MODEL QUESTION PAPERS

CONSTRUCTION TECHNOLOGY

CONSTRUCTION TECHNOLOGY

SUBJECT : CONSTRUCTION MATERIALS

I-YEAR PAPER-I

Section - A

Note : (i) Answer all the Questions
(ii) Each Question carries 2 marks 2 x 10 = 20

1. Define the term dressing of stones
2. What is frog? What purposes does it serve?
3. Define the term stoneware. What are the ingredients of clay used for stone ware?
4. What is bulking of sand?
5. Write the chemical composition of portland cement.
6. Define the term 'Mortar'. How are they classified?
7. What is the need for batching the materials of concrete?
8. What is meant by i) Design Mix ii) Nominal Mix?
9. State andy four uses of mild steel.
10. Write any four types of paints.

Section - B

Note : (i) Answer five Questions
(ii) Each Question carries 6 marks 5 x 6 = 30

11. State the classication of rocks based on
    a) Geological b) Physical
12. What are the different types of moulding of bricks? Explain any one method with its advantages.
13. Briefly explain types of tiles.
14. Explain the differences between quick setting and rapid hardening cements
15. Define water-cement Ratio. Explain the importance of water-cement ratio in preparing concrete.
16. Explain the types of Rein forcing steel.
17. What is varnish? State the types of varnishes.
18. Describe the properties of fibre reinforced concrete. State the uses of fibre reinforced concrete.

MODEL QUESTION PAPER
CONSTRUCTION TECHNOLOGY
Ist YEAR PAPER - II
SURVEYING

Time : 3 Hours **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions
(ii) Each Question carries 2 marks 2 x 10 = 20

1. Define Reconnaisance
2. Define Ranging
3. Define Baseline
4. Draw the Conventional Signs for
   a) Pond b) Road
5. What is Bearing
6. Define Magnetic Declination
7. What is Orientation of Plain table?
8. Define Levelling
9. What is a change point?
10. What is Face Left Observation?

Section - B

Note : (i) Answer five Questions
(ii) Each Question carries 6 marks 5 x 6 = 30

11. a) Write Classification of surveying based on instruments
    b) Explain Indirect Ranging
12. Explain different obstacles in chain surveying
13. The following fore bearings were observed in a closed compass traverse ABCD conducted in clockwise direction. Calculate included angles. Apply check.

    Line F.B

AB	$47^0 30'$
BC	$128^0 15'$
CD	$200^0 00'$
DA	$298^0 15'$

14. The Following fore and back bearings were observed in a closed traverse ABCDA. Where local attraction is suspected. Detect the local attraction and correct the bearings for local attraction.

Line	F.B.	B.B
AB	$45^0 20'$	$222^0 20'$
BC	$119^0 30'$	$298^0 30'$
CD	$226^0 45$	$46^0 15'$
DA	$310^0 30'$	$130^0 00'$

15. Write the methods of plane tabling and Explain radiation method of plane tabling.
16. Explain the various types of levelling staves used in levelling
17. The following readings were taken successively with a dumpy level :

    2.225, 1.605, 0.980, 2.090, 2.865, 1.265, 0.600, 1.980, 1.045 and 2.685m. The instrument has been shifted after third, sixth and eigth readings. Enter the readings in a page of level book and calculate the R.L. of points by Rise and fall method. The first reading was on bench mark of R.L. 400.300 m
18. Draw the neat sketch of Transit Theodolite and identify the component parts.

PAPER III YEAR I

CONSTRUCTION TECHNOLOGY

SUBJECT : ENGINEERING MECHANICS

Model Paper

Section - A

Note : (i) Answer all the Questions
(ii) Each Question carries 2 marks 10 x 2 = 20

1. Distinguish between base and derived units
2. Define : a) Force, b) Vector
3. Define moment of a force and mention the types of moments
4. Define centroid
5. State the portion of centroid with a neat sketch for
   a) Rectangle b) Triangle
6. Define Radius of gyration
7. Define Centroid
8. State the relationships between elastic constants
9. Mention the types of beams
10. Define point of contra flexure

Section - A

Note : (i) Answer any 5 Questions
(ii) Each Question carries 6 marks 5 x 6 = 30

11.a) Find the resultant of two forces acting at a point by law of paralleelogram of forces.

b) Two forces 30N and 50N acting at 90^0 to each other. Calculate the resultant of forces

12. Determine the position of centroid of an unequal angle section of size 400 x 250 x 25 mm.

The Sketch is shown in Fig - A.

13. Find the polar M.I. for a hollow circular shaff section of outer diameter 40 mm and inner diameter 35 mm. Calculte Kzz

14. A circular bar of 20 mm diameter, 200 mm long was tested in tension. The increase in its length was found to be 1.5. mm while the decrease in tits diameter was 0.03 mm. Calculate the longitudinal strain, lateral strain, prisson's ratio.

15. A 40 mm diameter metal bar carrying a load of 210 KN extended by 0.032 mm on a gauge length of 200 mm. The contraction in diameter was 0.0024 mm. Calculate the elastic constants.

16. A cantilever 6 m long carries point loads of 40, 20 and 30N at a distance of 2,5, and 6m from fixed end respectively. Sketch SFD and BMD. Find the Max. B.M. and S.F.

17. A simply supported beam 6 m span is subjected to an U.D.L. of 20 N/M. Draw SFD & BMD State the maximum values of S.F. and B.M.

18. A simple supported beam 8m span is subjected to an U.D.L. of 25 N/m at center for a length of 3m. Two point loads of 30N are acting at a distance of 2m from both ends. Draw SFD and BMD.

MODEL QUESTION PAPER

BUILDING CONSTRUCTION

Time : 3 Hours **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions
(ii) Each Question carries 2 marks 2 x 10 = 20

1. Define bearing capacity of Soil
2. Define a) Cornice b) Throating
3. Draw sketch for king closer and queen closer of brick
4. Define modular brick. What are the advantages?
5. Write any four types of doors.
6. Define a) Span b) Pitch of a roof.
7. Write any four types of Floors.
8. Write the uses of a) Bulldozer b) Concrete Mixer
9. Write the tools used in brick masonry construction
10. Name the systems of sanitation that are used in tall buildings

Section - B

Note : (i) Answer five Questions
(ii) Each Question carries 6 marks 5 x 6 = 30

11. Explain the component parts of a building with neat sketch
12. Explain Grillage foundatin with sketch
13. What are the points to be observed in brick masonry?
14. Write various fixtures and fastenings used for doors
15. What are the types of stairs. Explain any one with neat sketch
16. Write short notes on
    a) Scaffolding b) Shoring
17. Briefly explain
    a) Form work for colomns
    b) Tools used in carpentary
18. Write any six construction equipment with their uses.

MODEL QUESTION PAPER
ESTIMATING & COSTING
IInd YEAR PAPER-II

Time : 3 Hours **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions
(ii) Each Question carries 2 marks 2 x 10 = 20

1. Define Estimation
2. Write any four items of work with units.
3. Define lead and lift
4. Estimate the quantity of brick work for a wall f length 6m, width 30cm and height 3.8 m
5. What is S.S.R. Book?
6. Write the format of abstract estimate
7. Calculate the quantity of plastering for a wall 5m length, 230 mm thick, 3.8 m height.
8. Estimate the quantity of cement, sand required for CM (1.6) for 1 cum.
9. List the materials required for RCC Column
10. What is plinth area estimate?

Section - B

Note : (i) Answer five Questions
(ii) Each Question carries 6 marks 5 x 6 = 30

11. Explain different types of estimates
12. Estimate the quantities of the following items of a single room building shown in Fig-A.
13. Calculate the quantities of the following items by center line method for the building shown in fig-A.
    a) D.P.C b) R.C.C. work
14. Estimate the materials required for

i) C.C. (1 : 2 : 4)

ii) Brick work in C.M (1 : 1 1/2 : 3)

15. Calculate the rate of C.C (1 : 1 1/2 : 3) for 1 cum. Take 10 cum. Assume the rates of material and labour.

16. Estimate the quantity of earth work for road embarkmnt of depths 1m and 2m at the end A and B respectively. Top width of embankment is 8m and sides lopes 2:1. Length of road embankment is 100m. Adopt Trapezoidal rule and mean sectional area methods for arriving the quantity of earthwork.

17. Calculate the quanlity of steel in kgs for a column footing of size 2m x 2m provided with 12mm dia bars placed at 150 mm c/c in both ways wt. of 12mm dia bar per metre is 0.89 kg/m

18. Estimate the quantities for the following items of work for compoundwall of 80m length.

    i) C.C. (1 : 4 : 8) in foundation as given fig. B.

    ii) Brickwork in C.M. (1 : 4)

MODEL QUESTION PAPER

CONSTRUCTION MANAGEMENT & ACCOUNTS

IIND YEAR PAPER-III

Time : 3 Hours **Max. Marks : 50**

Section - A

Note : (i) Answer all the Questions
(ii) Each Question carries 2 marks 2 x 10 = 20

1. Write the stages in construction
2. Define contract planning
3. Write limitations of barchart
4. Write the type of labour
5. Write the major items of controls in building construction
6. Define Contract
7. Define work order
8. Write various methods of carrying out works
9. Define Stock.
10. Define Issue rate

Section - B

Note : (i) Answer five Questions
(ii) Each Question carries 6 marks 5 x 6 = 30

11. Define scheduling. Briefly explain scheduling methods.
12. What is organization. Explain merits and demerits of line and staff organisation
13. Explain various types of contracts.
14. Define Tender. What are the documents to be attached along with tender form
15. Explain the procedure of issue of stock from stores
16. Explain the necessity of maintaining accounts.
17. Write short notes on

a) Payment of wages to labour

b) Functions of Inspection department

18. Write short notes on

a) Job layout

b) Minimum wages act

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