

# 17603

**21718**

**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) Figures to the right indicate full marks.  
(4) Assume suitable data, if necessary.  
(5) Use of Non-programmable Electronic Pocket Calculator is permissible.  
(6) 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 four functions of a Junior Engineer.
  - (ii) List out any four requirements of a valid contract.
  - (iii) Differentiate between item rate contract and percentage rate contract.
  - (iv) Define ‘Tender’ and list out various types.
  - (v) State any eight conditions when the lowest tender is rejected.
- b) **Attempt any ONE of the following:** **6**
- (i) Explain the PWD method of carrying out work by departmental method.
  - (ii) State the importance of measurement book. Write the rules for entering entries in measurement book.

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- 2. Attempt any FOUR of the following:** **16**
- a) Define administrative approval and technical sanction.
  - b) Draw administrative setup of PWD.
  - c) State advantages and disadvantages of lumpsum contract.
  - d) Which are the conditions when 'Negotiated Contract' is suitable for work.
  - e) Define 'Secured advance'. Write maximum limit for it.
  - f) What is first and final payment? Which form number is used for it.
- 3. Attempt any FOUR of the following:** **16**
- a) Explain with example 'Unbalanced Tender'.
  - b) Define 'Earnest money' When it is refunded?
  - c) Define 'Arbitration'. Why it is needed?
  - d) List the documents to be submitted at the time of registration as a contractor.
  - e) Suggest the type of contract suitable for :
    - (i) Purchase of office furniture
    - (ii) Only one contractor for particular work is available in the area.
- 4. a) Attempt any THREE of the following:** **12**
- (i) Enlist various modes of payment to contractor.
  - (ii) Describe the process of submission of tender.
  - (iii) Enlist various types of specifications and explain any one in detail.
  - (iv) List out various factors affecting value of a property.
- b) Attempt any ONE of the following:** **6**
- (i) Explain BOT project with respect to objectives advantages and disadvantages.
  - (ii) What are the points to be confirmed before making final bill?

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

- a) Draft a tender notice for construction of Boy's hostel at your place costing Rs. 2.5 Crore. Assume suitable data.
- b) Suggest the suitable rent per month for a building having plot area of 300 m<sup>2</sup> purchased at Rs. 300/m<sup>2</sup> construction area is of 150 m<sup>2</sup>@ Rs. 1500/m<sup>2</sup>.  
Total outgoing are 30% of gross rent  
Returns expected on construction cost @ 12%  
Returns expected on cost of land @ 8%
- c) Differentiate between:
  - (i) Market value and Book value
  - (ii) Depreciation and Obsolescence

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

- a) Draft the detailed specification for M20 grade concrete in footing and column.
  - b) What are the points to be observed while framing the specification?
  - c) What are legal aspects of specification?
  - d) List out any eight purposes of valuation.
  - e) Define Sinking fund and years purchase.
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