



- Notes :
1. All questions carry marks as indicated.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data whenever necessary.
  4. Illustrate your answers whenever necessary with the help of neat sketches.
  5. Use of non programmable calculator is permitted.

1. a) What is the principle of project finance ? What are the guiding parameters to finance any project ? **7**
- b) What is mean by an infrastructure project ? Explain each with suitable example. **6**

**OR**

2. a) What are the essentials of site layout planning ? Discuss. **7**
- b) What is mean by Detailed Project report ? Discuss the essentials of a DPR. **6**
3. a) Give the difference between PERT & CPM networks explain the circumstances under which one is preferred over other. **6**
- b) The time estimate for three activities A, B & C are as follows: **8**
- | Activities | Optimistic Time | Most likely Time | Pessimistic Time |
|------------|-----------------|------------------|------------------|
| A          | 10              | 12               | 14               |
| B          | 6               | 8                | 12               |
| C          | 5               | 10               | 12               |

Determine the expected time & variance of each activity. Which activity has more reliable time estimates.

**OR**

4. a) Draw the CPM network for the following Logic & determine critical Path, Total float & show the critical path with double lines on the network, if duration of network is as follows. **14**

Activity	Duration
A	5
B	4
C	2
D	5
E	6
F	6
G	8
H	4
I	3
J	8
K	5

The network logic is as follows:

- i) At the start of the project activity A & B are the initial activities & are done concurrently.
- ii) D follows A
- iii) C & F follows B
- iv) E follows C & A
- v) G & H follows E
- vi) J follows both D & G
- vii) J follows F
- viii) K follows both H & I
- ix) J & K are parallel activities & the project ends.

5. a) What are the steps involved in purchasing of materials ? **7**  
b) Draw the neat sketch of power shaved & explain its working principle. **6**

**OR**

6. a) What do you mean by EOQ ? Explain. **7**  
b) A piece of equipment costs Rs. 2,40,000/- and has a useful life of five years and a salvage value of Rs. 40,000/- Determine the depreciation & book value at the end of each year using straight line & sum of year method. **6**

7. a) Explain in brief the characteristics of management information system. **6**  
b) Discuss the safety measure for excavation work in civil engineering which is the relevant provisions as per National Building Code for the same ? **7**

**OR**

8. a) What is the concept of continuous improvement as per TQM ? **6**  
b) Discuss the precautions to be taken to avoid accidents in a big construction project. **7**
9. a) Discuss the role of metropolitan committee & its function in MRTP Act-1966. **7**  
b) Discuss the enactment & objectives of Highway Act-1956. **6**

**OR**

10. a) Enumerate the process of regularising the Gunthewari developments. **6**  
b) A per MHADA Act, discuss the function of Housing Regulatory Authority. **7**
11. a) Enumerate the salient features of forest conservation Act-1980. **7**  
b) As per the Indian Contract Act -1872, define the following terms. **7**  
i) Promise, ii) Obligation  
iii) Agreement iv) Contract.

**OR**

12. Write short note on **any four**. **14**  
i) Transfer of property through "Power of Attorney".  
ii) Role of Panchayat Raj in land Acquisition Act - 2013.  
iii) Section 24 of water (pollution & prevention) Act -1974.  
iv) Objective of Environment Pollution Act -1986.  
v) Transfer of Property Act  
vi) Essential elements of a Valid Contract.

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