

KATHMANDU UNIVERSITY  
End Semester Examination  
January/February 2024

Marks Scored:

Level : B.Arch.

Year : IV

Exam Roll No. :

08 FEB 2024

Time: 30 mins.

Course : CIEG 403

Semester : I

F. M. : 10

Registration No.:

Date :

SECTION "A"

[20Q. × 0.5 = 10 marks]

**Choose and encircle the most appropriate option from each set of choices.**

1. An estimate of the potential profitability, or a study that measures the expected benefits from the project relative to its cost is:
  - a. A project formulation
  - b. a Feasibility studies
  - c. Project appraisal
  - d. a project planning
2. As per the construction cost curves, delay in a project directly increase the:
  - a. Direct cost
  - b. Indirect cost
  - c. Mark up price
  - d. Quality cost
3. If the owner has good access to the building material-suppliers s/he would prefer to enter the following construction contract with a contractor:
  - a. Lump sum contract
  - b. Cost plus percentage contract
  - c. Percentage rate contract
  - d. Labour contract
4. Separation of ownership and management is the characteristic of:
  - a. sole proprietorship
  - b. general partnership
  - c. private partnership
  - d. joint stock company
5. In an organization, how instruction flow from top to bottom is called:
  - a. Top-down information flow
  - b. Chain of command
  - c. Communication
  - d. Authority
6. If the substantially responsive lowest evaluated bidder does not sign a contract within the due date, you will:
  - a. issue a warning letter.
  - b. simply invite the 2<sup>nd</sup> lowest bidder for agreement.
  - c. forfeit the bid security of the 1<sup>st</sup> lowest and invite the 2<sup>nd</sup> lowest bidder for agreement.
  - d. redo the bidding process.
7. As per the Contract Act, 2056 (2000), contract concluded shall be void if concluded with a person who has not attained:
  - a. 16 years of age
  - b. 17 years of age
  - c. 18 years of age
  - d. 21 years of age

8. On a bid opening day, you found that a bidder has not submitted the bid security. You would mention this in minute, and later, while evaluating the bids, you would:
- reject the bid and not evaluate the bid.
  - ask to submit the bid security and evaluate the bid.
  - return the bid to the bidder.
  - do as evaluation committee decide.
9. Which of the following is not the responsibility of an Engineer?
- to recommend certificate of payment (bill).
  - to enforce contract.
  - to approve variations & and make payment.
  - to interpret contract.
10. If in Earned Value Analysis (EVA), the Schedule Performance Index (SPI) is greater than 1.0 then project is:
- behind the schedule
  - ahead of schedule
  - on the schedule
  - overbudgeted
11. If you must clear the uneven site that is marshy and muddy, covered by shrubs and stumps for building lay out and construction, you would:
- scraper
  - crawler dozer
  - wheel dozer
  - grader
12. During Risk analysis, a risk of probability of occurring is 0.5 (50%), and the impact to project is 50 lakhs, but your project is far from exposure to that risk, you would consider it:
- as a risk
  - hazard
  - not a risk
  - as a risk to be managed
13. You are to cast RCC piles at the site, you would choose:
- Diesel hammer
  - Vibratory Pile Driver
  - Hydraulic Press-in Pile Driver
  - Piling rigs
14. The owner accuses contractor of fundamental breach of contract. As per the SBD of the PPMO, the authorized person to ascertain that breach of contract has been occurred is:
- the owner of the project
  - the contractor
  - the project manager
  - the arbitrator
15. An assertion of a right, claim or demand on one side and repudiation thereof by another is called:
- Claim
  - Arbitration
  - Dispute
  - Claim substantiation
16. Anything that has the potential to cause harm to people or property is called:
- Accident
  - Hazard
  - Risk
  - Threat
17. As per the GCC of the SBD of PPMO, the owner can terminate contract if the contractor:
- stops the work for 30 days without notice
  - stops the works for 60 days
  - stops the works for 90 days without notice
  - stops the works for 120 days
18. 'Retention money' is taken by owner:
- along with bid document submission
  - while signing the contract
  - from every payment made by owner
  - while evaluating bids

19. The highest cause of accidents in construction site is due to:
- a. collapse of structure
  - b. fall from height
  - c. moving objects
  - d. contact by electricity
20. Stepping up the production or generation from the initial trial production to the acceptable designed capacity is called:
- a. Startup
  - b. Initial operation
  - c. Testing
  - d. Commissioning



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F.M. : 40

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SECTION "B"

Attempt *ALL* questions.

1. Define project and discuss the characteristics of a project. Also, mention the benefits of infrastructure development project to a country. [5]
2. Draw a CPM network from the following table and find the Critical Path (project duration), Total Floats, Free Floats, and Independent Floats. [6]

	Activities	Duration (weeks)	Predecessors	Successors
1	A	7	-	D, F
2	B	9	-	G
3	C	6	-	E, H
4	D	5	A	G
5	E	3	C	G
6	F	9	A	-
7	G	8	B, D, E	-
8	H	8	C,	-

3. Briefly describe different quality concepts developed in management field. Also explain why quality is not a grade with the examples in construction. [6]
4. Define and describe monitoring and project monitoring cycle. How would you monitor a construction project with the help of planning document? [7]
5. You are a member of bid opening committee; describe how you would open the bids. Also mention all the grounds for which bid securities are forfeited. [7]
6. Write short notes on *ANY THREE*. [3 × 3 = 9]
  - a. Project specific criteria for selection of machines and equipment.
  - b. Sources of construction claim by contractor.
  - c. Role of an Engineer as a technical and administration officer.
  - d. Turnkey and management contract.
  - e. Reasons of construction site being more dangerous than other industries.

