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Roll No. 170741/120741/30741

4th Sem. / Civil

Subject : Concrete Technology

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

- Q.1 Strength of concrete _____ with age. (CO-1)
- Q.2 Volume of one bag of cement _____ (CO-2)
- Q.3 As the slump increases workability _____. (CO-4)
- Q.4 Water-cement ratio law is only valid when concrete is _____ compacted. (CO-3)
- Q.5 Concrete in which preliminary tests are conducted is known as _____ (CO-5)
- Q.6 Retarders to concrete decrease the _____. (CO-6)
- Q.7 The period of curing can be _____ as the temperature of concrete increases. (CO7)

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Q.8 The temporary structure used as a mould for the concrete is called. _____. (CO1)

Q.9 The aggregates retained on _____ sieve is called coarse aggregate. (CO2)

Q.10 Water cement ratio = _____. (CO3)

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

- Q.11 Name the different types of concrete. (CO1)
- Q.12 What do you mean by bulking of sand? (CO2)
- Q.13 Define Workability. (CO4)
- Q.14 State Duff Abraham's law of water cement ratio. (CO3)
- Q.15 What is the object of mix design. (CO5)
- Q.16 State the purpose for which admixtures are used. (CO6)
- Q.17 What is fibre reinforced concrete. (CO7)
- Q.18 What is Expansion joint? (CO8)

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- Q.19 What is weight batching? (CO8)
- Q.20 What is creep? (CO4)
- Q.21 What do you understand by screeding? (CO9)
- Q.22 What is the effect of storage of cement on the strength of cement? (CO8)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

- Q.23 What are the uses of concrete? Describe briefly. (CO1)
- Q.24 Discuss classification of aggregates according to shape and size in brief. (CO2)
- Q.25 Describe the properties of concrete in plastic stage briefly. (CO4)
- Q.26 What are the limitations of water cement ratio law? Discuss. (CO3)
- Q.27 What do you mean by controlled concrete. (CO5)
- Q.28 Enumerate the precautions required for cold weather concreting. (CO7)

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- Q.29 What do you understand by curing of concrete? Explain procedure briefly. (CO7)
- Q.30 Explain briefly rebound hammer test. (CO9)
- Q.31 Explain storage of cement in warehouse. (CO8)
- Q.32 Describe the difference between nominal and controlled concrete. (CO5)

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

- Q.33 Explain the factors affecting workability of concrete. (CO4)
- Q.34 Explain the slump test for measurement of workability? (CO8)
- Q.35 Explain the methods of concreting in cold weather. (CO7)
- Q.36 a) Explain advantages and disadvantages of concrete.
- b) Define compaction factor test of workability of concrete. (Co4)

(**Note:** Course outcome/CO is for office use only)

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3rd Sem. / Civil Engineering

Subject : Public health Engineering/W.S & W.W Engg.

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Fill in the blanks. All questions are compulsory.

(10x1=10)

(Course Outcome/CO)

- Q.1 The water is not chemically pure but does not contain any harmful to human health is known as _____. (CO-1)
- Q.2 The ratio of the maximum daily consumption to the average daily demands is _____. (CO-2)
- Q.3 The permissible pH value for public supply water is between _____. (CO-3)
- Q.4 The outlet provided for tapping water during fires, from mains to sub-mains are called as _____. (CO-5)
- Q.5 The different types of fitting used in a building for installing 'water supply plumbing system' are called as _____. (CO-7)

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- Q.6 The excess water from rain water which runs off on the surface of ground is called _____. (CO-8)
- Q.7 The velocity by which solid matters, oil, greases, industrial waste may be removed is called _____. (CO-9)
- Q.8 The process of placing sewers at the correct alignment with proper gradient is known as _____. (CO-10)
- Q.9 The decomposition, which takes place in the absence of oxygen or when the free oxygen is not available for sewage, is called _____. (CO-11)
- Q.10 At about _____ percent moisture, the sludge becomes dry. (CO-13)

SECTION-B

Note: Very Short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

- Q.11 Define hydrological cycle. (CO-1)
- Q.12 Define design period. (CO-2)
- Q.13 Define the process of sedimentation of water (CO-4)
- Q.14 Name the various types of pipes used for conveyance of water. (CO-5)
- Q.15 Define stop cock. (CO-5)

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- Q.16 Define timbering of trenches. (CO-6)
 Q.17 Define goose neck. (CO-7)
 Q.18 Define sewers. (CO-9)
 Q.19 Write the factors affecting self purification of streams. (CO-12)
 Q.20 Write the objectives of skimming tank. (CO-13)
 Q.21 Define trickling filters. (CO-13)
 Q.22 Define water closet. (CO-14)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

- Q.23 Enlist the various factors affecting per capita demand, explain any two of them. (CO-2)
 Q.24 Enlist the various chemical tests conducted on water and explain chlorine test. (CO-3)
 Q.25 Define break point chlorination and write its advantages. (CO-4)
 Q.26 Define back filling of trenches and write the steps involved in this process. (CO-6)
 Q.27 Define water carriage system of sanitation and write its advantages. (CO-8)
 Q.28 Define a manhole and draw its diagram. (CO-9)

- Q.29 Write the process of setting out the alignment of sewers. (CO-10)
 Q.30 Write the importance of C.O.D in connection with sewage treatment. (CO-11)
 Q.31 Write the purposes of sewage disposal. (CO-12)
 Q.32 Write the objectives of building drainage. (CO-14)

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

- Q.33 Explain the working of slow sand filters with the help of diagram. (CO-4)
 Q.34 Write the construction, working, advantages and disadvantages of expansion joints. (CO-5)
 Q.35 Explain the process of sewage treatments with the help of flow diagrams. (CO-13)
 Q.36 (a) Write the process of air-testing of sewers. (CO-10)
 (b) Enlist the various types of water demand and explain any one of them in detail. (CO-2)

(Note: Course outcome/CO is for office use only)

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4th Sem. / Civil

Subject : IRRIGATION ENGG.

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory. (10x1=10)

(Course Outcome/CO)

- Q.1 Irrigation is supplementary to _____. (CO-1)
- Q.2 The limited period during which any crop requires more quantity of water for its growth is called _____. (CO-2)
- Q.3 Spillways are also known as _____ for the dams. (CO-7)
- Q.4 Head works are suitable in the _____ stage of river. (CO-8)
- Q.5 Circle of influence of two wells _____ cross each other. (CO-6)
- Q.6 A canal which is aligned at right angle to the contours of area is known as _____. (CO-5)

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Q.7 The gap created in the bank of a canal is called a _____. (CO-5)

Q.8 Seepage drains _____ the chances of water logging. (CO-12)

Q.9 Escapes are also known as _____ for the canals. (CO-10)

Q.10 The basic hydrologic equation is simply stated as _____. (CO-3)

SECTION-B

Note: Very Short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

- Q.11 Define drip irrigation. (CO-4)
- Q.12 Define catchment area. (CO-3)
- Q.13 Define water shed canal. (CO-5)
- Q.14 Define aqueduct. (CO-9)
- Q.15 Define spoil bank. (CO-5)
- Q.16 Define intensity of irrigation. (CO-2)
- Q.17 Define cone depression. (CO-6)
- Q.18 Define critical of depression head. (CO-6)
- Q.19 Define water logged area. (CO-12)
- Q.20 Define guide bank. (CO-11)

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Q.21 Define hydrometry. (CO-3)

Q.22 Define escapes. (CO-10)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 How will you justify the statement that irrigation is the science of survival. (CO-1)

Q.24 What are uses of rainfall records. (CO-3)

Q.25 Explain different types of earthen dam briefly. (CO-7)

Q.26 How will you close a canal breach. (CO-5)

Q.27 Draw the plan of a canal head work and show its various component parts. (CO-8)

Q.28 Differentiate between canal syphon and drainage syphon. (CO-9)

Q.29 How will you detect whether an area is water logged or not? (CO-12)

Q.30 What are factor which affect duty. (CO-2)

Q.31 Write a brief note an A.P.M outlet. (CO-10)

Q.32 What are river training works and why these are provided. (CO-11)

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 (a) What points you will keep in mind while selecting site for a canal head work. (CO-8)

(b) Why a canal should be aligned along the water shed. (CO-5)

Q.34 (a) Prove that the relation between duty, delta and base period is $D = \frac{8.64 B}{\Delta}$ hec./ cu-mec. (CO-2)

(b) Explain the factor which affect runoff. (CO-3)

Q.35 (a) Explain strainer type tube well (CO-6)

(b) Explain various causes of water logging. (CO-12)

Q.36 (a) Write a short note on maintenance of canal. (CO-5)

(b) Explain method of irrigation. (CO-4)

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4th Sem. / Civil Engg

Subject : Surveying - II

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory. (10x1=10)

(Course Outcome/CO)

- Q.1 The Transiting is also Know as-----.(CO-5)
Q.2 Define additive constant. (CO-7)
Q.3 What is swinging of telescope? (CO-5)
Q.4 Total length of single circular curve is----- (CO-8)
Q.5 Define Deviation cure. (CO-8)
Q.6 Define degree of curve. (CO-7)
Q.7 Write full form of EDM. (CO-9)
Q.8 What is serpentine curve? (CO-7)
Q.9 Direct vernier is based on-----principles.(CO-5)
Q.10 Define changing face. (CO-5)

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SECTION-B

Note: Very Short answer type questions. Attempt any ten parts (10x2=20)

- Q.11 Define Contour. (CO-1)
Q.12 Name the two commonly used methods for contouring. (CO-1)
Q.13 Define Tachometry. (CO-7)
Q.14 Name the two types of theodolite. (CO-5)
Q.15 Define multiplying constant. (CO-7)
Q.16 Define horizontal axis. (CO-5)
Q.17 Define compound curve. (CO-8)
Q.18 Name at least two EMD instruments. (CO-9)
Q.19 Define super elevation. (CO-7)
Q.20 Define balancing of a traverse. (CO-6)
Q.21 Define degree of curve. (CO-8)
Q.22 What is apex distance. (CO-7)

SECTION-C

Note: Short answer type questions. Attempt any eight questions. (8x5=40)

- Q.23 Explain direct method of contouring. (CO-1)

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- Q.24 List requirements to be satisfied in setting out a transition curve. (CO-8)
- Q.25 Describe movable hair and fixed hair method of tachometric survey. (CO-7)
- Q.26 Discuss the uses of satellites in remote sensing. (CO-9)
- Q.27 Explain in brief various sources of errors in theodolite. (CO-5)
- Q.28 Describe in brief instruments used in tachometry. (CO-7)
- Q.29 Write a short note on remote sensing. (CO-9)
- Q.30 Draw and explain serpentine curve. (CO-8)
- Q.31 What do you mean by transition curve and what are its different types. (CO-8)
- Q.32 Why super elevation is needed on curves, explain? (CO-7)

SECTION-D

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.33 Explain method of finding horizontal angle by repetition method. (CO-6)

- Q.34 In order to determine the constants of tachometer, distances 210 and 400 m were accurately measured from the instruments and readings on a stadia rod on the upper and lower hairs were taken as follow:

Distance in meter	Reading at	
	Lower stadia	Upper stadia
210	2.00	4.00
400	0.50	4.50

Determine the values of the constant and find the distance when the readings of the stadia curves were 1.5 and 4.5m, The line of sight being horizontal in all cases. (CO-7)

- Q.35 Draw neat sketch of a simple curve and show various elements on it. (CO-8)
- Q.36 What are the different stage in an idealized remote sensing system. (CO-9)

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No. of Printed Pages : 4
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4th Civil .

Subject :Public Health And Irrigation Engg. Drawing

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Objective questions and sketch attempt any 10 parts. (10x2=20)

Q.1 Define Refuse?

Q.2 Define Vent pipe?

Q.3 Define Branch Sewer.

Q.4 Define Manhole.

Q.5 Define Weir.

Q.6 define Earthen Dam.

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Give the Sketch of following:-

Q.7 Rectangular Bath.

Q.8 Shower head.

Q.9 Grease trap.

Q.10 Metal Sections.

Q.11 Earth.

Q.12 WC.

SECTION-B

Note: Short answer type questions. Attempt any three parts. (3x10=30)

Q.13 Draw the x-section of R.C.C. sewer having 750mm diameter.

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Q.14 Draw the P.Q and S trap sections.

Q.15 Draw neat sketches of different types of kitchen sink.

Q.16 Draw the x-section of a lined canal fully in cutting . The lining consists of 130mm th. cement concrete use standard specifications. The natural surface level is 1.0m above the lining.

Q.18 Draw an sectional plan and x-section of septic tank for 15 users. cleaning interval =1year.

Q.19 Draw the detailed section of a lined well showing the detail of R.C.C. curb.

SECTION-C

Note: Long answer type questions. Attempt any two questions. (2x25=50)

Q.17 Draw the three sectional view, Plan front and side of an intercepting chamber from 1.0m x 0.90m. Inside depth upto invert is 1.0m . other data may be assumed suitably.

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