

17603

11718

3 Hours / 100 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) **Attempt any THREE of the following:** **12**
 - (i) State any eight functions of Junior Engineer.
 - (ii) List any eight types of engineering contracts.
 - (iii) Describe percentage rate contracts. State any one advantage and one disadvantage.
 - (iv) Enlist the tender documents.
 - (v) Describe schedule 'A'.
- b) **Attempt any ONE of the following:** **6**
 - (i) Explain item rate method or unit price method and state any four advantages and disadvantages.
 - (ii) Describe procedure of issuing materials through indent.

P.T.O.

- 2. Attempt any FOUR of the following:** **16**
- a) Explain administrative approval and technical sanction.
 - b) Prepare organisational structure of P.W.D.
 - c) State the requirements of valid contracts or essentials of valid contract.
 - d) Differentiate between Lumpsum contract and Item rate contract.
 - e) Differentiate between running account bill and final bill.
 - f) Compare imprest and temporary advance.
- 3. Attempt any FOUR of the following:** **16**
- a) Draft a tender notice for the construction of 'Ladies-Hostel' building at your polytechnic campus costing Rs. 100 Lakh. Assume any other suitable data if necessary.
 - b) State the circumstances under which the lowest tender is rejected.
 - c) Describe the term security deposit.
 - d) State the classes of contractors along with capacity in terms of amount of the work to be executed.
 - e) Describe BOT project. State objectives of BOT project.
- 4. a) Attempt any THREE of the following:** **12**
- (i) State any four modes of payment to the contractor and describe any one. (Standard form of bills with its uses)
 - (ii) Describe the two envelope system of submission of tender.
 - (iii) State the legal aspects of specification.
 - (iv) State the factors affecting valuation of building.
- b) Attempt any ONE of the following:** **06**
- (i) Explain the target contract with suitable example. State any two advantages and any two disadvantages of target contract.
 - (ii) Describe nominal muster roll. With respect to its parts, method of recording attendance and unpaid wages if any.

5. Attempt any TWO of the following:**16**

- a) Describe any four terms related to tender documents.
- b) Find the value of a property consisting of land and building from following data:

Rent inclusive of all taxes Rs. 4000 per month, Outgoings 20% of gross rent. Net yield expected from the property 6% future life of building 50 years.

- c) A building is newly constructed at the cost of Rs. 600000 on a plot of 1000 m². Fix monthly rent of this property.

Given:

- (i) Rate of land Rs. 100 per sq.m.
- (ii) Return expected on cost of land and building 8%
- (iii) Life of building 60 years.
- (iv) Rate of Interest for sinking fund 3%
- (v) Scrap value 10% of construction cost
- (vi) Other outgoings 30% of gross rent.

6. Attempt any FOUR of the following:**16**

- a) Draft a detailed specification of cement concrete (M20) for slab and beam.
 - b) State and describe the types of specifications.
 - c) Explain sinking fund method of depreciation.
 - d) Define outgoings. State various types of outgoings.
 - e) Define valuation. State necessity of valuation.
 - f) State the necessity and importance of specifications of an item of work.
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