION 13

Critical path in a network

- 1. Is always the shortest path**
- 2. May have the longest path**
- 3. Is always the longest path**
- 4. May have the shortest path**



QUESTION 14

State which of the following statements are true or false

1. The critical path determines the minimum time required for completion of a project.
2. The critical path determines the maximum time required for completion of a project
3. The critical path determines the path along which the project takes the minimum time to be completed.
4. The critical path determines the path along which the project takes the maximum time to be completed.

QUESTION 15

In PERT analysis the probability of completion by a due date follows

1. Binomial distribution
2. Beta distribution
3. Normal distribution
4. Poissons distribution

QUESTION 16

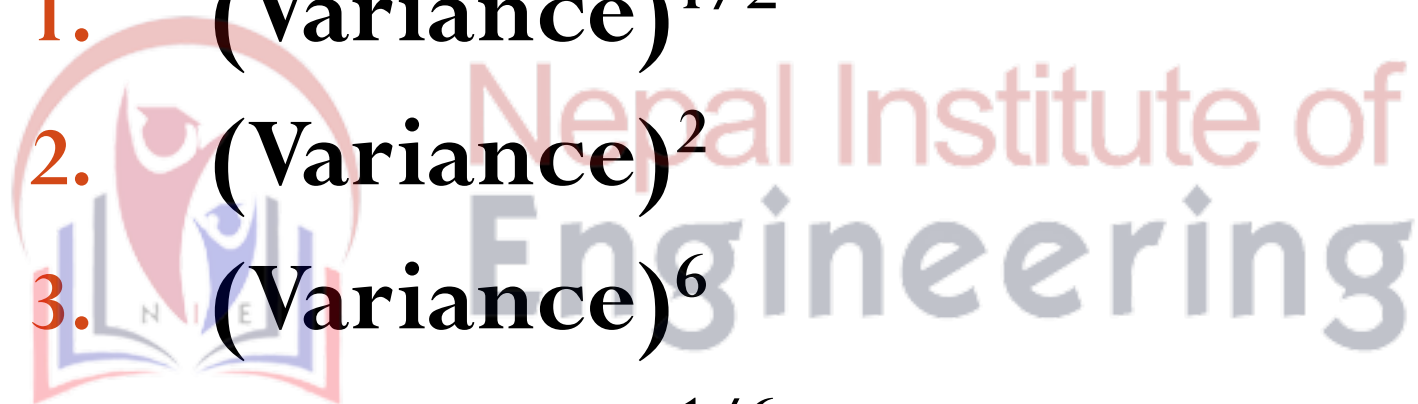
Standard deviation is equal to

1. $(\text{Variance})^{1/2}$

2. $(\text{Variance})^2$

3. $(\text{Variance})^6$

4. $(\text{Variance})^{1/6}$



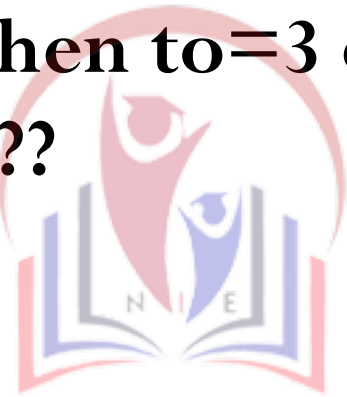
QUESTION 18

State which of the following statements are true

1. Critical activity is the one for which Total Float is Zero
2. Critical activity is the one for which Total Float and Free Float is Zero
3. Critical activity is the one for which only Free Float is Zero
4. Critical activity is the one for which neither Total Float or Free Float is Zero

QUESTION 19

What is the value of expected time to complete a project and standard deviation when $t_o=3$ days, $t_p=12$ days and $t_m = 6$ days
????



Nepal Institute of
Engineering

QUESTION 20

Select the correct statement

1. PERT is applicable to construction projects only
2. PERT is useful for deterministic activities
3. PERT is applicable to large projects only
4. PERT is useful for R/D projects.



Nepal Institute of
Engineering

QUESTION 21

The time by which the start or finish of an activity can be delayed without delaying the EST of the succeeding activity is called

1. Total Float
2. Free Float
3. Independent Float
4. Interfering Float

QUESTION 22

Free Float is defined as the difference between

1. Latest start time and earliest start.
2. EST (next activity) minus EFT of this activity
3. LFT of an activity minus its LST
4. EFT of an activity and LST of the successor activity

QUESTION 23

When resource is plenty, a constant level of resource without extending the project duration is maintained by

1. Resource levelling
2. Resource allocation
3. Resource smoothing
4. Inducting more resources from outside

QUESTION 24

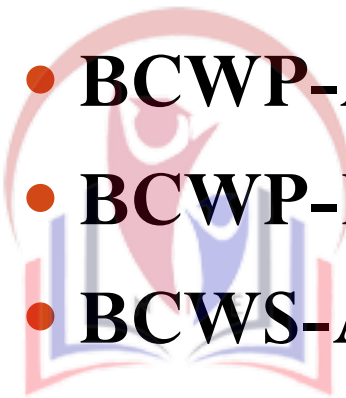
Cost variance can be obtained by

1. **BCWS- BCWP**
2. **BCWP-ACWP**
3. **BCWP-BCWS**
4. **BCWS-ACWP**

QUESTION 25

Schedule variance can be obtained by

- **BCWS- BCWP**
- **BCWP-ACWP**
- **BCWP-BCWS**
- **BCWS-ACWP**



Nepal Institute of
Engineering

QUESTION 26

% Cost overrun is equal to

1.
$$\frac{(\text{Actual cost} - \text{value of work done})}{\text{Value of work done}} * 100\%$$

2.
$$\frac{\text{Value of balance work}}{\text{Value of the project}} * 100\%$$

3.
$$\frac{\text{Budgeted cost} - \text{value of work done}}{\text{Value of work done}} * 100\%$$

4.
$$\frac{\text{Budgeted cost} - \text{actual cost}}{\text{Actual cost}} * 100\%$$

QUESTION 27

Direct cost relates to

- 1. Penalty and excise duty**
- 2. Loss or gain in revenue**
- 3. Cost of materials and wages of labor**
- 4. Administrative expenses**

1.

QUESTION 28

Crashing of a project results in

1. Extending the project duration
2. Squeezing the activity duration
3. Decrease in flow of material
4. Avoiding of over time work



Nepal Institute of
Engineering

QUESTION 29

During Crashing

1. Direct cost decreases
2. Indirect cost increases
3. Both direct and indirect cost increase
4. Direct cost increases but indirect cost decreases



Nepal Institute of
Engineering

QUESTION 30

What is meant by Risk management?

1. Management covering risk
2. Management involving risk
3. Management with pre determined risk
4. None of the above

- Which of the following is not true?
 - (a) Every project is unique
 - (b) A project gives some output
 - (c) Projects are not repetitive
 - (d) Car manufacturing is an example of project

- A person who is directly or indirectly involved with your project, or affected by your project or its outcome, is known as:
 - (a) Customer
 - (b) Manager
 - (c) Team Member
 - (d) Stakeholder

- **A milestone chart**

- (a) Shows the interdependencies of various activities**
- (b) Depicts the delay of job, if any**
- (c) Points outgoing ahead of schedule of jobs, if any**
- (d) None of these**

- Capital budgeting is

- (a) Reversible

- (b) Unimportant

- (c) Irreversible

- (d) All of the above

- EPC contract stands for

- (a) Engineering , procurement and contract

- (b) Engineering , procurement and construction

- (c) Economic, Profit and Cost

- (d) None of the above

- For a financial institution, the most important study of a project to be taken for a risk management is

(a) Appraisal

(b) Environmental and Social

(c) Technical

(d) Financial and Economical

- In incremental analysis, which project is selected as the base alternative
 - (a) Having lower investment
 - (b) Having higher investment
 - (c) Any one of these
 - (d) None of these.

- IRR is calculated for
 - a) Decision on the investment of project.
 - b) Decision on the project selection
 - c) Decision on the project prioritization.
 - d) Decision on project development.

- **Select the incorrect statement regarding the present worth or NPV method of calculation of project.**
- a) **It assumes we can borrow and lend money at same interest rate.**
- b) **All cash inflow and outflow are discounted to the present**
- c) **It is simpler than other method.**
- d) **The interest rate must be the same throughout the life of project.**

- Which among the following is not true in IRR method of performing engineering economic analysis.
 - a) It most widely used method.
 - b) It is known as the discounted cash flow method
 - c) It solves for the equivalent worth of cash inflow and outflow at fixed interest rate
 - d) The IRR sometimes referred to as break even interest rate.

- The factor by which the future sum multiplied to find a uniform sum that should be regularly such that the final value of the fund set aside is equal to the future sum is

(a) Capital recovery (b) Arithmetic gradient (c) Geometric gradient (d) Sinking Fund deposit

- What is the type of annuity where the first payment does not begin until some later date in the cash flow?

(a) Ordinary annuity (b) Perpetuity (c) Annuity due (d) deferred annuity.

- In a cash flow diagram annuity due occurs at

- a) End of each year
- b) Beginning of each year
- c) Both beginning and end of each year
- d) Half at the beginning and other half at the end of each year.

- Which among the following is not true about benefit cost analysis?
 - a) Cost and benefits must be converted to a common time base
 - b) A public project is normally acceptable if the B/C ratio is at least one.
 - c) The analysis makes sure that the benefits are at least 10-20% more than cost.
 - d) The B/C ratio is a ratio of discounted benefits to discounted costs.

- In which phase the detailed risk analysis of a project is done?

(a) Feasibility study (b) Planning phase (c) Evaluation Phase (d) Implementation phase

- The difference between the maximum time available and actual time needed to perform the activity is called

(a) Free float (b) Independent float (c) Total Float (d) Half Float

1. Risk in a project is defined as

- (a) Uncertain event, that if it occurs, has a positive effect on the project objective.**
- (b) Uncertain event, that if it occurs, has a negative effect on the project objective.**
- (c) Uncertain event, that if it occurs, has a positive and negative effect on the project objective.**
- (d) Uncertain event, that if it occurs, do not have any effect on the project objective.**

The bid evaluation committee shall prepare a bid evaluation report within

- (a) 10 days of starting of starting a bid evaluation**
- (b) 15 days of starting of starting a bid evaluation ***
- (c) 20 days of starting of starting a bid evaluation**
- (d) 25 days of starting of starting a bid evaluation**

Remedies available to any contracting party to compensate for the financial loss suffered as the result of a proven breach of contract is

(a) Breach bond (b) liquidated damage (c) price adjustment (d) compensation fund.

The assessment of importance of the identified risk and development of prioritized list of these risks in subjective manner for further analysis or direct mitigation is

- (a) Qualitative risk analysis (b) quantitative risk analysis
- (c) Risk impact analysis (d) risk response planning

- Project financing of hydropower project in Nepal are developed under
 - (a) BOT model (b) BTO model (c) BOOT model (d) BOO model
- What term denotes the mitigation of risk to a threshold level?
 - (a) Mitigation (b) acceptance (c) transfer (d) none of these.

- Which one is incorrect?
 - (a) Arrow from left to right in scale
 - (b) Head of arrow indicates the end of activity
 - (c) Tail of arrow indicates the start of activity
 - (d) Each activity consumes time.

- Which formula is used to calculate the EFT of an activity during the forward pass calculation in CPM?

(a) $EFT = EST + \text{Duration} - 1$

(b) $EFT = LFT - \text{Duration} + 1$

(c) $EFT = EST + \text{Duration}$

(d) $EFT = LFT - \text{Duration}$

- **A contract is a legal document between two parties**

- (a) To do something**
- (b) Not to do something**
- (c) To do and not to do something**
- (d) None of these**

- Which terms describes the utilization of resources in a project without altering the project duration?
 - (a) Resource Smoothing
 - (b) Resource Levelling
 - (c) Critical path method
 - (d) PERT