Unit – 1 FLUID PRESSURE & ITS MEASUREMENTS, HYDROSTATICS			
S.No	**Questions**	**Marks**	**Appeared in**
1	Write SI units of the following a) Pressure/ Compressibility b) pressure head/ Viscosity c) density/ Atmospheric pressure d) hydraulic mean depth/ Specific weight e) discharge/ Mass density	5	Nov-Dec 2017, Nov-19
2	$P_{abs}= P_{atm}+ P_{gauge}$ Explain the equation with neat diagram.	5	Nov-Dec 2017
3	a) Explain with neat sketch Total pressure P= wAx	3	Nov-Dec 2017
	b) Determine the total pressure & depth of centre of pressure on an isosceles triangular plate of base 5m & altitude 5m. When it is immersed vertically in oil with sp.gr. of 0.8, the base of triangle 2m below the free surface of water.	7	
4	Define a) Density b) Sp. Weight & state their units	5	April-May2017
5	Distinguish between intensity of pressure & pressure head.	5	April-May2017
6	a) Convert the pressure head of 500mm of oil of specific gravity 0.8 to an equivalent head of water.	5	April-May2017
	b) A simple manometer is used to measure the 5m pressure of water flowing in a pipeline, its right limb is open to atmosphere & the left limb is connected to pipe. The centre line of pipe is in level with that or mercury in the right limb. Determine the pressure in the pipe. If the difference of mercury levels in the two limbs is 150mm.	5	
7	Determine the total pressure & depth of centre of pressure on an isosceles triangular plate of base 4m and altitude 6m, when it is immersed vertically in water such that its base touches the water surface.	10	April-May 2017
8	Define i. Absolute weight ii. Sp. Weight iii. Sp. Gravity	6	April-May 2018
	i. List the types of fluid.	3	
	ii. Calculate the specific weight density and specific gravity of a liquid having volume one liter and weight 6N.	6	
9	A circular plate of diameter 3m is immersed in water in such a way that its centre is at a depth of 5m below the free surface. Determine the total pressure and centre of pressure exerted by the liquid on the plate.	6	April/May-18, Nov-19

10	What is manometer? Mention types of manometer.	5	April-May 2018
11	Explain with neat sketch bourdons pressure gauge.	5	April-May 2018
	Define total pressure and centre of pressure	2	Nov-19
	Differentiate between simple manometer and differential manometer.	3	Nov-19
Unit –2 FLOW OF FLUIDS			
12	Write Bernoulli's equation. Explain Briefly	5	Nov-Dec 2017
13	Differentiate between i. steady flow and unsteady slow ii. uniform and non- uniform flow	5	April-May2017, Nov-Dec 2017
14	Draw neat sketch of venturimeter & explain terms used in discharge equation.	5	Nov-Dec 2017 May/june,2018
15	i. Mention the types of flow	3	Nov-Dec 2017, Nov-19
	ii. A pipe 300m long has a slope 1 in 100 & 7m tapers from 1m diameter at the higher end to 0.5m at lower end. Quantity of water flowing is 5400litre per minute. If pressure at the higher end is 70KN/m^2, find the pressure at the lower end.	7	
17	State Bernoulli's theorem & list the application of Bernoulli's theorem	5	April-May2017
18	A horizontal venturimeter with 200mm dia at inlet & 100mm dia at throat is used for measuring the flow of water. The differential mercury manometer shows a gauge difference of 250mm. Find the discharge in lit/sec. Take C=0.98	10	April-May2017, Nov-19
19	a) Compute the velocity ratio between two sections of a tapering pipe, if the dia ratio 1:2, when the liquid is flowing continuously through the pipe.	4	April-May2017
	b) The diameter of pipe changes from 200mm at section 6m above datum to 50mm at a section 3m above datum. The pressure of water at first section is 200KPa & the intensity of pressure at the second section.	6	
20	Explain the "Equation of continuity of a liquid"	3	April-May2018
21	State Bernoulli's theorem. What are the limitations of Bernoulli's theorem	5	April/may2017, May/june,2018, Nov-19
22	A 300m diameter pipe carries 80 lit/sec of water. at points P and Q the measurements of pressure and elevation are 361 kn/m^2 and 30.5m and 33.5m respectively. assuming steady flow finds the head loss between two points	5	Nov-19
23	A venturimeter is to be fitted to a 250mm diameter pipe, in which the max flow is 7200 lit/min and the pressure head is 6m of water. what is the minimum diameter of throat so that there is no negative head in it?	6	May/june,2018

Unit – 3 FLOW THROUGH ORIFICE NOTCHES AND WEIRS			
24	Define cv, cd, cc, Qth, Qact	5	Nov/Dec 2017
25	List the different types of weirs	5	Nov/Dec 2017
26	Define vena contrata	5	Nov/Dec 2017 May/june,2018
27	What are mouth pieces, mention its types	5	Nov/Dec 2017
28	Mention the different types of orifice	3	Nov/Dec 2017
29	A jet of water issues from a sharp 7m edge orifice under a constant head of 0.15m at a certain point of issuing jet. the horizontal and the vertical coordinates measured from vena contrata are 0.406 and 0.85 m respectively determine cv and cc take cd as 0.62	7	Nov/Dec 2017, Nov-19
30	A 60mm diameter orifice is discharging water under a head of 9m calculate the actual velocity of the jet in m/sec at the vena contrata. if cd = 0.6 and cv = 0.98	6	Nov/Dec 2017 May/june,2018
31	Differentiate between mouth piece running free and mouth piece running full	5	April/may2017,
	Water discharges at the rate of 100 lit/sec through a 120mm diameter sharp edge orifice under a constant head of 10m a point on the jet measured from the vena contrata has coordinates of 4.5 m horizontal and 0.54 m vertical. calculate the values cc, cv, and cd for the orifice	10	April/may2017,
32	Define notch and list different types of notches	4	April/may2018,
33	Find the discharge through a trapezoidal notch which is 1.4m wide at top and 0.6m at the bottom and is 0.5m height. the head of water on the notch to be 0.62 and for triangular notch to be 0.6	6	May/june,2018
	List the advantages of a triangular notch over a rectangular notch.	5	Nov-19
	Differentiate between: i. uniform and non-uniform flow, ii. Laminar and turbulent flow.	4	Nov-19
	What is a Cipolletti weir? How does it differ from a rectangular weir?	3	Nov-19
	Determine the height of rectangular weir of length 5m to be built across a rectangular channel. The maximum depth of water on the upstream side of the weir is 1.5m and discharge is 2m^3/s. Take Cd=0.6 and neglect end contractions.	7	Nov-19
Unit - 4 FLOW THROUGH PIPES			
34	List different major and minor losses in pipe flow/ List any five losses in flow through pipes.	5	April/may2017, Nov/Dec 2017, Nov-19
35	Explain surge tank with sketch	5	May/june,2018 April/may2017, Nov-19

36	Give the darcy's and chezy's formula for loss of head due to friction	5	April/may2018,
37	The daily record of rainfall over a catchment area is 0.2 million cubic meters. it has been found that 80% of rain water reaches the storage reservoir the population is 2 lakhs head available at the end of town 40m, distance of reservoir from town is 80km f= 0.01 determine i) discharge through pipe ii) diameter of pipe iii) velocity of flow	7	Nov/Dec 2017
38	a) $hf = 4flv^2/2gd$ i) name the components of the equation ii) what equation is this iii) what kind of energy loss occurs	3	Nov/Dec 2017
39	A reservoir has been built 4km away from college campus having 6000 inhabitants' water is supplied from reservoir to campus. it is estimated that each inhabitant will consume 200 lit of water per day and half the daily supply is pumped within 8 hours calculate size of the supply main if the loss of the head due to friction in the pipeline is 20m take f = 0.01	10	April/may2017, May/june,2018, Nov-19
	With usual notations, give Chezy's formula and manning's Formula for uniform flow in channel sections.	5	Nov-19
Unit –5 FLOW THROUGH CHANNELS			
40	Explain i) most economical section ii) hydraulic mean depth	5	Nov/Dec2017 April/may2017, Nov-19
41	**a) V= c $\sqrt{mi}$** explain the equation, **b)** design a most economical rectangular section for a discharge $0.3m^3$/sec and bed slope as 1 in 1000 take c = 50	7	April/may2017 Nov/Dec 2017,
42	A channel of rectangular section 6m wide carries water at the rate of $30m^3$/sec at a depth of 1.8m. calculate bed slope of channel give manning N = 0.01	10	April/may2017
43	A brick lined channel has side slope of 1.5 horizontal to 1 vertical. if it is required to carry $15m^3$/sec. if the average velocity of flow is not to exceed 1m/sec. find a) wetted perimeter for minimum lining b) bed slope N = 0.03	10	May/june,2018
	Define hydraulic gradient line and total energy line.	2	Nov-19
	A trapezoidal channel has side slopes 3 horizontal to 4 vertical and the slope of its bed is 1 in 1800. Determine the economical section of the channel, if it is to carry water at 0.60m3/s. Take Chezy's constant as 60.	10	Nov-19
Unit – 6 PUMPS AND TURBINES			
44	List out any three advantages of centrifugal pump over reciprocating pump	5	Nov/Dec2017, Nov-19
45	Explain with sketch the principle working of a Francis turbine	5	Nov/Dec2017

45	Explain with sketch the construction and principle working of a Pelton wheel turbine	5	Nov/Dec2017, Nov-19
46	List the classification of hydraulic turbines	5	April/may2017
47	Explain the working principle of centrifugal pump	5	April/may2017 May/june,2018
48	Write any five differences between impulse turbine and reaction turbine	5	May/june,2018

UNIT 1- INTRODUCTION & QUANTITY OF SEWAGE			
Sl.No	**Questions**	**Marks**	**Year**
1	Define: - a) Sewer b) Sewerage c) Invert d) DWF e) Garbage f) Refuse g) Sullage h) Sewage (any five)	5	Nov-17, Apr-17, May-18, Apr-19
2	Explain Aims & Objectives of sewerage work.	10	Nov-17, May-18
3	Compare conservancy & Water carriage system.	5	Apr-17
4	Determine the diameter of a circular sewer to carry sewage of 120lit/sec. when flow is half full with a slope of 1 in 200 using N=0.01	5	Apr-17
5	Explain merits & demerits of water carriage system.	5	Apr-17
6	Write a note on self-purification of a stream	5	May-18, Apr-19
7	Calculate the velocity, discharge for a sewer running full. The diameter of sewer is 150mm and it is laid at a gradient of 1 in 60. Assume N= 0.013.	5	May-18
8	Determine the size of a circular sewer for a discharge of sewage of 600 lit/sec. running half full. Take i=0.0001 & N=0.015.	10	Apr-19
UNIT 2- CHARACTERISTICS & ANALYSIS OF SEWAGE & SEWARAGE SYSTEMS			
1	Explain physical tests on sewage.	5	Apr-17
2	Define sanitary sewage and list the factors affecting sanitary system.	5	Apr-17, May-18
3	Explain merits & demerits of separate sewerage system.	5	Apr-17
4	Write the significance of following terms: BOD, COD, pH value, Dissolved oxygen, Chlorides	10	Apr-17, Dec-17, Apr-19
5	Compare separate and combined sewerage system.	5/10	May-18, Apr-19
6	Define: i) BOD ii) MPN iii) Invert	5	May-18
7	Write a short note on strength of sewage.	5	Apr-19
UNIT 3- SURFACE & STORM WATER DRAINAGE & SEWERAGE APPURTENANCES			
1	Explain deep manhole with neat sketch	10	Apr-17, Dec-17, Apr-19
2	Explain with sketch: a) Floor trap b) Gully trap	10	Apr-17, Dec-17
3	Explain with sketch drop manhole	10	May-18
4	Explain with sketch objectives grease & oil trap.	10	May-18
5	List the factors affecting storm sewage.	5	Apr-19
6	Explain different shapes of surface drains and their functions.	10	Apr-19
7	Calculate the diameter & discharge of a circular storm water sewer laid at a slope of 1 in 400, when it is running half full with a velocity of 1.8m/Sec. use manning's formula & N=0.012.	10	Apr-19

UNIT 4- SEWAGE TREATMENT AND DISPOSAL			
1	What are the functions of grit chamber	5	Dec-17
2	List the various methods of sludge disposal. With one example.	5	Dec-17, Apr-19
3	Write the objects of sewage treatment.	5	Apr-17
4	Write advantages & disadvantages of sewage disposal on land.	5	Apr-17
5	With neat sketch explain functioning of trickling filter.	10	Dec-17
6	Explain sludge digestion tank with neat sketch.	10	Apr-17, Dec-17, Apr-19
7	Explain oxidation pond with neat sketch	10	Dec-17, May-18
8	Explain the working of a septic tank with neat sketch.	10	Apr-17, Apr-19
9	With flow diagram explain the working of activated sludge process.	10	Apr-19
10	Discuss the requirements of surface drain	5	May-18
11	Explain aerobic lagoons.	5	May-18
12	Compare between Standard rate and high rate trickling filter.	10	May-18

UNIT 5- SANITATION IN BUILDINGS AND SANITARY FITTINGS			
1	List any five principles and requirements of building drainage.	5	Apr-17, Dec-17, Apr-19
2	Explain requirements of good water closet.	5	Apr-17, May-18
3	Explain with neat with sketch showing arrangements of drainage in multistoried building.	10	Dec-17
4	Write a note on inspection, testing & maintenance of sanitary fittings.	10	Dec-17
5	Explain inspection & maintenance of house drainage system.	10	Apr-17
6	Explain with neat sketch the following sanitary fittings: a. water closets b. Inspection chambers	10	Apr-19
UNIT 6- AIR AND NOISE POLLUTION & EIA			
1	With neat sketch explain electrostatic precipitation.	10	Apr-17, Dec-17
2	Explain the causes of air pollution.	5	Apr-17, Dec-17
3	Explain effects of noise on humans	5	Dec-17
4	List any 5 control measures of air pollution.	10	Apr-17
5	Explain with neat sketch the cyclone separator equipment.	10	Dec-17, May-18
6	What are noise pollution control measures?	5	May-18
7	List the effects of air pollution on human beings	5	May-18, Apr-19
8	Explain global warming and its effects.	10	May-18
9	Explain waste water recycling.	10	May-18
10	List ambient air quality standards in respect of noise.	5	Apr-19
11	With a neat flow diagram explain the methodology of EIA.	10	Apr-19

UNIT – 1- INTRODUCTION & CONCRETE INGREDIENTS			
Sl.No	**Questions**	**Marks**	**Year**
1	a) Explain impact test conducted on coarse aggregates. b) What is manufactured sand.	10	Apr-18
2	What are the different types of admixtures used in concrete.	5	Apr-18
3	Mention chemical composition of cement and different tests conducted on cement.	5	Nov-17
4	List the permissible limits of impurities as per IS code.	5	Nov-17
5	Explain the test conducted on sieve analysis of Fine Aggregates under which conduction w/c ration is valid.	5	Nov-17, Nov-16
6	How size, shape & texture of coarse aggregates is important in concrete? Write a note on adjustment of site for workability.	5	Nov-17
7	Explain initial setting time & final setting time of cement.	5	Apr-17
8	Explain tests on bulking of Fine Aggregates.	5	Apr-17, Nov-18
9	List the precautions to be taken in storing the cement.	5	Apr-17, Nov-16
10	Define workability. Explain Factors affecting workability.	5	Apr-17, Apr-18, Nov-18
11	How do you store cement at site?	5	Apr-18
12	Write a note on silica fume.	5	Apr-18
13	Define admixture. Write a note on fly ash.	5	Nov-18
14	List the physical properties of cement. Explain the test to find initial setting time with sketch.	10	Nov-18
15	Define Bulking of sand. Explain its significance.	5	Nov-18
16	List properties of aggregate. Write short note on size of CA.	5	Nov-18
17	Which test should be conducted to determine the expansion of cement? And how?	10	Apr-19, Nov-19
18	What are he uses of concrete as a building material?	5	Nov-19
19	Write a note on Accelerators.	10	Nov-19
20	Write a short note on Calcium silicate hydrate and Calcium hydroxide.	10	Nov-19

UNIT – 2- BEHAVIOR OF CONCRETE			
1	Explain Hydration of cement and heat of hydration.	5	Apr-18
2	Define w/c ratio & gel/space ratio. Differentiate between gel/space ratio & water/cement ratio on strength of concrete.	5/10	Nov-17, Apr-19
3	Differentiate between plastic shrinkage and drying shrinkage.	5	Nov-17
4	Explain in details factors contributing to cracks in concrete.	5	Nov-17, Apr-18
5	Differentiate between segregation & bleeding.	5	Nov-17, Nov-19
6	Explain bleeding of concrete.	10	Apr-17
7	Explain the techniques adopted to minimize the segregation of concrete.	10	Apr-17, Nov-16
8	Write a short note on aggregate cement bond strength.	5	Nov-17
9	Explain how gel space ratio affects strength of concrete.	5	Apr-18
10	Write a note on water requirement for hydration of cement.	5	Apr-18, Nov-18, Nov-19
11	Explain factors affecting shrinkage of concrete.	10	Apr-18
12	Write a relationship between water cement ratio and strength of concrete.	5	Nov-18
13	Explain transition zone in concrete?	5	Nov-18
14	Define fineness modulus of sand. Explain the procedure to calculate the fineness modulus of fine aggregate.	10	Apr-19
15	Write a short note on chloride attack.	5	Nov-19
UNIT – 3- PROPERTIES OF CONCRETE			
1	What are different Non-destructive tests conducted on concrete.	5	Apr-18
2	What are the properties of fresh concrete?	5	Dec-17
3	Write a note on aggregate cement bond strength.	5	Nov-16
4	What are the factors affecting strength of concrete? Explain how to determine flexural strength	10	Nov-18
5	Explain the test conducted on measurement of workability by vee-bee test	10	Apr-18
6	Explain in details the methods for controlling the sulphate attack on Concrete	5	Apr-18
7	Write a short note on Carbonation?	5	Nov-18
8	How do you ensure concrete quality at site?	10	Apr-19

9	List the factors affecting creep and shrinkage of concrete.	10	Apr-19
10	Define: i) bleeding, ii) segregation, iii) creep, iv) shrinkage, v) workability	5	Apr-19, Nov-19
11	What id creep of concrete? List the factors affecting creep.	10	Nov-19
UNIT – 4- CONCRETE MIX DESIGN			
1	What are the Factors affecting concrete mix proportion?	5	Nov-17
2	List objectives of mix design.	5	Apr-17, Nov-19
3	List the factors affecting mix proportion or design mix.	5	Apr-17, Nov-19
4	List the factors affecting durability. Explain effect of w/c ratio on durability and permeability of concrete.	10	Nov-18
5	List the various methods of mix design. What is the data to be collected for mix design?	5	Nov-18, Apr-19, Nov-19
6	**Design concrete mix design for proportioning** a) Grade designation: M20 b) Type of cement: OPC 43 grade confirming to IS 8112 confirming to IS 3812 (Part-1) c) Maximum nominal size of aggregates: 20 mm d) Minimum cement content: 320 kg/m3 e) Maximum water cement ratio: 0.55 f) Workability: 75mm (slump) g) Exposure condition: Medium (for reinforced concrete) h) Method of concrete placing: Pumping i) Degree of supervision: Good j) Type of aggregate: Crushed angular aggregate k) Maximum cement content: 450 kg/m3 l) Chemical admixture type: not used **TEST DATA FOR MATERIALS** m) Cement used: OPC 43 grade confirming to IS 8112 n) Specific gravity of cement: 3.15 o) Specific gravity of fly ash: 2.2 p) Specific gravity of Coarse aggregate: 2.68; Fine aggregate: 2.65	10	Nov-16, Nov-17, Apr-19

	q) Water absorption Coarse aggregate: 0.5 percent / 0.6 percent Fine aggregate: 1.0 percent r) Free (surface) moisture coarse aggregate: Nil (absorbed moisture also nil) Fine aggregate: Nil s) Sieve analysis coarse aggregate: Conforming to Table 2 of IS: 383 Fine aggregate: Conforming to Zone I of IS: 383		
7	Design concrete mix design for proportioning for M25 as per IS 10262-2009 **1. DESIGN STIPULATIONS FOR PROPORTIONING** a) Grade designation: M25 b)Type of cement: OPC 43 grade c) Maximum nominal size of aggregates: 20 mm d) Minimum cement content: 320 kg/m3 e) Maximum water cement ratio: 0.45 f) Workability: 75mm (slump) g) Exposure condition: severe (for reinforced concrete) i) Degree of supervision: Good j) Type of aggregate: Crushed angular aggregate k) Maximum cement content: 450 kg/m3 l) Chemical admixture type: super-plasticizer **2. TEST DATA FOR MATERIALS** a) Cement used: OPC 43 b) Specific gravity of cement: 3.10 c) Specific gravity of Coarse aggregate: 2.75 Fine aggregate: 2.7 d) Specific gravity of super-plasticizer: 1.145 e) Water absorption Coarse aggregate: 0.5% Fine aggregate: 1.0% f) Free (surface) moisture coarse aggregate: Nil (absorbed moisture also nil) Fine aggregate: Nil g) Sieve analysis coarse aggregate: Conforming e) to Table 2 of IS: 383 Fine aggregate: Conforming to Zone I of IS: 383	10	Apr-18

<table>
<tr><td>7</td><td>Design Concrete Mix Proportion for M30 grade by IS 10262 - 2009.
<table>
<tr><th>DESIGN STIPULATIONS FOR PROPORTIONING</th><th>TEST DATA FOR MATERIALS</th></tr>
<tr><td>Grade designation: M30
Type of cement: OPC 43 grade confirming to IS 8112
Maximum nominal size of aggregates:20mm
Minimum cement content: 320 kg/m3
Maximum water cement ratio: 0.4
Workability: 100 mm (slump)
Exposure condition: Severe
Method of concrete placing: Pumping
Degree of supervision: Good
Aggregate type: Crushed angular aggregate
Maximum cement content: 400 kg/m3
Chemical admixture type:Superplasticizer</td><td>Cement: OPC 43 grade confirming to IS 8112
Specific gravity of cement: 3.15
Chemical admixture: Super plasticizer conforming to IS 9103
Specific gravity of coarse aggregate: 2.74
Fine aggregate: 2.74
Water absorption coarse aggregate: 0.5%
Fine aggregate: 1.0 %
Free (surface) moisture (absorbed moisture also r
Coarse aggregate: Nil
Fine aggregate: Nil
Sieve analysis coarse aggregate:
Conforming to Table 2 of IS: 383
Fine aggregate Conforming to Zone I of IS383</td></tr>
</table></td><td>10</td><td>Nov-18,
Nov-19</td></tr>
<tr><td colspan="4">UNIT – 5- CONCRETE OPERATIONS</td></tr>
<tr><td>1</td><td>What are the different methods of curing the concrete?</td><td>10</td><td>Apr-17,
Nov-17,
Nov-19</td></tr>
<tr><td>2</td><td>Differentiate between screeding & floating</td><td>5</td><td>Nov-18</td></tr>
<tr><td>3</td><td>Write a short note on ready mix concrete.</td><td>5/10</td><td>Nov-17</td></tr>
<tr><td>4</td><td>Write the situation of use the following equipment pans, wheel barrows, transit mixers, chutes, belt conveyors, pumps, tower cranes.</td><td>5/10</td><td>Nov-17,
Apr-19</td></tr>
<tr><td>5</td><td>Explain manufacturing of ready-mix concrete</td><td>5</td><td>Apr-17,
Nov-16</td></tr>
<tr><td>6</td><td>What is self-compacting concrete mention advantages</td><td>10</td><td>Apr-18</td></tr>
<tr><td>7</td><td>Define batching. Explain methods.</td><td>5</td><td>Nov-18,
Apr-19</td></tr>
<tr><td>8</td><td>Define curing. Explain 1 method of curing.</td><td>5</td><td>Nov-18</td></tr>
<tr><td>9</td><td>Mention different types of joints in concrete.</td><td>5</td><td>Nov -17</td></tr>
<tr><td>10</td><td>Differentiate between Hand mixing & Machine mixing.</td><td>5</td><td>Nov-17</td></tr>
<tr><td>11</td><td>What are the precautions taken during hot and cold weather concreting?</td><td>5</td><td>Nov-17,
Apr-18,
Nov-18</td></tr>
<tr><td>12</td><td>Explain different methods of curing concrete.</td><td>10</td><td>May-17,</td></tr>
</table>

			Apr-18
13	Why is vibrator required in concreting? Discuss the various types of vibrators used in concreting	10	Apr-18, Apr-19
14	Explain Finishing concrete slabs-screeding, floating, and trowelling	10	Apr-18
15	Define compaction. Discuss various types of vibrators used in concreting.	10	Nov-18
16	List the exposure condition and explain.	5/10	Nov-18, Apr-19
17	What are the precautions to be taken while placing concrete?	5	Nov-19
18	Explain different types of transportation of curing.	10	Nov-19
UNIT – 6- SPECIAL TYPES OF CONCRETE			
1	What are the specific applications of foamed concrete?	5	Apr-18
2	Write a short note on Ready-mix concrete? Explain.	5/10	Nov-17, Apr-19, Nov-19
3	What is fiber reinforced concrete; mention any two advantages and its specific application?	10	Nov-17, nov-19
4	Mention advantages of application of waste/ recycled materials in concrete?	10	Nov-17, Apr-18, Apr-19
5	List applications of high strength concrete.	5	Apr-17
6	What are the applications of ferrocement concrete?	5	Apr-17
7	Explain manufacturing of ready-mix concrete.	10	May-17
8	Explain the types of fibers used in fiber reinforced concrete.	5	May-17
9	What is Ferrocement concrete? Mention its advantages and applications.	5	Nov-18, Apr-19
10	Write a short note on no fines concrete.	5	Nov-18
11	List some of the waste/ recycled materials can be used in concrete? Mention advantages of application of this concrete.	10	Nov-18
12	Differentiate between high strength and high-performance concrete.	10	Apr-19
13	What is high strength concrete? Mention any four advantages and application of high strength concrete.	10	Nov-19

UNIT – 1- HUMAN VALUES			
Sl.No	**Questions**	**Marks**	**Year**
1	Distinguish between morality and ethics.	5/10	Nov-17/ Apr-17
2	List the factors for one to work peacefully.	5	Nov-17, Nov-19
3	List any five significance of ethics.	5	Apr-17
4	Distinguish between caring & sharing.	5/10	Apr-17/ Nov-17/ Apr-18, Nov-19
5	Explain various actions of an engineer leading to dishonesty.	10	Nov-17, Nov-19
6	Explain the core human values.	10	Apr-17
7	List the objectives of this course professional ethics' and Human Values.	5	Apr-18
8	List the types of virtues, with an example for each.	5	Apr-18
9	Explain Service Learning and discuss on its components.	10	Apr-18
10	(a) Explain collective bargaining with example? (b) Explain Occupational crime?	10	Apr-18
11	List any 5 types of values and give an example for each.	5	Nov-19
12	Explain term empathy with and example.	5	Nov-19
UNIT – 2- ENGINEERING ETHICS			
1	Explain the terms profession professional and professionalism	5	Nov-17
2	Define the term moral dilemma	5	Nov-17, Nov-19
3	What is self-control and explain	5	Apr-17
4	Explain unethical behavior of employees	10	Apr-17/ Nov-17
5	Explain any five skills for improving moral autonomy.	10	Apr-17
6	Define corporate responsibility and engineering ethics	5	Apr-18
7	State the five characteristics of professionals	5	Apr-18, Nov-19
8	a. How on can shape self-confidence? Explain b. Why do people behave unethically?	5 5	Nov-19
9	a. What is moral integrity? Explain. b. Differentiate between self-respect and self-esteem.	5 5	Nov-19
UNIT – 3-SAFETY RESPONSIBILITIES OF ENGINEERS			
1	State five characteristics of professionals	5	Nov-17
2	State the difference between bribe and gift	5	Nov-17

3	Explain occupational crime with some examples.	10	Nov-17, Nov-19
4	What is risk mention any four effects of risk in an organization	10	Apr-17
5	Define corporate social responsibility	5	Apr-17
5	Explain different types of CSR	5	Apr-17
6	Write a note on Risk Benefit Analysis	5	Apr-18
7	Explain the moral dilemma and moral autonomy	10	Apr-18
8	How risk can be reduced?	5	Nov-19
UNIT – 4- ETHICAL ISSUES IN ENGINEERING PRACTICE			
1	Define computer ethics. List the issues in computer ethics	5	Nov-17/ Apr-18, Nov-19
2	State any five Commandments of computer ethics	5	Apr-17
3	Explain the different options for depositing the plastic waste	10	Apr-17
4	Explain the role of engineer as a manager	10	Nov-17, Nov-19
5	Explain code of Ethics followed in TATA group	10	Apr-18
6	Explain ethical theories. Compare the senses.	10	Apr-18
7	Explain the effects of Industrial waste disposal on Environment.	10	Apr-18, Nov-19
UNIT – 5- HUMAN RIGHTS			
1	Describe briefly trademark	5	Nov-17
2	Explain concept of women empowerment	10	Nov-17
3	Describe intellectual property rights	5	Nov-17, Nov-19
4	State any five objectives of national Commission for Women	5	Apr-17
5	What is meant by whistle blowing name different types of install blooming	5	Apr-17
6	What are the functions of national human rights commission	10	Apr-17
7	List the various Special Programs for Women's Development from government?	5	Apr-18
8	Explain POCSO act 2012	5	Apr-18, Nov-19
9	List five features of 'International Human Rights'.	5	Nov-19
10	Write a note on status of women in India.	5	Nov-19
UNIT – 6- INDIAN CONSTITUTION			
1	Describe the role of gram panchayat in upliftment	5	Nov-17
2	Describe in Brief about Indian Constitution	10	Nov-17
3	What is the procedure followed in parliament in making law	10	Nov-17
4	Explain functions of zilla panchayat	5	Nov-17, Nov-

			19
5	Explain powers of Rajya Sabha & Lok Sabha.	10	Nov-17
6	State any five fundamentals rights according to Indian constitution	5	Apr-17/ Apr-18
7	List any five functions of Rajya Sabha	5	Apr-17
8	List any ten fundamental duties of every citizen of India	10	Apr-17
9	Write down any 10 powers and functions of supreme court of India	10	Apr-17
10	List the functions of zilla panchayat in Karnataka	10	Apr-17
11	Explain about Indian constitution	10	Apr-18
12	What is the Procedure followed in parliament in making law	10	Apr-18
13	Write about structure of Parliament	10	Apr-18, Nov-19
14	Explain the formation and functions of Supreme Court	10	Apr-18
15	What are the important constitutional bodies of India? Explain the functions of any 2 such constitutional bodies.	10	Nov-19
16	a. What are the functions of prime minister? b. Explain the composition of Rajya Sabha.	5 5	Nov-19
17	Write a note on structure if judiciary.	10	Nov-19