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ET-524(B)

B.Tech. Civil (Construction Management) / B.Tech. Civil (Water Resources Engineering)

Term-End Examination

00528

June, 2016

ET-524(B) : CONSTRUCTION MANAGEMENT – I

Time : 3 hours *Maximum Marks : 70*

Note : *Question no. **1** is **compulsory**. Attempt any **four** questions from the remaining. Use of scientific calculator is permitted. Missing data can be suitably assumed.*

1. (a) Floor plan should generally be drawn in the scale of

(i) 1 : 200

(ii) 1 : 50

(iii) 1 : 10

(b) To prevent the possibility of lumping up under pressure restrict the height of the cement stack to

(i) 10 Bags

(ii) 12 Bags

(iii) 15 Bags

(c) Methods of measurement are based on the recommendation contained in

(i) IS : 1200 – 1974

(ii) IS : 456

(iii) IS : 800

(d) Painting coefficient for glazed windows with iron bar is

(i) 1·50

(ii) 2·00

(iii) 2·25

(e) Increase in Bills Payable results in

(i) increase in cash

(ii) decrease in cash

(iii) no change in cash

(f) Under straight line method of depreciation, what will be the value of an asset after 4 years when the asset value is ₹ 40,000, expected life is 10 years, scrap value is ₹ 5,000 ?

(i) ₹ 24,000

(ii) ₹ 26,000

(iii) ₹ 27,000

(g) In case of discrepancies in the contract document, the following precedence rules are adopted to resolve the conflicts :

* Amendments take precedence over the specification.
* Specifications take precedence over plans.
* Stated dimensions take precedence over scale dimensions.

All the above statements are

(i) true

(ii) false

(iii) not a matter of concern *7×2=14*

2. (a) Define Contour. Draw sketches of contour lines showing uniform slope, streams and ridges. *1+6=7*

(b) What are the factors that the site engineers should study before site work begins ? Write briefly about site layout. *5+2=7*

3. (a) Define floor plan. Briefly explain the following : *1+3×2=7*

(i) Sectional drawing

(ii) Elevation drawing

(iii) Specified drawing

(b) State a few advantages of CAD system over manual methods of drawing. *7*

4. (a) What are the various uses of Estimates in construction ? 7

(b) Draw a plan for foundation trench excavation and foundation concreting. Also draw a section and label these with dimensions/materials (assume suitably) so that an estimator can work on it (section up to plinth level). 7

5. (a) Develop the formulae for earthwork for canals – fully in cutting, partially in cutting and partially in filling, fully in banking. 7

(b) What is formwork ? How is formwork quantified in area basis for slab, beam, lintel and column construction ? *1+6=7*

6. (a) What is meant by 'work breakdown technique' in the construction planning process ? Explain by an example of two-storey primary school construction. 7

(b) Briefly describe the following statement :

"The control system aids the management at various levels to perform the functions effectively and efficiently." 7

7. (a) Why are economic comparisons required ? Explain the mechanism of making economic comparisons. 7

(b) Write a note on Inflation. 7
